

**A STRATIFIED COMPETENCY BASED LEARNING PROGRAMME FOR
PRACTITIONERS OF MEDICAL AESTHETICS IN SOUTH AFRICA**

By

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Thesis submitted in fulfilment of the requirements for the degree

Philosophiae Doctor in Health Professions Education

Ph.D. HPE

in the

DIVISION HEALTH SCIENCES EDUCATION

FACULTY OF HEALTH SCIENCES

UNIVERSITY OF THE FREE STATE

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DECLARATION

I hereby declare that the work submitted here is the result of my own independent study. Where assistance was needed, it was duly acknowledged. I additionally declare that this work is being submitted for the first time at this university/faculty towards a Philosophiae Doctor degree in Health Professions Education and that it has never been submitted to any other university/faculty for the purpose of obtaining a degree.



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DEDICATION

I dedicate this thesis to the perfect prince of my life, my son Vuyolwethu Khumalo; my mother, Hellen Khumalo and the rest of my family, who offered me unconditional love, support and understanding throughout the progression and completion of this thesis. You all are the sun and moon of my life. I may never have completed this without you as my motivation to achieve academic excellence.

This goes to the Khumalo family as I make history #1STPHD in the family.

ACKNOWLEDGEMENTS

It is with heartfelt thanks that I write this section to express my gratitude to everyone that had a positive impact in my journey of conducting and completing this study, to everyone who supported me, encouraged me, prayed for me and believed in my success.

I desire to express my sincere appreciation to the following:

- My promoter, Dr Johan Bezuidenhout, Head: Division Health Sciences Education, Faculty of Health Sciences, University of the Free State for his sincere encouragement and reassurance of my abilities, guidance, support and advice during the study; thank you for always being available at any hour and the countless phone calls to make sure I was always afloat through the study.
- My co-promoters Prof. Vincent-Lambert and Prof. Werner Sinclair, for your valuable contributions to this thesis.
- The staff at the Division Health Sciences Education, Faculty of Health Sciences, University of the Free State, for empowering me through numerous workshops and training sessions to become a scholar and a proud PhD graduate of this university.
- A special vote of gratitude to Elmarié Robberts and Cahrin Bester. You all were always just so amazing.
- Ms Elmarie Robberts, for the editing and attention to technical details.
- Dr Chantel Van Wyk, I cannot begin to thank you for the support and for being such a supportive friend, thank you, I will treasure our friendship always.
- A big word of thanks to Prof. Andre Swart, Executive Dean, Faculty Health Sciences, University of Johannesburg (UJ). Thank you for the professional guidance, for the faith you had in my success and for the enormous support you gave me.
- The Health and Welfare Seta for granting me a bursary to finance certain aspects of my study.
- The professionals who participated in the study and without whom this study would not have been possible.
- Officer: Directorate for Institutional Research and Academic Planning, Ms Enna Moroeroe, who supported me with the compilation and distribution of the electronic questionnaire; interpretation and statistical analysis of the accumulated data.
- My wonderful colleagues at the Department of Somatology, Faculty of Health Science, UJ, for the encouragement, contributions, prayers and trust. A special thanks to

Dr Karien Henrico for always being there, as we embarked on this journey of our lives together, I sincerely appreciate your generosity, believing in my success and for being a blessing.

- To Hettie Human, my language editor. Thank you for going beyond the call of duty, thank you for the language lessons you afforded me, for translating my summary to Afrikaans. Thank you so much for ensuring that my thesis is of good quality.
- The SQP office and director, Dr Riette De Lange, for supporting me and for availing funds so I could go on sabbatical leave, ensuring that this study was a success.
- To my friends and family, thank you for the support and most importantly thank you for believing in me always.
- To my mother, Hellen Khumalo. I cannot thank you enough for all the support you afforded me through this journey, for always taking care of my prince (Vuyo), when I was occupied with research activities, for believing in me, for the words of valuable encouragement and mostly for all the prayers you said for me – you have been my pillar of strength always, I love you so dearly and thank God for you.
- Most significantly, I thank The Almighty God and Father of our Lord Jesus Christ for having directed each step of the way with me. Without your favour, grace, love and support I would not have been able to complete this thesis.

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ACRONYMS

AAAM:	American Academy of Anti-Aging Medicine
AAMSSA:	Aesthetic and Anti-aging Medicine Society of South Africa
AMS:	Academy of Medicine Singapore
ASAP:	American Society of Aesthetic Plastic Surgery
CESM:	Classification of the Educational Subject Matter
CFPS:	College of Family Physicians Singapore
CHE:	Council of Higher Education
CIDESCO:	Comité International d'Esthétique et de Cosmétologie
DHET:	Department of Higher Education and Training
ELO:	Exit-Level Outcomes
FSIQ:	Full Scale Intelligence Quotient
HEQC:	Higher Education Quality Committee
HPCSA:	Health Professions Council of South Africa
MA:	Medical Aesthetics
NLI:	National Laser Institute
NQF:	National Qualifications Framework
OBE:	Outcomes-Based Education
PA:	Physician Assistant
PQM:	Programme and Qualification Mix
RPL:	Recognition of Prior Learning
SA:	South Africa
SAAHSP:	South African Association of Health and Skincare Professionals
SAn:	South African
SAQA:	South African Qualifications Authority
SMC:	Singapore Medical Council
UFS:	University of the Free State
UJ:	University of Johannesburg
USA:	United States of America
WIL:	Work Integrated Learning

SUMMARY

Key terms: stratified, competency-based, learning programme, medical aesthetics, South Africa, regulation, treatment interventions, skin conditions, health education.

In this study, a comprehensive study was carried out by the researcher with the intention of developing a stratified, competency-based learning programme for practitioners of medical aesthetics (MA) in South Africa (SA).

MA in the current South African context is characterised by a shortage of literature and a lack of evidence-based guidelines for the knowledge, skills and competencies required by the persons practicing MA in SA. This is in contrast to countries such as Brazil and the United States of America, where MA is far more advanced and where guidelines for the regulation of the MA industry are in place. To the contrary, in SA there is a lack of practice guidelines and regulations applicable to the wide variety of professions involved in the practice of MA. Furthermore, there is an absence of a stratified, competency learning programme for the various professions involved in the practice of MA in SA. Therefore, this research study was carried out in order to develop a stratified, competency-based learning programme for practitioners of MA in SA.

In addressing the above challenges, the central research question was:

What would a stratified, competency-based learning programme consist of in order to provide learners with the required knowledge, skills and competencies to function as professional medical aestheticians in the South African healthcare environment?

For this study, an exploratory mixed-method design that was sequential in nature was followed. This design consisted of a two-phased approach, whereby the qualitative phase (desktop study) was followed by a quantitative phase (questionnaire). A desktop study was first applied as a method for collecting qualitative data to highlight the knowledge, skills and competencies involved in the practice of MA in SA. This assisted in providing the relevant literature and components of programme for MA practitioners. The desktop study also assisted to place MA in context and understand its complexities in a South African context. The desktop study was then followed by the questionnaire (quantitative) which

was used as another method of gathering data relating to the building of theory on stratified knowledge, skills and competencies of MA practitioners in SA. The questionnaires were distributed to stakeholders involved within the MA fraternity, in order to gain a clear view of the topic under study.

The study resulted in a stratified, competency-based learning programme for medical aesthetics in South Africa. It became clear that to facilitate MA a short-learning programme would be suitable. The study meets the need for educational competence and regulation regarding the practice and implementation of MA in SA. The researcher believes the learning programme that was developed could serve as a source of inspiration to the education system as far as MA is concerned in the South African context; by doing so, the study may serve to provide encouragement for the regulation and professionalisation of MA in SA. This can be achieved through the expansion of education and training for MA, which has the potential to translate into an improvement of the quality of services rendered to patients.

The results of this study indicate that there are very few mechanisms for regulating the practice of MA in SA, which cements the need for and importance of SA having both a stratified, competency-based learning programme for MA, and more robust regulatory mechanisms. Having completed the study, the researcher made a number of recommendations, the major one being that a pre-test/pilot of the proposed stratified competency-based learning programme be done, as it may identify issues related to the implementation process – this was not the main focus of this study.

OPSOMMING

Sleutelterme: Gestratifiseerde, bevoegdheidsgebaseerde, leerprogram, mediese estetika, Suid-Afrika, regulering, behandelingsingryping, veltoestande, gesondheidsopvoeding.

Hierdie studie behels 'n omvattende ondersoek deur die navorser met die doel om 'n gestratifiseerde, bevoegdheidsgebaseerde leerprogram vir mediese-estetika-praktisyns in Suid-Afrika te ontwikkel.

In die Suid-Afrikaanse konteks word mediese estetika (ME) gekenmerk deur 'n tekort aan literatuur en 'n gebrek aan bewysdraende riglyne vir kennis, vaardighede en bevoegdheids wat vereis word van mense wat ME in Suid-Afrika (SA) praktiseer. Hierdie toedrag van sake verskil van dié in lande soos Brasilië en die Verenigde State van Amerika, waar ME baie meer gevorderd is, en waar daar riglyne geld vir die regulering van die ME bedryf. In teenstelling is daar in SA 'n gebrek aan praktykriglyne en -regulasies wat van toepassing is op die wye verskeidenheid professies wat ME beoefen. Daar is verder ook 'n afwesigheid van gestratifiseerde, bevoegdheidsgebaseerde leerprogramme vir die verskillende professies wat ME in SA beoefen. Gevolglik is hierdie studie uitgevoer om 'n gestratifiseerde, bevoegdheidsgebaseerde leerprogram vir ME-praktisyns in Suid-Afrika te ontwikkel.

Ten einde bogenoemde uitdagings aan te spreek, het die hoof- navorsingsvraag soos volg gelui:

Wat sal 'n gestratifiseerde, bevoegdheidsgebaseerde leerprogram behels indien dit leerders van die nodige kennis, vaardighede en bevoegdheids moet voorsien wat hulle in staat sal stel om as professionele ME-praktisyns in die Suid-Afrikaanse gesondheidsorgomgewing te werk?

Hierdie studie het 'n ondersoekende gemengdemetodes-ontwerp gevolg, wat opeenvolgend van aard was. Die ontwerp het bestaan uit 'n tweefase-benadering, waardeur die kwalitatiewe fase (lessenaarstudie) gevolg is deur die kwantitatiewe fase (vraelys). 'n Lessenaarstudie is eers toegepas as 'n metode om kwalitatiewe data ten opsigte van die kennis, vaardighede en bevoegdheids wat by die beoefening van ME in SA betrokke is, te versamel; dit het toepaslike literatuur en komponente van 'n program vir ME-praktisyns

verskaf. Die lessenaarstudie het ook bygedra om ME in konteks te plaas en om die ingewikkeldheid van die Suid-Afrikaanse konteks te verstaan. Die lessenaarstudie is gevolg deur die vraelys (kwantitatief), wat gebruik is as nog 'n metode om data te versamel ten opsigte van die opbou van 'n teorie oor gestratifiseerde kennis, vaardighede en bevoegdheids van ME-praktisyne in SA. Die vraelys is aan belanghebbendes in die ME-gemeenskap versprei ten einde 'n duidelike oorsig van die studieonderwerp te verkry.

Gevolgtrek het die studie aanleiding gegee tot 'n gestratifiseerde, bevoegdheidsgebaseerde leerprogram vir ME in SA. Dit het duidelik geword dat 'n kortleerprogram geskik sal wees om ME te bevorder. Die studie voldoen aan die vereistes vir opvoedkundige bevoegdheid en regulering van die praktisering en implementering van ME in SA. Die navorser glo dat die ontwikkeling van leerprogramme 'n bron van inspirasie vir die opvoedingstelsel ten opsigte van MA in die SA konteks is, en daardeur kan die studie dien as aanmoediging vir die regulering en professionalisering van MA in SA. Dit kan bereik word deur die uitbreiding van opleiding en onderwys in ME, wat die potensiaal het om die gehalte van dienste wat aan pasiënte gelewer word, te verbeter.

Die bevindinge van hierdie studie dui aan dat daar baie min meganismes is wat die ME-praktyk in SA reguleer. Dit bevestig die behoefte aan en belangrikheid van sowel 'n gestratifiseerde, bevoegdheidsgebaseerde leerprogram vir MA, as sterker regulatoriese meganismes in SA. Nadat die navorser die studie voltooi het, maak sy 'n aantal aanbevelings, waarvan die belangrikste die volgende is: 'n Vooraftoets of loodsstudie van die voorgestelde gestratifiseerde, bevoegdheidsgebaseerde leerprogram behoort uitgevoer te word ten einde kwessies wat met die implementering van so 'n program verband hou, te identifiseer – dit was nie die hoofokus van hierdie studie nie.

A STRATIFIED COMPETENCY BASED LEARNING PROGRAMME FOR PRACTITIONERS OF MEDICAL AESTHETICS IN SOUTH AFRICA

CHAPTER 1

ORIENTATION OF THE STUDY

1.1 INTRODUCTION

Medical Aesthetics (MA) is a fast-growing industry that involves beautification of the body with the help of medical knowledge; it primarily involves treatments of the skin and face, although other parts of the body may be treated too. The abbreviation MA (in some literature referred to as aesthetic medicine) refers to a branch of medicine focused on satisfying the aesthetic desires and goals of patients. Literature is beginning to emerge that shows a link between positive self-image and overall health, including the way patients and their family members experience illness, healthcare interventions and recovery (Qingxing, Xue & Jiaye 1995:1197).

A literature search using the following key words: "*MA education in SA*", "*MA in SA*", "*regulation of MA in SA*" "*MA competencies*" and "*regulation of MA in SA*"; "*MA internationally*" and the *various skin conditions and interventions* by name have heralded very little literature specifically relating to MA in SA; the results are of these searches are mostly related to the field of medicine. Some search engines used to search for literature in MA were: *Intute, PubMed, medical student.com, Medscape, Google Scholar and Google Web* among others. MA in the current South African (SA) context has minimal literature and lacks evidence-based guidelines for knowledge, skills and competencies required by persons practicing MA in South Africa (SA); this observation/conclusion is drawn as a result of minimal scientific and evidence based literature in the SA context, additionally, it may be because MA in SA is not recognised as a profession and is unregulated; hence the minimal literature around the field, including the knowledge, skills and competencies required of MA practitioners.

This is in contrast to countries such as Brazil and the United States of America (USA), where MA is far more advanced and where guidelines for the regulation of the MA industry are in place (Prendergast 2012:3). To the contrary, in SA there is a lack of practice guidelines and regulations applicable to the wide variety of professions involved in the practice of MA.

Furthermore, there is an absence of a stratified competency-based learning programme for the various professions involved in the practice of MA in SA. Therefore, this research study was carried out in order to develop a stratified competency-based learning programme for practitioners of MA in SA. With this in mind the establishment of such a programme may be used to train various different aesthetic practitioners in South Africa so that their competency can be assured and patient safety protected. The programme is by no means to invade on the various levels of training required but rather to assure quality.

The field of MA is a field of practice that has since its emergence become prevalent in SA, and which involves a number of professions. There is a great need to build on the body of knowledge of this field, particularly in the SA context, because there are very few mechanisms or formal practices that apply to the implementation of MA in SA (Prendergast 2012:4). Medical aestheticians find employment with dermatologists, hospitals, laser skincare clinics and spas. Anecdotal evidence through experience indicates that in SA, MA is practiced by a number of professionals, including general practitioners, dermatologists, plastic surgeons, somatologists, beauty therapists and nurses. Many procedures require medical training and the programme also aims to address that the scope of practice is clearly identified in order to ensure that the correct aesthetic procedure is recommended and carried out on patients and on the required level of the professional.

Whilst the benefits of MA are becoming universally accepted, SA currently does not have a standardised or recognised stratified competency-based learning programme for the various professionals involved in the practice of MA in SA; with the exception of one registered MA learning programme only available to general practitioners. The purpose of this study was to develop such a programme for health professionals from different disciplines who have an interest in practicing MA and or those that have embarked on MA practice. Developing such a programme may yield those performing the procedures; or managing skin conditions within the field and in turn advance the credibility of the field. Furthermore, the emphasis of this study was not to be prescriptive to medical practitioners but rather to lift the current level practices of other practitioners. The study also aims to the enhancing and contributing of the minimal existing literature on MA in SA.

Therefore, the aim of the study was to develop a stratified competency-based learning programme for practitioners of MA in SA. The study also seeks to meet the need for educational competence in the practice and implementation of MA in SA, by gathering and analysing data from other countries (e.g. USA & Brazil) where MA is well developed and

training is offered as stratified competency-based principle. With this study the researcher aimed to inspire the education and training system as far as MA is concerned by developing guidelines for knowledge, skills and competencies required by professional MA practitioners in the South African context; by doing so, the study may serve as a source of literature and material that educators, institutions can assimilate and disseminate, in order to further improve and place emphasis on stratified competencies of the various professionals involved in MA in SA. The purpose and aims of this study were achieved through the use of the exploratory mixed methods approach.

It is important to note that the purpose of this study was not in any way to interfere with any of the professions that were involved, but rather to develop a stratified competency-based learning programme for health professionals from different disciplines who have an interest in practicing MA and or those that have embarked on MA practice. The focus was to then ensure that the professionals practicing MA are well empowered in working with the various skin conditions and to perform quality MA treatments and procedures.

One of the data collection strategies used was a documentary/desktop analysis of existing documentation in order to develop the semi-structured questionnaire used in this study. The desktop study was followed by the administration of a purposefully designed semi-structured questionnaire, consisting of both closed and open-ended questions. The respondents to this study included general practitioners, dermatologists, plastic surgeons, somatologists, nurses and beauty therapists in SA.

The results of this study can serve as a source of material that educators and institutions can assimilate and disseminate in order to improve and emphasise the competencies, knowledge and skills of persons practicing MA in SA. Educators and institutions can apply the results in education by offering a stratified competency-based learning programme that caters for the various professionals involved in the field.

The study adhered to a number of ethical considerations and obtained ethical clearance (cf. Appendix A) from the Ethics Committee, Faculty of Health Sciences at the University of the Free State (UFS). Approval was also obtained from an evaluation committee at the Faculty of Health Sciences, University of the Free State.

This chapter aims to highlight the research problem and problem statement, and explain the research questions, overall goal, aims and the objectives of the study. The significance of the study will also be discussed, and an overview of the research design and methods that were used to collect and analyse data will be provided. This chapter will also give a breakdown of the chapters by explaining the layout of subsequent chapters as well as a brief conclusion.

Note that, henceforth, reference to MA practice or practitioners is in relation to South Africa, unless specified that another country is being referenced. Furthermore, because of the range of professions involved in MA (from dermatologists and general practitioners, cosmetic surgeons, nurses to somatologists and beauty therapists, people receiving MA treatments could be termed either patients or clients; for the sake of consistency, the term patient will be used throughout this study.

1.2 BACKGROUND TO THE STUDY

The researcher in this study is a qualified somatologist, affiliated to the SAAHSP, with 14 years' experience in the practice of somatology. After completing a Master's degree in somatology at the University of Johannesburg (UJ), the researcher became more interested in the education and training of somatology students, particularly regarding the MA aspect. The researcher has been a lecturer in the Somatology Department at the UJ for eight years. Since the start of her lecturing career she has been intensely involved in the work integrated learning (WIL) aspect of the Somatology Department. She also served on the faculty WIL committee at UJ in 2011 to 2012. This involvement stimulated her interest in conducting a study that involved developing a stratified competency-based learning programme for practitioners of MA in the SA context. The main reason for her interest is the state of the MA field in SA, relating to the limited scope of practice for MA practitioners.

This study falls within the field of MA. In one form or another, MA forms part of a number of professions as mentioned above, therefore, the field itself does not belong to any particular profession nor can it be registered with statutory bodies, such as the Health Professions Council of SA (HPCSA). The multidisciplinary nature of the MA field further necessitates for a study such as this one. This section of this chapter aims to orient and highlight the context in which the study was based and carried out.

1.2.1 Defining medical aesthetics

The word aesthetic itself has a number of connotations. The term was coined for academic discourse and does not have a strong history in vernacular use. Philosophers usually speak of aesthetics in reference to theories of perceptions of beauty and aesthetic quality, and especially to aesthetic qualities illustrated in critical discourse about arts. A number of meanings have become attached to the term, including a general sense of style of a particular artist or movement. Under this usage, the boundary between criticism and philosophy becomes blurred (Hein 1993:3). Beauty, on the other hand, is defined by Gambino (1991:1) as a value, that is, it is not a perception of a matter of fact or of a relation: it is rather an emotion, an affection of its volitional and appreciative nature. There have been minimal efforts to define and articulate the competencies of persons practicing MA in SA, and this has led to the need for a stratified competency-based learning programme format in the SA context.

According to Qingxing, Xue and Jiaye (1995:1198), the terms medical aesthetics and medical cosmetology are usually used indistinctly at times. The task of medical aesthetics is to study the human body in its entirety, concentrating on both the internal and external beauty and put the findings into practice, whereas the task of medical cosmetology is to study and assess only the external beauty of the human body and to take action on that basis.

In the classical sense the term medical aesthetics refers to the discipline of aesthetics in the field of medicine or medicine in the field of aesthetics. Furthermore, commercial skincare entities have started to describe personnel carrying out medically influenced cosmetic intervention as "medical aestheticians". This has led to the term being considered disreputable by the medical fraternity (Green 2004:55).

To further understand MA and or aesthetic practice, it is important to note that according to the United Kingdom Expert Group on the Regulation of Cosmetic Surgery, aesthetic practice is defined as: "operations and other procedures that revise or change the appearance, colour, texture, structure, or position of bodily features, which most would consider otherwise to be within the broad range of 'normal' for the person" (Qingxing, Xue & Jiaye 1995:1198). For the purpose of this study, this definition forms the basis and guide for which MA or aesthetic practice is viewed and defined for this study.

In light of the definitions given above, for the purpose of this study MA is defined as a term referring to a discipline in the field of aesthetics incorporating medical knowledge and principles.

1.2.2 History of aesthetics

Human aesthetic processing entails the sensational-based evaluation of a person with respect to concepts like aesthetics and harmony. Aesthetic appreciation has a number of determinants, ranging from evolutionary anatomical constraints, to influences of culture, history and individual differences; there are a number of networks underlying these multifaceted processes of aesthetic appreciation (Aldrich 2004:11). Simply put, the way in which we see ourselves and how we are in turn seen by others is affected by these factors (anatomical constraints, culture, history and individual differences).

The modern traditions of aesthetics originate in the eighteenth century – a time when the analysis and pleasure of beauty began to focus on a variety of perceptions. Since discussions of the nature of aesthetic pleasure began, through much of the twentieth century, have been virtually uninformed in their claim that apprehension of aesthetic qualities transcends personal interests and concentrates one's attention on the object of appreciation. Thus, pure aesthetic attention is considered to be incompatible with interest in other values, such as moral and social values; as well as perceptions and inaccuracies of aesthetic pleasure. People are more concerned with their own personal aesthetic interests; and this has since become a popular concern, among both women and men (Aldridge 1991:720).

1.2.3 State of medical aesthetics: nationally and internationally

According to Biomani Scientific Skincare (2015:online) MA is a thriving and growing industry. Although MA has endured criticism from people who claim that the overwhelming majority of interventions are done for purely cosmetic or commercial reasons. The medical aesthetic and medical spa industries are currently growing exponentially, without any clear indication of a saturation point in sight. The increasing acceptance, availability and affordability of many minimally invasive cosmetic treatments have fostered what the global culture has named the Era of Glamour (Biomani Scientific Skincare 2015:online). This era ushered in the premise that medical aesthetic treatments are part of a normal routine that works to maintain a natural and healthy appearance.

An international study suggested that women's perceptions of their beauty have undergone a change. Of the women surveyed, 83% revealed that they wanted to look as natural as possible after MA interventions in order to better reflect their personalities and expressions; and to protect their emotional well-being (Bennette, Courval, Onorato, Argerton, Castro, Gibson, Lambert & McQuillan 2008:348). These findings add to the significance of developing a stratified competency-based learning programme for MA in SA; as they evidence of the continuous growth of MA demand. Bennette *et al.* (2008:348) findings coincide with current marketing of aesthetics, including people's desire and ability to minimise the effects of aging, as well as the new societal value of healthy aging (Bennette *et al.* 2008:348).

There have been calls (made by the scientific community) for practitioners of complementary medicine to validate their work with clinical studies. These demands have been countered by practitioners of complementary medicine, who claim that scientific methods are often inappropriate to study these forms of medicine. A similar call was made in orthodox medicine, namely, that the strict methodology of science is often found deficient when applied to human behaviour (Hein 1993:4). This study can assist with these calls as it will assist in grounding the practice of MA in SA through science, especially since most of the literature within the South African context is anecdotal.

Sammons (2010:61) highlights the challenges within the field of MA, and suggests that the biggest challenge in MA is the need to overcome the stigmas of MA among patients, and the fears that some patients may have in relation to MA. Media reports of failed treatments that some patients have had with poorly trained individuals practicing MA and suboptimal equipment have had adverse outcomes for the MA field and have resulted in a negative stigma related to the lack of expertise by individuals practicing MA. The reports of malpractice may be as a result of a lack of regulatory mechanisms that would require competencies of medical aestheticians to be articulated and implemented with all stakeholders, including educational institutions.

The importance of combating instances where patients experience unfavourable outcomes from their treatments as a result of poorly qualified individuals; and overcoming the negative stigma; requires that the knowledge, skills and competencies of a MA practitioners be developed and articulated, especially through education, in order for all individuals practicing MA to have all the necessary skills, competencies and knowledge required prior

to practicing MA; this will therefore help increase the confidence of the general public towards the field as a whole.

Both science and art are activities that attempt to bring certain contents of the world into perspective; especially within MA in SA, where MA is practiced by different professionals within the health and skin care industry (as mentioned earlier). The concern and need for both science and art stems from the scenario in SA, where medical doctors for instance, do not get the aesthetic/art aspect of the education, whereas it is crucial in the practice of MA; and vice versa with the other practitioners within the field that do not have a good grounding of the clinical medical aspect of MA; therefore a well-rounded pedagogy of MA is then crucial in the South African context.

There are also debates about the relations between MA on the one hand and classical sub-disciplines of medicine such as dermatology and reconstructive/plastic surgery. Medical professionals usually come to the field of MA field through dermatology and plastic surgery; additionally, there are also sub disciplines that come into the field of MA such as Somatologists, Nurses, Beauty therapists and General Practitioners (Jacobsen 2010:184).

In order for the field of MA to be better recognised and grounded, there needs to exist, a standardised stratified competency-based learning programme for persons wishing to practice MA. Such a programme should provide the knowledge, skills and competencies required to practice MA.

1.2.4 Practice of MA (nationally and internationally)

Medical aestheticians within the American context are licensed to perform non-invasive facial procedures, and are expected to have obtained specialized training for a number of existing aging conditions utilizing sophisticated clinical management skills and beauty therapy modalities. The medical aesthetician performs basic skin care facials and expansive clinical skills that results in a positive outcome, as well as promote an on-going comprehensive clinical skin care management process. This specialized aesthetician would not work in a typical beauty salon or beauty spa, but rather in a medical aesthetic clinic, health and skin care clinics, medical practice establishments. Aestheticians are also required to work under and in partnership with doctors and nurses' (Fam 2013:online).

Many Somatologists, Aestheticians and Nurses are seemingly seeking to expand their career by working with a physician, as it currently stands in SA; however, the demands of the medical settings are different to those of spas. Somatologists, Aestheticians and Nurses are required to perform advanced chemical peels, with pure acids and skin care products, as well as to select products that set them apart from others.

With the above highlighted, it can be concluded that education is a necessary series of processes that develop ability, attitude and behaviour of individuals. The entire process is based on the individual's own experiences. The education system consists of formal (registered) and non-formal (non-registered) education sub-systems. Vocational education is a very important part of an aesthetician's education programme, and is generally defined as a "process of developing a person's physical, intellectual, emotional, social as well as economic capabilities", in order to acquire the knowledge and practical skills required by the respective professions (Arnold 2002:502). In formal and non-formal education institutions offering aesthetician education programmes, skilled labour training is planned according to consumer demands as well as the current technologies, procedures and treatments.

1.2.5 Regulations of MA

In contrast to SA, MA is regulated in certain countries (example is the United States of America and Australia) and the regulation laws are clearly stipulated by the regulatory bodies within the field, therefore, addressing the uncertainties of the field. Regulation of the MA field also ensures that both the patient and practitioners have safety realms, of which guide them as far as the practice of MA is concerned, therefore, need to be clearly set out. Requirements for Board Certification by, the American Board of Cosmetic and Aesthetic Medicine (2013:online), for example are as follows:

- The practitioner must be a Medical Doctor (M.D.), Doctor of Osteopathy (D.O.), or Doctor of Dental Surgery (D.D.S.).
- The practitioner must have an active, unrestricted license to practice medicine in the United States / U.S. Territories or Canada.

In order to maintain and ensure uniformity and a standard level for knowledge, safety, and credentials; only physicians and dentists practicing in the U.S. / Canada are eligible for

board certification. Candidates must not have any suspensions or disciplinary actions imposed on an active license.

- They need to be members of The American College of Aesthetic and Cosmetic Physicians in conjunction with The American Society of Aesthetic / Cosmetic Physicians.
- Lastly, they need to meet some combination of training competencies that are clearly highlighted.

In the American context, according to Rinehart (2008:online) nurses are expected and required to prepare their certifications for all aesthetics skills that would help them stay competitive and advance with their doctors programme; they are required to learn more business and marketing skills as well. If nurses learn facial analysis, skin assessments, basic facial skills and advanced MA procedures including iontophoresis, clinical electrolysis and specialized mask treatments, they are then better prepared for the rapidly changing environment; because their profession is set chiefly in a clinical environment as opposed to somatologists and beauty therapists. Nurses within MA are expected to actively participate in identifying the skin care diagnosis, perform a comprehensive consultation and co-participate in the facial aesthetics procedures with the physicians (cf. 2.5.1).

In Europe, entry into the field of MA comes from either the beauty therapy industry and/or nursing sector, nurses are able to perform more aesthetic treatments and procedures such as dermal fillers, Restylane and Botox, where as someone coming from the beauty therapy sector is limited in what they can treat and therefore these two pathways tend to branch out into other areas of specialism within MA (DJPIMAC 2015:online). Considering that the field of MA is a newly emerging field of practice involving a number of professions within it (especially in SA) (cf. 2.4), there is a great need to develop a formal learning MA stratified competency based-programme as well as build on the body of knowledge within this field, more so in the South African context, especially as there are very little mechanisms or formal practices into the implementation of MA in SA.

There are both national and international laws and regulations world-wide, which aim to protect the beauty service customers/patients and public health. In Turkey the first "cosmetic Regulation" was developed in 1976, the purpose of the regulation for beauty and cosmetic orientated healthcare facilities, was to manage and organize the procedures and principles regarding the establishment, management and supervision of beauty and cosmetic oriented facilities, by means of protecting the public health (Blaschke 2005:413).

This profession is totally based on honesty, reliability, objectivity and awareness. Members of this profession are accountable to the government, society and respective partners; however in SA there is no regulatory function within MA.

Tan (2007:123) concluded in his paper that the practice of MA has generally been marginally regulated, even in more highly developed countries. He suggests that the main regulatory concern appears to be the practice of minimally invasive aesthetic surgery by general practitioners; and that professional voluntary self-regulation would probably not be effective in view of the peculiar nature of aesthetics medicine vice versa conventional medicine.

Similar to the USA and Brazil, Singapore is another country to note in terms of its regulations on MA. MA practice in Singapore is guided by guidelines on aesthetic practice for doctors, the guidelines were launched in July 2008 by the College of Family Physicians Singapore (CFPS) and the Academy of Medicine Singapore (AMS), and the guidelines were endorsed by the Singapore Medical Council (SMC) as a standard for MA practice for doctors (Singapore Medical Council 2016:online). There are also countries (such as USA & Brazil) from which guidelines for regulating MA can be drawn for the SA context.

Having reflected on the knowledge around the regulation of MA in other countries, regulatory guidelines can be drawn from other countries (not neglecting considerations of the unique contexts); furthermore. MA in SA is a non-regulated occupation, meaning it can be considered a profession that does not have a legal requirement to get certification. Among aspects towards regulating a profession is the need to have registered qualifications; therefore the development of a stratified learning programme for MA in SA may assist towards steps of having the field regulated.

In addition to the educational aspect, to regulate a profession is clinical governance, which relates to the operations within a particular field. Halligan and Donaldson (2001:1413), suggest that clinical governance provides the opportunity to understand and learn to develop the fundamental components required to facilitate the delivery of quality care, meaning a no blame, questioning, learning culture, excellent leadership and an ethos where staff are valued and supported, as they form partnerships with patients. Furthermore they recognize that these aspects might have been regarded as being too intangible to take seriously or attempt to improve. Clinical governance demands the re-examination of traditional roles and boundaries between health professions, between doctor and patient,

and between managers and clinicians, therefore, providing a means to show the public that there will be no tolerance for anything less than best practice.

In a paper titled: *The role of clinical governance as a strategy for quality improvement in primary care*, Campbell, Hutchinson, Marshall and Braspenning (2002:358) consider the process of implementing clinical governance in primary care and its impact on quality improvement and the challenges thereof. The vagueness of the initial definition of clinical governance serves both as a challenge and opportunity, in terms of its successful implementation. It is highlighted in their paper, that continuous quality improvement agenda is emerging as a result, the fact that patients/patients will benefit from such improvements and that the practitioners will improve the care and treatments they provide.

Perhaps the education and training would be an aspect to be considered especially in view of clinical governance and the implementation thereof. Frank, Snell, Cate, Holmboe, Carraccio, Swing, Harris, Glasgow, Campbell, Dath and Harden (2010:638) appends the importance of producing students that would be competent as practitioners, especially since innovation in health education moves towards outcome based training (Frank, Snell, Cate, Holmboe, Carraccio, Swing, Harris, Glasgow, Campbell, Dath & Harden 2010:638).

The goal of MA certification and specialization programmes in the USA for example, is to provide advanced cosmetic and aesthetic procedures that improve the presence within the scope of a Nursing, Somatology, Aestheticians or Medical practice. To succeed in this recently emerging field, one requires an entrepreneurial spirit, hard work, determination and mentoring from those who have the sound knowledge, experience and the skills of teaching (Jorm 2012:47).

Education can therefore to be useful in ensuring alignment of practice and may influence governance of MA, provided the skills and competencies are articulated and identified formally; hence this research seeks to highlight the knowledge, skills and competencies of MA practitioners in quest for developing a competency-based learning MA programme (in order to address the issue of effective governance of MA) (Nagelsmith 1995:245).

There is therefore a relationship between regulation and the stratified competency-based learning programme (cf. 2.7.4). Drawing from the field of nursing; it is evident that regulatory bodies have a number of principles which are applicable and applied to regulating the profession. Among the 12 principles considered when regulating a profession are

professional optimacy, efficiency and congruency, inter-professional equality and compatibility; principles which are driven by a strong basis in education. Furthermore, the principle of definition is crucial as it is closely related to the education aspect in that it implies and demands for regulatory standards to be based upon clear definitions of professional scope and accountability (c.f 1.4.3-d) (World Health Organization 2002:12). The development of the stratified competency-based learning programme can be influential in setting a foundation for the regulation of MA in SA.

1.2.6 Conclusion of background

Although there are differences in skills, knowledge and competencies among the various professions (cf. 1.1) in MA when dealing with certain skin disorders and their corresponding cosmetic concerns; it remains notable that all the various professions in MA have their respective scopes of practice. The stratified competency-based learning programme (cf. 6.2) will indicate which of the professions will perform certain treatments and manage certain skin conditions on completion of the programme in alignment with the individual professions' current scopes of practice. The field of MA is growing as an overlap between the medical treatment of skin diseases and traditional cosmetology, this poses problems and challenges for all the stakeholders in MA, including regulatory agencies. Wallach (2002:137) suggests a patient-centred approach in addressing the implementation of this challenge.

Regulatory mechanisms are fundamental to improving the quality of services offered by medical aestheticians and MA education, in order to meet the needs for qualified labour forces in this field, as well as for the protection of the general public and the health aspects thereof (Ondogan & Benli 2012:4651) (cf. 1.2.5). Consequently, it is important to characterize the required knowledge, skills and competencies of a MA practitioner and the roles thereof, a stratified competency-based programme will allow for foundational basis of regulating MA in the South African context (cf. 1.2.5); as there are a number of professions involved in MA it is important for a stratified competency-based learning programme.

It was additionally gathered from an advisory meeting at the University of Johannesburg's Somatology department (2012:personal communication), along with the above discussions that a stratified competency-based learning programme in MA is lacking in SA. Although there are a number of professions currently involved within MA in SA, there is no clear

distinction of a medical aesthetician, from all the professions within the field. It can be noted as discussed in Chapter 2 (cf. 2.11) hence this study is interdisciplinary.

As in many parts of the world there is certainly a need but good scientific evidence are lacking and many procedures are not evidence based. Many procedures are adopted without confirmation of efficiency and safety and are rather driven by false claims. Such claims rather hurt many professions and lead to many law suits. Scientific publication and evidence based studies should rather be the drivers.

1.3 PROBLEM STATEMENT AND RESEARCH QUESTIONS

The problems addressed in this study were a lack of literature and evidence highlighting stratified knowledge, skills and associated professional competencies that are required by persons wishing to practice MA in SA. Over and above the minimal existence of literature, *there exists few formally recognised MA programmes targeted at specific professionals; however no programmes exist that are stratified and competency-based that can be undertaken by all the various professionals (cf. 2.4.1) involved in MA in SA; hence the need for this study and developing an inclusive stratified competency-based learning programme that caters for all the mentioned professionals (cf. 2.4.1).*

The above deduction is made on the basis of minimal results on studies conducted to either stratify medical aesthetic education and the lack of regulations into the practice of MA in SA; a number of search engines were explored, among which was Google Scholar which yielded no results on MA education specifically in SA, although there were articles on radiofrequency and combined radiofrequency pulsed-light technology in aesthetic medicine (Sadick & Sorhaindo 2005:131). Other search engines yield studies relating to ethics in aesthetics, malpractice and environmental aesthetics among other topics not related to education within MA. SAQA has however got a qualification registered for MA, although it is a programme designed only for medical practitioners, the qualification is not a stratified one in terms of catering for all the professions involved in MA in South Africa.

The main research question therefore was:

What would a stratified competency-based learning programme consist of in order to provide students with the required knowledge, skills and competencies to function as professional medical aestheticians in the South African healthcare environment?

Two associated research questions that were addressed in order to answer the above mentioned central research question were:

- a) *Is there a need for a stratified competency-based learning programme for MA in SA and what should the training of MA include?*
- b) *What are the key knowledge, skills and competencies required by MA practitioners in the South African context to practice MA?*
- c) *What should the scope of practice be for professional MA practitioners in SA and what should the contents of a stratified competency based learning programme include?*

1.4 OVERALL GOAL, AIM AND OBJECTIVES OF THE STUDY

1.4.1 Overall goal of the study

With the existence of one qualification registered with the South African Qualifications Authority (SAQA) as an advanced diploma in aesthetic medicine, with an NQF level 7, offered only to Medical doctors (identification number is 90571). Therefore, the overall goal of this study was to develop a stratified competency-based-learning programme for MA in SA so that multiple professions have access and therefore accommodates and allows the various professions involved in MA in SA (cf. 4.2.1); which in turn would improve the quality of the education and training aspect of MA in SA. It is believed that such a programme could ultimately improve the quality of MA practice. An additional benefit of the study was a better clarity on the practice of MA. It must be clear that this study is not trying to bridge between the unique professional characters of the different professions but only focus on MA.

Achieving the overall goal of the study was further guided by a number of theories which were the guiding theories for this study, as illustrated in Figure 1.1 below.

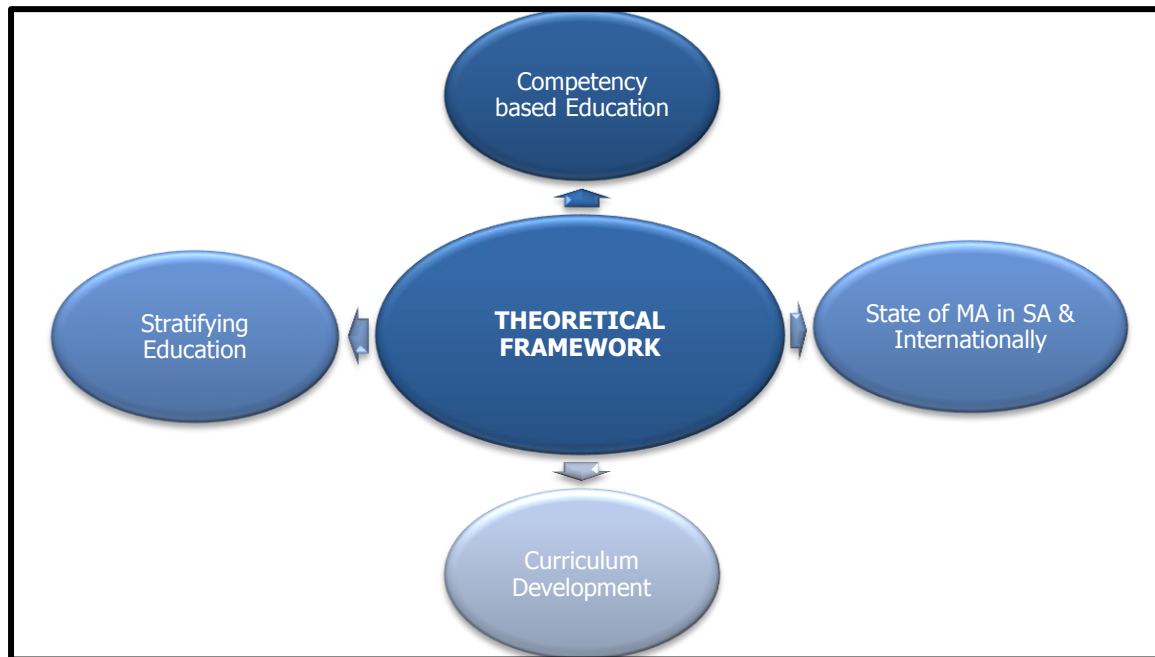


FIGURE 1.1: OVERVIEW OF THE THEORETICAL FRAMEWORK (COMPILED BY THE RESEARCHER KHUMALO 2015)

1.4.2 Aim of the study

The aim of the study is to develop a stratified competency-based learning programme for MA practitioners in SA. Furthermore, the study may serve as a source of literature and material that educators, institutions can assimilate and disseminate, in order to further improve and place emphasis on stratified competencies of the various professionals involved in MA in SA.

1.4.3 Objectives of the study

In achieving the above mentioned goals and aims, the following objectives were pursued:

- a. To gain deeper insights into the current status of MA education with an in-depth discussion of the relevant issues, challenges/limitations and requirements that are involved within MA education in SA. This objective provided the basis for the development of a stratified competency based MA learning programme. This therefore provided the necessary context to the study (Literature survey, cf. Chapter 2). This objective addressed the first sub research question.
- b. To provide factual descriptions of the processes involved in the approval, and certification of a stratified competency-based learning programme for MA practitioners and explain how each of those aspects would practically apply to the practice of MA

(Desktop study, cf. Chapter 2). This objective is important as it forms the basis for which the development of the stratified competency based learning programme was guided and developed.

- c. To establish and understand which treatments and conditions are being managed by which of the different professions involved within MA (questionnaire). This objective addressed the main central research question as it highlights the aspects that would need to be added into the training of the various professionals, based on their various educational content covered in their respective professions (Desktop study).
- d. To determine knowledge, skills and competencies of MA practitioners relevant to the changing arena of MA as discussed in (a) for individuals pursuing practicing MA and to determine the outcomes for the stratified competency-based learning programme in MA, which would then enable them to practice medical aesthetic in SA (Literature survey, desktop study and questionnaire). This objective addressed both the main and sub research questions.
- e. To establish a set of criteria needed for the academic development and implementation of MA in SA and determine their relevance, importance and practical application of MA (Literature survey, desktop study and questionnaire (cf. 4.3). This objective addressed both the main central and sub research questions.
- f. Using the results from (a) to (e), provided the content of a stratified-competency-based learning programme for training of practitioners of MA in SA as presented in Chapter 6.

1.5 DEMARCATION OF THE FIELD AND SCOPE OF THE STUDY

Well-defined scope and boundaries are the central elements in a research study, especially in order to ensure focus and direction (Ocholla, Olden, Ocholla & Bosire Onyancha 2012:478). The scope of this study was therefore not limited to one particular field/profession, however, due to the study being inclusive of more than one profession, the study is thus classified as being multidisciplinary as it included the practice of MA and (the different professions involved within the practice thereof), lastly the domain of academic curriculum development within Health Professions Education. The respondents for the semi-structured questionnaires of this study were professionals with expertise in their respective fields within the practice of MA.

In conclusion, the study was therefore within the field of Health Professions Education (HPE) and lies in the domains of both education and MA. The study is multidisciplinary as it reaches across between HPE and MA and the various professions involved in the practice

of MA (General Practitioners, Dermatologists, Plastic surgeons, Somatologists, Nurses in SA).

With regards to the timeline of this study, the study protocol was accepted by both the research ethics and evaluation committees of the Faculty of Health Professions Education as the UFS in 2013, after which the empirical research stage begun was concluded July 2015.

1.6 SIGNIFICANCE, VALUE AND CONTRIBUTION OF THE STUDY

This study into developing a stratified competency-based MA learning programme proved to be relevant in the South African context. The study was relevant as it may enhance and build on the minimal existing literature on MA in SA; this will be as a result of the number of papers that are in the process of being presented at conferences and publications at peer reviewed and accredited journals.

The value of this study may serve to be a source of material that educators, institutions can assimilate and disseminate in order to improve and highlight the competencies of practitioners practicing MA in SA. Until now, there has not been education and training programmes that are stratified and are competency-based in nature, for the various professions involved in MA in SA.

The value of this research study was stratifying the various scopes of practice within the various professions involved within MA. The significance of the study is that the stratified competency-based learning programme for MA may be used to guide and inform programmes in MA regarding curriculum design, teaching and learning, and assessment practices in the MA field, ensuring quality in teaching, and learning as well as the implantation and practice of MA. The study may contribute significantly to the introduction and implementation of MA education, training and regulation of MA practice.

The contribution of the study was the *development of a stratified competency-based learning programme for training MA practitioners in SA*. A learning programme can be defined as any other learning programme which includes a structured work experience component; this would include apprenticeship, learnership, skills programme and any other set of recommended sets of learning offerings which comprises of a structured work experience as indicated above.

The findings of this study were made public to other educationalists in MA through journal articles and paper presentations at conferences and seminars, for example Comité International d'Esthétique et de Cosmétologie (CIDESCO) world conference (20-25 May 2015, Sandton convention centre, the presentation topic – a stratified competency-based learning programme in MA in SA) (cf. Appendix I) and Professional Beauty's South African Association of Health and Skincare Professionals (SAASHP) seminars in 2015 thus far (31 August 2015, Gallagher convention centre, Midrand, the presentation topic – a stratified competency-based learning programme in MA in SA, session 2).

1.7 RESEARCH DESIGN AND METHODS OF THE STUDY

For this study, an exploratory mixed-method design was followed, and was sequential in nature. This design consisted of a two phased approach whereby the qualitative phase (desktop study) was followed by the quantitative phase (questionnaire). Creswell, Fetters, Plano Clark, and Morales (2009:161) highlight the advantages of using the mixed-method approach (combining both qualitative and quantitative methods) in one study. Creswell, Fetters, Plano Clark, and Morales (2009:161), also state that a combination of methods can strengthen the validity and reliability of the data. Small (2011:57) states that mixed-method research studies are motivated by confirmation (verification of findings), complementarity (eliminating weaknesses on one method); using more than one method allows for triangulation; sequencing (renders different approaches); nesting (allows better comprehension of different aspects of a study). In this study, the above were incorporated to address the research objectives.

Desktop studies provide rich descriptions of complex phenomena and illuminate the experience and interpretation of events by participants with widely differing stakes and roles as well as playing an important role in the theoretical elaboration and theory development. The desktop study method also allowed for improvement of understanding the knowledge, skills and competencies of MA practitioners in ways that the conventional quantitative methods might not necessarily achieve (Bourgeault; Dingwall & Vries 2010:42) (cf. 3.3.2).

A desktop study was first applied as a method for collecting qualitative data in relation to highlighting the knowledge, skills and competencies involved in the practice of MA in SA (cf. 1.4.3-b). This assisted in providing the relevant literature and components of programmes for MA practitioners. The desktop study also assisted to place MA in context

and understanding its complexities in a South African context. The issues of knowledge, skills and competencies within the practice of MA, required research methodologies that would not only be able to analyse processes and change; but also allow for diverse and possibly contradictory perspectives, therefore warranting the qualitative component and quantitative semi-structured questionnaires. The questionnaire was administered among stakeholders within the MA industry; as was considered as the best method to collect data.

Hammersley (2012:4) defines qualitative research as a research approach that emphasizes words rather than quantification in the collection and analysis of data; it may also be defined as an umbrella term for an array of attitudes towards conducting enquiries that are aimed at understanding how humans understand, experience, interpret and produce the social world.

The use of qualitative methods is also crucial for understanding the complicated nature of organizational change, including the subtle and sometimes latent causes of failed initiatives or processes within MA. Miles and Huberman (1994:57), state that in order to understand facets of health care, multilevel data collection strategies and analysis are fundamental. The expectation with literature studies is that this method concentrates on experiential knowledge of different participants within the various professions, as well as pay close attention to the influence of the social contexts among others (Caronna 2014:176). The gathering of data for the desktop method did not compel the researcher to be emerged in a particular setting but in a particularly described group/population (Sofaer 1999:1101).

The questionnaire was used as a method of gathering data relating to the building of theory on stratified knowledge, skills and competencies of MA practitioners in SA. Questionnaires were distributed to stakeholders involved within the MA fraternity, in order to gain a clear view of the topic under study. The questions in the questionnaires made provision for comments and elaboration of all the sections of the questionnaire (cf. 3.3.3).

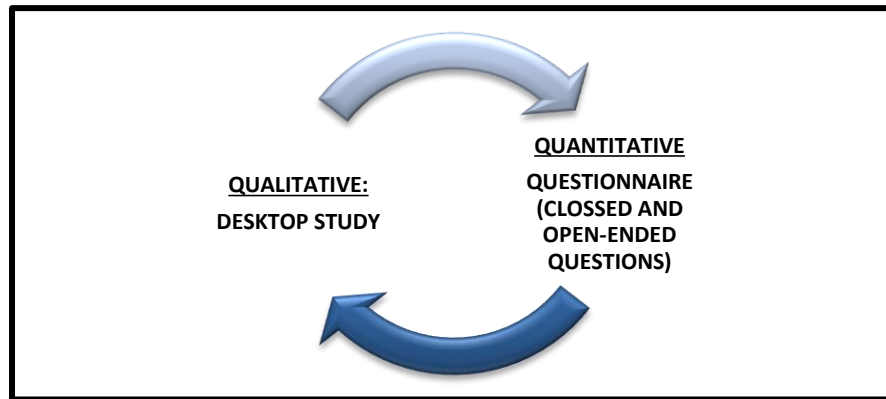


FIGURE 1.2: DIAGRAMMATIC OVERVIEW OF THE MIXED METHODS (COMPILED BY THE RESEARCHER, KHUMALO 2015) (GUIDED BY CRESWELL'S EXPLANATORY AND DESCRIPTIVE MIXED METHOD DESIGN 2008:73)

In the above section several important aspects of the research design and methods were clarified. The detailed research process will be outlined in Chapter 3. The next section will show the schematic overview of the study (cf. Figure 1.3).

1.8 TABULATED OVERVIEW OF THE STUDY

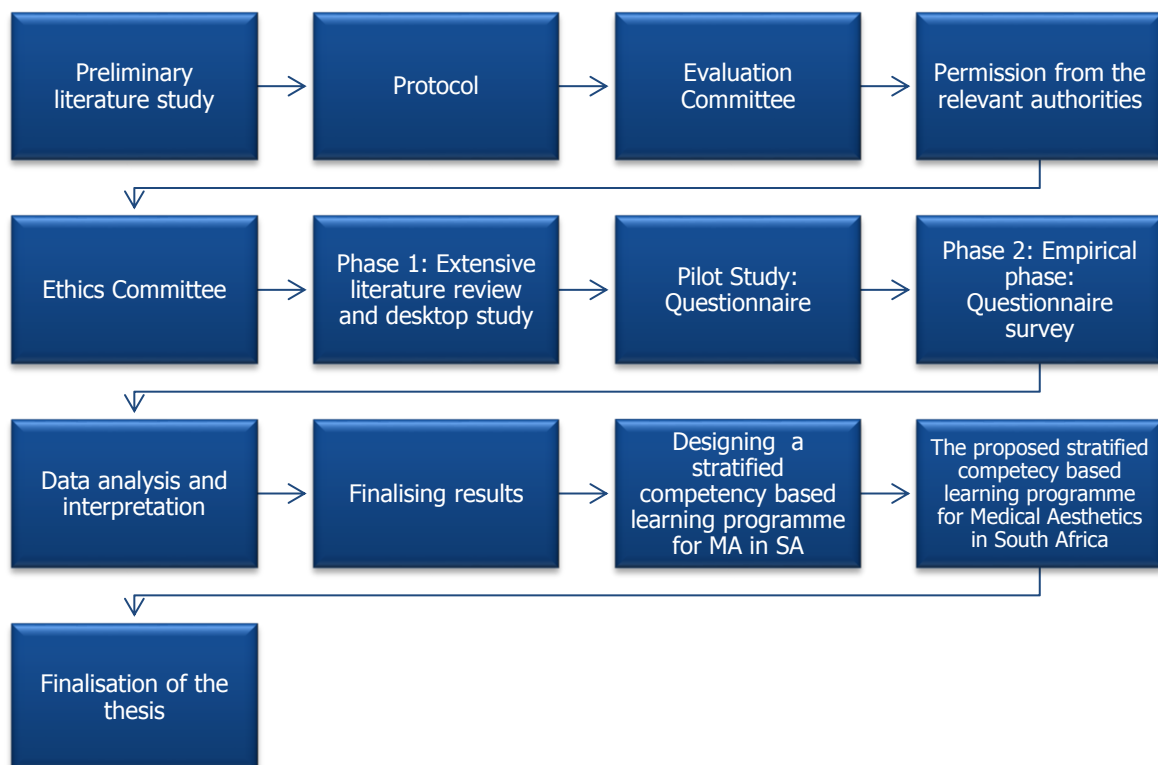


TABLE: 1.1 TABULATED OVERVIEW OF THE STUDY (COMPILED BY THE RESEARCHER KHUMALO, 2015)

1.9 IMPLEMENTATION OF THE FINDINGS

This report on the findings of the research will be brought to the attention of the SAAHSP education board; The Aesthetic and Anti-aging Medicine Society of SA (AAMSSA) and The College of Medicine of SA, specifically for Dermatology and Plastic and Reconstructive Surgery. The recommended stratified competency-based learning programme for MA practitioners in SA may be presented at training institutions in SA offering MA training (where it may be recommended that the developed learning programme be adopted in the courses being offered relating to MA). The research findings were presented (cf. 1.6).

The research findings may be further submitted to accredited academic journals for publication. By presenting the results from the study and the newly developed stratified-competency learning programme for MA in SA may enable exposure to a wider population of educationalists (cf. 1.6). The findings may continue to make further contributions to quality training of professional MA in the future.

1.10 ARRANGEMENT OF THE REPORT

The following section provides a brief outline of the study and layout of the thesis.

In this Chapter 1, ***Orientation to the study***, the researcher provided the overview, context and background to this study by providing the acronyms and definitions of commonly used terms that are applicable to this study. Thereafter, the background to the problem, problem statement, scope, overall goals, and aims as well as the research design was introduced.

In Chapter 2, ***Stratifying MA Education***, contextualisation and conceptualisation of a stratified competency-based learning programme for MA in the South African context was examined through literature and desktop study.

In Chapter 3, ***Research design and methodology***, the research approach/design including the method was discussed in depth. A brief on the subsequent data gathering and analysis is provided in the chapter. This chapter includes the processes that were involved in the execution of all the different phases of the study relating to highlighting skills, knowledge and competences of MA practitioners in the South African context.

In Chapter 4, ***Results and interpretation of findings of section A, B and C of the semi-structured questionnaire***, presents a report on the results, discusses analysis of the data from the semi-structured questionnaires and the interpretations thereof.

In Chapter 5, ***Results, interpretation and discussion of findings of Section D of the semi-structured questionnaire***, presents a report on the results, discusses analysis of the data from the semi-structured questionnaires and the interpretations thereof.

In Chapter 6, ***A stratified competency-based learning programme for medical aesthetics in the South African context***, presents the final outcome and contribution of the study. This chapter provides a comprehensive discussion of the proposed stratified competency-based learning programme for MA in the South African context.

In Chapter 7, ***Conclusion, recommendations and limitations***, the formal conclusions, recommendations and limitations of the study are conferred.

1.11 CONCLUSIVE SUMMARY

This first chapter provided an orientation to the study, background to the problem, problem statement, scope, and overall goal and discussed the aim together with a brief introduction to the research design and research methods. The chapter concluded by providing an outline of the thesis and the chapters to follow.

In the following chapter (Chapter 2), titled, ***Stratifying medical aesthetics education***, the theoretical orientation and framework; analysis and critical comparison of the literature related to MA are discussed, including contextualising and conceptualising the study.

CHAPTER 2

STRATIFYING MEDICAL AESTHETICS EDUCATION

2.1 INTRODUCTION

The growth of patient and patient recognition has caused an expansion of scientific and treatment development, and has led to the launch of MA as a subfield with a distinct pool of knowledge as far as the treatments and products are concerned and a measure of practical competence. This subfield is no longer restricted to dermatology and plastic surgery, since various other professionals (cf. 1.1-b) offer MA treatment interventions in order to sufficiently meet their patients' aesthetic requirements. The American Academy of Anti-Aging Medicine (AAAM) (AAAM:online), acknowledges the necessity of instituting standards of practice in MA. In 2008, the AAAM launched the aesthetic Anti-Aging Fellowship, which is a seven-part, hands on and informative scientific series of training and accreditation courses. The necessity of instituting paramount standards in MA can be achieved by developing a stratified, competency-based learning programme for practitioners of MA in the South African context -- this type of programme does not currently exist.

Stratification refers to gradation in which classifications can be distinguished unmistakably and by which education institutions define their curricula. In an educational context stratification often refers to differences among institutions. In a stratified system, the programme offerings are stratified on the bases of diverse points of access to opportunities to obtain supplementary and additional cutting-edge education. Therefore, this term refers equally to the kinds of courses offered and their associations to forthcoming opportunities (Kerckhoff, Ezell & Brown 2002:99). In this study, stratification of education refers to stratifying the programme to suit the various professionals (cf. 1.1) involved in MA in SA, especially in relation to their competencies in MA.

In this chapter, MA and education in MA is contextualised and conceptualised from both international and South African contexts by employing a desktop study and identifying relevant literature and components of MA. This chapter presents an overview of MA, MA in SA and the education aspect thereof, MA internationally and the education thereof; stratification in education, competency-based education, developing a learning programme, programme accreditation and curriculum development. Figure 2.1 below provides a

diagrammatic overview of the various facets and aspects that will be described in this chapter.

2.2 AN OVERVIEW OF THE VARIOUS ASPECTS THAT WILL BE DISCUSSED IN THIS CHAPTER

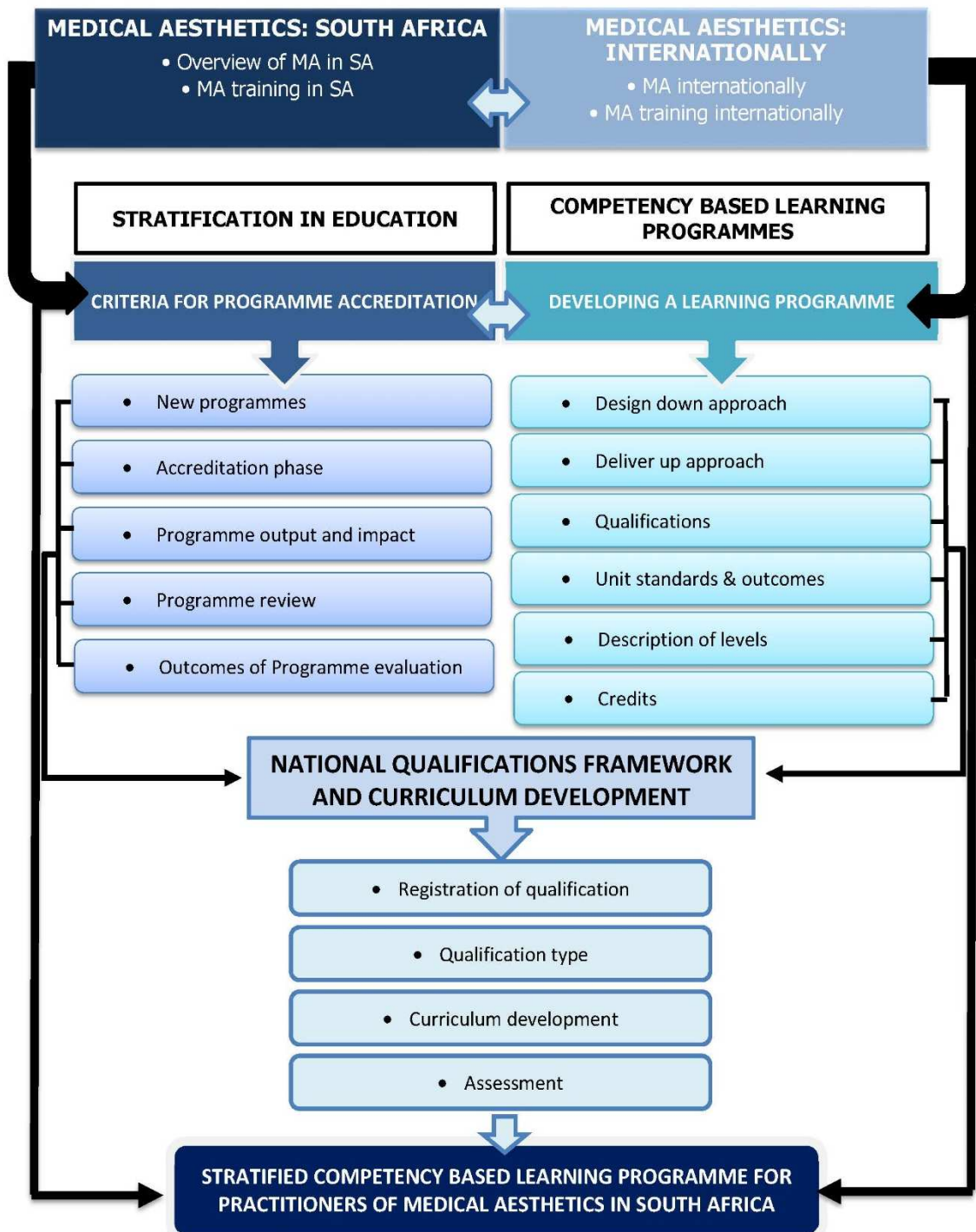


FIGURE 2.1: DIAGRAMMATIC OVERVIEW OF THE VARIOUS FACETS AND ASPECTS THAT WILL BE DISCUSSED IN THIS CHAPTER (COMPILED BY THE RESEARCHER, KHUMALO 2014)

2.3 OVERVIEW OF MEDICAL AESTHETICS

The notion and practice of MA was introduced by a nurse-aesthetician and facial aesthetics instructor around 1980. This pioneer, Anna D. Rinehart, was a CIDESCO diplomat who realised that the evolving nature of aesthetics and medicine had to consider women's concerns about overall aging and appearance further than beauty treatments and scalpels. Rinehart is a recognised and validated inventor and developer of MA procedures, treatments and techniques that do not require expensive laser treatments or surgery. After many years of study, clinical practice and documentation, she authored a number of books describing the foundation and practice of MA before any medical society or physician managed to do so (Medical Aesthetics FACE Conference 2008:online). Rinehart initially anticipated resistance from other professionals within the medical field, not necessarily because the procedures and concepts she suggested for clinically caring for the skin were imperfect, but rather due to the fact that she was a leader in the field.

MA has since developed into a specialised method of cutting-edge clinical skincare management. MA allows women and men to make choices regarding the way in which they deal with different skin conditions, while avoiding the use of costly lasers, surgeries, medications and possibly toxic injections. In instances that involve medical challenges, such as plastic surgery, trauma and burn recovery, MA interventions can be used for palliative or preventative reasons as well as for cosmetic purposes (Medical Aesthetics FACE Conference 2008:online).

Medical aesthetics basically involves the following categories of treatment interventions (amongst others):

- Injectables;
- Lasers;
- Peeling agents;
- Photodynamic therapy; and
- Non- to minimally invasive suturing or cutting.

(Ahmad, Eaves, Rohrich & Kenkel 2011:214)

2.4 MEDICAL AESTHETICS IN SOUTH AFRICA

According to Carruthers, Kane, Flynn, Huang, Kim, Solish and Kaeuper (2013:493), South Africans have actively joined the universal anti-aging trend, which involves an increasing

number of individuals choosing non-invasive aesthetic procedures, such as lip plumpers and wrinkle smoothers, to combat the effects of aging.

Compared to approximately 20 years ago, there are currently a greater number of options for people who are not satisfied with their appearances. An increasing proportion of the people who are not happy with their appearances are choosing to use minimally invasive techniques to address this dissatisfaction (Chou, Wang & Khan 2009:359). SA's MA industry is mainly driven by the middle class (even in the current economic state, statistics indicate a growing use of MA services by the general public), and the growing demand for subtler (i.e. less artificial) techniques for combating the signs of aging. MA has become much more main-stream than it was in SA approximately 10 years ago (Chou, Wang & Khan 2009:357). There has certainly been a significant rise in non-surgical or minimally invasive procedures being undertaken (Green, Aagaard, Caverzagie, Chick, Holmboe, Kane & Lobst 2009:5) (the study was conducted in the USA, used in the absence of similar studies in). The results of the various treatment interventions are seen to be meeting patients' needs, which has additionally contributed to product development and increased skill among practitioners of MA.

Mizuno (2013:132) suggests the possibility of other countries, such as SA shadows international trends, with the majority of non-invasive cosmetic techniques being pursued by women. This is so in SA with approximately 2% of the South African market comprising of male patients, however, this division is shifting as more men are becoming concerned about their appearances and seek to increase their confidence levels by means of MA procedures and treatments.

2.4.1 Medical aesthetic training in SA

There is only one registered programme for MA in SA, which is currently registered with SAQA as an advanced diploma in aesthetic medicine, at NQF level 7 – SAQA qualification identification is 90571 (SAQA 2015:online) (cf. 1.3). This programme is endorsed by AAMSSA, and it is aimed at equipping qualified medical doctors with systematic understanding of modern thinking in MA. The programme ensures the integration of theory and practice, which makes it particularly suitable for continuing professional development. However, this advanced diploma excludes other professionals; professionals such as nurses, beauty therapists and somatologists are unable to register for this particular programme, even though these professionals also work in the field of MA (SAQA 2015:online). There is

therefore a need for an inclusive, stratified, competency-based learning programme for practitioners of MA in SA due to the non-existence of such a programme in a SA (context) where there are other professionals offering MA to patients; it therefore is important to provide or have official training inclusive of the other professions within the field (cf. 1.1).

Product houses do, however, offer a number of short courses for certain aspects of MA. However, such short courses are usually specific to one treatment technology, particular products and industry-driven content passed down in the field of MA (AESMEDSA 2014:online). This shortcoming highlights the need for a stratified, competency-based programme for practitioners of MA in SA, one that is inclusive of the various professionals involved in the practice of MA.

The wide variety of devices invented to deal with the effects of aging on the skin have revolutionised the beauty industry, not only in SA, but worldwide. There is currently a challenge in that there are insufficient standardised and formal training programmes for equipment such as cosmetic lasers. There is therefore a need for programmes that educate MA practitioners about the safe use and application of the various devices used in MA in SA. There are few rules and regulations relating to the use of some devices used in MA; this is possibly a repercussion of the significant and high risk of patient injury (as explained in Chapter 1). In addition, standards for MA education in SA are lacking. The current situation is that anyone can purchase a laser machine and begin treating patients after receiving a brief equipment demonstration from the laser manufacturer -- the practitioner is not required to possess extensive knowledge of anatomy and physiology (personal experience).

The development and implementation of a stratified, competency-based learning programme for MA in SA may lead to a safer environment for patients; and a higher level of professionalism among practitioners of MA in SA, as a result of improved training of the various MA practitioners (cf. 1.2.5). The next section of this chapter reviews MA on an international level in order to highlight the need for such a programme in SA. It is clear that, where MA is concerned, some other countries are more advanced and regulated.

2.5 MEDICAL AESTHETICS IN THE INTERNATIONAL CONTEXT

The American Society of Aesthetic Plastic Surgery (ASAP), statistics by Press centre (2015:online) reports that MA is far more used and popular in countries such as the USA than in SA. Literature (Press centre 2014:online) indicates that Americans spent over \$12

billion on cosmetic procedures in 2012 as opposed to \$8 billion in 2011; indicating the rapid growth of MA in the USA. MA treatments and procedures are typically carried out in medical spas or in doctors' rooms; however, they can be performed in dermatology clinics, healthcare facilities or even in cosmetic laser clinics. Over the past decade, procedures and treatments in MA have generated an incredible income, which has resulted in the creation of job opportunities. The following statistics validate the growth of the industry in the USA:

- ASAP reports that approximately 11 million non-surgical cosmetic procedures were done in 2015.
- Non-invasive cosmetic procedures and treatments made up 83% of all cosmetic procedures in 2015.
- Since 1997, non-invasive cosmetic treatments, such as Botulinum toxin, laser hair removal, and dermal fillers, have increased.
- In 2015 women accounted for users of more than 8 million non-invasive cosmetic procedures – 90.8% of the total – while men had just fewer than 1 million non-invasive cosmetic procedures done, 9.2% of the total.
- In 2015, Americans spent 12% more on both non-invasive cosmetic procedures and surgical cosmetic treatments than the year 2012, which (2013) exceeded the \$12 billion mark for the first time since 2008.

(ASAPS 2015:online)

ASAPS was established in 1967, at a time when cosmetic surgery was beginning to be acknowledged as the significant subfield that it is today. Membership of the ASAPS is limited to physicians certified with the American Board of Plastic Surgery and who comply with a minimum number of surgical procedures performed. ASAPS is committed to a noteworthy amount of on-going medical education. However, other healthcare professionals not registered with ASAP are permitted to provide and perform MA treatments and procedures. Therefore, non-invasive and surgical techniques are carried out by a variety of professionals (ASAPS 2015:online). Figure 2.2 indicates the increase in surgical and non-surgical procedures from the 1997 to the year 2015.

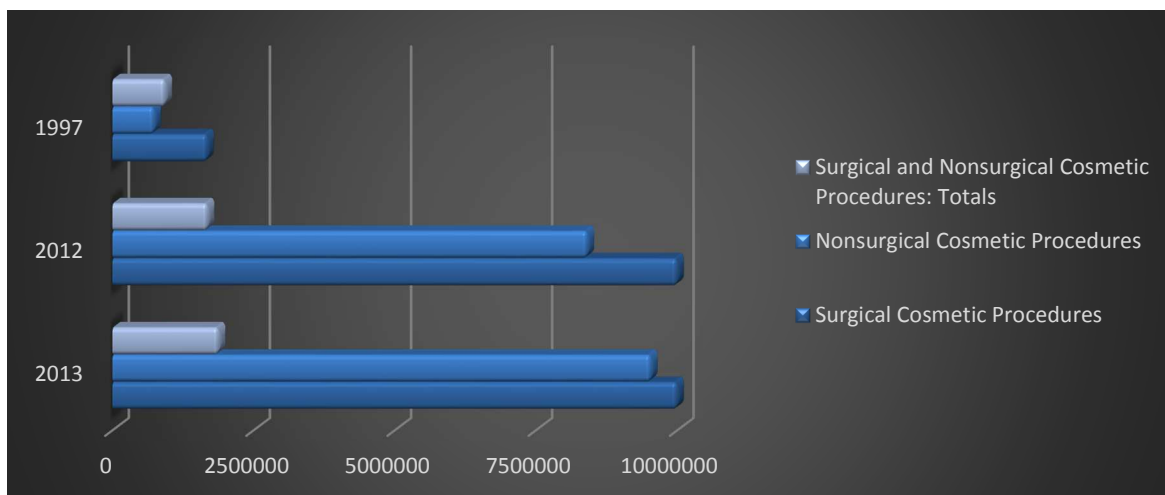


FIGURE 2.2: INCREASE IN SURGICAL AND NON-SURGICAL PROCEDURES (ASAP 2014:ONLINE)

There are numerous reasons why physicians, nurses and other medical professionals wish to enter the MA industry and to learn how to perform treatments such as cosmetic dermal fillers and Botulinum toxin. Among the reasons is the fact that a significant increase in income can be generated in a very short period of time in MA. Furthermore, MA is an exciting business to be involved in (Russell, Kaplan, Ferraro & Michelow 2010:239e).

In Singapore, MA practice is not regarded as a speciality or subspecialty, therefore all registered medical practitioners need to adhere to SMC and Ethical Code and Ethical Guidelines, including Section 64 and 65 of the Medical Registration Act when displaying or using any qualification, title or designation for publicity purposes. This means that it is unacceptable in Singapore to use titles such as aesthetic plastic surgeon, 'aesthetic dermatologist' or 'aesthetic physicians' MA practice in Singapore is regulated based on guidelines developed by CFPS and AMS, the guidelines refer to ma practice for doctors (Chou, Wang & Khan 2009:359). MA practice is regulated and guided in various countries differently, it would therefore, be beneficial for SA to move towards the same direction in pursuit to match international standards as far as MA practice is concerned.

In the emerging markets, the focus has been on the BRIC countries. Brazil has held its place as a strong market for medical aesthetics interventions and the origin of numerous new developments in the MA; while Russia is overtaking some of the major players in the EU in the growing arena of anti-ageing, particularly with devices and topical treatments.

Although the North American market has been projected to represent 45% of the MA global market, the leading position has shifted towards Asia especially in the energy based devices segment of MA. Asia is widely anticipated and considered to be the next frontier and the number of physicians and clinics in China and India have been steadily rising, along with medical tourism in the region. In the categories of injectables and devices, the EU ranks second behind the US.

The injectables market, comprising wrinkle relaxing agents and wrinkle fillers, is considered to be a more developed market with many small players and a handful of global giants such as Allergan, Galderma and Merz. Permanent fillers are more accepted in Asia than in the EU and US (Cosmeticbusiness:online).

Whereas in New Zealand (NZ), medical aesthetics is regulated as a result of the development of best "standards" of practice, the New Zealand Society of Cosmetic Medicine (NZSCM) has developed a rigorous Training Program for aspirant medical aestheticians as well as an audit programme for their recertification and on-going medical education. The training is offered over a period of 2 years and is delivered with the intention to accommodate those in practice (either medical or cosmetic practices). The training is hugely practical and allows graduates to acquire advanced practical experience. The training is provided by NZ's leading practitioners who keep at the forefront of new techniques. The culture of their course is very collegial (NZSCM:online).

2.5.1 Medical aesthetic education: International situation

MA training in the USA is formalised and includes courses and opportunities for individuals not involved in medicine as a discipline, such as aestheticians and cosmetologists, to enter the field of MA. The opportunity in the USA to train and study to be a PA is very popular and is becoming even more popular, and this results in the expansion of the important role of the PA. As more doctors are offering various cosmetic treatments in their practices, more opportunities arise for PAs to perform treatments and procedures such as Botulinum toxin and dermal fillers. Continued medical training is a vital part of a PA programme. The existing cutting-edge medical aesthetic procedures and treatments make PAs more important, marketable and valuable in MA, because doctors are generally very busy (Physician Assistant Site 2015:online).

A variety of MA courses are offered in the USA, according to the National Laser Institute (NLI online:nd). The National Laser Institute offers a 12-day intensive PA programme that involves teaching, learning and training for using cosmetic lasers and injectable treatments for MA procedures and treatments such as Botulinum toxin, dermal fillers, radiofrequency skin tightening and sclerotherapy. Part of this programme involves classroom training, where students learn from industry experts. The programme's learning objectives include information on laser safety, the Fitzpatrick scale, biophysics and other aspects of MA. The second part of the course involves clinical, hands-on training at a retail medical spa, where students gain hands-on training and experience with state-of-the-art equipment by practising the different techniques on patients. Once the programme has been completed, the PAs are able to perform MA treatments and procedures on their own.

This differs from the South African context, where only general practitioners, dermatologists and plastic surgeons can work independently, and somatologists, beauty therapists and nurses are required to work under the supervision of a medical professional, regardless of the minimum regulatory mechanisms and unclear scopes of practice for the MA industry applicable to the different professionals involved (cf. 1.4.3-b).

Another course offered in the USA is a two-day, accredited, intensive training for professionals in the health sector. This programme include training in procedures such as Botulinum toxin, Abobotulinumtoxin A/Botulinum toxin type A and dermal fillers, and is offered by the National Laser Institute (National Laser Institute online:nd).

Various institutions offer qualifications to enable aestheticians (somatologists) and cosmetologists to study and qualify as medical aestheticians, among which the following:

Dallas Centre for Advanced MA

This institution offers an advanced clinical MA certification programme, which is intended to integrate conventional aesthetics with paramedical knowledge. The programme is aimed at training aestheticians, nurses and other health and medical professionals in advanced skincare skills and techniques. This course offers a variety of professional advanced clinical aesthetic skills combined with medical knowledge. Completion of the programme results in a qualification as a medical aesthetician and certifies the successful candidate to practice as a medical aesthetician (Dallas Medical Aesthetics:online).

MA Face, Clinical Skincare Programme

This programme/course offers a range of educational opportunities aimed specifically at qualified aestheticians and nurses wishing to work in collaboration with medical practitioners in the MA field. Clinical aestheticians are licensed to perform non-invasive facial aesthetic procedures. The programme curriculum includes the following: Skin assessments, skin analysis, patient consultation, carrying out follow-up treatments, establishment of communication channels between physicians and patients, delivery of skincare treatments (facials, extractions, chemical peels, microdermabrasion, chemibrassion, stretch-mark reduction, tattoo reversal techniques and electrolysis) (Medicalaesthetics 2008:online).

The Gray Clay College in Medical Education

The Australasian Academy of Cosmetic Dermal Science (situated in Queensland), offers a variety of government-accredited qualifications; it offers a professional graduate certificate in dermal therapies, which was developed for candidates with an aesthetic background. The objective of the course is to provide students with knowledge and hands-on skills to meet the employment requirements of MA clinics (Gray Clay Medical Aesthetic Education 2016:online).

In Brazil, the Complutense University of Madrid offers a masters course in Aesthetic & Anti-Aging Medicine; the course is internationally recognised postgraduate qualification which has been in existence for over nine years. The qualification involves 600 teaching hours. The teaching programme covering techniques and procedures of aesthetic medicine such as Botulinum Toxin A & skin fillers, Mesotherapy, Aesthetic Phlebolympology, Rhinoplasty, Chemical peels, Sustentation threads, body contouring and treatment of cellulite, nutrition, laser and Intense pulse light, various other techniques and procedures (ucm: reference-online). Interesting to note that according to Watts (2014:online) and International Society of Aesthetic Plastic Surgery (2014:online).

Brazil has overtaken the USA as the world leader for cosmetic operations. With less than 3% of the world's population, Brazil accounted for 12.9% of the cosmetic operations performed in 2014.

In the next section, a definition of stratification is provided, and various aspects of the stratification of education are discussed.

2.6 STRATIFICATION IN EDUCATION

Stratification is generally defined as the comparative societal position of people in a specified category, social group, and geographical area or other units. In current Western civilizations, stratification is often divided broadly into three core separations of societal class: lower, middle and upper class. It can also be defined as a system or development of classes or layers. Stratification is generally used to designate a specific way of positioning different things (Tombaugh 2004:203). For the purpose of this study, stratification will be used to classify and arrange educational content for the different professionals involved in MA in SA.

Stratification also exists in different forms within the education system. Some systems in schools group students within the schools they attend. The reasoning behind stratification is to meet the students' needs better by providing a more homogenous educational atmosphere and facilitating instructions.

Miller, Scott, Issenberg, Petrusa, Brotons, Gordon, McGachie and Gordon (2006:239) suggest that healthcare providers seek to improve their approaches to meet patient needs, thereby making evidence-based learning imperative. In the framework of evidence-based medicine, treatment efficiency is increased by a combination of pragmatic research findings, clinical proficiency, and patient principles. This is true and applicable in the MA field too, especially because the field is currently not regulated in SA, resulting in cases of malpractice after MA treatments and procedures.

In spite of most education being based on differentiation by means of Full Scale Intelligence Quotient (FSIQ), it is suggested that a programme for MA is stratified on the basis of educational content. Education and training based on stratification can potentially recognisable results for patients and patients, and results in better treatment performance.

Stratification-based education eliminates the undesirable outcomes of treatments applied incorrectly due to a lack of sufficient education. Miller *et al.* (2006:239) and Scott, Hacker, Averbach, Modest, Cornish, Spencer, Murphy and Parmar (2014:773-78) stratified their participants and emphasise the importance of stratifying (in their studies) by race/ethnicity,

gender, age, educational level, as well as geographical area. Both studies stratified respondents chiefly according to education since that was the reason for the study. Therefore the importance of stratification in these studies has supported the need for stratifying the respondents to this study according to their professions; hence the need to collect data on the different professions in MA.

Stratified education, that is, stratifying the educational content for the various professionals who are involved in MA, is an important aspect to consider for MA education and training. Miller *et al.* (2006:239) makes it clear in his study that education is important for delivering the best treatments for patients or patients. Education can potentially empower each of the professionals positively by advancing their knowledge of various aspects of MA, because most of the professionals either have or lack at least one aspect (e.g. treatments, skincare, clinical knowledge etc.) of MA.

Stratification has become prominent in research, as more and more studies are based on stratifying data and respondents. Tombaugh conducted a study on normative data for a trial making test, and the data that was collected was stratified for age and education (Miller *et al.* 2006:239). A similar study by Brown, Vassar, Connor and Vickrey (2013:243) stratified health professionals according to the education they had that enabled them to be able to do collaborative work and manage patients diagnosed with dementia. The study was conducted to empower caregivers who worked with patients who have dementia and assist them to increase results by learning to collaborate with other health professions, for the good of the patient/patients. Collaboration is also applicable in MA.

Stratifying respondents and data is important for improving many different professionals and industries. A study conducted among school leaders in Mpumalanga, stratified participants according to education (Bush & Glover 2014:553). Another study, on social inequality and the transition to upper secondary school in Germany (Schneider & Tieben 2011:139), suggests that stratification in research is used often, is beneficial for improving certain aspects of a study, and is effective in highlighting certain difficulties, in order to effect improvement.

Existing studies that have used stratification highlight the value valuable tool in education, as confirmed by McNair, Duree and Ebbers (2011:12) in their study on external influences on health professionals. A study titled, "Stratification in Higher Education, Choice and Social Inequalities in Greece", suggests that higher education has extended to an extraordinary

degree in numerous countries in recent times. The growth of stratified education has led to great heights and contribution in the education sector. The study showed that, with expansion of new university departments, and a rise in the number of university applicants in Greece, a stratified structure of higher education has emerged (Sianou-Kyrgiou 2010:22).

Mathuranath, Cherian, Mathew, George, Alexander, Sankara and Sarma (2007:106) conclude that education has the most potent effect on performance, both on the cognitive examination and mini-mental-state examination to which Indian cohort was subjected. It is therefore important to direct a great deal of attention and dedication towards stratifying MA education in SA by offering a formal, stratified, competency-based learning programme for MA in SA.

2.7 COMPETENCY-BASED EDUCATION

In recent times competency-based education has developed into a burning subject in higher education. It has become progressively more popular as some teachers in the USA search for methods to advance institution affordability and more accurate measures of student learning. Numerous institutions claim to practice competency-based education and they attach many meanings to the model. It is therefore important to describe what competency-based education is and the manner in which it can benefit higher education (Klein-Collins & Hain 2009:187). This section therefore explores the values of competency-based education and seeks to form an understanding of the applicability of competency-based education being appropriate in developing a competency-based learning programme in MA; and illustrating the researchers understanding of this approach as well as the reasoning for the choice of a competency-based learning programme.

2.7.1 Defining competency-based education

Bowden and Masters (1993:13) refer to competency-based education as an approach for learning and teaching that is used more regularly for learning solid skills than for non-concrete learning. They note that competency-based learning is different from other methods in that, in competency-based learning, learning is based on the required skills within a particular field. Rather than a course or module, all distinct skills are known as competencies. In competency-based courses students acquire one skill at a time, and a skill is usually a component of a larger outcome. Once the student has mastered one competency, then a more complex competency is taught to the student to a degree of

mastery. Another interesting point relating to competency-based education is that students can skip learning modules completely if the student can demonstrate mastery; this can be achieved through preceding formative testing or learning assessments (Ganzglass, Bird & Prince 2011:22). The above principles were considered and applied in developing the stratified, competency-based learning programme for MA in SA.

2.7.2 Significance of competency-based education

Competency-based education is important, according to Klein-Collins and Hain (2009:187); the greatest significant characteristic of competency-based education is the fact that it grades learning over time. It is based on the belief that students' developments demonstrate their competence, which then proves that they can master the skills and knowledge (called competencies) necessary for a specific course, irrespective of how long it takes; it would therefore be valuable in the context of MA as the field is skills based. While more old-fashioned models can and often do grade competency, they are time centred, meaning that learning is offered over a fixed, predetermined period, after which the students can progress after they have put in the lecture (practical and theory) time. For example, students can progress even if the student has completed the coursework and passed the final exam in half the time. While many universities and colleges hold time requirements constant and let the learning aspect vary; competency-based education permits constant learning at different times; which would be valuable in the context of MA as it requires practical application and practice; and so will allow students to progress to a point of achieving all competencies without placing too much emphasis on the time factor, but rather the skills students attain (Klein-Collins & Hain 2009:188).

Tsugihashi, Kakudate, Yokoyama, Yamamoto, Mishina, Fukumori, Nakamura, Takegami, Ohno, Wakita, Watanabe, Yamaguchi and Fukuhara (2013:250) developed internet-based combined learning courses that enable busy healthcare providers to obtain core competencies in clinical research. They found that many healthcare professionals did not have the core clinical competencies, and this programme enabled many healthcare professionals to obtain the essential competencies effectively, irrespective of their professions. It is evident from these authors' findings that a competency-based learning programme for practitioners of MA in SA would ensure that all practitioners of MA are equipped with the competencies that they lack, because the competencies had not formed part of the training for their specific qualifications.

A competency-based education approach also permits students to progress on the basis of their capability to master skills or competencies at their individual speed, irrespective of the environment. This approach is designed to achieve different learning capabilities and could result in additional effective student outcomes (Ganzglass *et al.* 2011:24; Sullivan & Downey 2015:3). This sort of approach is formed upon standard reforms and offers a novel value proposition for South African education structures. A competency-based strategy is generally seen as simple flexibility in granting credits; it can also be viewed as a substitute to the Carnegie unit (120 hours of class or contact time with educator over the course of the year). Nevertheless, this does not capture the complexity of converting the education system from a time-based system to a competency-based learning-based system (Burke & Hoelter 1988:29).

Competency-based programmes can be utilised for all age groups, from basic education to higher education, centring the attention of students, teachers, parents and the larger community on students achieving measurable learning topics. Much of the focus in competency-based education is stimulated by technological advances, which open up new possibilities for learning (Frost, Strom, Downey, Schultz & Holland 2010:38). Most virtual schools are fixed in a time-based structure of learning; especially since funding is still dependent on seat-time (contact time). Without a competency-based policy structure, it is impossible to gain the full benefit of online training. Competency-based methodologies also hold potential for districts exploring innovative ways to enlarge and enrich support to students, challenging the supposition that learning takes place only in the schoolroom setting (Sullivan & Downey 2015:43).

Competency-based education is an improved model that is suited to all students, because it enables them to learn and study at their own individual speed, it is ideal for adults with college qualifications. This type of education affords adults the opportunity to finish a degree, which results in improved job execution, higher earning prospects and an improved life (Sturgis & Smith 2010:66; Sullivan & Downey 2015:4). This benefit also offers another reason for designing a competency-based programme for MA in SA, as many of the professionals are adults and are working.

Finney (2012:59) suggests that it is important to consider that adult students enter the higher education environment possessing knowledge of a variety of topics, and that they are capable of learning at various rates. Competency-based learning gives recognition to this authenticity and matches education to the student. As opposed to a one-size-fits-all

method, it actually enables adults to return to higher education with the intention of applying what they have learned through formal education, life and work experience. These adults are able to progress rapidly through the knowledge they already know and concentrate on aspects they still need to study. For many, this means that they can speed up their progress towards a higher degree or qualification, while saving both money and time. Effective implementation of competency-based education can promote consistency and quality and reduce costs; condense the time required to graduate, and afford the true grading of student learning (Sullivan & Downey 2015:43). This will be important to consider when developing a stratified, competency-based programme for MA in SA, as many professionals who enter the programme will already possess knowledge of some aspects of MA.

2.7.3 Principles of competency-based education

There are a number of aspects that are taken into consideration when dealing with competency-based education:

- Measuring learning of the students rather than the time they take to learn (Finney 2012:59); since MA is a skill based field, competency-based education is a suitable approach to MA education.
- Maximising the power of technology for learning and teaching. Computer-arbitrated education offers the possibility of customising learning for each student, because each student learns at a different pace and likely to possess knowledge of a variety of topics. It is an important requisite of competency-based education to utilise technology (Finney 2012:59). Taking into consideration that MA is a fast growing industry, this principle is then valuable to apply in MA as it is notably a field which is technology driven.
- Changing the role of teachers fundamentally, from offering planned lessons for an arranged number of weeks, during which teaching and learning takes place at the lecturer's pace, to working with students, facilitating learning; leading discussions, answering questions, helping students synthesise and apply knowledge. For most students the lecture's pace is not necessarily the correct pace for them. Some require a slower pace, and others might be able to progress at a much faster speed. Competency-based learning modifies the role of the lecturer from that of "a sage on the stage" to a "guide on the side" (Finney 2012:59); this is therefore noted as vital for the MA field of study.

- Defining the competencies and improving reliable and valid assessments. An important principle of competency-based education is that it be made clear what the students are expected to know and do. Students can therefore only graduate once they have displayed their competency. This means that the competencies need to be clearly set out. Acquiring industry contribution is vital to ensure that the pertinent competencies are identified. When the competencies are established, specialists in assessment are needed to certify that the correct aspects are being measured (Finney 2012:59); this principle is valuable since MA is a field of study that requires particular attention to skills or competencies.

Since there is a continuing growth in the MA industry, there is a rising appreciation of the significance of an educated labour force. A key obstacle to education is determining how to make people, specifically adults, thrive in higher education and encourage them to acquire qualifications appropriate for MA. Promoting completion of a qualification is not the only challenge. Currently, the higher education system faces a predicament concerning its apparent quality, especially regarding the MA industry. One way to address this concern related to quality is a competency-based learning programme, in which expected competencies are clearly defined, as early as the programme design stages (Bird, Mendenhall, Stevens & Oddou 2010:812; Sullivan & Downey 2015:43).

2.7.4 Competency-based education in higher education

The benefits of a competency-based approach have been recognised by policy creators and influencers in higher education. Although competency-based education is valuable, the measures instituted to ensure that rules and regulations support it, are inadequate. For instance, financial assistance guidelines are normally centred on seat-time, with accreditation requirements being focussed on analyses of course materials, teachers, and time measures as opposed to what students have learnt (Klein-Collins & Hain 2009:187).

The stratified competency-based programme offers a chance for higher education institutions to give a significantly different curriculum to that of the old-fashioned course-based model. Considering the number of institutions worldwide that are focused on student competencies, one can acknowledge that several institutions use extraordinarily different models of tuition or qualification achievement. These institutions have made notable strides away from the old-fashioned seat-time-centred course models (Klein-Collins & Hain 2009:187).

For instance, Westminster College (Utah) restructured its business degree programme into a series of competency-based ventures for students to achieve. South New Hampshire University carried out an in-depth scrutiny of its existing business administration programme, and realised that restructuring the curriculum into specifically designed modules would probably provide better training and strengthen students' essential competencies; while potentially eradicating the necessity for a full year of study. This restructuring led to an advanced, competency-based 3-year Bachelor's degree that saves students money and time. Western Governors University (Utah and national) and DePaul's School for new learning (Illinois) take a new approach, allowing students to advance towards a qualification by demonstrating competencies attained through courses of independent study. Likewise, Excelsior College's School of Nursing (New York) provides an example of a specialised institution that enables students to qualify on basis of their competencies (Klein-Collins & Hain 2009:187).

The development and implementation of a stratified competency-based learning programme requires learning (by institutions not implementing it) from the experiences of universities and colleges that are pioneers of the competency-based approach discussed above. The literature explored in this section suggests that the following lessons and suggestions are vital for implementing competency-based approaches:

- **Ensuring strong vision and leadership.** A resilient leader is vital for constructing an institutional culture that is open to transformation.
- **Developing a reliable system of assessments.** Certain forms of assessment are vital for ensuring the value and quality of the qualification as well as the success of a competency-structured qualification.
- **Rethinking the old-fashioned models for enrolment and courses.** An emphasis on competencies can necessitate novel or extended roles for teachers and can necessitate new ways of designing learning activities and courses (Klein-Collins & Hain 2009:187).

According to Klein-Collins and Hain (2009:187) Excelsior College's nursing programme has offered students an effective, competency-based method of learning for approximately four decades. The curriculum is in line with recognised standards for associate qualification programmes set by administrations like the National League for Nursing and National Council of State Boards of Nursing. A competency-based programme is designed for individuals who are entering the profession of nursing with substantial experience in

clinically oriented healthcare disciplines; similarly to the stratified competency-based learning programme presented in Chapter 6.

Excelsior College encourages students to apply their knowledge and practical clinical skills by developing students' prior clinical experience; and then require students to develop previous knowledge further by engaging with the curriculum – this will apply to the stratified, competency-based MA programme developed in this study. Students complete the overall educational section of the curriculum in a way that all nursing students do, through online courses, campus based, or through credit-by-examination. Further, students engage in the nursing section of the curriculum by successfully demonstrating accomplishment of learning outcomes (Birchard 2013:569e).

The objective for institutions implementing competency-based education is to enable students to accomplish both clinical competence and theoretical learning, together with critical thinking at a level necessary for practicing as a nurse. Students demonstrate learning outcomes through their performance on a sequence of computer-delivered nursing theory assessments; and through in-person clinical performance evaluations in simulation labs (Birchard 2013:569e). The above information forms the basis for which the stratified competency-based MA programme for SA will be developed.

Similarly, a new era has dawned in Canadian medical education. It is changing, from a predominantly time-based learning structure, to a competency-based structure. The competency-based system was phased in gradually, with a few residency specialties assessing the approach as part of a pilot programme. The competency-based approach is utilised for a wide range of medical education, as well as residency education (Cooke, Irby, Sullivan & Ludmerer 2006:1339). Medical schools in Canada are committed to making this change to their degrees in medicine. In order for the medical schools to be accredited, they must show that their curricula will yield competent students who possess certain skills by the time they graduate. This requirement emphasises that competency-based education is important and should shape an education system. It also means that competencies are at the forefront, and from a pedagogical position this makes sense (Birchard 2013:569e).

Furthermore, a case study conducted by Matsumoto and Hoogenes (2012:819), suggests that it is important to scrutinize the implementation of a competency-based learning programme and self-assessment, in order to ensure that the quality of the programme is of good quality. Therefore their (Matsumoto & Hoogenes 2012:819) case study provides

and can serve as foundational framework for further research in competency-based learning and assessment (Singer, Gray & Miehl 2012:451).

2.8 DEVELOPING A LEARNING PROGRAMME

Developing a learning programme requires adherence to guidelines set out by education authorities, in the context of the stratified competency-based learning programme, the SAQA short learning programme guidelines will be applied as discussed in the proceeding sections and as alluded in (cf. 6.2). This section explores the guidelines and requirements for developing a short learning programme according to SAQA guidelines; therefore this section explores and discussed the various aspects considered in developing a stratified competency-based learning programme in MA in SA. Prior to discussing the various aspects in developing a learning programme, it is valuable to note and understand the difference between a learning programme and a curriculum, as they are closely associated, and generally, the two terms are used interchangeably. These terms are discussed below with reference to SAQA publications.

2.8.1 Curriculum versus Learning programme

SAQA provides an extensive interpretation of the term "curriculum", describing curriculum as being more than just a syllabus. According to SAQA, curriculum refers to learning and teaching opportunities taking place in learning institutions, including:

- The values and purpose of learning;
- Learning outcomes;
- Methods, activities, content and media;
- Learning and teaching strategies;
- Methods of assessment; and
- Evaluations of delivery, moderation.

(SAQA 2014:online)

To summarise the above, a curriculum deals with the following aspects:

- Setting standards;
- Developing learning programmes;
- The delivery, including assessment; and
- Quality assurance of the assessment process.

On the other hand, SAQA describes a learning programme as successive learning activities connected with curriculum implementation, resulting in the achievement of particular qualifications (SAQA 2014:online). Therefore, a learning programme is a plan for getting the student to achieve specified outcomes set out in the curriculum. A learning programme comprises of assessment activities and learning based on the outcomes of the qualification; the assessment activities and learning outcomes are designed by the provider, based on sound educational principles (for instance, student-centeredness).

A **learning programme** can be further described as the *when, what, and the how* of implementing teaching and learning. It relates mostly to the activities that take place in the lecture room: the assessments, learning/teaching and activities associated with achieving specific outcomes. It is therefore the academic institution's responsibility to structure challenging, innovative learning and assessment experiences for students (as applied to the stratified competency-based learning programme for MA (cf. 6.2); and it is the responsibility of the Education and Training Quality Assurance (ETQA) body to determine if students have been offered fair opportunities to attain the outcomes, by monitoring the learning programme and quality assuring the learning achievements through methods such as moderation (cf. 6.2.7). The illustration in Figure 2.3 summarises the various components of a learning programme (SAQA 2014:online).

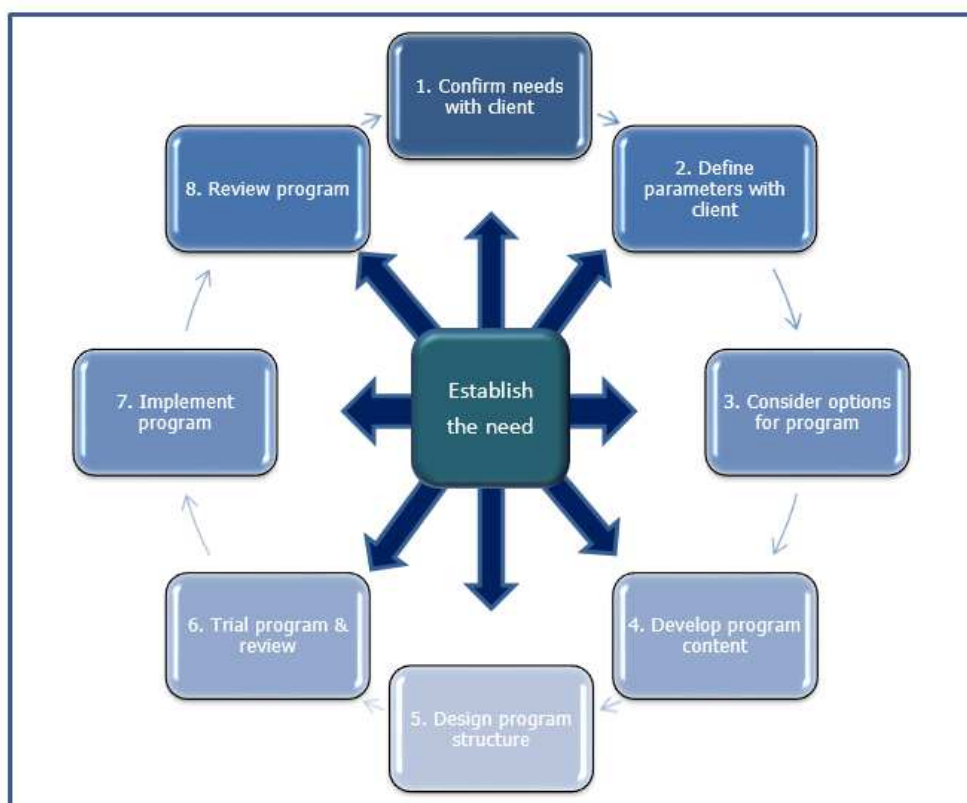


FIGURE 2.3: COMPONENTS OF DEVELOPING LEARNING PROGRAMMES (SAQA 2014:ONLINE)

Next is a discussion of a systematic way of designing assessment and learning activities, which helps students to achieve the desired knowledge and skills (cf. 6.2.14 & 6.2.18).

2.8.2 “Design down, Deliver up” programme design approach

There are various approaches that form the basis for designing learning programmes; this section discusses the applicable approach that was used in developing the stratified competency-based learning programme for MA in SA (cf. 6.2). The **“Design down, Deliver up”** approach was followed to design the stratified competency-based learning programme.

“Design down, Deliver up” approach is one that shifts attention from an examination of the qualification to unit standards, and eventually to a close inspection of the outcomes, the assessment benchmarks and other pertinent information. As a unit standard generally comprises more than one outcome, the point is to examine every outcome completely, then to put the analyses of unit standards and outcomes together in order to find connections and the areas at which assessment and learning can be combined. It is imperative to consider that the student accomplishes the outcomes that shape the objective of unit standards, and accomplishes unit standards that outline the objectives of the qualification. It is therefore important to *design down* for the purpose of the qualification. This guideline will be adhered to in the development of the stratified, competency-based learning programme for MA in SA (cf. 6.2.12).

2.8.2.1 A design down approach

The *design down* approach can be represented by addressing the following (SAQA 2014:online):

- Determining the objective of the qualification (cf. 6.2.6);
- Determining whether the objective can be accomplished. Identifying what students need to be able to do and know in order to accomplish the objective;
- Determining the values embodied in the objective;
- Considering the above mentioned points and writing them as outcomes;
- Asking how one knows whether the students have accomplished the outcomes. The evidence to be looked at? Basically, asking *how* the students are going to be assessed to determine whether they have achieved the outcomes (cf. 6.2.14); and

- Asking how the students are going to be prepared for the assessments. What learning and teaching activities will yield the skills, knowledge and values needed by the assessment activity? (cf. 6.2.18).

2.8.2.2 A deliver up approach

When the *design down* process is completed, one can then *deliver up*, by conducting *learning activities* that can prepare students for assessment activities (cf. 6.2.14 & 6.2.18). These assessment activities provide evidence that the students have accomplished the outcomes and thus have achieved the *purpose* of the qualification.

2.8.3 Qualifications, Unit standards and outcomes

Education providers are required to offer registered unit standards and qualifications. Most of the process of developing learning programmes works with unit standards, so a similar approach can be accepted for the exit-level outcomes (ELO). It was important to be aware of the fact that only *unit standards* and *qualifications* can be registered on the NQF and are allocated credit value, and that ELOs and outcomes cannot be registered. This means that students receive credits once they have accomplished all the outcomes in a unit standard (cf. Chapter 6 outcomes). Outcomes can be clustered together into unit standards, or can be set out as ELOs (SAQA 2014:online), as was for the stratified competency-based learning programme presented in Chapter 6 (cf. 6.2.13). The qualification is received based on achieving the outcomes, within the stratified, competency-based learning programme that is designed for MA in SA.

2.8.4 Level descriptors

Unit standards, level descriptors and qualifications are registered at specific levels of the NQF. The descriptions are comprehensive and generic, but indicate what is demanded of a student at a particular level or qualification; the level descriptors are therefore highlighted and included in the stratified competency-based learning programme for MA in SA (cf. 6.2.12). Outcomes need to be comparable with the level descriptors for that particular level.

Level descriptors are statements linked to the applied competence, and refer to the skills, knowledge and applications at a specific level; and the independence of the learning

process. Level descriptors can be found on the SAQA website and the Council on Higher Education (CHE) website (SAQA 2014:online) and are attached as Appendix B.

2.8.5 Credits

It is important to understand what and how credits work, in this section a detailed understanding of credits is discussed in relation to the stratified competency-based learning programme. Credits are described as a measure of the learning time and notional hours that it would take a typical student to achieve the prescribed outcomes of the programme. Credits comprises the structured learning, contact time, workplace learning as well as self-study (for example -10 notional hours = 1 credit) (SAQA 2014:online).

In terms of credits dictating **learning time**, the number of credits allocated to a unit qualification or standard can be a *guide* to the average learning time. Students learn in dissimilar ways, some faster than others. Knowledgeable teachers can then adjust the learning programme in order to accommodate specific groups of students. It could mean that the educator prepares, in advance, additional material that the faster students can be challenged by, or sets up peer groups that can help students that learn at a slower pace (SAQA 2014:online).

It is important to understand each of the components of a SAQA registered qualification illustrated above when designing a stratified, competency-based learning programme for MA in SA.

Applied competence refers to an amalgamation of skills, knowledge, attitudes and the applications that students are capable of performing in ways that are appropriate for the learning context. It is in addition described as practical (skills), foundational (knowledge), and the instinctive competence that the students need in order to be regarded as completely competent (SAQA 2014:online).

Critical cross-field outcomes are overarching outcomes that all learning programmes work towards. They are important for developing the capacity for lifelong learning. These outcomes are about the needs of the society and individual. Learning programmes have to offer students opportunities to obtain critical outcomes. The ETQAs must take into consideration how the critical outcomes have been assessed and learned in the programme delivery (SAQA 2014:online).

Level descriptors do not incorporate all the critical outcomes, although it is expected that students accomplish all the critical outcomes by the time they have finished the programme content and awarded the full qualification. Below are prescribed critical outcomes that students should master. They must be able to:

- Detect and resolve problems;
- Work successfully with others in a team;
- Organise themselves efficiently;
- Gather, examine, organise and evaluate information;
- Communicate well through writing or speech;
- Become entrepreneurial;
- Explore education and career opportunities;
- Be culturally and aesthetically sensitive;
- Participate as responsible citizens in community life;
- Explore strategies to learn more effectively;
- Comprehend that the world is a set of correlated systems; and
- Use science and technology responsibly (SAQA 2014:online).

Critical outcomes of the stratified competency-based learning programme are therefore guided and grounded on the above descriptors.

The design of a learning programme should continue successively through three key stages of analysis, namely,

- Analysing the qualification;
- Analysing the ELO or unit standard; and finally
- Analysing the outcome collectively with its assessment criteria and associated information.

A number of steps must be taken in developing a programme, and it is vital to complete each step in order to understand the next. The learning programme does not exclude crucial learning assessments, which are discussed (SAQA 2014:online) (cf. 2.10.4 & 6.2.14).

Step 1: Analysing the qualification

It is recommended that one should only work in a field they are qualified in and to investigate the various aspects and repercussions the qualification might have for institutional planning (e.g. level, purpose, credits and the moderation options). The questions below can be used to work through the important information contained in the qualification:

- For who is the qualification meant?
- What is the purpose of the qualification?
- What is the level of the qualification (considering the level descriptors for this level)?
- What are the admission requirements for the qualification?
- How can "joint assessments" be done within the context of the qualification?
- How are credits spread across the fundamental and elective core categories?
- What moderation opportunities are there, and what are the implications for the institution?
- Considering assessment criteria and outcomes, what physical resources do the qualification require (SAQA 2014:online)?

Step 2: Analysing the unit standard

The following considerations must be engaged when dealing with ELOs:

- The purpose statement of unit standards;
- The learning assumed to be in place;
- The number of outcomes the unit standard contains;
- Whether the range statements attached to particular outcome(s) relate to the unit standard;
- The possibility of making a list of embedded knowledge in the unit standard as a whole;
- The number of credits assigned to the unit standard; what notional hours it translates to; and
- What the critical outcomes in this unit standard indicates (SAQA 2014:online).

Step 3: Analysing the specific/learning outcomes

This step includes asking questions such as:

- What do the outcomes indicate that the student should be able to do and know?

- What would need to be examined in accordance with the assessment criteria for an outcome?
- What content the student will require?
- What activities will enable students to accomplish outcomes and meet the assessment criteria?
- What teaching approaches will be suitable to guide students to the point where they can produce evidence of the required learning (SAQA 2014:online)?

Step 4: Assimilating outcomes

Ensuring that assessment and learning activities are designed for multiple outcomes (or the whole unit standard) which are discussed and applied in detail in Chapter 6, where the programme is presented (SAQA 2014:online).

2.9 PROGRAMME ACCREDITATION

The criteria for programme accreditation and minimum standards for academic programmes prescribed by the Higher Education Quality Committee (HEQC) are discussed above. These criteria are meant to be serving as the foundation for an institution's self-evaluation of programmes submitted for accreditation, together with supplementary standards that the institution might set for itself. The HEQC uses the self-evaluation report, the standards and supporting evidence supplied by the institution to assess submissions for programme accreditation (new programmes), or for reaccreditation of existing programmes (CHE 2009:online).

Programmes are required to conform to the following national requirements:

- As far as public education providers are concerned, the programme must be part of the institution's programme and qualification mix (PQM), as permitted by the Department of Higher Education and Training (DHET);
- As far as private providers are concerned, the institution has to apply to the DHET for registration in terms of the Higher Education Act No. 101 of 1997 and the Regulations of the Department of Education (2002), prior to the programme being conditionally accredited for the candidacy phase;
- The programme needs to adhere to the national requirements related to programmes, which are presently being developed within the context of the NQF;
- The programme has to be registered by SAQA on the NQF;

- The requirements of the Labour Relations Act and conditions of service with regard to recruitment and employment of staff apply; and
- Appropriate labour legislation and guidelines on safety and health in the workplace must be considered.

2.9.1 Criteria for new programmes

2.9.1.1 *Candidacy phase: Criteria for programme input*

When an institution applies for candidacy for a new programme, it is required to prove, firstly, that it meets the HEQC's standards for the candidacy phase, or, otherwise, demonstrate that it has the capacity or potential to meet the criteria within a specified time. The institution's application for candidacy status is founded on a serious self-evaluation of the new programme measured against the requirements of the HEQC's programme input criteria.

Secondly, the institution needs to submit an implementation plan for the new programme. The plan could specify, for example,

- the executed steps of the new programme, budgetary and time allocations for all the phases and the human capital for managing the implementation of the new programme; including application of strategies, policies, conditions, etc. stated in the criteria for the candidacy phase, as well as provision of the required infrastructure; and
- institutional strategies that show that the HEQC's criteria for output and impact, programme progress and reviews will be met in the accreditation stage of the new programme (CHE 2009:online).

The HEQC board of peers assesses applications for new programmes. The peer board may also conduct a location visit to the institution, if necessary. When all candidacy requirements have been met, the HEQC will award provisional accreditation for the new programme.

Halfway through the new programme, the institution will be asked to submit a progress report for evaluation by the HEQC secretariat. A location visit takes place only where circumstances permit it. The progress report includes the following:

- Steps that were implemented to address issues noted by the HEQC for urgent attention during approval of candidacy submission; and
- A report on progress of the programme implementation, with reference to the implementation plan submitted to the HEQC (CHE 2009:online).

Table 2.1 provides the criteria for programme input as related to the proposed programme.

TABLE 2.1: CRITERIA FOR PROGRAMME INPUT: RELEVANT ASPECTS AND AREAS IN RELATION TO THIS STUDY

AREAS	RELEVANT ASPECTS	CRITERION
1. Programme design	<ul style="list-style-type: none"> • Relation to institution's planning and mission • Students' and other stakeholders' needs • Intellectual trustworthiness • Coherence • Articulation • Needs and characteristics of vocational and professional programmes • Development of learning materials 	Criterion 1
2. Teaching and learning strategies	<ul style="list-style-type: none"> • Significance of promotion of student learning, institutional type, delivery styles and student composition • Suitable learning and teaching methods • Advancement of teaching approaches • Implementation plans, targets, and ways to evaluate impact, monitor and effect improvement 	Criterion 5
3. Student assessment policies and procedures	<ul style="list-style-type: none"> • Internal assessment • External and internal moderation • Monitoring the progress of students • Reliability and validity of assessment • Capturing of results • Security • Acknowledgment of previous learning 	Criterion 6
4. Programme administrative services	<ul style="list-style-type: none"> • Provision of information • Detecting at-risk and non-active students • Addressing the needs of a diverse student population • Ensuring the integrity of certification 	Criterion 8
5. Postgraduate policies, regulations and procedures	<ul style="list-style-type: none"> • Procedures, regulations and policies • Access and equity • Preparing students 	Criterion 9

The criteria listed in Table 2.1, are important to consider when developing a implementing the stratified, competency-based learning programme for MA in SA as required by SAQA and the CHE for purposes of accreditation.

2.9.2 Accreditation phase

There are a number of steps leading to accreditation:

- Within a year of the first group of students graduating from the new programme, the institution is required to show that it has accomplished the conditions set out by the HEQC for the candidacy stage. Relevant evidence and explanations need to be provided in cases where the conditions have not been accomplished.
- The institution needs to carry out a self-evaluation of the programme, applying the HEQC's criteria for the stage concerning accreditation.
- The institution also needs to submit a programme plan that tackles areas needing attention, as identified by the self-evaluation.
- A location visit by CHE might be conducted, if necessary.

If the institution's submission is accepted by the HEQC, then the programme acquires accreditation status. During the two stages of accreditation institutions will obtain the opportunity to advance the programme in areas where it does not meet the required criteria, on the assumption that they possess the capability to correct the problem areas and achieve minimum standards within a specified time period (CHE 2009:online).

TABLE 2.2: CRITERIA FOR PROGRAMME PROCESS (CHE 2009:ONLINE)

Areas	Relevant aspects	Criterion
1. Academic development for students	<ul style="list-style-type: none"> • Staff and student development • Developing the curriculum • Supplementary student academic support 	Criterion 11
2. Teaching and learning interactions	<ul style="list-style-type: none"> • Guiding students on programme outcomes and integration • Using appropriate learning and teaching approaches • Providing appropriate opportunities for learning • Involving students • Work integrated learning 	Criterion 12
3. Student assessment practices	<ul style="list-style-type: none"> • Integration of learning and teaching • External/internal assessments • External/internal moderation • Reliability • Security and rigour • Work integrated learning 	Criterion 13 Criterion 14
4. Coordination of work-based learning	<ul style="list-style-type: none"> • Monitoring system • Recording system • Communication • Mentoring structure 	Criterion 15

Table 2.2 summarises the various criteria applicable to understanding the process of developing a programme

The four highlighted criteria were used to ensure that the stratified competency-based learning programme meets the set out requirements for developing a programme. It was important to ensure that the programme delivers on ensuring development of both the teachers and the students; to ensure that students are aware of the requirement, responsibilities; the programme ensures that there are a variety of assessment and learning activities and further ensure that the stratified learning programme cooperates coordination of work bases learning, the various assessments and work experiences were therefore included and that they are known by both the students and teachers.

2.10 THE NATIONAL QUALIFICATIONS FRAMEWORK AND CURRICULUM DEVELOPMENT

By exploring the existing links between the qualification and the curriculum, it becomes possible to explore the relationship between learning programmes and qualifications. It is important to understand the difference between a learning programme and curriculum, in order to then adhere to the guiding principles towards developing a stratified competency-based learning programme.

According to SAQA (2014:online) a qualification refers to a intended amalgamation of learning outcomes that have distinct purposes, and which are expected to provide qualifying students with useful competence and a foundation for additional learning. Qualification also entails formal recognition of accomplishments at precise levels of the NQF, as might be determined by relevant bodies registered for such purposes by SAQA.

Curriculum

The word "curriculum" is commonly used to refer to the syllabus – the list of topics, subjects and the texts encompassed within the course of study. It also integrates subject skills and content, the method of assessment and teaching being followed, the philosophical viewpoint of the teachers and who the students are. Curriculum is the actual implementation of the planned process, the teaching and the students "experiences" of the learning method (SAQA 2014:online).

Curriculum can also be defined as a dynamic, ever-changing series of planned learning experiences; it refers to everything students experience in school. Curriculum is a structured cultural duplication. It values an independent manner of thinking in the context

of the broadest sense of social responsibility (Smith, Stanley & Shores 1957:78; Poetter 2013:6). Luckock, Lefevre and Tanner (2007:192) define curriculum as the reconstruction of experience and knowledge that enables the students to grow in exercising intellectual control of consequent experience and knowledge.

It is more difficult to provide a definition of curriculum, because different authors describe it differently.

- Curriculum can be understood in relation to experience and activity experienced, as opposed to merely knowledge acquired (Cross 1980:202).
- Curriculum refers to the learning and teaching activities plus experiences provided by institutions (cf. 2.8).
- Curriculum is a set of aspects of learning and teaching (cf. 2.8).
- Curriculum can be defined as all the planned learning guided by institutions (cf. 2.8).
- Curriculum can be understood as the overall reasoning for an educational programme (Kelly, Longbottom, Potts & Williamson 2004:221).

Curriculum is assumed to be more than a syllabus document; instead, it refers to all learning and teaching opportunities that take place in learning institutions, including (cf. 2.8):

- The aim and goals of the education system and the precise goals of learning institutions;
- What is being taught: the selection of content, the underlying values, arrangement of the content into subjects, programme and syllabuses, with the inclusion of processes and skills;
- The learning and teaching strategies, as well as the relationships between students and teachers;
- The numerous methods of evaluation and assessment used, and their social effects;
- the manner in which the curriculum is resourced and serviced, plus the organisation of students, space and time as well as the resources and materials that are made accessible; and
- How the curriculum reflects the interests and needs of the nation, the community, teachers, students, the employers and the economy (Candy, Crebert & O'Leary 1994:21).

A curriculum is therefore concerned with:

- Determining the values and purpose of learning;
- Evaluating the needs of the students;
- Determining the learning objectives/outcomes;
- Choosing the subject matter and content that will support accomplishing outcomes;
- Determining the methods, activities and media for learning and teaching;
- Planning how the assessments will be carried out; and
- Preparation and assessment of the overall effectiveness of delivering the curriculum.

(De Bellis 2009:32)

According to the observations and views of the curriculum given above, it is obvious that curriculum is a comprehensive tool that includes features such as standard setting, learning programme delivery and development; and quality assurance of the process of delivery. However, the NQF challenges the traditional concept of developing curriculum as perceived in the South African context, by dividing it into three parts: the design, the setting of the standards, and delivery and assessment thereof, including the quality assurance processes (SAQA 2014:online). The developed learning programme for MA in SA is guided and has adhered to the above guidelines and principles of developing a learning programme.

Learning programmes

A **learning programme** refers to successive learning activities, connected to curriculum execution, resulting in the accomplishment of a specific part qualification or qualification. Learning programmes may be identified with a group of qualifications. A particular qualification may be attained through various learning programmes that meet the associated assessment criteria and ELOs of the qualification (Interim Joint Committee 2000:online). It is based on the definition of a "learning programme" that the stratified competency-based learning programme for MA in SA is defined.

The term "**programme**" refers to a comprehensible set of courses, primary to a particular degree. The optional courses and core curriculum can be differentiated within a programme; both comprise of the various ways a student can choose to arrive at the degree (Hobson, Rolland, Best, Chomyszyn-Gajewska, Dymock, Essop, Hupp, Kundzina, Love, Memon, Moola, Neuman, Ozden, Roth, Samwel, Villavicencio, Wright & Harzer 2008:286). It is in considering the above description of a programme that the researcher believes that

the learning programme presented in Chapter 6 is a competency-based learning programme.

2.10.1 Registration of qualifications on the National Qualifications Framework

The NQF is the main tool through which training qualifications and national education are acknowledged and quality assured. SAQA established criteria and policies for registration of qualifications in 2008 (which, its usefulness is noted in order to guide the possible registration of such a programme). These policies indicate that, to be registered, qualifications must:

- Comprise clear stipulations of outcomes, using level descriptors;
- Highlight the minimum requirements for obtaining the qualification;
- Highlight the appropriate sub-framework which is recommended for registration on NQF;
- Be submitted and recommended to SAQA for registration by a quality council;
- Comply with the specified criteria for registration; and
- Be written in English.

There are specific guidelines regarding the format of the qualification registration.

- Title: The qualification title should adhere to the qualification type descriptions provided for in the applicable sub-framework of the NQF.
- Sub-framework: The sub-framework on which the qualification is intended to be registered must be supplied.
- Provide field and sub-field, including classification of the educational subject matter (CESM) category and/or organising framework for occupations, where applicable.
- Level of the qualification: The published level descriptors must be utilised to determine the level of the qualification.
- Credits: The credits are to be calculated on the basis of one credit being equivalent to 10 notional hours of learning. The lowest credit allocation for a qualification has to comply with the qualification type requirements as determined within the applicable sub-framework of the NQF.
- Rationale: Provide details of the rationale that resulted in the identification of the need for the qualification. Indicate the manner in which the qualification meets particular needs in the sector for which it is developed, provide details of discussions with recognised industry bodies or professional bodies with regard to the need; highlight

the range of typical students and identify the jobs, occupations or areas of activity in which the qualified students will operate; indicate the learning path where the qualification exists in and highlight the manner in which the qualification will benefit students, the economy and society.

- Purpose: Specify the context of the qualification and what it intends to accomplish in the professional, national, and/or career setting. The purpose statement must also note what the qualifying students will know and be able to do upon completing the qualification. The ELOs have to be related to the purpose of the qualification.
- Rules of combination: There must be consistency between the essential parts of the qualifications.
- Entry requirements: The minimum requirements for entry into the qualification need to be indicated and should be aligned with the approved institutional admission policies.
- ELOs and associated assessment criteria: ELOs are to be outlined against the level descriptors and should set out what the students should be able to do and know after completing the qualification. These competencies should be directly related to the competencies needed for additional work and/or learning for which the qualification was planned. Writing the associated assessment criteria for the qualification the necessity of the ELOs can be evaluated in an integrated manner.
- International comparability: A statement must be given on how the qualification compares to related qualifications or offered standards or best practices in other countries. The quality councils then apply the statement in a suitable manner to the applicable sector and sub-framework. Qualifications that are globally comparable could contribute to determining the chances for articulation of the qualification with qualifications from countries and regions.
- Integrated assessment: The assessments undertaken to determine the students' applied competence and effective completion of learning in the qualification have to be noted.
- Recognition of prior learning (RPL): Institutional RPL policies have to unmistakably indicate the manner in which RPL will be applied to achieve or gain entry to the qualification. The RPL quality councils' policies have to be made accessible to SAQA when requested. The RPL policies of training, education and development providers need to be in line with the national SAQA RPL policy.
- Articulation: A statement defining the vertical, horizontal and diagonal articulation opportunities within the applicable sub-framework and among sub-frameworks should be indicated, where appropriate.

(Bornman 2004:372)

These criteria were imperative for compiling a stratified competency-based learning programme for MA in SA; the learning programme presented in Chapter 6 based of these aforementioned criteria.

2.10.2 Qualification type

There are four qualification types within further education and training:

- Level 1: General Certificate;
- Level 2: Elementary Certificate;
- Level 3: intermediate Certificate; and
- Level 4: National Certificate.

However at Higher Degree institutions Levels 5-10 is accommodated, with Ph.D.'s on the highest level, Level 10 of the HEQSF.

2.10.3 Curriculum development

The traditional notion of curriculum development suggests that schools need to return to basic education and its high standards, and must systematically teach basic knowledge and not be afraid to stress hard work and discipline; it suggests that knowledge consists of facts, concepts and skills that must be mastered through memorisation and drill. The traditional way is generally regarded as an objective, impersonal, and often value-free commodity to be grasped. Teaching and learning according to the traditional notion of curriculum development requires that the outcomes are to be very specific. Teachers are technicians whose task is solely to follow the steps-by-step instructions in their manuals (Luckock *et al.* 2007:192).

The progressive way of curriculum development emphasises relevant curriculum content. The progressivist view knowledge as more than a product that has to be mastered, and that students will be required to interact with the world around them as well as interpret it. Progressivist consider curriculum as merely a general guide; they see human beings as important subjects rather than mere objects and rather than "mastering" knowledge, students establish meaning for their own lives through understanding and interpretation. The stratified, competency-based learning programme for MA that will be developed in this study will therefore take on the progressive way of developing the curriculum, because it

enables flexibility and ensures that students don't only master knowledge but interact and interpret the world they live in (Luckock *et al.* 2007:192).

Bencze and Hodson (1999:521), suggest that a curriculum also involves interaction between teachers and students, between students themselves, and between students and curriculum content. The focus of teaching is therefore the making of meaning through learning, rather than the transmission of concepts and skills. In developing a learning programme, the following aspects are important:

- No one has all the truth;
- Human nature and human learning are complex; and
- Curriculum documents are only guides. Teachers use their professional and considered judgement in determining what is best for a particular situation.

Street (2005:63) opposes "banking education" and "narrative sickness", by which teachers deposit information into the passive minds of their students. Instead, students should be more than active participants, but should develop critical consciousness. If a curriculum team shares common beliefs and values, a progressive orientation, with its emphasis on understanding and meaning and critical thinking linked to life situations, will yield a more considerate approach to planning curriculum, compared to other orientations.

Curriculum development is the organised preparation of whatever is going to be taught within a course or programme at a given time during a given period. Curriculums are made into official documents and serve as guides for teachers. The way in which a certain topic or concept is taught usually determines what is actually taught. Therefore, there needs to be a distinction between the official or planned curriculum; between the one that is formal and the one that is actually taught (Bencze & Hodson 1999:521).

Universities are gradually being held answerable to industry, parents, government, the wider community and students, without necessarily compromising academic autonomy. The anticipation is that universities yield graduates who know the content and have the competence to provide human resources to meet the needs of the country.

There is an international awareness of the necessity for persons in higher education to continually review and develop curricula in relation to changing circumstances; this awareness supports the need for a stratified competency-based MA learning programme.

Because of developments in the country, and in higher education specifically, changes in curricula are imperative for SA. Therefore, an integrated national framework for learning is being established through the NQF and SAQA. Such improvements are meant to have an influence on all education programmes in the country.

The expansion and assessment of curricula need to take into account the social and economic environment within which graduates will work, and national education policies. Curricula are required to take cognisance of the range of student backgrounds. The increase of information due to modern technology has led to conditions posing new challenges for teachers. New methods of designing curricula are anticipated, and they are intended to equip students with the skills to access and manage knowledge, as opposed to just absorbing knowledge (Luxon & Peelo 2009:51-60).

The essential considerations for curriculum development that guided the learning programme in chapter six were that:

- Challenges are identified;
- Characteristics and needs of students are considered;
- Changes aimed at students are made;
- Significant and pertinent content is identified;
- Approaches to achieve intended outcomes are used; and
- Assessment approaches for content, methods and planned outcomes are identified.

The curriculum development model illustrates how the above-mentioned aspects are related to each other and to the curriculum development method. The curriculum development model starts when concerns, issues or problems need to be addressed. When the training or education sector assists in solving problems, it results in a curriculum that supports educational efforts; at the same time becomes a priority with the financial and human resources allocated.

The last stage of curriculum development is to form a curriculum development team. The team makes methodical resolutions about the target audience, which would involve student characteristics, intended outcomes, methods, and content, and evaluation strategies. On the basis of feedback from the curriculum development team, draft curriculum products are developed, verified, assessed and reformed, if necessary. Once the ultimate product has been created, volunteer training is carried out. The approach demonstrates a circular

process, in which volunteer training offers feedback for new resources or revisions to the existing curriculum (Connors, Weaver, Warren & Miller 2002:228).

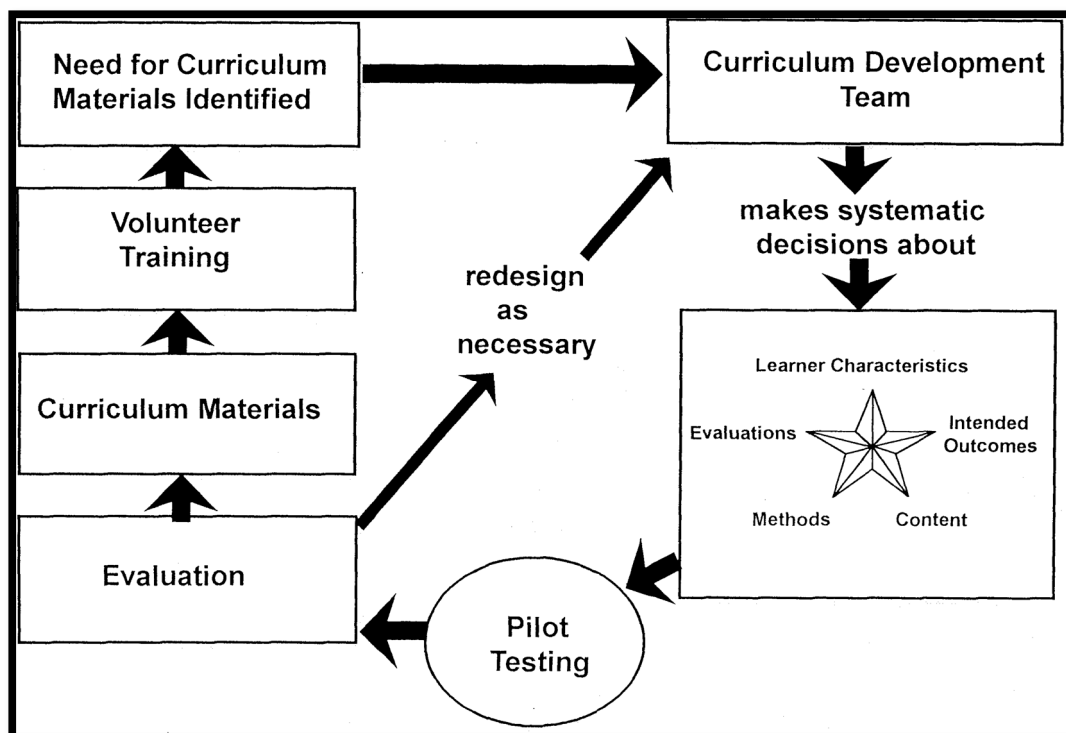


FIGURE 2.4: CURRICULUM DEVELOPMENT MODEL (FAO CORPORATE DOCUMENT REPOSITORY 2015:ONLINE)

The phases and steps in curriculum development given below explain the relationships of the four essential stages of the curriculum development process:

- Organisation;
- Methods and content;
- Execution; and
- Assessment and recording.

It is imperative to note that things do not at all times work precisely as depicted in the model. Each stage has some steps to be accomplished in a rational structure. The steps are not always distinct; they can overlap and occur concurrently. Each phase rationally follows the preceding one. It would not make sense to design learning activities before the student outcomes and content have been identified and highlighted. Correspondingly, content cannot be determined prior to the student outcomes being described (Harden 2000:551); therefore this was adhered to in developing the stratified competency-based learning programme presented in Chapter 6.

Vincent and Focht (2009:164) identify the following curriculum development stages as ones that are often omitted or paid less attention:

- Needs assessment: If it is not carried out, the teachers could develop a wonderful curriculum that does not, however, meet the needs of the targeted audience.
- Involving the youth: The volunteers and target audience who will be implementing the curriculum must be is important to cater for the needs of the target audience.
- Assessing and reporting on the influence of the curriculum: Assessment is important for getting financial and human support from main policy decision makers and for evaluating if the curriculum has achieved the intended outcome (FAO corporate document repository 2016:online).

Curriculum change is important for maintaining vibrant, timely, and relevant educational programming. However, major renewals of longstanding curricula at an established university present many challenges for leaders, faculty, staff and students. However, there are ways to change curricula strategically while avoiding the above-mentioned challenges. As with other aspects of life, in academia too, planning seems to be a big part in attempting to change a curriculum. Galea, Fried, Walker, Rudenstine, Glover and Begg (2015:s17), suggests that it is advisable to establish a central committee and a number of subcommittees with good representation from the faculty, staff, and prominent stakeholders within that particular field. This study has established a gap for developing a stratified, competency-based learning programme in MA in SA. In developing the programme, the following should be given special attention:

- An integrated core curriculum;
- Disciplinary education and dual degrees;
- Certificate programmes;
- Integration of science and practice;
- Integrative practicum experience;
- Leadership and innovation;
- Transforming the educational experience with technology;
- On-going curricular review;
- Department operations and implementation; and
- A student advisory board should be established.

The implementation process takes a while; however academia is about constant change and ensuring that an MA programme continuously develops therapists that are industry relevant and competent. There are a few key elements that are important to a successful curriculum development process. The curriculum development process requires commitment from the dean, who provides the financial, political, and moral support throughout the design and implementation stages of the process (Galea, Fried, Walker, Rudenstine, Glover & Begg 2015:s17).

2.10.4 Assessment

Prior to discussing the different elements of assessment, it is necessary to explain the meaning or provide a definition of the term itself. Assessment can be defined as the act or result of judging the value or worth of something or someone, in the case of this research, assessment refers to the students, as opposed to something (Bath, Smith, Stein & Swann 2004:313). An important part of designing engaging learning activities for students is developing informal and formal assessments to comprehend what the students are learning and know in relation to the particular learning unit outcomes. Assessment basically asks the student to demonstrate what he/she knows and what he/she can do. Teachers are required to collect evidence throughout the learning unit over a period of time, therefore, it is crucial to plan the assessments and design the types of assessments while developing a curriculum (Cumming 2009:90). Assessment is also understood to define what the students define as essential, how they spend their time and how they see themselves as students and as graduates.

The discussions below are for the purpose of guiding the analysis, and to refresh and refine methods of assessment. The most important aspects of assessments are aligned, ensuring alignment between assessment tasks, assessment methods, learning opportunities and envisioned learning objectives or outcomes and between criteria, assessment feedback and the assessment tasks; as per the stratified competency-based learning programme presented (cf. 6.2.14).

2.10.4.1 *Alignment of assessment*

The basis for course or curriculum design is the alignment of assessment with all features of the course, and it is central to effective assessment. Realistic and clear outcomes provides students with a good guide to what has to be learned; and provides the teachers

with a guide to teaching methods and the learning opportunities they can offer. Offering relevant learning opportunities assists students to achieve the specified learning outcomes. Effective methods of assessments and tasks are meant to communicate to both the learning outcomes and the methods of learning. In order to ensure consistency of judgement by the lecturer and for the students to accomplish the demands of the assessment task; the criteria need to be clear and specific; this is true of the stratified competency programme presented in Chapter 6. There needs to be close links between feedback, criteria and the assessment tasks in order to assist students to fulfil the demands of assessment and assist students to achieve the learning outcomes of the programme. Figure 2.5 provides a summary of the various relationships that ensure alignment of all the aspects involved in assessment.

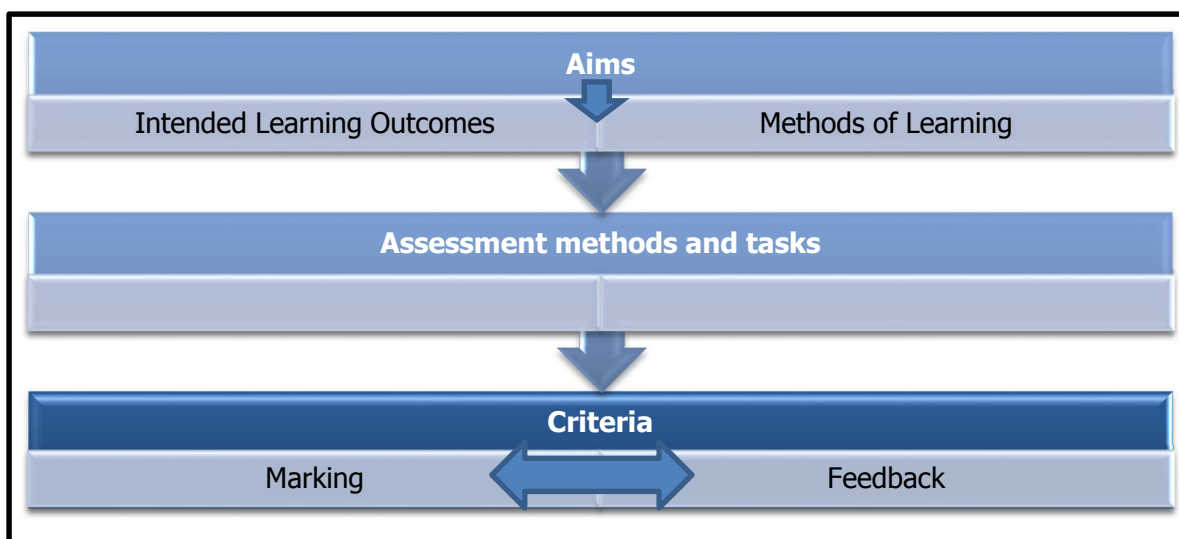


FIGURE 2.5: ALIGNMENT OF ASSESSMENT

2.10.4.2 Purpose of assessment

The following are the main purposes of assessment within the stratified competency-based learning programme for MA in SA:

- Providing a licence to proceed to the next stage or to graduate;
- Classifying student performance in rank order; and
- Improving learning.

These purposes can sometimes overlap. If licences to proceed or graduate are the key concerns, the assessment tasks should be based on core knowledge and skills, and the pass/fail threshold should be completely secure. If, however, the purpose of the

assessment is to rank the students, the assessment tasks should be designed in a manner that differentiates between the capabilities of a wide range of students. The purpose of the assessments in the stratified competency-based learning programme were based on both knowledge, skills and for ensuring grading among the students, especially in order for students to be aware of the necessary areas needing development/improvement within the various modules.

Purposes of assessment are correlated to both formative and summative assessment. Summative assessment contributes to the marks for a level, module or degree, whereas formative assessment provides feedback to students during the programme in order for the students to have an opportunity to improve. This means that formative assessment overlap with the feedback in learning. Assessment of coursework is typically formative and summative. It is meant to give feedback and contribute towards the final profile of the marks. In such a case, the in-course assessment becomes a part of multiple-point summative assessments. Heavy assessment schedules and numerous other obligations may be tempting to provide obligatory feedback (CHE 2009:online). The stratified competency-based learning programme therefore incorporates both formative and summative assessments.

2.10.4.3 *Principles of assessment*

The stratified competency-based learning programme's assessment was guided by the following are key principles of assessment:

- Assessments shape learning, which means that if one wants to change learning then one would need to change the method of assessment;
- Learning outcomes must be aligned with assessment tasks;
- The criteria for assessment must be matched with the learning and task outcomes;
- Assessment criteria must be kept simple;
- Markers must be fair, valid and reliable in the marking process; and
- Meaningful and timely feedback must be provided.

(CHE 2009:online)

Integrated assessment applies to the assessment and learning process of a learning programme; integration can be achieved in various ways, in the case of the stratified

competency-based learning programme, the following are examples of integrated assessments.

- Utilising an assessment activity for multiple outcomes; such as case studies;
- Utilising an assessment/learning activity for multiple unit standards;
- Incorporating the critical outcomes in learning outcomes in assessments and learning activities;
- Educating and assessing theory and practice by means of the same activities;
- Utilising a big assessment activity to integrate all outcomes that students have dealt with throughout the learning period; and
- Assessing across learning areas.

(SAQA 2014:online)

The possibility of recognising prior learning (RPL) is about measuring competence based on evidence presented. Assessment criteria and outcomes specify what students have to do to prove competence; meanwhile, all unit standards and qualifications state the outcomes unequivocally, which enabled identification of the assessment activities in the programme (cf. 6.2.14), using the procedures that are highlighted in this section.

2.10.4.4 *Designing assessment*

There are a number of questions that logically result in the design of a precise assessment task; the questions also assist in identifying areas where more refinement is needed with regard to each learning task. The following questions were answered and clearly noted when designing the various assessments for the stratified competency-based learning programme (cf. 6.2):

- What are the outcomes being evaluated?
- What are the competences/skills of the outcomes?
- Are the chosen methods of assessment in agreement with the skills and outcomes?
- Is the approach fairly effective in terms of student and staff time?
- What are the alternatives? What would the disadvantages and advantages be?
- Are the precise assessment tasks counterparts of the outcome skills?
- Are the criteria or marking schemes appropriate?

(CHE 2009:online)

2.10.4.5 *Bloom's taxonomy*

According to Dwyer, Hogan and Stewart (2014:43) the key idea of Bloom's taxonomy is for the teachers to establish what the students are required to know, should be included in statements of the educational outcomes as discussed above, and can be organised in a grading from less to more complex. The stages are understood to be sequential, so that one level has to be mastered prior to the following level being reached. The application of Bloom's taxonomy to a stratified competency-based learning programme can assist in stimulating a change in the students' status from being detached observers to being involved participants of their learning (Forehand 2010:41).

2.10.4.6 *Curricular modalities for a stratified, competency-based learning programme*

According to Akir, Eng and Malie (2012:87) education is intended to construct learning and teaching settings that can result in desired alterations in the students, whether they would be better skilled or more knowledgeable or that their values and outlooks have been affected positively. The core of learning and teaching is to design teaching activities and to determine the degree to which students have attained the envisioned competences. Hence, it is important to understand the modalities of competency-based education.

Competency-based education is constructed on the larger conception of outcomes-based education (OBE), which is familiar to a number of higher education institutions and that forms the basis for numerous existing instructional design methods. OBE operates in reverse mode within a course, beginning with the preferred outcomes and applicable assessment, and eventually shifting to the learning practices that ought to lead students to achieve the outcomes. Typically there is an intention to include flexible pathways for the student to attain the outcomes (Akir *et al.* 2012:87). OBE can be implemented in numerous methodologies, including online, face-to-face and mixture of models. The stratified, competency-based learning programme that this study developed for MA is designed to be offered primarily in a face-to-face basis, with the inclusion of experiential training off campus in medical aesthetics establishments.

Competency-based education is a fine model, a subsection or an illustration of OBE, where the outcomes are more closely connected to professional employment needs or skills of a specific profession (in the case of this study, MA), and that the methods are classically self-

paced (Ganzglass *et al.* 2011:23). Akir *et al.* (2012:87) suggests six key constituents of competency-based education, which were applied to the:

- Unambiguous learning outcomes in relation to the mandatory concomitant proficiency and skills;
- A flexible time period in which to master the skills;
- A diversity of instructional actions to enable learning;
- Criterion-referenced testing of the compulsory outcomes;
- Certification founded on validated learning outcomes; and
- Adaptable programmes to safeguard the finest student guidance.

In a paper written about examining the state of competency-based education, Klein-Collins and Hain (2009:187) indicate that there is a range of methods used to carrying out competency models. Firstly, one subsection of institutions utilises competency frames in the setting of a course-based system. A course-based structure means that students take the same types of courses that have continuously been offered by institutions such as universities and colleges, which are lecturer-led and credit-hour based (Ganzglass *et al.* 2011:23).

Secondly, the courses are usually offered on or off campus, online or in the classroom, fast-tracked or usually paced. Institutions that apply competency based education describe competencies that are anticipated of the students or graduates; ensuring that students demonstrate the competencies set out by effectively completing the course. In some instances, institutions embed competency assessments into all courses. In most of the examples presented by Klein-Collins and Hain (2009:187) the institutions also offer the possibility of awarding credit for prior learning (as discussed under curriculum development earlier in this chapter), usually prior learning assessments are said to be course-based too.

There seems to be a legitimately big jump when the programme shifts into a self-paced structure. For these self-paced, competency-based education initiatives, which are currently experiencing adoption of the current growth, the present implementations of competency-based education are expected to either be;

- Fully online;
- Self-paced;
- Flexible enough to permit recapturing of evaluations until competency is proven; and
- Aimed to give working adults the opportunity to complete higher education.

The current growth and emphasis on competency-based education is informed by the goal to provide lower cost education options through programmes that are targeted at working adults (Akir *et al.* 2012:87). Therefore, the stratified, competency-based learning programme for practitioners of MA in SA will be designed according to the modality and principles of competency-based education. This modality is appropriate as it targets individuals who already have qualifications in another field, as mentioned in Chapter 1.

2.11 DESKTOP STUDY

In addition to studying literature, the study made use of a desktop study as a means to collect data. Desktop studies provide rich descriptions of complex phenomena and illuminate the experience and interpretation of events by participants with widely differing stakes and roles as well as playing an important role in the theoretical elaboration and theory development. The desktop study method also allowed for improvement of understanding the knowledge, skills and competencies of MA practitioners in ways that the conventional quantitative methods might not necessarily achieve (Bourgeault; Dingwall & Vries 2010:42) (cf. 1.7 & 3.3.2).

A desktop study was first applied as a method for collecting qualitative data in relation to highlighting the knowledge, skills and competencies involved in the practice of MA in SA (cf. 1.4.3-b). This assisted in providing the relevant literature and components of programmes for MA practitioners. The desktop study also assisted to place MA in context and understanding its complexities in a South African context. The issues of knowledge, skills and competencies within the practice of MA, required research methodologies that would not only be able to analyse processes and change; but also allow for diverse and possibly contradictory perspectives on the various professionals and the educational content of their training as they currently exist.

There were various documents that were explored; documents which form the basis for understanding the educational aspects and identifying the aspects of MA that were not covered within the various professions' that are not covered. The documents explore and include the various academic documents highlighting the competencies of all the professionals involved in MA in the SA context. The MA competencies are highlighted in the following section.

2.11.1 General Practitioners

Medical doctors are expected to function excellently as healthcare practitioners, integrating all graduate attribute roles to provide optimum, ethical, comprehensive and patient/client-centred care in a plurality of health and social contexts (HPCSA 2014:online). The document describing the competencies of general practitioners are attached (cf. Appendix C).

2.11.2 Dermatologists

A Dermatologist is a professional that has studied medicine and has specialised in the field of Dermatology (the study of the skin and skin diseases, including the scalp, hair and nails). Several of the disorders that they treat include skin cancer, warts, fungal infections (e.g. athlete's foot), acne, dandruff, moles, sun damage, aging, discolorations, eczema, dermatitis and psoriasis. Dermatologists also carry out skin surgeries for either clinical reasons (e.g. removal of unsightly or cancerous growths) or for cosmetic reasons (e.g. removal of a mole).

The following are simplified competencies of Dermatologists:

- Consults with patients and conducts examination of the skin;
- Prescribes appropriate medical treatment/procedures;
- Consults with other specialists;
- Performs biopsies to diagnose exact cause of problem;
- Perform surgical procedures: removal of benign or malignant growths;
- Keeps up to date with new developments: both in drugs and techniques;
- Performs cosmetic procedures: laser treatments, microdermabrasion, chemical peels, and Botox injections; and
- Teaches and/or does research.

(HPCSA 2014:online)

The scope of practice of Dermatologists is attached (cf. Appendix C).

2.11.3 Plastic Surgeons

Plastic surgery has two branches, cosmetic surgery and reconstructive plastic surgery. Cosmetic surgery aims to improve the aesthetic appearance of a person, while plastic surgery may include this, or just the reconstruction (reconstructive surgery).

Reconstructive plastic surgery aims to improve function; however, it may also involve trying to approximate normal appearance, but that is not its primary function. Reconstructive plastic surgery is often referred to as simply reconstructive surgery (HPCSA 2014:online) (cf. Appendix C).

2.11.4 Somatologists

Somatology is defined anecdotally as the study or science, of the human body (coming from the Greek roots meaning "body" and "study"). This also includes the study of material substances, as in physics, chemistry, biology, botany which are under the general heading of physicalism.

This term is used in a number of different ways to describe a variety of activities related to studying the body. In one sense, somatology is the study of the body in the sense of anatomy and physiology, to learn about how the parts of the body work together. People who work in this area of somatology study a variety of topics related to the body and how it functions, such as pathology, studying what happens when the body is injured or diseased, and they may also be interested in topics like biomechanics, studying the movement and articulation of the body. Training in somatology can also be applied to the practice of physical therapy and many other health and wellness related professions.

Some practitioners of alternative medicine may also refer to what they do as somatology. In this sense, the term is used to refer to the study and treatment of the body as a whole (holistic therapy), with the application of techniques such as massage, herbal medicine, acupuncture, guided imagery, and so forth to patients and clients. Some people in this branch of the field may focus on providing people with sources of relaxation, with some spas and massage studios referencing somatology in their promotional materials (International Academy 2015:online).

Attached (cf. Appendix C) is the proposed scope of practice as per SAHSP.

2.11.5 Beauty Therapists

A beauty therapist carries out face and body treatments for clients with the purpose of help them look and feel better. Beauty therapists are required to be able to make clients feel relaxed and also be a good listener (National Career Service 2016:online).

2.11.6 Nurses

A nurse is a highly skilled health care professional who combines the art of caring with scientific knowledge and skills developed through their education and career. Nursing can be a lifelong career which is recognised world-wide and which will enable you to take advantage of an international nursing career. A nurse is involved in the education of patients around health and disease processes, health promotion activities, clinical procedures and management of nursing processes. Nursing enables you to work in a diverse range of settings including hospitals, community settings, general practices, prisons, homes and residential settings (SANC 2016:online). The scope of practice is further eluded to in Appendix C.

2.12 CONCLUSIVE SUMMARY

The purpose of the review of literature and the desktop study was to assist the reader to understand aspects of this research study, which relates to developing a stratified, competency-based learning programme for practitioners of MA in the South African context. It was necessary to explore the various aspects involved in developing a stratified, competency-based learning programme for the South African education system, while also considering the international context through the desktop study and literature explored in this chapter.

It was furthermore important to note various considerations related to developing a competency-based programme for MA in SA; to ensure adherence to both the CHE's criteria for programme accreditation and SAQA's regulations. This chapter reviewed and described MA education from both a national and international stance. This review confirmed the need for a stratified, competency-based learning programme in the South African context.

In Chapter 3, *Research design and methodology*, the methodology applied to this research will be presented.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

In this chapter, the research design and research methodologies used and applied in this study are discussed. The theoretical perspectives on the research design and methodology are also provided. This chapter explains the pilot study, and describes the target population and methods used for sample selection, data collection and analysis. A mixed-method exploratory sequential research design was employed. The qualitative component (desktop study) was carried out concurrently with the literature review, and it was followed by the quantitative component (questionnaire). This chapter also includes explanations of the data-collection processes and techniques, specifically the methodology and procedures applied for developing a questionnaire by means of EvaSys automation software.

The term “research” is believed to refer to the process of collecting data, however, more importantly, research is about answering unanswered questions; alternatively it is about creating that which does not exist (Ocholla, Ocholla & Bosire Onyancha 2012:478). This research, therefore, included all the aspects of the above definition; it that the study sought to answer the question “*What would a stratified competency-based learning programme consist of in order to provide students with the required knowledge, skills and competencies in order to function as professional medical aestheticians in the South African Health Care environment*” along with the sub-research questions (cf. 1.3); thereby creating a stratified competency-based learning programme for MA in SA, as it currently does not exist.

The qualitative aspect of this study was carried out first, and was composed of the desktop study and literature study. The desktop study entailed studying various documents relating to components of MA education in countries such as the USA and Brazil; and the processes involved in developing learning programmes for curricula, for MA in particular. The fine difference between a literature study and a desktop study is that a literature review covers scientific literature (in the field of MA, in the case of this study); whereas the desktop study was a preliminary and comprehensive investigation and analysis into gathering currently available relevant information relating to MA learning programmes offered by existing education institutions.

The qualitative approach of this study was necessary to understand the various important aspects and criteria that must be included in the development of programmes in a South African context. The study served as a guide for developing the stratified, competency-based learning programme for practitioners of MA.

According to Hughes and Hannart (2003:1140), a desktop study is a systematic way of collecting data, which was used to compile the various sections and questions composed in the questionnaire. The questionnaire was used as survey instrument and underpinned the programme design.

Desktop research therefore refers to seeking facts, general information on a topic, historical background, study results, etc., that have been published or exist in public documents. This information can be obtained from libraries, newspaper archives, government, universities, websites etc. Such information can be easily accessed on the internet or at the various relevant institutions (Hughes & Hannart 2003:1140).

The quantitative aspect of this study made use of a questionnaire, which was administered secondary to the qualitative aspect. The structured questionnaire contained both closed and open-ended questions. The questionnaire was used to gain information on which professionals were carrying out certain procedures and treatments as well as gaining information on the various professions whom were known by the participants to be managing certain conditions encountered in MA, in order to design the above-mentioned learning programme on the basis of the results, which were indicative of the fact that the field of MA is not regulated and therefore various professionals are carrying out treatment interventions that do not necessary form part of their professions scope of practice; highlighting at the same time, the need for a stratified competency-based learning programme for MA in SA. It is through this manner that the theoretical foundation was devised for the stratified competency-based programme for MA in SA, taking into consideration the desktop study (in terms of the various scope of practice of the various professionals. The main reason for choosing the mixed method design is that the two phases of the research are complementary (Small 2011:57).

3.2 THEORETICAL PERSPECTIVES ON THE RESEARCH DESIGN

Theoretical perspective to the research design entails that which underpins research design in terms of theory as a design; that which may potentially inform the understanding of the

phenomenon being studied and that which may potentially emerge from the study. This section seeks to provide the theoretical perspective from which the researcher's study stems from.

3.2.1 Pragmatism

The research approach followed in this study is mixed methods, making the primary philosophy that of pragmatism. Mixed methods research is an approach that acknowledges both theory and practice, both qualitative and quantitative. Mixed method approach attempts to consider multiple standpoints or perspectives. This study is therefore based on the above and was found to be best for this study as it allows for multiple views and ways to be adventurous.

3.2.2 Strategy of inquiry and research approach

This study made use of what is termed a sequential exploratory mixed-method research design. The term mixed methods refers to all procedures or aspects of the study, including both qualitative and quantitative aspects in the process of a single study (Teddlie & Tashakkori 2010:1-44). Mixed-method research has been conducted for several decades, and is referred to by a variety of terms, such as multi-method, interrogated, hybrid or combined methods (Creswell, Fetters, Plano Clark & Morales 2009:163). The motivation for employing a mixed-method design is usually diverse, although the mixed method approach can be commonly described as an approach to expand the scope of the data collected, to offset the weaknesses of either the quantitative or qualitative approach alone (Lingard, Albert & Levinson 2008:460).

Creswell and Plano Clark (2013:2) defines mixed-methods as an approach to inquiry that combines or associates qualitative and quantitative types of data; it encompasses philosophical assumptions, the use of quantitative and qualitative methods, plus collaborations of both methods in the study. Therefore, mixed methods approach expands beyond mere gathering and analysis of the two types of data; it further includes the use of both methods in order for the overall strength of the study to be better than either quantitative or qualitative research alone.

Mixed-method designs can therefore be classified by a variety of metrics. The designs within the mixed-methods approach are distinguished by the levels at which one method

of data collection is prioritised over another. The amalgamation of data types in the research procedure (during or after the analysis phases); the timing of the data-gathering period (whether the qualitative and quantitative phases take place concurrently or sequentially) and the order in which the approaches were used determine the type of design within mixed methods (Fetters, Curry & Creswell 2013:2134; Carlile & Christensen, 2004:15). Some researchers have integrated diverse metrics to create mixed-methods classificatory systems (Shih, Feng & Tsai 2008:955).

Literature describes four basic categories of mixed-methods research, namely, triangulation, exploratory, explanatory and embedded approaches. Creswell, Fetters *et al.* (2009:164) gives an overview of these types of mixed-method designs, which were considered prior to making a decision on how data would be mixed in this study.

Exploratory mixed-method research starts with a qualitative approach, and it uses results of the first method (qualitative) to gather quantitative data (Creswell, Fetters *et al.* 2009:163). It is an appropriate way to explore a phenomenon (Creswell 2013:32). This design is a two-phase mixed-method design and is used when qualitative data is needed to form the basis for quantitative data. The quantitative results, in this case, would provide an overall picture, whereas the qualitative results explain, refine or extend the general picture (Creswell, Fetters *et al.* 2009:163). This design was expected to be suitable for this study because the desktop study enabled the researcher to explore aspects of MA and assist in designing the questionnaire. The desktop study preceded the structured questionnaire adhering to the requirements of the approach followed.

The triangulation research design is one of the most commonly used designs in mixed-methods research. This design gathers a variety of complementary data on a single topic in an attempt to understand the problem being studied (Teddlie & Tashakkori 2010:14). Creswell, Fetters *et al.* (2009:163) further state that the intention of using the triangulation design is to combine the different strengths and non-overlapping weaknesses of quantitative approaches with those of qualitative approaches. This design is generally utilised when the researcher seeks to directly contrast and compare quantitative results with qualitative results, or to authenticate or build on quantitative data with qualitative data (Creswell, Fetters *et al.* 2009:163). This design was applicable as there was more than one approach used to collect data; as an addition to the study being sequentially.

The embedded design is a design in which one dataset plays a secondary and supportive role in a study, which is centred on the other data category. With this design, an individual dataset is not adequate – various questions need to be asked and answered; with each kind of question having various types of data. This design is commonly used in cases where researchers need to include quantitative or qualitative data in order to answer research questions in a largely qualitative or quantitative study. This design is said to be even more beneficial when the researcher wants to embed a quantitative design within a qualitative component, as in cases of experimental or correlation design (Creswell, Fetters *et al.* 2009:164). This design was not suitable for this study because one set of data was not embedded or nested in the other.

The explanatory mixed method design is characterised by the initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis. The usual purpose of explanatory mixed method design is to explore a phenomenon; it may also be useful when developing or testing new instrument (Creswell, Fetters *et al.* 2009:164). This design as therefore not appropriate for this study as there was not an instrument to be tested in this study.

There are two transformational mixed-methods research strategies. These two strategies fall on fairly diverse ends of the mixed-methods design continuum and are linked to the period of data collection. The first strategy involves quantitative and qualitative data being gathered sequentially; the other is a legitimately complex sequential design. This study made use of the sequential strategy; qualitative and quantitative data were collected sequentially, with the desktop study conducted prior to the structured questionnaire being administered (Fetters *et al.* 2013:2134; Carlile & Christensen 2004:15).

Vlčková *et al.* (2012:251) further identify different types of mixed-method designs too. Selecting one particular method is difficult but significant; the decision made for this study was based on the following reasons:

- The appropriateness of the design to the research question (cf. 1.3);
- The expertise of the researcher (cf. 1.2); and
- The resources available (Creswell 2013:32).

Other reasons for the decision to select the exploratory sequential and triangulation mixed-method design were:

- Timing;
- Weighing; and
- Mixing.

The decision relating to timing involved the order in which data would be collected –it was collected sequentially, as discussed earlier in this section. Weighing refers to the equal or unequal weight of the qualitative and quantitative methods used for gathering data. Decisions about weighing were based on the literature cited, the purpose of the study and practical considerations (Creswell, Fetters *et al.* 2009:170). The weighing decision also refers to the way the data is to be mixed, which indicated “an explicit relation of the two types of data” (Creswell *et al.* 2009:199). Strategies for mixing data can therefore be classified as merging, embedded and sequential (Creswell, Fetters *et al.* 2009:164), as illustrated in Figure 3.1.

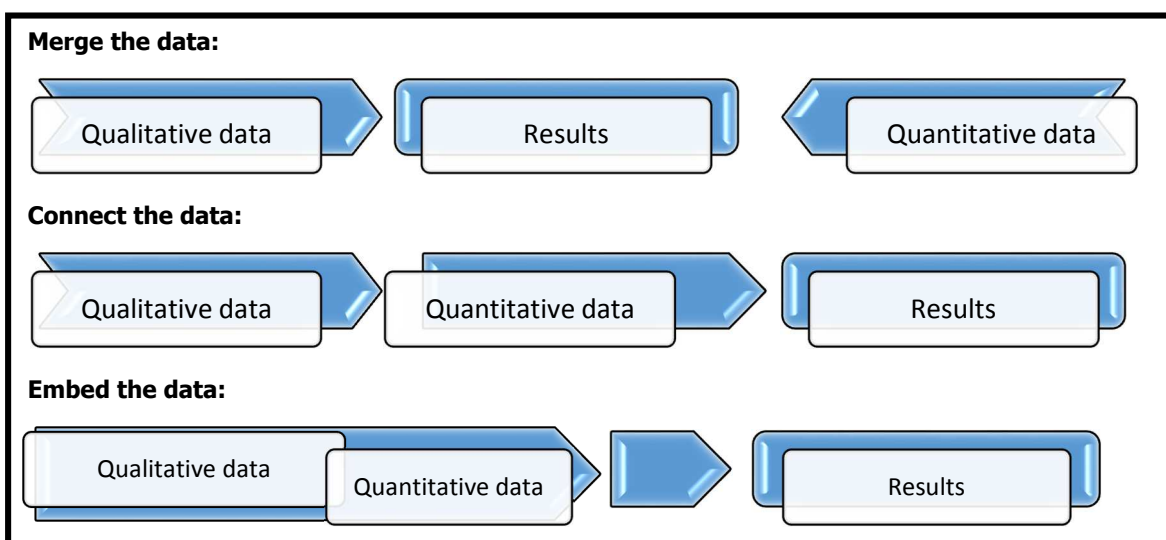


FIGURE 3.1 MIXING DATA IN MIXED-METHOD DESIGN (VLČKOVÁ, MRÁZEK, KOPEČNÝ & PETRŽELKOVÁ 2012:250)

Creswell, Fetters *et al.* (2009:164) explain that mixing datasets enables the researcher to provide an enhanced understanding of the problem being studied, as opposed to using either dataset in isolation. There are various ways of mixing methods, merging the two sets of data by bringing them together, linking the two datasets by having one build on another (which was applicable to this study), or by embedding one dataset within the other in order for the one kind of data to provide a supportive role for the other set of data. In some way the data that is collected needs to provide a more comprehensive picture of the problem than it would if it was analysed alone.

Figure 3.2 illustrates the steps guiding the implementation of this study. The steps were carried out throughout the process of this study. This sequence was applied as a guide for designing the processes of this study.

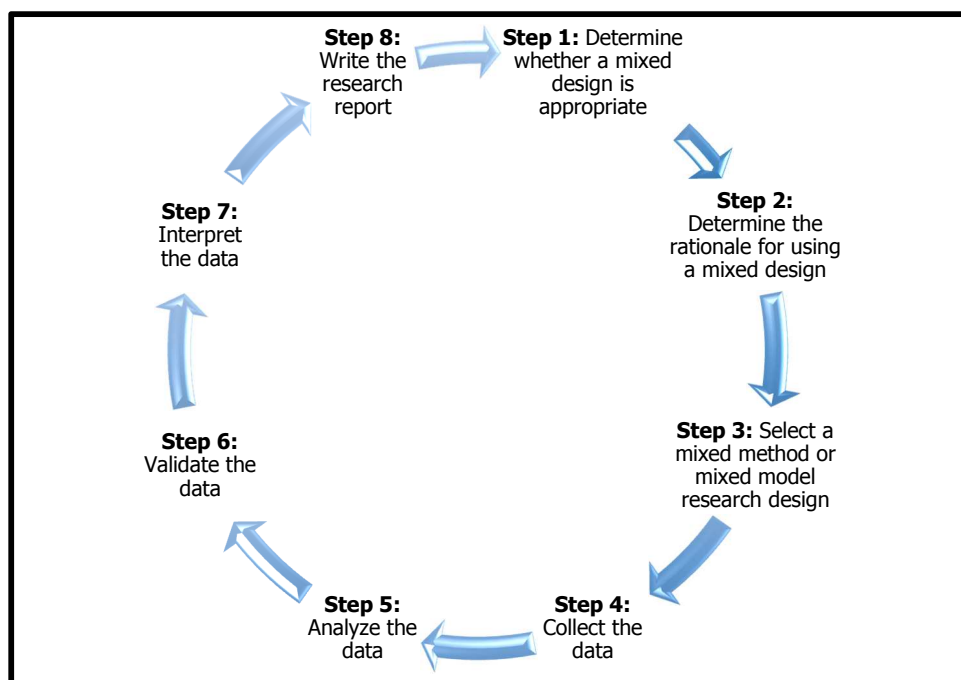


FIGURE 3.2 STEPS IN MIXED-METHODS (CRESWELL, KETTLES & PLANO CLARK 2011:23)

3.2.2.1 *Exploratory sequential mixed-method design*

Mixed-methods research involves a variety of alternative approaches. Creswell (2013:47) refers to transformational and exploratory sequential approaches. Sequential techniques involve data collection via qualitative and quantitative approaches applied in a sequence, for instance, carrying out the qualitative technique (desktop study) first and following it with the quantitative data gathering (questionnaire), as was done in this study.

A sequential mixed-method data-gathering approach was employed to authenticate one type of data by means of another type, in order to check the data for contrast, or to address diverse types of questions (Creswell, Kettles & Plano Clark 2011:535); the triangulation design was to ensure validity of the study through using the qualitative and quantitative approaches sequentially. This study offered respondents the option to provide either quantitative and qualitative data, or both, in order to ensure that the data was comparable – this is common in this approach. This mixed method design was used to collect and explore topics raised by the questionnaire that might not have been covered by structured questions alone. This facility made this strategy applicable to this study, as it enabled collection of both structured and unstructured data. Each topic-precise set of structured

questions in the questionnaire was followed by an open-ended statement that elicited further comments and had an unrestricted field for comment; the statement was unambiguously related to the questions set directly preceding it. With reference to this study, the open-ended statement which was aimed at eliciting further comments was, "Please feel free to make comments and additions relating to this section".

The sequential and triangulation data-collection strategies have numerous benefits for mixed-methods approaches, which led to the decision to use this particular approach of mixed methods. The particular design chosen for this study is a sequential mixed-methods design. Particularly in this study, the electronic and printed formats of the questionnaires were easy to comprehend; and the open-ended answer field was unrestricted, some of the respondents seized the opportunity to give additional comments (discussed in conjunction with the qualitative data presented in Chapter 4), the additional comments were completed for Section B only. Consequently, these comments usually related to preceding structured responses, making it easier for both the respondents and the researcher to connect structured and unstructured responses.

The disadvantage of a sequential data-gathering design is that responses that are confusing or interesting cannot be followed up. In this study the researcher relied on the respondents to supplement their structured responses by expanding in the space provided for comments.

According to Creswell *et al.* (2009:202) combining qualitative and quantitative methods enhances understanding of the research problem to a level that would not be accomplished by either method on its own. Furthermore, the sequential design makes it possible to use one type of data as a foundation for collecting the other type of data, as was done in this study (Cameron 2009:144).

Having considered and explored the various designs within mixed-methods, the decision was made to use the exploratory mixed-method design that was sequential in nature. This design was the best one for this study because it entailed use of qualitative data to form a basis for the quantitative data.

Developing the stratified, competency-based learning programme was divided into the following phases:

- Qualitative approach: Desktop study and literature review; and
- Quantitative approach: Structured questionnaire.

The purpose of qualitative aspect of the research study was to conduct a literature and desktop study in order to highlight and understand the various aspects of the MA field, in view of the knowledge, treatments, and the skin conditions related to MA. Furthermore, the purpose for the qualitative approach was to develop the structured questionnaire that was used to collect data in the quantitative approach. The desktop study was conducted for the purpose of gaining knowledge about the educational aspect of MA; the concepts involved in MA education, and to use the data collected into the context of various MA programmes internationally (cf. 2.5).

In Phase 2 of the research study, the primary purpose was to collect quantitative and qualitative data by means of structured and unstructured questions/sections in a structured questionnaire. The questionnaire was sent to general practitioners, plastic surgeons, somatologists, nurses, dermatologists and beauty therapists whom were practicing MA interventions, for completion. The participants were identified through use of various data bases, ranging from professional and regulatory bodies of the various professions. The questionnaires were sent to as many of the identified professionals as possible, some of the contact information in some cases was outdated hence it was challenging to establish exact number of questionnaires that reached the various participants as per the domain.

The unstructured statement was included in the questionnaire to enhance the structured data that was collected. The data collected from the structured questionnaire was analysed in a quantitative manner by means of EvaSys software, which presents the data in a number of forms, including graphs and descriptions. After analysing the data the researcher used the findings to develop a stratified, competency-based learning programme for MA in the South African context, which was based on the findings of both the qualitative and quantitative approaches.

Atkinson and Coffey (2004:56) state that descriptive studies aim to give accurate and precise descriptions. This study explored and provided descriptions of the knowledge, skills and competencies required for the various professions comprising MA.

3.3 DESCRIPTION OF THE METHODS

As mentioned above (cf. 3.2.2), the methods that formed the empirical phase of this study included a desktop study and a structured questionnaire (which incorporated both closed and open-ended questions). The following section of Chapter 3 (cf. 3.3.1) will address the

areas of data collection, sampling, data analysis, ethical considerations and the matters of reliability and validity.

3.3.1 Theoretical perspectives

The purpose of discussing theoretical perspectives was to give a background to the concepts involved in this study, in order to assist with developing the questions, and to explain the documentary study. The theoretical perspectives explored, highlighted and set the context of the research problem; it was also important to determine the need for the research and to validate that the researcher was knowledgeable about the area being studied (Cronqvist, Theorell, Burns & Lützcén 2001:228; Reason & Bradbury 2001:7).

The theoretical perspectives explored and included were focusing on the field of MA, the field; current trends in education and training; and the background of the field were significant. The theoretical perspectives included aspects of curriculum development. A variety of sources of information were explored in order to highlight the theoretical perspectives of this study, including but not limited to journal articles, books and online publications. The focus was the higher education system in general, but paid particular attention to the South African context (For the complete discussion of the theoretical perspectives underlying this study (cf. Chapter 2).

Because an exploratory mixed-method design was used, the study made use of desktop study as a method for collecting data to explore the knowledge, skills and competencies involved in the practice of MA. This study helped in designing the questionnaire and understanding the topic being studied (knowledge, skills and competencies of MA practitioners). The matter of knowledge, skills and competencies in MA and the variety of professions involved in the field, required research methodologies that would not only help to analyse processes and change; but would also allow for diverse and possibly contradictory perspectives, thereby justifying both the qualitative desktop study and quantitative structured questionnaire (closed and open-ended questions) as the best methods for collecting data.

Desktop studies provide rich descriptions of the complex facets of MA practice and education. The desktop study also developed a better understanding of the knowledge, skills and competencies of MA practitioners in ways that the conventional quantitative methods alone could not achieve (Bourgeault *et al.* 2010:71).

Miles and Huberman (1994:57) state that, in order to understand facets of healthcare, multilevel data collection and analysis is fundamental. The advantage of the desktop study was that the method itself concentrates on experiential knowledge of the different stakeholders within the various professions, and pays close attention to the influence of the social context (Caronna, Pollack & Scott 2009:249-70).

Gathering data for the desktop study did not compel the researcher to be emerged in a particular setting; instead, data that emerged from the literature was related to what was studied (Sofaer 1999:1110).

The structured questionnaire that was administered for the purpose of gathering data relating to building a theory relating to stratified knowledge, skills and competencies of MA practitioners in SA, was answered by practitioners in a wide variety of professions in MA, as mentioned in Chapter 1 (cf. 1.1). In order to gain a clear view of the topic under study, the questions in the structured questionnaire were both closed and open-ended (Burns & Grove 2005:814).

3.3.2 Desktop study

A desktop/documentary study is useful and important for enhancing and compensating for the limitations of other methods. Gathering documentary evidence was a useful method of cross-validating information gathered with the aim of developing a stratified, competency-based learning programme for MA. Additionally, the explored literature provided guidelines that assisted with the inquiry during the administration of the structured questionnaires. This phase (Phase 1) substantiated all three sections of the structured questionnaire, and therefore enhanced reliability and validity of both the content of the questionnaire and the findings (Eitel, Kanz & Tesche 2000:517).

The data gathered in the beginning stages of the research was collected from documents and regulatory guidelines from countries such as the USA (cf. 1.2). This was advantageous for this study because the researcher envisaged combining such accounts with insights with those of the other data-gathering method utilised – the questionnaire completed by stakeholders in the MA industry in SA. The questions on the questionnaire were formulated from the combined data of the various educational programmes (cf. 1.2) that were explored through the literature and desktop study.

3.3.2.1 *Determination and justification of sample size*

The desktop study required the researcher to ensure that there were an unrestricted number of data sources; ensuring that there were minimal restrictions in terms of collecting the data via the use of documents. Published research papers on the topic were included in the study.

Data from the USA and Australia, among other countries, was gathered; this decision was made due to the uniqueness and advanced level in MA education in these countries (Ragin 2006:291).

3.3.2.2 *Data analysis method*

Data analysis in a desktop study involves close integration of matters relating to representation, ensuring coherence and clarity through multiple analysis strategies and unrestricted data sources. This goal was achieved in this study through content analysis of the different institutions' MA course outlines, content and policies used as sources of data; therefore, there was no restriction to the data sources, as all the sources listed above were easily accessible.

The data from the desktop study was analysed for summary through content analysis. Content analysis is a widely used technique used in qualitative research. Content analysis involves three distinct approaches: conventional, directed or summative. Therefore this study made use of the summative approach as presented in (cf. 2.5.1), which is used to interpret meaning from the content of the data (Hsieh & Shannon 2005:1277). In this study the coding categories were derived directly from the text data (the various educational programmes that were studied). With a direct approach, the analysis started with relevant literature that was explored for the initial categories. The summative aspect of the analysis involved comparisons of key words and content, which was then followed by the interpretation of the relevant aspect involved in MA, in order to then compile questions for the questionnaire (cf. Appendix E); followed by interpretation of the underlying context as per the literature study.

In conclusion, the content analysis resulted in categories that emerged (i.e., key variables and patterns in the data); which were then applied to the questionnaire. The theoretical propositions were also extracted from the documents as an element of data collection, as

well as offering a broader theoretical understanding of aspects of MA education, the various contexts – the areas of high interest in this study included exploring the areas around guidelines for knowledge, competencies and skills of MA practitioners.

3.3.2.3 *Target population*

The target population for the desktop study was MA industries in countries where the practice and education of MA is well established, countries such as Australia and the USA; therefore, there was no specific population in terms of respondents at this phase of the research.

3.3.2.4 *The pilot study*

A pilot study was not carried out for the desktop study phase of the study, as it entailed reviewing and analysing documents.

3.3.3 Questionnaires

A questionnaire is a tool used to collect data in the form of certain information about a particular issue of interest. The structured questionnaire used in this study consisted of a list of questions, clear instructions for completion, and space for the respondents to provide answers and administrative particulars. Questionnaires must have a definite purpose that correlates with the intentions of the study; it also is important that the researcher clarifies how the data will be used. Respondents needed to be thoroughly informed of the purpose of the study, and they must be told how they would receive feedback on the findings (Bird, Chagué-Goff & Gero 2011:225).

This study used EvaSys survey automation software to carry out the data collection phase. EvaSys is a survey tool that can be used for organisational research projects, studies, training and course evaluations, assessments and exams. This software manages all aspects of an evaluation project; it offers reactive and customisable templates that are accessible on computer and mobile devices or can be paper-based, and can be used for both paper and online surveys – the latter was used this study.

As noted in this section (cf. 3.3.3), questionnaires involve the collection of data directly from respondents who are of interest for the study. Therefore, questionnaire should be

well planned and designed so that equivalent data is gathered from large numbers of persons in an equivalent way, so that the data can be studied systematically and quantitatively. Designing a questionnaire in an appropriate fashion is therefore essential, to ensure that the responses are valid for the questions. Chan and Leung (2006:436) noted two reasons/objectives of using questionnaire design; the first one being, to maximise the proportion of respondents that respond to the questionnaire (response rate), and the second to ensure that accurate, relevant data is obtained from the questionnaire.

Bird *et al.* (2011:225) provide a set of rules for designing the questions of the questionnaire. The following general ***guidelines*** were considered in the construction of the questions used in the structured questionnaire of this study:

- Use short and simple questions rather than long complex questions to eliminate confusion and ambiguity;
- Request one piece of information at a time;
- Avoid negatives;
- Ask precise questions that are not ambiguous to ensure that the question has only one meaning;
- Ensure that the respondents are knowledgeable about the topic being investigated;
- Ask the exact level of detail required and avoid including unnecessary details; and
- Minimise bias, as respondents are likely to respond to questions in a manner that they perceive to be socially anticipated or expected by the researcher, and they often seek clues within the questions.

3.3.3.1 Arrangement of responses

The questions were designed to involve both closed and open-ended formats. In the open-ended questions the respondents were requested to express their individual responses; whereas with the closed-ended questions, the respondents had to select a response from the options given. It was possible to include both formats in the structured questionnaire utilised in this study.

The open-ended sections that were filled in were those from Section B, which was concerned with the educational course content. The responses to the open-ended sections are discussed in Chapter 4, under Section B discussions and are presented as raw data in the form of quotes.

3.3.3.2 *The length of the structured questionnaire*

There are no restrictions about the optimal length of a questionnaire, and the length is dependent on the type of respondents. It has, however, been noted that short questionnaires usually attract higher response rates (Bird *et al.* 2011:225).

The arrangement of the questions was guided by Bird *et al.* (2011:225), as follows:

- Start from general and move to more particular questions;
- Start with easy questions, then progress to difficult ones;
- Progress from factual to abstract questions; and
- Ensure that the relevant questions are addressed first.

The length of the structured questionnaire used in this study was 6 pages long when printed single side. The structured questionnaire is composed of four sections, namely, Section A, B, C and D. The first section was the easiest as it was on demographic information of the respondents, then progressed to the abstract content (knowledge requirements for MA, treatment interventions and finally skin conditions encountered in MA. The various sections of the questionnaire are discussed further in Chapter 4 (cf. 4.1).

3.3.3.3 *The administration of the structured questionnaire*

The structured questionnaire used in this study was self-administered, and was sent to the respondents by a number of methods, including email and hard copy (paper format). The advantages of using a self-administered, structured questionnaire in this study are that the email option is inexpensive and easy to administer, confidentiality of all data can be preserved; and it is easy for the respondents to complete the questionnaire at their convenience.

Although there are disadvantages to the use of questionnaires, the decision to use questionnaires as a tool to collect data was based on the following:

- Questionnaires are practical;
- Large quantities of information can be gathered from large numbers of respondents, with limited effect on the reliability and validity;

- The results of questionnaires can be quantified quickly and effortlessly by the researcher, or with the aid of a software package;
- Data from questionnaires can be studied more objectively or scientifically compared to other tools of research such as case studies;
- After data has been quantified, it can be used to test existing hypotheses or to create new theories;
- It is easy to reach people who are spread across a wide geographical area; and
- Respondents are able to fill in the questionnaires in their own time.

(Bird *et al.* 2011:225)

Using questionnaires for data collection also has disadvantages, and the following were noted in relation to this study:

- Questionnaires are arguably inadequate to understand some forms of information, particularly behaviour, feelings and emotions, etc., hence the inclusion of the qualitative questions;
- Phenomenologists indicate that quantitative research is merely a simulated creation of the researcher, as it only asks a restricted amount of information without explanation. This disadvantage was combated by including open-ended questions in the questionnaire;
- Questionnaires are said to lack validity;
- There is a lack of certainty regarding the truthfulness of the respondents' responses;
- There is a possibility that respondents' don't consider the complete context of the situation when answering the questions;
- There is a possibility that respondents could read and understand the questions differently, and answer according to their own interpretation of the questions;
- Questionnaires involve a level of imposition, meaning that, when the questionnaire is developed, the researcher is creating his/her own assumptions and decisions about what is and isn't important. Hence this study used a desktop study to develop the questions; and
- The response rates can be low and refusal rates high.

(Rennie 2004:37)

After considering the advantages and disadvantages of questionnaire use, the researcher concluded that the structured questionnaire was an appropriate method for data collection for this study. The structured questionnaire was stratified with regard to knowledge, skills

and competencies, in order to establish which treatments and skin conditions were practiced by the various professions involved within MA. This stratification principle assisted with the compilation of the list of possible knowledge, skills and competencies of MA practitioners in SA (for the purpose of the questionnaire), in accordance with global standards, in order to develop the stratified, competency-based learning programme for MA (Fitzpatric & Kazer 2011:732).

The respondents granted permission to participate in the research, after which the respondents then were sent a link on which they could fill out the questionnaire. In the case of the manually distributed questionnaires, the researcher sent both hard formats of the consent and information letter to the possible respondents, after which they received the questionnaires (Appendix E) to complete, provided they had signed the consent forms. All respondents filled in the same structured questionnaire, in order to reduce bias and to ensure that the data collected was accurate. English was the language used in the questionnaire.

3.3.3.4 Determination and justification of sample size

Sample size calculation is concerned with how much data is required to make an accurate decision in particular research. It is logical to believe that more data translates into a more accurate decision and that there would be less error of the parameter estimate. This doesn't necessarily mean that more is always best in sample size determination.

In this study, the various relevant professional groups vary in size; there are no statistics on the number of professional practitioners involved in the field of MA, and the probable reason for this lack of information is the lack of a regulatory body. Taking this into consideration, it was more appropriate to determine the required population size on the basis of the guiding principle, *non-finite population scenario*: This scenario involves an unknown population size, i.e. non-finite population (Yeoh 2015:189). The formula below is used for non-finite population cases, such as the situation in this study:

$$(2)n_{nf} = Z^2 \sigma^2 / E^2$$

Where

Z = critical value for Z

σ = estimated population standard deviation

E = standard error, which is given by: $E = \sigma / \text{sqrt}(n_{\text{test}})$

With this method, a test sample (n_{test}) needs to be taken as an initial sample in order to obtain statistics and use the equations above to calculate the value of σ (Yeoh 2015:189).

The population size for this study could not be specifically determined as the MA population size is unknown. The researcher intended to get the highest possible number of professionals to take part in the questionnaire (cf. 3.2.2.1). The participants were from anywhere in SA (KwaZulu Natal, Western Cape, Gauteng, North West), the various professions were selected based on their involvement in the field of MA in SA and hence the selection.

3.3.3.5 *Data analysis method*

The data acquired from the structured questionnaires was captured by the EvaSys data collection software system, as discussed above (cf. 3.3.3). The data was arranged by a biostatistician at the UFS who is an EvaSys consultant. The data was classified as descriptive statistics illustrated through the use of tables and graphs (cf. Chapters 4 & 5). Provision was made for hard-copy questionnaires in case respondents requested such copies for manual completion; these completed questionnaires can be physically scanned into an EvaSys machine to capture the data.

3.3.3.6 *Target population*

The population for the questionnaires consisted of stakeholders in the MA field, which include general practitioners, plastic surgeons, somatologists, nurses, dermatologists and beauty therapists. The number of distributed questionnaires to the various professionals were: somatologists (50), dermatologists (40), beauty therapists (37), general practitioner (30), nurses (25) and plastic surgeons (18), of which a total of 76 stakeholders of MA responded (cf. 4.2.4). Purposive sampling was used to select respondents (cf. 3.2.2.1). Delpont, Strydom Theron and Geyer (2011:121) explain that purposive sampling is a sampling technique where respondents are selected from a group for a particular reason (for this study, this group consisted of the various professionals involved in MA).

Purposeful sampling was best suited for this study, because the selection was not necessarily from large groups (a population). The inclusion criteria for respondents were:

- Any of the professionals whom were qualified in their respective domains;
- Respondents needed to be actively practicing all or some interventions of MA (it is worth noting that MA is not a regulated field -.it is therefore challenging to confirm

without a doubt that the respondents were actively involved in MA, although the researcher also consulted health and skin care clinics, doctors rooms, dermatologists who were in practices that offered MA interventions).

3.3.3.7 *The pilot study*

Considering the general complexity of crafting a questionnaire, it is difficult for an expert to get it right the first time. Therefore, the questionnaires in this study were pre-tested on a small sample of respondents that met the inclusion criteria (cf. 3.3.3.6) (Bird *et al.* 2011:225).

A pilot study using the questionnaires was carried out for this research study; this was done after the desktop study had been done and prior to collecting the data. Only after the protocol had been approved by the Ethics Committee of the Faculty of Health Sciences, was the questionnaire piloted with one respondent from each of the professions involved in MA; the respondents for the pilot study met the criteria for inclusion in the study. Data obtained from these respondents was used in the main study, as the pilot did not indicate that changes had to be made to the structured questionnaire. In any case, in order to ensure valid results, respondents of the pilot study were not permitted to participate in the questionnaires again when the official study took place. The pilot study was performed to:

- Ensure that sufficient time was allocated for communication and consent for participation from the potential study respondents;
- Ensure that all relevant questions were included and that the questions were unambiguous, unbiased, and in an appropriate order; and
- Confirm the approximate time required for completion of the questionnaires.

There were no irregularities noted from the pilot study, therefore, no adjustments were made to the questions of the structured questionnaire.

3.4 QUALITY ASSURANCE AND RIGOR OF THE STUDY

Reliability and validity are concepts used in relation to quality assurance of quantitative studies, whereas trustworthiness is used in qualitative studies. Rigor is the means by which truthfulness and proficiency are presented; it relates to the politics and ethics of a study, irrespective of the research paradigm – the features of rigor apply to all research methods.

Rigor is the structure and application of characteristics that necessitate creativity, innovation and transparency in qualitative aspects of a study (Gerrish & Lacey 2010:304). Since the study consisted of a qualitative and quantitative phase, the quality and rigor of both phases of the study will be discussed in this section.

3.4.1 Validity and reliability

Validity in the context of quantitative research refers to the degree to which a questionnaire measures what it actually intends to measure. Validity, therefore, comprises the whole investigational notion and determines whether the findings gathered meet all the necessities of the scientific research method. There are two forms of validity, internal and external validity. Internal validity dictates how an investigational strategy is structured and how it incorporates all stages of scientific research methods. Internal validity in this study was ensured through a pilot study, and peer review of the structured questionnaire. Lastly, because all the respondents of the pilot study met the inclusion criteria, the feedback obtained from pilot of the structured questionnaire ensured the validity of the structured questionnaire (Denzin & Lincoln 2005:203).

External validity is the practice of inspecting the results and interrogating whether there are any probable casual associations (Denzin & Lincoln 2005:203).

In this study, triangulation was done as there was more than one method used in this study; the data collected by both approaches complemented the data collected by each of the separate approaches. The incorporation of both qualitative and quantitative approaches in this study contributed to the validity of the data. The triangulation of the data from the desktop study, structured questionnaires and the researcher's experience was carried out.

Reliability, on the other hand, refers to the consistency of a questionnaire. A questionnaire would be considered reliable if the same results would be obtained if the questionnaire was re-administered repeatedly (Muller). Reliability is based on the ability of other researchers to perform a particular study under the same circumstances and obtain equivalent results, which would reinforce the findings as well as ensure that the broader scientific community accepts the findings. Reliability can therefore be thought of as consistency (Denzin & Lincoln 2005:206). Although it is not possible to measure reliability, there are four general estimators:

- Inter-rater/observer reliability, which refers to the degree to which different observers give consistent answers or estimates;
- Test-retest reliability, which refers to the steadiness of a measure evaluated over a period of time (applicable to this study);
- Parallel-forms reliability, this refers to reliability of two tests constructed in the same manner, from the same context;
- Internal consistency reliability, which refers to the consistency of results across items; and
- Spit-halves reliability, a more practical technique that does not need two administrations of the same test. With this method of determining reliability, the overall number of items is divided into two and a connection made between those two shares. This connection only estimates the dependability of each half of the test. It is therefore important to use statistical correlation to estimate the reliability of the whole study.

(Denzin & Lincoln 2005:2054)

Reliability of this study was enhanced by the *spit-halves reliability* prediction, as mentioned above (cf. 3.3.3.4) (Yeoh 2015:189). This process was the most suited and applicable to ensure further reliability of this study. This method, together with the researcher's own self-reflections and subject experience concerning the process of data analysis and interpretations; and her involvement in the data-collection stage, further enhanced the reliability of the structured questionnaires as well as the research process as a whole.

3.4.2 Trustworthiness

The qualitative phase (desktop study) of this study made use of Lincoln and Guba's (Creswell 2013:23) frame of measures to ensure transferability, credibility and confirmability and trustworthiness, and which was maintained together with dependability and authenticity (Guba, Lincoln & Lynham in Denzin & Lincoln 2011:196). These strategies are explained in Table 3.1.

TABLE 3.1: STRATEGIES FOR TRUSTWORTHINESS
(Table continue on next page)

Strategy	Criteria	Applicability
Credibility	Prolonged engagement with literature	<ul style="list-style-type: none"> • Ensuring honesty and openness in synthesising data.

	Authority of the researcher	<ul style="list-style-type: none"> The researcher underwent training in research methodology while studying for her Bachelor's degree in Somatology. She also completed the PhD SANTRUST research methodology modules successfully. There were three promoters/supervisors for this study, who all have Doctorial qualifications and therefore have vast knowledge and experience in research.
	Triangulation	<ul style="list-style-type: none"> Multiple methods of data collection were used; namely, a desktop study and a structured questionnaire (containing closed and open-ended questions), additionally the researchers experience and knowledge was additionally used in the triangulation.
Transferability	Dense description	<ul style="list-style-type: none"> Purposive sampling was used based with specific criteria. The demographics of the respondents were described. The results were contextualised in the literature.
Dependability	Code-recoding procedure	<ul style="list-style-type: none"> All aspects of the study were described fully and discussed. This included the methodology, sampling process and data analysis.
Authenticity	Fairness	<ul style="list-style-type: none"> Balancing all perspectives of the various documents used.
	Ontological and educational authenticity	<ul style="list-style-type: none"> Raised awareness of the sources of documents. Raised awareness of professional communities of practice.
	Catalytic or tactical authenticity	<ul style="list-style-type: none"> Action orientation of the study results.

3.5 ETHICAL CONSIDERATIONS

The researcher ensured adherence to ethical standards. The research protocol was submitted to and approved by the Higher Degree and Ethics Committees of the Faculty of Health Sciences for ethical clearance at the UFS. The areas of ethical consideration that were taken into account were informed consent, confidentiality, anonymity, privacy, beneficence and quality of the research.

Throughout all phases of the research process the researcher was sensitive to ethical considerations, as discussed below and addressed in the consent form.

3.5.1 Informed consent

The researcher acquired permission from possible respondents before they completed the questionnaire. Respondents were asked to give considerable time to the study by voluntarily giving consent by clicking on "I voluntarily agree to participate in this study" on the electronic mail sent to them. Consent forms were signed by the respondents who made use of the paper-based questionnaire prior to participating in the research study (Creswell 2013:44).

Carr, Perry and Rhoads (2002:151) state that the overall philosophies involved in dealing with document, are not different from the ones involved in other areas of social research, but that the precise features of documentary sources require consideration of their unique structures and the specific systems needed to deal with them.

In the case of desktop studies, it is imperative to be conscious of and abide by the responsibilities, rights and limitations contained in the main legal provisions. These may differ in different countries. The most important legal aspects that affect desktop studies are freedom of information, copyright and data protection. In addition, considerations of confidentiality of information and the rational ownership were considered.

Informed consent involves the researcher providing respondents with detailed, clear, and accurate information about the study, its risks, its methods and benefits, along with a guarantee of the voluntary nature of participation, and the liberty to refuse or remove from the study without any consequences (Green & Thorogood 2013:77).

Respondents were legally proficient (in consideration of the ages of the respondents, they were all adults) to give consent and were also informed that they would be at liberty to withdraw from the study at any time if they wished to. None of the respondents were prompted into participating in this study; therefore, their participation was voluntary. The informed consent forms of the respondents of this study were signed by each of the respondents. Respondents' permission was obtained to take part in the study. The respondents were also informed of the purpose and procedure of the structured questionnaires.

The respondents were offered the opportunity to ask questions prior to the commencement of the study as well as during the completion of the structured questionnaire. The contact details of the researcher and PhD promoters of this study were given to the respondents in the informed consent letter.

3.5.2 Confidentiality and anonymity

Green and Thorogood (2013:70) state that confidentiality and anonymity refer to not disclosing information gained from the research in other settings, such as informal conversations. A confidentiality agreement was signed between the data analyst and the researcher. The identities of the respondents were not revealed in any published material

and the researcher ensured that all the documents used were stored and kept in a password-protected file.

3.5.3 Right to privacy

The respondents' right to privacy was maintained. This entailed that each respondent had a right to choose where, when, to whom and to what degree the data would be exposed as per the consent letter (Singleton *et al.* 1988:454; Jooste, Khumalo & Maritz 2013:14). Furthermore, in ensuring the right to privacy, the researcher made certain that privacy of the data collected during the empirical phase was maintained. The respondents were informed that the only persons who would be handling the data would be the study promoters, data analyst and researcher.

3.5.4 Beneficence

Beneficence means that respondents are treated in an ethical way, not only in respecting their choices and offering them protection from any harm, but also in ensuring their well-being (Sullivan, Prevost & Churchill 2000:15). With reference to beneficence, Cassell, Sullivan, Prevost and Churchill (2000:455) state that there are two rules that apply in facilitating beneficence: one would be for the researcher to ensure that no harm is caused to the respondents, and the second is to maximise possible benefits to them.

Respondents were not exposed to any physical and/or emotional harm in any manner. It is accepted that, within qualitative research, the possible harm to respondents might be mainly of an emotional nature. The ethical obligation rested with the researcher to ensure that respondents were protected within reasonable limits from any possible harm that might have resulted from the study. Emotional harm to the respondents is often more difficult to predict and determine, however has more far-reaching consequences for the respondents than physical harm (De Vos, Strydom, Fouché, Delport 2005:58). In this study, psychological harm was not possible, as the topic was not of a sensitive nature, nor was the respondents regarded as weak individuals.

The respondents were not exposed to any legal, social, physical or economic harm. The respondents were informed of the possible influence of the study. Respondents could withdraw from the study at any stage of the research study, without fear of victimisation or penalty by the researcher (highlighted in the consent form).

3.6 CONCLUSIVE SUMMARY

This chapter provided theoretical perspectives on the mixed-methods research design as well as related methods selected and utilised in this study. These methods comprised a desktop study and structured questionnaire. The methods used in the study informed the programme respectively; the desktop study and literature study allowed for identification of the various key elements of medical aesthetics (education, professions, and MA interventions); whereas the structured questionnaire allowed for the statistical validation of the various aspects included in the short learning programme presented in Chapter 6.

The chapter concluded with a discussion of validity, reliability, trustworthiness and ethical considerations relating to the study and that were taken into account.

Chapter 4 is titled: "***Results and interpretation of findings of Section A, B and C of the structured questionnaire.***" The researcher will present a report on the results, discuss and analyse the data from the structured questionnaires and the interpretations thereof.

CHAPTER 4

RESULTS AND DISCUSSION OF QUESTIONNAIRE SURVEY:

SECTIONS A, B AND C

4.1 INTRODUCTION

In Chapter 3 the research approach/design and the methods were discussed in depth. In this chapter the data obtained from the research is presented in various forms, specifically tables and graphs, and discussed. The data for this research was gathered using two methods, namely, a desk top study and a structured questionnaire. The structured questionnaires were completed by stakeholders in medical aesthetics (discussed in Chapter 3).

The structured questionnaire (cf. Appendix E) was developed on the basis of the desktop study – as the desktop study assisted in identifying the important knowledge and course content of MA courses; the treatment interventions in MA as well as the common skin conditions that are managed within MA (cf. 2.5.1 & 2.3). In the introduction to the questionnaire, the respondents were reassured that their responses would be confidential; they also received instructions for completing and returning the questionnaires. The structured questionnaire was divided into four sections.

It is worth noting that there was a limitation to the questionnaire aspect of collecting data. Although there were just over 200 questionnaires sent out to as many of the professionals as possible, the majority of the respondents were somatologists; the other professionals were not represented in equality to each other, despite the numerous reminders sent out to the respondents. The data represented in both Chapter 4 and 5, represent the views of the sample and not necessarily a representation of the practice of MA.

Section A contained demographic information of respondents, for example, gender, age, qualifications and degree of experience in their respective fields, including MA.

Section B collected data relating to the educational course content; the objective was to determine what stakeholders of MA deemed to be important content that should be included in the stratified, competency-based learning programme. The responses in this section were provided on a three-point scale, and respondents were required to rate the importance of the content as not important, somewhat important, or important in accordance with

Barnes (2001:180). Barnes suggests that the most frequently used number of options seems to be five, although three can suffice if the aim is to eliminate the fine lines amongst five options. The open-ended field on this section was filled out by 2/76 respondents, their response to the open-ended field are included in this section, and are presented as raw data in the form of quotes.

Section C determined which professionals perform certain treatment interventions in MA. Respondents needed to indicate the professions practicing the various treatment interventions. This data was used to stratify the treatment interventions practiced by the various professionals in MA. This section also enabled respondents to provide any additional information in the open-ended part of the section.

Section D was designed to collect data on which professionals in MA treat the identified (most often encountered) skin conditions in MA. This section also provided respondents with the opportunity to provide additional comments relating to the section. Section D will be discussed in Chapter 5.

The structured questionnaire was distributed amongst many (just over 200 questionnaires in total) professionals in MA, the number of distributed questionnaires to the various professionals were: somatologists (50), dermatologists (40), beauty therapists (37), general practitioner (30), nurses (25) and plastic surgeons (18), of which a total of 76 stakeholders of MA responded (cf. 4.2.4). Data gathered from the questionnaire was arranged by a biostatistician and analysed and interpreted by the researcher. It must be made clear and acknowledged that the data could be affected by the number of professionals that participated in the study from a particular profession and could impact on the results.

4.2 SECTION A: DEMOGRAPHIC INFORMATION OF RESPONDENTS

4.2.1 Gender of respondents

The respondents were asked to indicate their gender, and the results are presented in Figure 4.1.

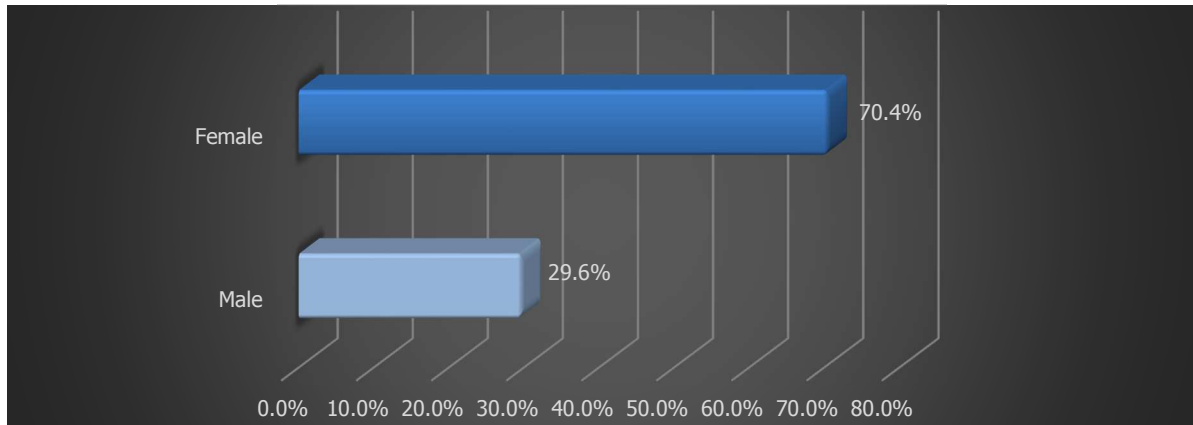


FIGURE 4.1: GENDER OF RESPONDENTS (n=71)

The results indicate that the majority of the respondents were female, 50/71 (70.4%), with a much lower number of male respondents, who were 21/71 (29.6%) of the respondents. This finding is supported by the predominance of women in the field of MA (cf. 2.4) (Neilson 2009:349). 5/76 (6%) of the respondents did not indicate their gender. The results presented in Figure 4.1 indicate the results from the 71 respondents who indicated their gender.

4.2.2 Age of respondents

The respondents were asked to indicate their age, and the results are presented in Figure 4.2.

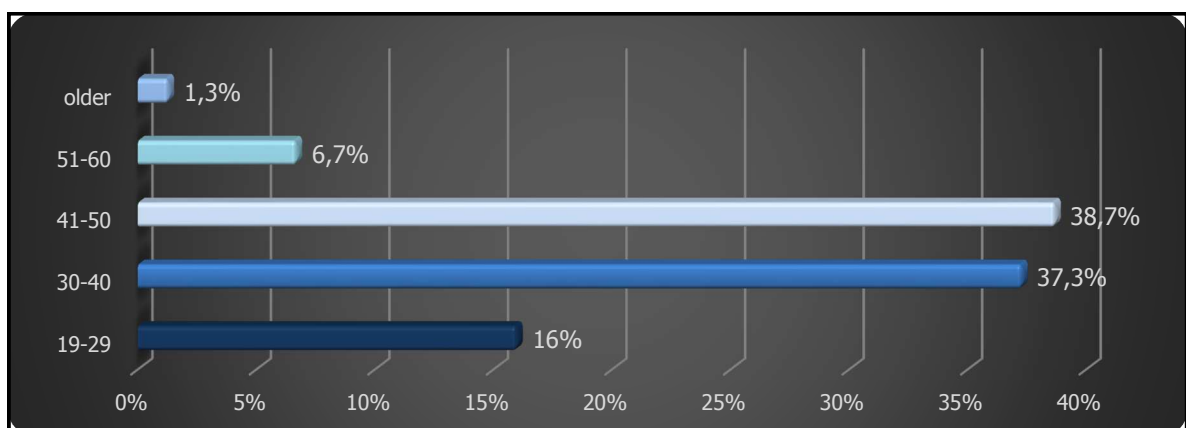


FIGURE 4.2: AGES OF RESPONDENTS (n=75)

The best represented age group of the respondents was the age group 41-50 years, with 29/75 at (38.70%), followed by the age group 30-40 years, with a representation of 28/75 (37.30%). The age group 19-29 years was represented by 12/75 (16%) of respondents, with the 51-60 years age group making up only 5/75 (6.70%). 1.30% of the respondents

were in the age group 61 years and older. One of the 76 respondents did not indicate his/her age group. This data indicates the diversity of respondents in relation to the age of practitioners of MA.

4.2.3 Highest qualifications of respondents

This question presented the respondents with predetermined choices regarding their qualifications, the respondents needed to indicate their highest qualifications; the results are illustrated in Figure 4.3. The options were Grade 11 or lower (Std. 9 or lower), Grade 12 (Matric, Std. 10), Post-matric, Diploma or certificate, Baccalaureate degree(s), and Other. This question was answered by 67 respondents, meaning 9 respondents did not respond to this question, the results indicated in Figure 4.3 are reflecting the 67 respondents who answered the question.

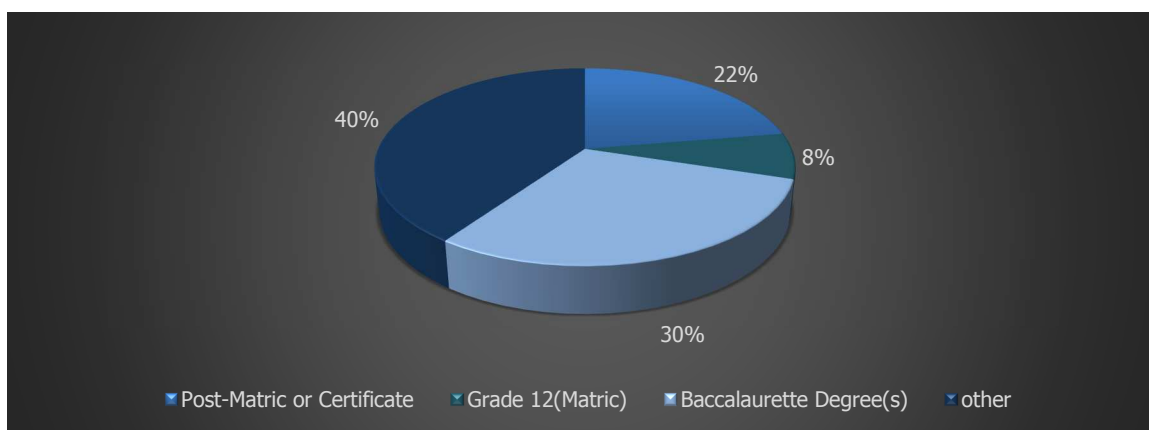


FIGURE 4.3: HIGHEST QUALIFICATIONS OF RESPONDENTS (n=67)

The greatest number of respondents selected the option "Other", namely (27/67) 40%. 20/67, thirty percent of respondents indicated that their highest qualification was a Baccalaureate degree within their traditional professions; 15 (22%) of the respondents had a post-matric qualification or certificate as their highest qualification in their respective fields of study. It was a surprise that 5\67 (8%) of the respondents possessed Grade 12 (Matric) as their highest qualification; it is surprising as one would expect that practitioners of MA would have some form of higher education in the health or medical field. A total of 9 respondents did not respond to this question. It is assumed that the reason such a high percentage of respondents selected "Other" means that respondents had higher qualifications than the options provided.

Another explanation, although unlikely, is that the majority of respondents had lower qualifications within their fields, which could be one of the consequences of the deficiency in regulatory mechanisms for MA practice in SA. This in turn is testimony of the importance of developing this stratified competency-based learning programme for purposes of benchmarking.

4.2.4 Formal professions of respondents

This question was formulated in order to gain a scientific perspective on the representation of professionals involved in the practice of MA in SA; the data indicated in Figure 4.4.

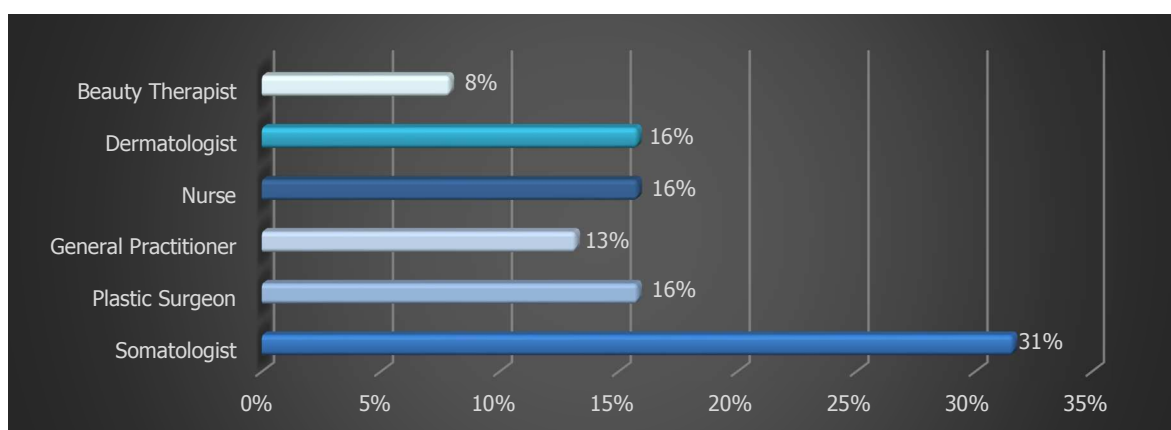


FIGURE 4.4: FORMAL PROFESSIONS OF RESPONDENTS (n=76)

Of the respondents in the study, 24/76 (32%) were somatologists, 12/76 (16%), were plastic/cosmetic surgeons, 12/76 (16%) were nurses and 12/76 (16%) were dermatologists, 10/70 (13%) of the respondents were general practitioners and, lastly, 6/76 (8%) were beauty therapists. This data indicates that all the identified respondents are involved in the practice of MA (Dobbs 2013:20) (cf. 2.5).

4.2.5 Years of experience in area of qualification

The respondents were asked to indicate the number of years' experience they hold in their area of formal qualification. The findings indicate that 62/76 (81.6%) of the respondents had six or more years' experience in their respective fields, 9/76 (11.8%) of the respondents had 0-2 years' experience and 5/76 (6.6%) of the respondents had 3-5 years' experience in the respective areas relating to their qualifications. The data indicate that the respondents are knowledgeable to the practice of MA in South Africa (cf. Figure 4.5).

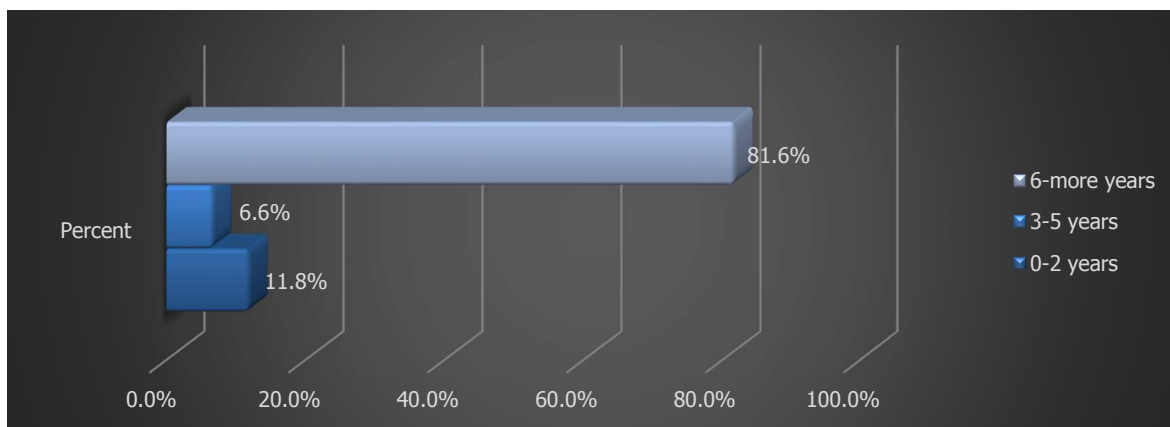


FIGURE 4.5: YEARS OF EXPERIENCE IN AREA OF QUALIFICATION (n=76)

4.2.6 Years of experience in medical aesthetics

This question was aimed at gaining insight into the respondents' experience in the practice of MA; the results are presented in Figure 4.6.

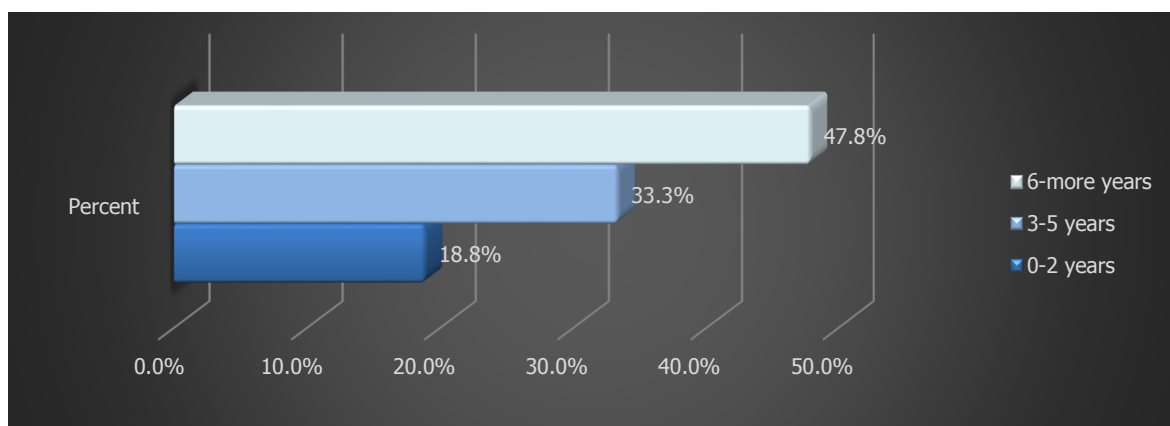


FIGURE 4.6: YEARS OF EXPERIENCE IN MEDICAL AESTHETICS (n=69)

Of the respondents, 33/69 (47.8%) had six or more years' experience, 23/69 (33.3%) had 3-5 years' experience and 13/69 (18.8%) the least experience, between 0 and 2 years' experience in MA. Seven of the 76 respondents did not indicate their number of years' experience in MA practice. It can therefore be concluded that the majority of respondents had a great deal of experience in the practice of MA.

4.3 SECTION B: EDUCATIONAL COURSE CONTENT FOR MEDICAL AESTHETICS

This section was formulated to identify the educational content that should be included in a MA learning programme. Respondents were asked to grade each of the components on a scale that offered the following options: Important, Somewhat important and Not

important. The data gathered from responses to these questions is presented in rows prior to the discussion of each result. All 76 respondents answered all the questions in this section. The results of the open-ended section preceding the quantitative questions are included in the discussion of this section; through the use of quotes within the discussions and conclusive remarks of this section, there were two respondents that provided comments on this section (cf. 3.3.3.1).

TABLE 4.1: IMPORTANCE OF KNOWLEDGE OF DIAGNOSTIC TOOLS IN MEDICAL AESTHETICS EDUCATION

QUESTION 1	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of diagnostic tools in medical aesthetics education?	98,7%	1,3%	0,0%

Knowledge of diagnostic tools is a fundamental requirement for practicing as an MA practitioner (Kerscher & Dubertret 2007:180) (cf. Section 2.5.1). Knowledge of diagnostic tools was indicated as important by 75/76 (98.7%) of respondents, with 1 (1.3%) having the opinion that knowledge of diagnostic tools was somewhat important. Knowledge of diagnostic tools is incorporated in most MA programmes offered internationally (Primary Care Dermatology Society 2015:online). This aspect of the knowledge base enables students to utilise various methods and tools for diagnosing abnormal skin conditions. Diagnosis of skin conditions can refer to the history of the individual, predominant site of occurrence, or morphology (Primary Care Dermatology Society 2015:online). There are, however, various other tools that are used to assist in diagnosis of skin conditions, such as magnifying lamps, pinch tests, biopsies, wood lamps, Tzanck and diascopy.

TABLE 4.2: IMPORTANCE OF KNOWLEDGE OF ADVERSE EFFECTS OF MEDICAL AESTHETICS PROCEDURES IN MEDICAL AESTHETICS EDUCATION

QUESTION 2	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of adverse effects of medical aesthetics procedures in medical aesthetics education?	100,0%	0,0%	0,0%

All the respondents 76/76 (100%) indicated that knowledge of adverse skin reactions is important. Adverse skin reactions can result from various medications, products and services. It is therefore important for medical aestheticians to be aware of possible contraindications of procedures, treatments or products applied to the skin through communicating with patients (Warfield 2001:246).

TABLE 4.3: IMPORTANCE OF KNOWLEDGE OF CONDUCTING AESTHETIC CONSULTATION IN MEDICAL AESTHETICS EDUCATION

QUESTION 3	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of conducting aesthetic consultation in medical aesthetics education?	98,7%	1,3%	0,0%

In total, 75/76 (98.7%) of respondents indicated that knowledge of conducting aesthetic consultation is important; and 1/76 (1.3%) said it was somewhat important. Banning (2008 1550) suggests that consultation begins when the patient enters a treatment room and it is a fundamental step of all MA interventions, necessitating a structured approach to diagnosis and decision making related to treatment interventions. Effective communication forms an important part of consultation, as the practitioner needs to be able to communicate information to the patient without manipulating the information in any way (Cegala 2003:91).

TABLE 4.4: IMPORTANCE OF KNOWLEDGE OF PHARMACOLOGY IN MEDICAL AESTHETICS EDUCATION

QUESTION 4	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of pharmacology in medical aesthetics education?	94,7%	5,3%	0,0%

Certain treatments and interventions may have an effect on the client's existing medications. Furthermore, many medications have effects on the skin. For these reasons MA practitioners require knowledge of the principles of pharmacology. The findings indicate that 58/76 (94.7%) of the respondents deem knowledge of pharmacology to be important in MA education. It is, however, interesting to note that 4/76 (5.3%) of the respondents had a different opinion, as they indicated that knowledge of pharmacology was only somewhat important in MA education.

TABLE 4.5: IMPORTANCE OF KNOWLEDGE OF INFECTION CONTROL IN MEDICAL AESTHETICS EDUCATION

QUESTION 5	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of infection control in medical aesthetics education?	97,3%	2,7%	0,0%

According to the findings, knowledge on infection control was seen as important in MA education by 74/76 (97.4%) of the respondents; and 2/76 (2.6%) had the view that

infection control is somewhat important. Including knowledge on infection control would equip students with knowledge of bacteria, infection, procedures and guidelines to help MA practitioners to reduce the chances of infection.

TABLE 4.6: IMPORTANCE OF KNOWLEDGE OF ADVANCED COSMETIC CHEMISTRY IN MEDICAL AESTHETICS EDUCATION

QUESTION 6	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of advanced plastic/cosmetic chemistry in medical aesthetics education?	97,4%	2,6%	0,0%

The majority of respondents (97.4%) agreed that knowledge of advanced cosmetic chemistry in MA is an important part of an education programme. In support of this Boon Harold Tan (2007:13) suggest that an advanced cosmetic chemistry module should outline the basic elements of chemistry and chemical processes in relation to cosmetic products, ingredients and the various compositions of cosmetics.

TABLE 4.7: IMPORTANCE OF KNOWLEDGE OF AN AESTHETIC TREATMENT PLAN IN MEDICAL AESTHETICS EDUCATION

QUESTION 7	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of an aesthetic treatment plan in medical aesthetics education?	97,4%	2,6%	0,0%

Consultation involves providing information about treatment interventions, obtaining informed consent, managing expectations in a realistic manner, and designing a treatment plan, which 74/76 (97.4%) of the respondents deemed to be important enough to include in MA education. In contrast 2/76 (2.6%) of the respondents indicated that it is merely somewhat important (cf. Section 2.5.1).

TABLE 4.8: IMPORTANCE OF KNOWLEDGE OF BUSINESS SKILLS AND PROFESSIONAL DEVELOPMENT IN MEDICAL AESTHETICS EDUCATION

QUESTION 8	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of business skills and professional development in medical aesthetics education?	88,2%	11,8%	0,0%

Knowledge of business skills and professional development was regarded as important by 67/76 (88.2%) of the respondents. It was surprising that as many as 9/76 (11.8%) of the

respondents stated that inclusion of business skills in MA education was only somewhat important. Business skills are taught in most MA programmes worldwide. Such a module deals with MA business management, strategies for establishing a successful MA business, record keeping, customer service and marketing (Boon Harold Tan 2007:15); business skills and professional development are closely linked, hence they are provided together. Considering the nature of the MA industry, it could be important for MA practitioners to have knowledge about business skills and professional development (cf. Section 2.5.1).

TABLE 4.9: IMPORTANCE OF KNOWLEDGE OF THE DIFFERENCES BETWEEN ETHNIC/DARK SKIN AND WHITE/CAUCASIAN SKIN IN MEDICAL AESTHETICS EDUCATION

QUESTION 9	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of the differences between ethnic/dark skin and white/Caucasian skin in medical aesthetics education?	97,3%	2,7%	0,0%

The findings indicate that 74/76 (97.3%) of the respondents stated that it is important to include knowledge of the differences between ethnic/dark skin and white/Caucasian skin in MA education; whereas 2/76 (2.7%) indicated that it was somewhat important. According to (Dermascope:online) knowledge of this aspect includes the various skin conditions and how different skins react; as well as various strategies for dealing with different skins to suit a particular skin.

TABLE 4.10: IMPORTANCE OF KNOWLEDGE OF TECHNIQUES USED TO MANAGE COMPLICATIONS IN MEDICAL AESTHETICS EDUCATION

QUESTION 10	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of techniques used to manage complications in medical aesthetics education?	96,1%	3,9%	0,0%

Knowledge of techniques used to manage complications was deemed important for inclusion in MA education by 73/76 (96.1%) of the respondents; with 3/76 (3.9%) of the respondents indicating it as somewhat important. Knowledge of managing complications is important for the reasons mentioned above relating to adverse skin reactions, because adverse skin reactions can escalate to complications. It is therefore important for MA practitioners to be equipped with knowledge that prepares them to manage complications (Eppley & Dadvand 2006:98e).

TABLE 4.11: IMPORTANCE OF KNOWLEDGE OF PSYCHOLOGY IN MEDICAL AESTHETICS EDUCATION

QUESTION 11	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of psychology in medical aesthetics education?	92,1%	7,9%	0,0%

Knowledge of psychology as it relates to MA is important according to 70/76 (92.1%) of respondents; while 6/76 (7.9%) indicated that information on psychology is somewhat important. Psychology as a module is actually included in all the professions involved in MA. This module is generally specific to the field of MA, and it educates the MA practitioner about effectively dealing with MA patients exhibiting various psychological states (Ten Cate & Durning 2007:546).

TABLE 4.12: IMPORTANCE OF KNOWLEDGE OF BOTULINUM TOXIN AND FILLERS IN MEDICAL AESTHETICS EDUCATION

QUESTIONS 12 AND 13	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of botulinum toxin in medical aesthetics education?	93,3%	6,7%	0,0%
How important is knowledge of fillers in medical aesthetics education?	94,7%	5,3%	0,0%

Of the respondents, 71/76 (93.3%) regarded knowledge on botulinum toxin as being important to include in MA education, with only 5/76 (6.7%) indicating that such information is somewhat important in MA education. Knowledge on fillers was found to be important by 72/76 (94.7%) of the respondents and was indicated as being somewhat important by 4/76 (5.3%). Ho, Mendenhall, Hopkins, Agarwal and Agarwal (2011:36) (from The United Kingdom) suggest that it is important that MA practitioners obtain appropriate training and education if they are to be successful and efficient. Botulinum toxin and filler education and knowledge addresses the anatomy of the face and injection sites for neurotoxin administration, the care thereof and design plans.

Botulinum toxin is currently among the most popular and most commonly performed procedures in the MA field; it is therefore important to include information about botulinum toxin in MA education (cf. Sections 2.5; 2.5.1).

TABLE 4.13: IMPORTANCE OF KNOWLEDGE OF LASERS AND ENERGY-BASED DEVICES IN MEDICAL AESTHETICS EDUCATION

QUESTION 14	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of lasers and energy-based devices in medical aesthetics education?	94,7%	2,7%	2,7%

Knowledge of lasers and other energy-based devices used in MA was favoured for inclusion in MA education by 72/76 (94.7%) of respondents; 2/76 (2.7%) indicated that it is somewhat important; and 2/76 (2.7%) were of the opinion that knowledge on lasers and energy-based devices was not important. Ahluwalia (2008:15) regards knowledge about lasers and energy-based devices to be important, as it develops a sound understanding of the history and principles of lasers and other photo therapies; and raises awareness of safety precautions and relevant protocols. It is intriguing that 2.7% of the respondents selected the not important option for the question relating to knowledge of lasers and energy-based devices in MA education (cf. Section 2.5.1).

TABLE 4.14: IMPORTANCE OF KNOWLEDGE OF PEELING AGENTS IN MEDICAL AESTHETICS EDUCATION

QUESTION 15	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of peeling agents in medical aesthetics education?	98,7%	1,3%	0,0%

Of the respondents 75/76 (98.7%) indicated that it is important to include knowledge on peeling agents in MA education; while 1/76 (1.3%) indicated it is somewhat important. Peeling treatments are popular, and MA practitioners will undoubtedly encounter patients who require this service. Various programmes worldwide include knowledge on peeling agents (cf. Section 2.5.1); these programmes equip students with knowledge on selecting the most appropriate peeling agents with the required strength, and being proficient in providing anaesthesia in the form of regional blocks (Rendon, Berson, Cohen, Roberts, Starker & Wang 2010:32).

TABLE 4.15: IMPORTANCE OF KNOWLEDGE OF FACE AND BODY CONTOURING TECHNIQUES IN MEDICAL AESTHETICS EDUCATION

QUESTION 16	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of face and body contouring techniques in medical aesthetics education?	94,7%	5,3%	0,0%

Knowledge on face and body contouring techniques is indicated to be important for inclusion in MA education by 72/76 (94.7%) of the respondents; 4/76 (5.3%) believe it is somewhat important. Knowledge of face and body contouring equips the potential MA practitioner with an understanding of radiofrequency, ultrasound, cryolipolysis and liposuction (including laser liposuction) (Teitelbaum, Burns, Kubota, Matsuda, Otto, Shirakabe & Brown 2007:779).

TABLE 4.16: IMPORTANCE OF KNOWLEDGE OF ANATOMY AND PHYSIOLOGY OF THE SKIN IN MEDICAL AESTHETICS EDUCATION

QUESTION 17 AND 18	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of the anatomy of the skin in medical aesthetics education?	98,7%	1,3%	0,0%
How important is knowledge of the physiology of the skin in medical aesthetics education?	97,3%	2,7%	0,0%

Knowledge of anatomy and physiology is important for MA practitioners, as it provides them with an understanding of cells, metabolism of cells, functions of cells and the role cells play in the functioning and structure of the skin. It is also important for MA practitioners to understand the functions of all systems and their role in the MA profession (Aesthetic Science Institute 2015:online). Of the respondents 75/76 (98.7%) indicated that knowledge of anatomy is important; whereas 1/76 (1.3%) stated that it was, in their view, somewhat important. Knowledge on the physiology of the skin was considered important by 74/76 (97.3), and 2/76 (2.7%) regarded it as somewhat important.

TABLE 4.17: IMPORTANCE OF KNOWLEDGE OF BASIC PATHOLOGY IN MEDICAL AESTHETICS EDUCATION

QUESTION 19	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
How important is knowledge of basic pathology in medical aesthetics education?	93,4%	5,3%	1,3%

Knowledge of basic pathology (as per literature-put reference) was regarded as important by 71/76 (93.4%) of the respondents, while 5/76 (6.6%) regarded it as somewhat important. Knowledge of basic pathology is included in MA education to give students advanced comprehension and skills so that they can manage and treat pathological indications relating to aesthetics with competence and confidence (Bleakley, Marshall & Brömer 2006:197).

The results illustrated of Section B generally indicate that all the course content aspects derived from the literature study (cf. 2.1) desktop study were considered to be important for inclusion in a stratified competency-based learning programme for MA. The importance of the various aspects included in this section are further emphasised by two respondents who added to the open-ended field the following comments:

- Respondent 1: "Knowledge of anatomy is very important to include".
- Respondent 2: "I think all the knowledge criteria is important".

This section and its results will assist in developing the stratified competency-based learning programme for MA; therefore, the results will form the basis for which the learning outcomes of the programme will be designed.

4.4 SECTION C: PRACTICE OF TREATMENT INTERVENTIONS IN MEDICAL AESTHETICS

The 76 respondents were provided with a list of six professions (nurses, somatologists, dermatologists, general practitioners, plastic/cosmetic surgeons and beauty therapists). They were then required to indicate which of the listed professionals, as far as they were aware of, were performing the various treatments described below. Their responses are presented in graphs with accompanying narrative, where applicable. The discussions of each of the responses in this section take in consideration the scopes of practice of the various professionals as presented in Appendix C and D.

4.4.1 Chemical peels

All of the listed professionals were identified as performing chemical peels. The percentage of respondents who indicated they knew that each of the different professions was conducting chemical peels is indicated in Figure 4.7 below.

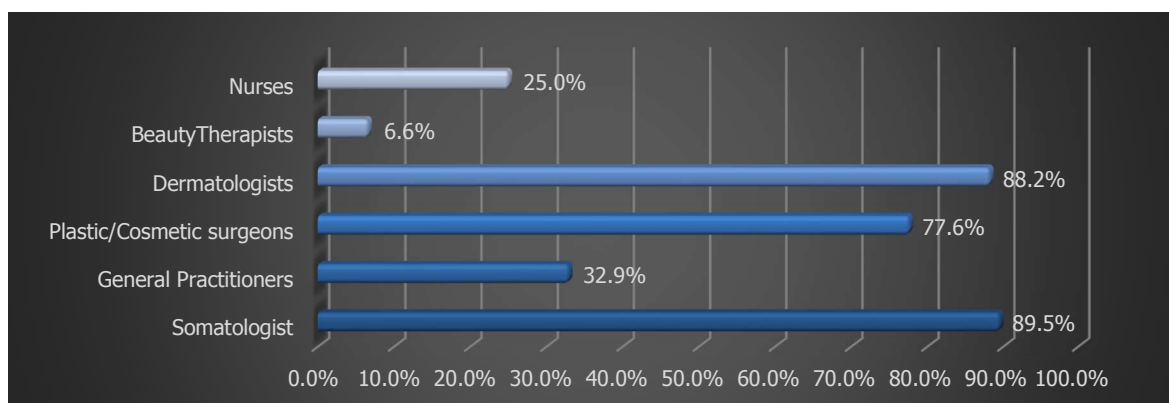


FIGURE 4.7: PROFESSIONAL CATEGORIES OFFERING CHEMICAL PEELS (n=76)

Chemical peels use salicylic acid and/or glycolic acids to eliminate lifeless skin cells, improve the skin's texture, reduce fine lines and improve the overall appearance of the skin. Chemical peels are particularly helpful for severe and/or moderate acne, wrinkles and facial blemishes/pigmentation. The formula for this treatment is dependent on each patient's skin condition (Bleakley *et al.* 2006:197) (cf. 2.3). According to Brody, Geronemus and Farris (2003:319) superficial chemical peels can be performed by nurses and somatologists, although they suggest that the higher/deeper chemical peels should be performed by dermatologists or plastic/cosmetic surgeons.

4.4.2 Microdermabrasion

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.8. The responses show that the three professions selected in high numbers for performing microdermabrasion were somatologists, selected by 69/76 (90.8%), dermatologists, selected by 68/76 (89.5%) and plastic/cosmetic surgeons, selected by 60/76 (78.9%). Professions selected less frequently were general practitioners, who were selected by 22/76 (28.9%), nurses by 19/76 (25%) and beauty therapists by 4/76 (5.3%).

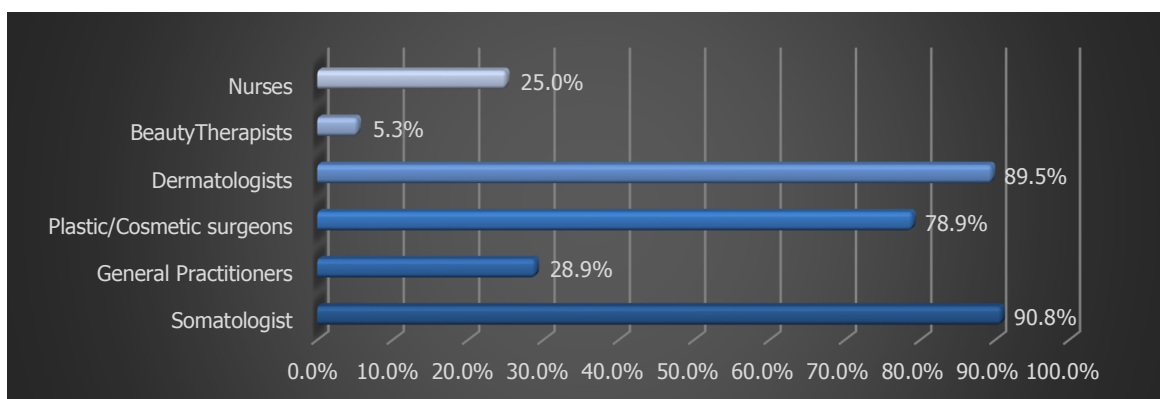


FIGURE 4.8: PROFESSIONAL CATEGORIES OFFERING MICRODERMABRASION (n=76)

According to Shpall (2004:47), microdermabrasion is defined as a skin-freshening technique that assists in repairing facial skin that has been damaged by the sun or the effects of aging. The treatment device used is a fine exfoliator that sprays minute crystals on the face while combining mild abrasion with suction to eliminate the outer, lifeless skin cells. As with most treatment modalities, more than a single treatment may be required to remove or reduce fine wrinkles and pigmentation. There are typically two versions of microdermabrasion, one done by somatologists, and a more powerful version done by physicians (cf. Section 2.5.1). These results support the inclusion of this treatment in

educational programmes for somatologists, dermatologists and plastic/cosmetic surgeons (Aasi & Leffell 2003:548).

4.4.3 Botulinum toxin

The results in Figure 4.9 show the professions selected as offering Botulinum toxin treatments by the respondents. Plastic/cosmetic surgeons were selected by 68/76 (90.8%) and dermatologists by 68/76 (89.5%), with somatologists, surprisingly, selected by 40/76 (52.6%). The professional categories that were selected least for offering this procedure were general practitioners, by 26/76 (34.2%) of respondents, nurses by 11/76 (14.5%) and beauty therapists by 1/76 (1.3%).

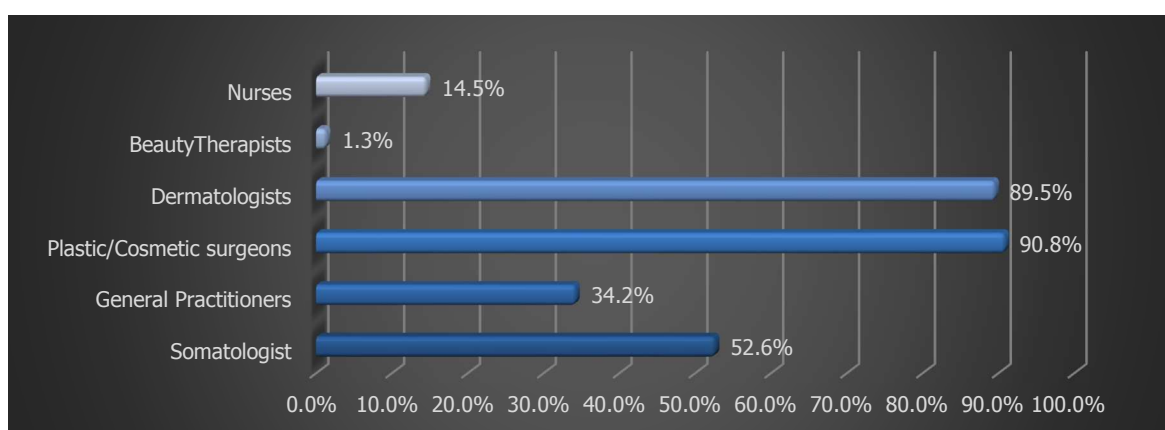


FIGURE 4.9: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH BOTULINUM TOXIN (BOTOX) (n=76)

Carruthers and Carruthers (2008:1) explain that the cosmetic use of Botulinum toxin, frequently referred to by its well-known product name of Botox®, involves a non-surgical injection that temporarily lessens or removes forehead creases, expression lines, crow's feet around the eye area and wrinkles around the neck area. Botulinum toxin operates by hindering nerve impulses, temporarily paralysing the muscles that cause lines and wrinkles, while providing the skin with a newer and smoother appearance (Bushara & Park 1994:1437). This is considered to be a medical procedure that should be carried out in a surgical centre environment (cf. Section 2.5.1).

Considering that Botulinum toxin treatment is considered to be a medical procedure, medical knowledge is essential and the results of this questionnaire support this view – this procedure is limited mainly to medical professionals. General practitioners are medical personnel who can do this procedure, but it is essential that they are educated on the aesthetic aspects of this treatment (particularly measuring facial features in relation to the

face and other features on the face) (Arnon, Schechter, Inglesby, Henderson, Bartlett, Ascher & Tonat 2001:1059). Somatologists and nurses have limited medical knowledge, and can offer training, although some seem to be performing this procedure, and are believed to be working hand in hand with or under the supervision of medical doctors, provided they (somatologists & nurses) have had additional training on this procedure.

4.4.4 Hyaluronic acid

The results of the questionnaire, as illustrated in Figure 4.10, indicate that 71/76 (93.4%) respondents indicated that plastic/cosmetic surgeons were offering this procedure; dermatologists were selected by 70/76 (92.1%); somatologists by 42/76 (55.3%); and the least selected professionals were general practitioners, who were selected by 25/76 (32.9%), and nurses, by 13/76 (17.1%). Beauty therapists do not offer this treatment.

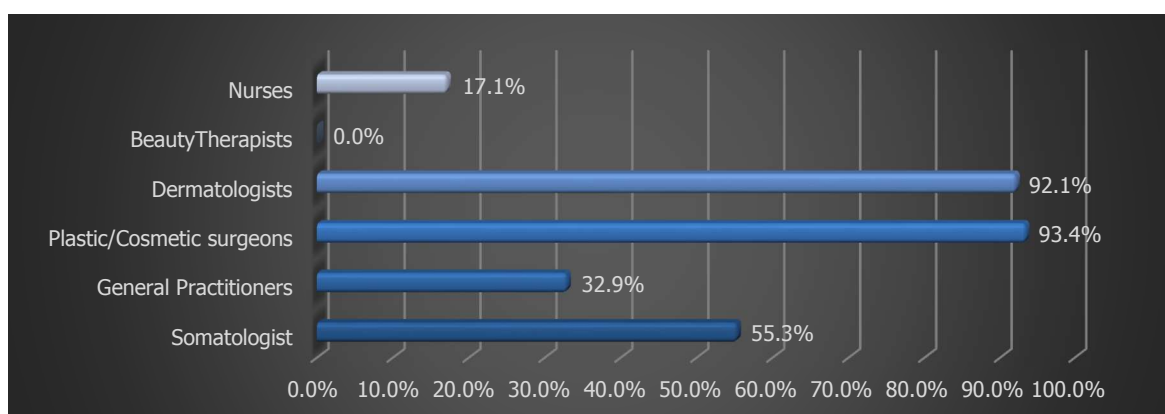


FIGURE 4.10: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH HYALURONIC ACID WRINKLE FILLER (n=76)

Hyaluronic acid is a non-surgical procedure that is used for managing contour irregularities, fine line wrinkles and volumetric deficiencies of the cheeks, face and lips (linked with aging), certain diseases, and developmental irregularities. It is known to be effective for lip augmentation, nasolabial folds, and areas of contour deformities. Hyaluronic acid or Restylane (the trade name) offers a predictable, harmless and user-friendly treatment. The results of hyaluronic acid treatment usually last up to six months. It is a desirable complement to Botulinum toxin treatment and is commonly used in combination with Botulinum toxin to correct lines and wrinkles (Rohrich, Ghavam & Crosby 2007:41s).

Monheit and Coleman (2006:141) define hyaluronic acid as a natural polysaccharide that is versatile and suitable for use as soft-tissue filler, commonly utilised for facial augmentation. It is available under the product names Restylane (also Restylane Fine Line & Perlane)

distributed by the Medicis company, and Hylaform, distributed by a company called Inamed (cf. Section 2.5.1).

4.4.5 Synthetic wrinkle fillers

The results for this question are shown in Figure 4.11 and show that plastic/cosmetic surgeons were selected by 71/76 (93.4%) of respondents, dermatologists by 66/76 (86.8%), somatologists by 39/76 (51.3%), general practitioners by 24/76 (31.6%) and nurses by 11/6 (14.5%) respondents as those who perform this treatment. The results indicate that beauty therapists do not carry out treatment with synthetic wrinkle fillers.

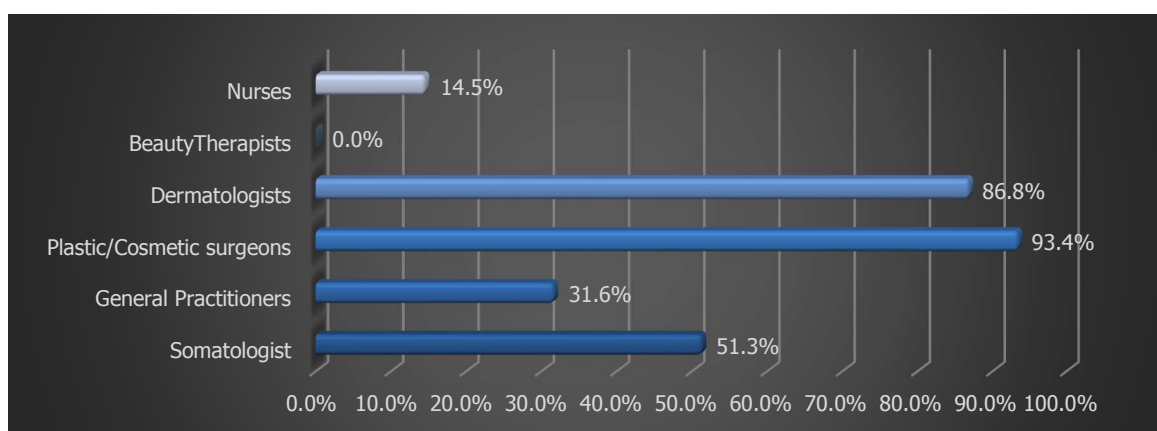


FIGURE 4.11: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH SYNTHETIC WRINKLE FILLERS (n=76)

Synthetic wrinkle fillers are a type of wrinkle filler that includes laboratory-manufactured substances that are not in any way related to anything found naturally in the skin. All kinds of fillers in this category have similar side effects, such as swelling, bruising on the site of the injection and redness on the skin. Additional side effects may be nodules and bumps under the skin, which can be felt and seen, and that, in rare instances, may need surgery to remove. The advantage of these types of fillers is that they have longer-lasting results. They offer permanent filling ultrasound creases and lines on the skin, which is why there is a greater chance of side effects. Should these fillers be used incorrectly, they may cause disfigurement (Eppley & Dadvand 2006:98e).

4.4.6 Collagen wrinkle fillers

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.12. Plastic/cosmetic surgeons were selected by 68/76 (89.5%), dermatologists by 65/76 (85.5%) and somatologists by 38/76

(50%) respondents; the professionals selected by the fewest respondents were general practitioners, who were selected by 26/76 (34.2%), and nurses, by 10/76 (13.2%). Beauty therapists were not selected as professionals performing this treatment intervention.

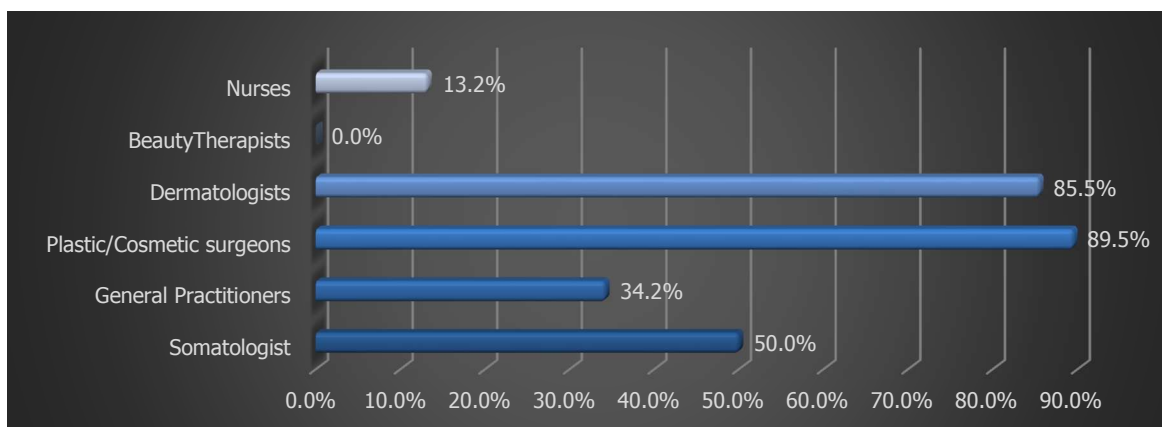


FIGURE 4.12: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH COLLAGEN WRINKLE FILLERS (n=76)

The first filler that was available was made of a purified form of collagen extracted mostly from cows; this makes collagen the filler that has been in use longest. While these fillers worked well and offered a natural looking fill, the results did not last as long as synthetic wrinkle fillers – the benefits were experienced for only a month after treatment (cf. Section 2.5.1). Because it was made from an animal source, collagen wrinkle fillers were more likely to cause hypersensitivity, and as a result required allergy testing prior to treatment. There are currently new ways of processing the collagen, which have assisted in lowering the risk of sensitising the skin. There are also newer forms of synthetic collagen injections available, which are more useful and safer to use on greater numbers of people than when it was first administered. Although the results of these fillers are still not long lasting, it is regarded as having a more natural appearance. Side effects from collagen derived from animal sources are allergic reactions that are more likely than with synthetic fillers, which have side effects such as redness and bruising at the site of the injection (Baumann, Kaufman & Saghari 2006:134). Literature suggests that physicians are best suited to performing this procedure (based on the nature of the treatment). Somatologists should not perform this procedure unless they do it under the supervision of a physician, or if they have acquired additional training (Murray, Zloty & Warshawski 2005:343).

4.4.7 Autologous wrinkle fillers

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.13. The findings of the questionnaire

point out the percentages of selections of the professionals that perform this procedure as follows: plastic/cosmetic surgeons were selected by 70/76 (92.1%), dermatologists were selected by 67/76 (88.2%) and somatologists were selected by 32/76 (42.1%) respondents. General practitioners were selected by 22/76 (28.9%) and nurses by 12/76 (15.8%) respondents – these are the professional categories that were selected the least for performing this procedure.

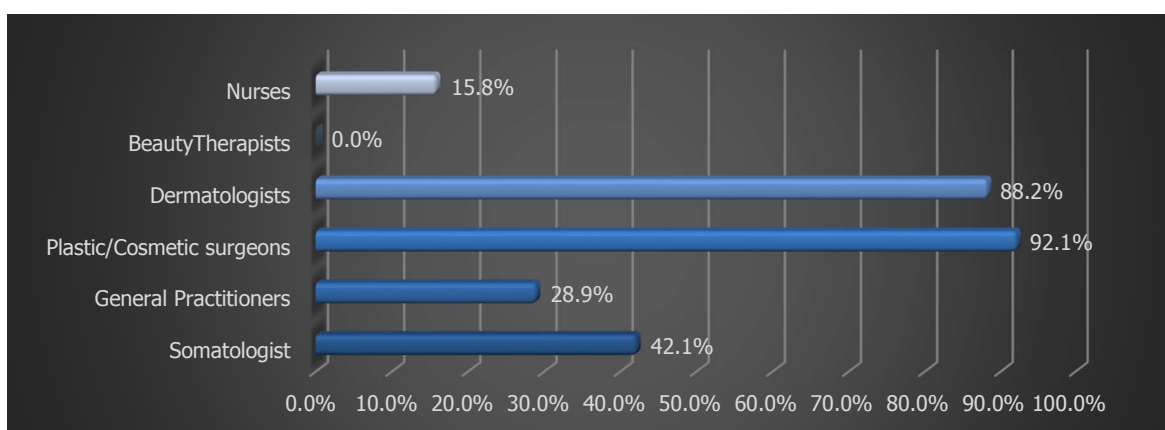


FIGURE 4.13: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH AUTOLOGOUS WRINKLE FILLERS (n=76)

According to Broder and Cohen (2006:7s) the filler substance (of autologous fillers) is made from fat taken from the patient's own body, generally the stomach or thighs. These kinds of fillers are not commonly used, but are considered an option for filling wrinkles. Literature and guidelines of various regulatory and professional bodies suggest that this procedure must be carried out by physicians, plastic/cosmetic surgeons and dermatologists (Baumann, Kaufman, and Saghari 2006:134).

4.4.8 Calcium-based fillers

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.14. The results below show that dermatologists were selected by 69/76 (90.8%) of respondents, plastic/cosmetic surgeons by 69/76 (90.8%) and somatologists by 31/76 (40.8%) of the respondents; the least selected professionals were general practitioners, who were selected by 21/76 (27.6%) and nurses, by 13/76 (17.1%). Beauty therapists were not selected by any of the respondents as professionals who perform treatments with calcium-based fillers.

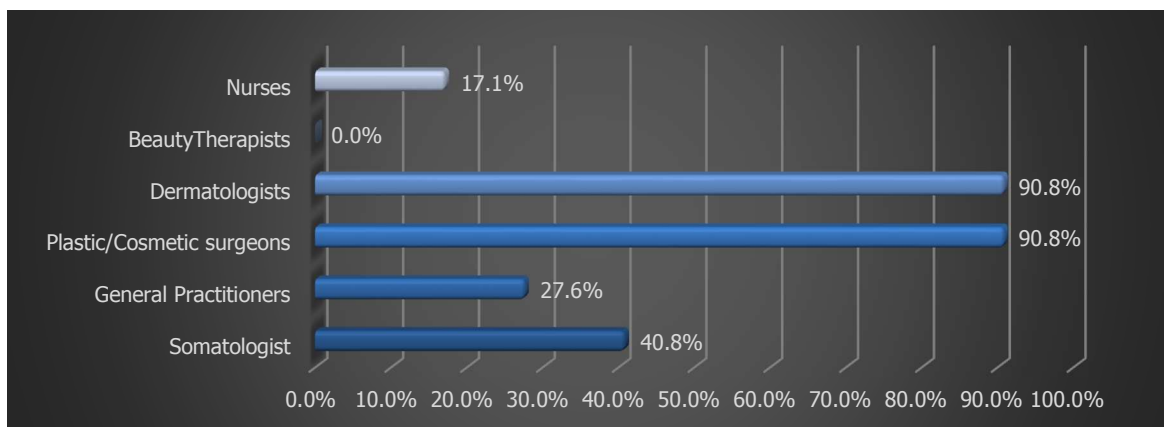


FIGURE 4.14: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH CALCIUM-BASED FILLERS (n=76)

Calcium hydroxylapatite-based fillers are the heaviest of facial dermal fillers. Calcium hydroxylapatite is naturally found in human bones and is a mineral-like compound. It is frequently used for moderate-to-severe wrinkles, such as marionette lines, nasolabial folds and frown lines; and can also be utilised to increase fullness of the facial contours and cheeks. Calcium hydroxylapatite is biosynthetically produced, meaning that no animal products are used; which lowers the risk of allergic reactions, and obviates the need to do tests on the skin. These types of fillers are known to produce very natural results; they do not migrate to other areas and have minimal side effects. These fillers can be also used for HIV-positive people suffering from facial lipoatrophy, which is a side effect of antiretroviral medications (Hamdani, Longuet, Lopez-Cuesta & Ganachaud 2010:1911). It is recommended that only plastic/cosmetic surgeons, dermatologists and general practitioners use calcium fillers (Wollina & Goldman 2013:731).

4.4.9 Artefill fillers

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.15. The results of the questionnaire indicate that the professionals that were selected most for administering these fillers were as follows: dermatologists were selected by 68/76 (89.5%) respondents, plastic/cosmetic surgeons by 67/76 (88.2%), somatologists by 30/76 (39.5%), and general practitioners by 23/76 (30.3%) of the respondents. The results show that beauty therapists were not selected as one of the professional groups administering this treatment intervention.

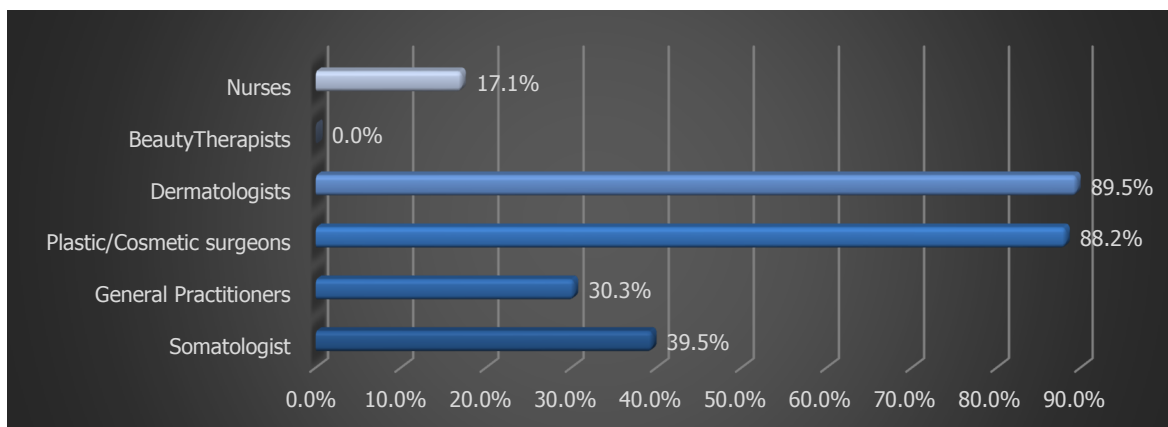


FIGURE 4.15: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH ARTEFILL FILLERS (n=76)

Artefill fillers are permanent injectable fillers used for the correction of expression lines, such as smile lines. These fillers were approved in 2006 by the United States Food and Drug Administration (FDA) as a medical device. These fillers are most effective when they are used to correct the appearance of lines, pitted acne scars on the cheeks and wrinkles. It is a gel filler consisting of millions of synthetic microspheres suspended in purified bovine (cow) collagen and lidocaine, which is a local anaesthetic. The cow collagen in which the synthetic polymer beads are suspended is absorbed by the body, however, the microspheres are not absorbed; therefore remain in the skin permanently. This product was recently (2014) rebranded and now goes under the name Bellafill.

In the USA artefill fillers are exclusively distributed to physicians and plastic/cosmetic surgeons that have undergone sufficient training in using artefill procedures. The depth of the injection is the key component to its success. Artefill is injected under the wrinkles, just above the fat layer of the skin, utilising a passageway or threading technique which is distinctive to these fillers. These fillers require a pre-allergy test, which needs to be done a month prior to the artefill injections. The effects of these fillers last 5-7 years or longer, and are considered convenient, as they involve two initial treatments (Lemperle, de Fazio & Nicolau 2006:551) (cf. Section 2.5.1).

This treatment should ideally be performed by plastic/cosmetic surgeons, dermatologists and general practitioners (Raymond 2012:15). Although the results of the questionnaire suggest that these fillers are used mostly by plastic/cosmetic surgeons, dermatologists and somatologists, the nature of the procedure requires that it is carried out by medical personnel (plastic/cosmetic surgeons, dermatologists and general practitioners). This finding, therefore, means that, except for the plastic/cosmetic surgeons, the professionals

using this procedure should be educated about aesthetics. Another observation is the fact that, for each question, there has been an almost constant percentage of nurses who do almost all the procedures discussed thus far – it is almost the same as the percentage of nurses who responded to the questionnaire. This could possibly be biased input from nurse respondents, who are involved in performing MA procedures for which they are not qualified.

4.4.10 Silicone fillers

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.16. The categories of professionals selected as those that perform this treatment are dermatologists, who were selected by 69/76 (90.8%) of respondents, plastic/cosmetic surgeons, by 66/76 (86.8%), and somatologists by 28/76 (36.8%); while general practitioners were selected by 22/76 (28.9%) and nurses by 11/76 (14.5) of respondents as professionals administering silicone fillers. The results indicate, further, that beauty therapists were not selected among the professionals that perform this procedure.

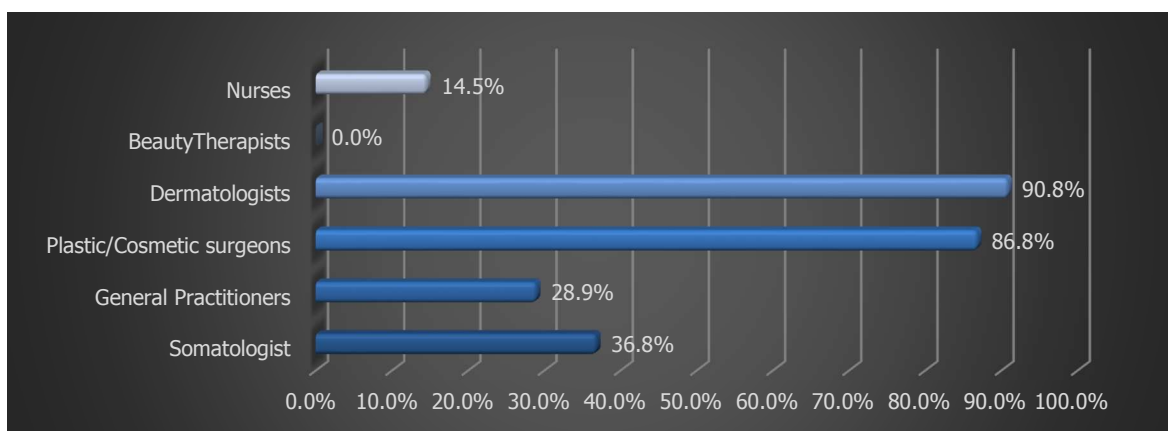


FIGURE 4.16: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH SILICONE FILLERS (n=76)

Silicone fillers are permanent and precise fillers. There is no harvesting of tissue from other sites of the patient's body nor is it necessary to carry out an allergy test. These fillers can be utilised in isolation or in combination with other facial rejuvenation techniques, such as chemical peels, laser skin resurfacing, Botulinum toxin or facial surgery, and helps to create a rejuvenated, smoother and more natural appearance. These injections are placed within or beneath the patient's skin, where the body then takes it as its own (De Maio & Rzany 2006:23). Literature proposes that silicone fillers be used by plastic/cosmetic surgeons, dermatologists and general practitioners. Consequently, all the professionals (excluding

plastic/cosmetic surgeons) require aesthetic knowledge associated with the procedures (De Maio & Rzany 2006:16) (cf. Section 2.5.1).

4.4.11 Poly-L lactic acid fillers

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.17. The results of this question indicate that dermatologists were selected by 62/76 (81.6%) respondents, 51/76 (67.1%) selected plastic/cosmetic surgeons, general practitioners were selected by 42/76 (55.3%), nurses by 3/76 (3.9%), and somatologists by 2/76 (2.6%). As the results show, beauty therapists were not selected as the professionals who perform this treatment.

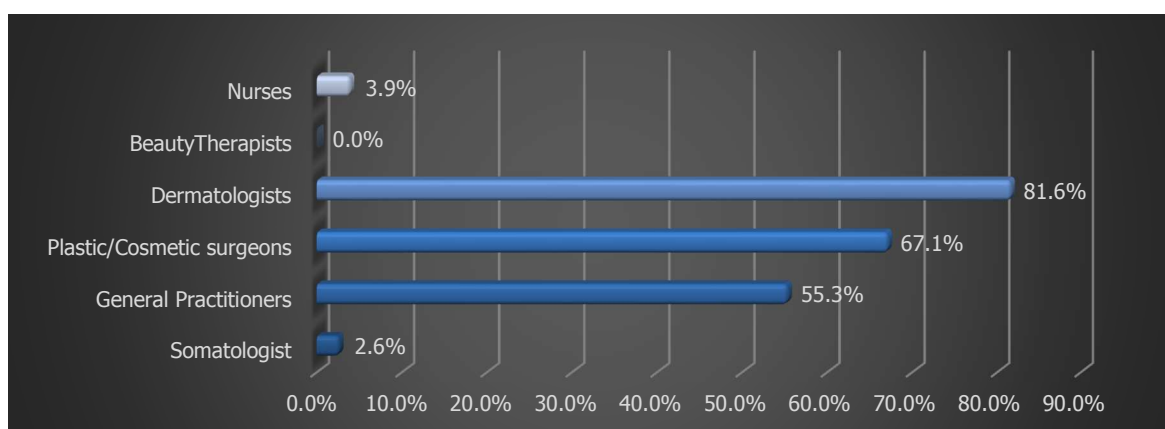


FIGURE 4.17: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH POLY-L LACTIC ACID FILLERS (n=76)

Poly-L lactic acid fillers are used for the correction of facial lipoatrophy in patients infected with HIV. These fillers were approved for correcting wrinkles and for soft tissue augmentation (commonly the lower half of the face) in both the USA and Europe in 1999. They are considered to be an ideal, reabsorbable filler material, and the effects can last as long as two years. The clinical results and side effects are generally technique-dependent (Woerle, Hanke & Sattler 2003:385). Given the nature of this treatment, it is understandable that these fillers are mostly used by dermatologists, plastic/cosmetic surgeons and general practitioners (Woerle *et al.* 2003:385).

4.4.12 Titan

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.18. The results show that dermatologists were selected by 65/76 (85.5%), plastic/cosmetic surgeons by 63/76 (82.9%) and somatologists by 30/76 (39.5%) respondents. The professionals selected by

fewer respondents for performing Titan procedures are general practitioners, selected by 27/76 (35.5%), nurses, by 13/76 (17.1%), and, surprisingly, beauty therapists, by 4/76 (5.3%) respondents.

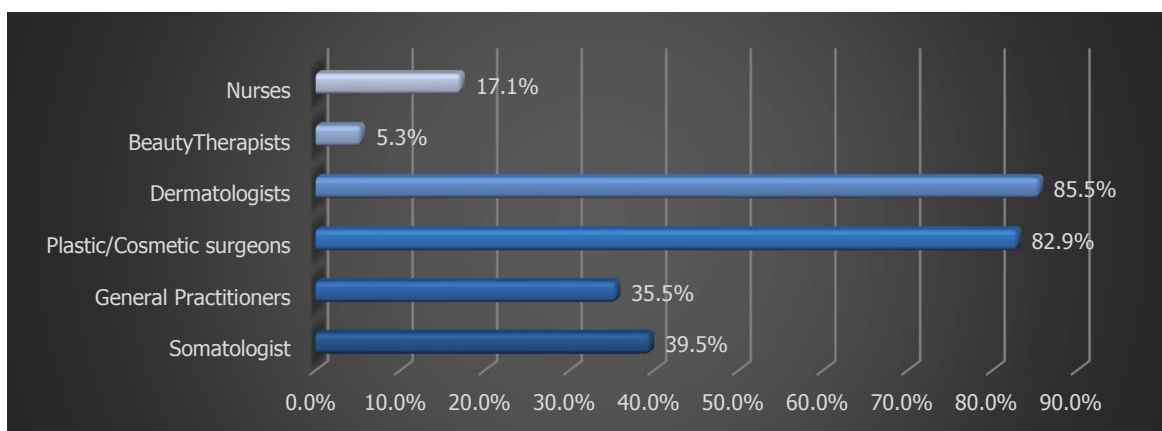


FIGURE 4.18: PROFESSIONAL CATEGORIES OFFERING TITAN TREATMENT (n=76)

Titan is a non-surgical skin-tightening treatment using infrared light to heat the dermis and produce a younger and smoother appearance. It is a non-invasive mechanism that works by targeting collagen production below the epidermis, stimulating it to multiply and create a tighter and firmer skin from the inside. Contrary to other techniques, such as Botulinum toxin, Titan encourages the body to repair itself naturally to create a more youthful skin (Gold 2010:36). Since this is a non-surgical treatment, it is understandable that all the professionals in this study carry out this procedure, provided they acquired training, as recommended by the literature (Center, John Di Saia, Naderi, Surgeon, Zimmerman, Light, Sidella, Medspa, Couvertier, Lee & Malik n.d.).

4.4.13 Pulsed dye lasers

The results shown in Figure 4.19 indicate the following professionals were selected as those that perform this treatment intervention: dermatologists were selected by 71/76 (93.4%) respondents, plastic/cosmetic surgeons by 68/76 (89.5%), and somatologists by 55/76 (72.4%), with general practitioners selected by 34/76 (44.7%), nurses by 16/76 (21.1%) and beauty therapists by 1/76 (1.3%) respondents. It is a matter of concern that beauty therapists report performing these treatments, because laser treatment is not included in their curriculum. Literature concurs with the findings; this treatment intervention is generally performed by plastic/cosmetic surgeons, dermatologists and somatologists.

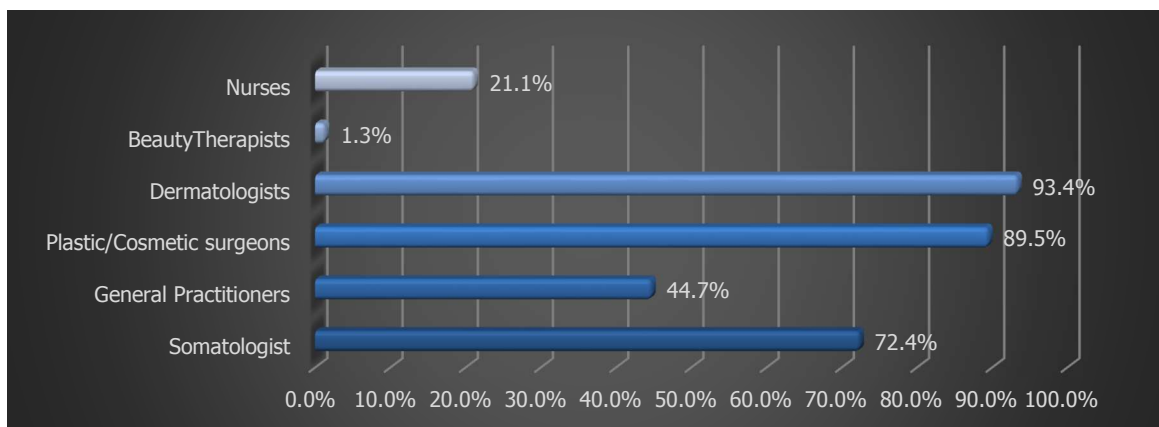


FIGURE 4.19: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH PULSED DYE LASERS (n=76)

Pulsed dye laser uses an intense ray of light that targets blood vessels in the skin. The light is transformed to heat, resulting in the destruction of the blood vessels, leaving the nearby skin unharmed. These lasers use a yellow light, which has been found to be harmless, and which does not cause long-term skin harm. The treatment can be carried out in few minutes and is performed during casualty health centre visits; no anaesthesia is needed because the machine yields a cold spray just before the laser pulse to diminish the feeling of pain. Patients generally need between one and three treatments, although patients with severe rosacea, port wine stains and haemangiomas are likely to require more treatments.

The general benefit of these lasers is improvement of the appearance of hypertrophic scars/keloids (Raulin, Greve & Grema 2003:78). A side effect could be bruising, although minimal side effects are experienced. A few general practitioners and nurses also perform this treatment intervention, though it is recommended that they receive training to do so (Raulin *et al.* 2003:78).

4.4.14 Thermage® lasers

The results in Figure 4.20 show that beauty therapists use thermal lasers: they were selected by 1/76 (1.3%), followed by general practitioners who were selected by 28/76 (36.8%) and nurses by 15/76 (19.7%) respondents; dermatologists were selected by 69/76 (90.8%), plastic/cosmetic surgeons by 64/76 (84.2%) and somatologists were selected by 47/76 (61.8%) of respondents as professionals that practice laser treatments.

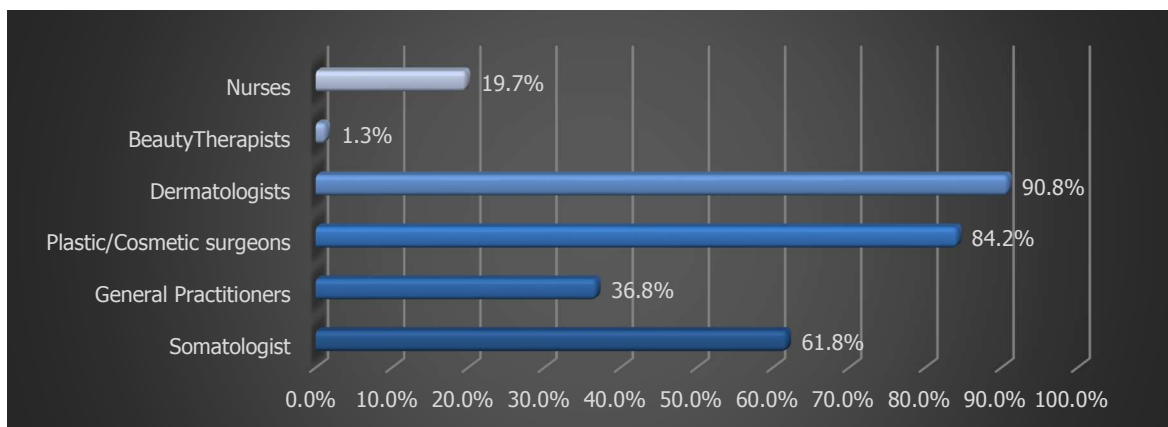


FIGURE 4.20: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH THERMAGE® LASERS (n=76)

Thermage® is an FDA-approved plastic/cosmetic procedure utilised for tightening the skin, reducing appearance of wrinkles and alleviating signs of aging. These lasers are considered to be the non-surgical facelifts of the future. These lasers use heat to tighten the underlying layers of the skin. This yields an instantaneous and noticeable reduction of sagging skin on the neck and areas such as the brow. This intervention is painless, non-invasive and needs no recovery time, while offering constant and immediate results (Sadick & Makino 2004:91). Taking into consideration, the nature of the treatment, the treatment can be performed by all the professionals (as the results show) (King 2007:11).

4.4.15 Carbon dioxide lasers

The respondents were asked to indicate which of the professionals performed this treatment; the results are presented in Figure 4.21. Nurses were selected by 5/76 (6.6%) and general practitioners by 20/76 (26.3%) respondents, dermatologists were selected by 71/76 (93.4%) and plastic/cosmetic surgeons by 66/76 (86.8) respondents.

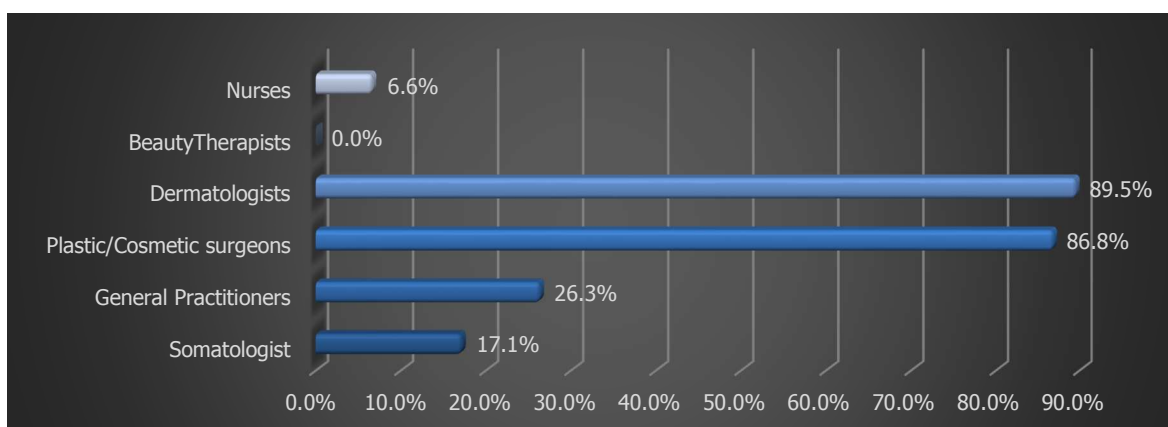


FIGURE 4.21: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH CARBON DIOXIDE LASERS (n=76)

Carbon dioxide lasers were among the first gas lasers developed in 1964 and it remains most useful. This type of laser uses a gas combination as the gain medium, which comprises nitrogen (N₂), carbon dioxide (CO₂) and perhaps hydrogen (H₂), helium (He), water vapour and/or xenon (Xe). Lasers such as these are electrically pumped via gas expulsion, which can be operated with both direct and alternating current (e.g. 20-50 kHz) or in radio frequency domain. Nitrogen molecules are excited by the discharge into a metastable vibrational level and transfer their excitation energy to the CO₂ molecules when they collide. Helium serves to depopulate the lower laser level and to remove the heat. Other elements, such as water vapour and hydrogen, can assist to reoxidise carbon monoxide to carbon dioxide. These lasers generally emit at a wave length of 10.6 μm, although there are other lines in the region of 1-11 μm (specifically at 9.6 μm). In many instances, average power ranges between many kilowatts and some tens of watts.

The power conversion efficiency can be considerably above 10%, meaning it is higher than for most lamp-pumped solid-state lasers, but lower than for many diode-pumped lasers (Brightman, Chapas, Hunzeker, Weiss, Karen, Hale, Bernstein & Geronemus, 2009:317). Given the nature of the treatment, it can be administered by all the professionals indicated, with the exception of beauty therapists. The represented professionals need be knowledgeable about lasers in general and the anatomy and physiology of the skin, as well as being well informed about adverse skin reactions (Boon *et al.* 2007:13).

4.4.16 Cryotherapy rejuvenation

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.22. The results reflect literature, in that the respondents selected each of the professional groups that perform this procedure: dermatologists were selected by 71/76 (93.4%), plastic/cosmetic surgeons by 59/76 (77.6%), and, surprisingly, considering that this procedure is a surgical procedure, somatologists were selected by 58/76 (76.3%) respondents. General practitioners were selected by 27.6%, and the fact that 19/76 (25%) respondents selected nurses is cause for concern. Beauty therapists were also selected as those that perform this treatment, by 1/76 (1.3%) respondent. It is a cause for concern that beauty therapists are seen to be performing this treatment, because this is not included in their curriculum and level of training (SAAHSP 2013).

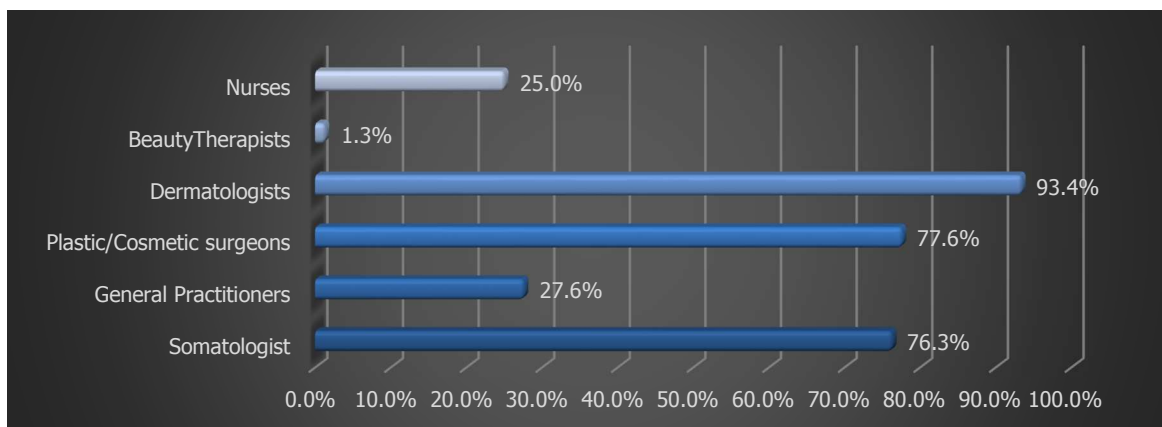


FIGURE 4.22: PROFESSIONAL CATEGORIES OFFERING CRYOTHERAPY REJUVENATION (n=76)

Cryotherapy rejuvenation is based on the application of coolness to fat cells, thereby icing the localised tissue for a precise time. The treatment involves suctioning the skin in order to decrease the flow of blood to the area being treated, it immobilises the fat tissue, and separates it somewhat from other tissue in order to shield other tissue and avoid damaging it. This treatment must be performed by a highly experienced and appropriately trained practitioner.

Another form of Cryotherapy treats a variety of conditions, such as actinic and seborrheic keratosis, verrucae and warts, lentigines, skin tags, superficial spreading basal cell carcinoma and basal cell carcinoma (Prendergast & Shiffman 2011:151). This treatment can be performed by all the professionals, provided they have been trained to do it.

4.4.17 Cryo-meso peel

The respondents were asked to indicate which of the professionals performed this treatment; the results are presented in Figure 4.23. The results of this study are representative of practice in other countries, such as the USA.

The results indicate that dermatologists were selected by 72/76 (94.7%), somatologists by 63/74 (82.9%) and plastic/cosmetic surgeons by 60/76 (78.9%) of respondents as the professionals who perform this treatment; while general practitioners were selected by 27/76 (35.5%), nurses by 24/76 (31.6%) and beauty therapists by 1/76 (1.3%) respondents.

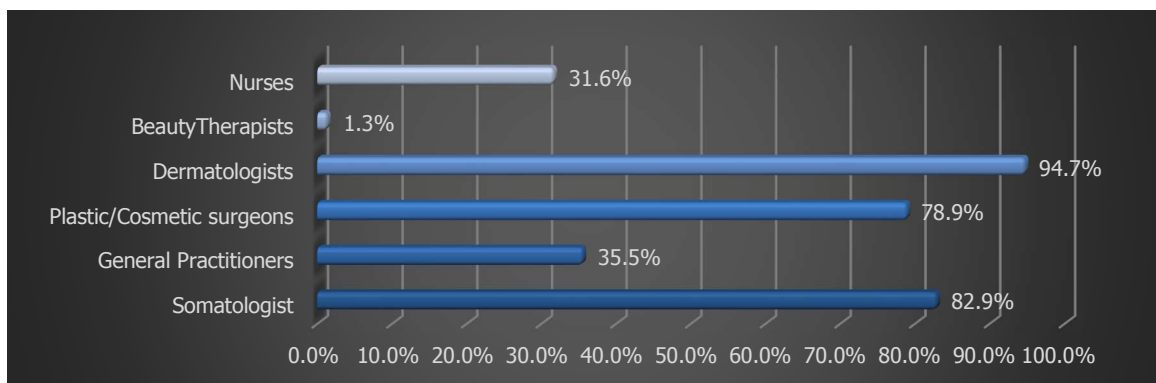


FIGURE 4.23: PROFESSIONAL CATEGORIES OFFERING CRYO-MESO PEEL (n=76)

In a cryo-meso peel the cryolift machine, mesotherapy and 70% glycopeel is amalgamated in order to rejuvenate fatigued, dull and wrinkled skin. Though it can be used as a single treatment for an immediate and radiant appearance, it can also be used as a series of treatments (4-7) to create continuous and long-lasting toning and firming of the skin, and for skin radiance. The treatment starts with glycopeel, which does not cause any visible peeling. This part of the treatment does not need much time to execute; it is followed by mesotherapy (done with needles where the skin is crêpe-like). Specific serums comprising a wide range of cell extracts, vitamins, minerals and amino acids are utilised to produce paradoxal vasomotricity, reducing the temperature of the skin to 18° Celsius, which permits deep penetration and skin circulation of active ingredients. This cooling method also improves oxygenation and reduces the amount of melanocytes, helping to decrease the appearance of pigmentation. It is a painless, pleasant and relaxing treatment (Bell 1969:284). Cyro-meso therapy can be performed by plastic/cosmetic surgeons, dermatologists, somatologists, general practitioners and nurses (DermNet 2011:online).

4.4.18 Liposuction

The results of this study, illustrated in Figure 4.24, indicate that plastic/cosmetic surgeons were selected by 73/76 (96.1%) of the respondents, 5/76 (6.6%) showed that general practitioners performed this treatment, and dermatologists were selected by 4/76 (5.3%) by the respondents as professionals performing liposuction. This could be expected, because it requires intense training after attaining a medical qualification (Iverson & Lynch 2004:1478). The rest of the distribution is expected and understood, as it indicates that this procedure is not performed by somatologists (0%), nurses (0%) or beauty therapists (0%), considering the educational background needed before this surgery can be performed.

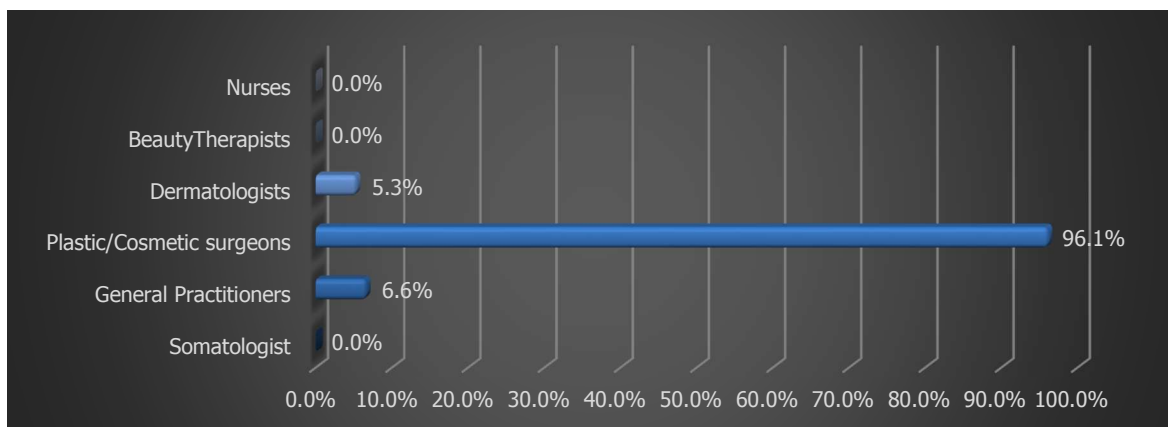


FIGURE 4.24: PROFESSIONAL CATEGORIES OFFERING LIPOSUCTION (n=76)

Liposuction or lipoplasty is a popular local procedure. It is a procedure that involves the removal of surplus fat from beneath the skin by plastic/cosmetic surgeons or well-trained general practitioners. The procedure is generally done in the doctor's consulting rooms under conscious sedation (the patient's body is numb, although the patient is conscious). Only in a few instances does the procedure take place in a theatre with full anaesthetic (Rohrich & Beran 1999:819).

This procedure can be done on any area of the body that has an accumulation of fat. The process can also be used to remove non-cosmetic fat, such as lipoma. The actual treatment involves making a keyhole incision (3mm) at the target area, into which a thin, hollow fibre tube with a suction device attached to the front end is pushed. The cut is made in a hidden spot, such as beyond the bikini line or under the arm. The fat is usually loosened in three ways: with ultrasound, by hand or by a laser. Approximately two litres of the loosened fat can be sucked out at a time through the pipe; the maximum is 3-5 litres at a time, which constitutes 4-5% of a person's body weight. The entire procedure time is between one and three hours, depending on the areas being treated. Treatments that take longer than three hours with more than three areas being treated, or removing a higher percentage of body weight, should be done in a hospital theatre and the patient should be kept overnight to be monitored (Roeder & Thaller 2012:47).

4.4.19 Abdominoplasty

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.25. The results of this question were anticipated, with no indications that somatologists (0%), nurses (0%) or beauty therapists (0%) are undertaking abdominoplasty. This is understandable, as surgery does not form

part of the curriculum for these professions. Few dermatologists and general practitioners were selected, at 1.3%, for performing this procedure – it is assumed that they may have had surgical training. All 76/76 (100%) respondents selected plastic/cosmetic surgeons as professionals that perform abdominoplasty, which is not surprising, given that this requires both surgical knowledge and medical training (Buck & Mustoe 2010:2189).

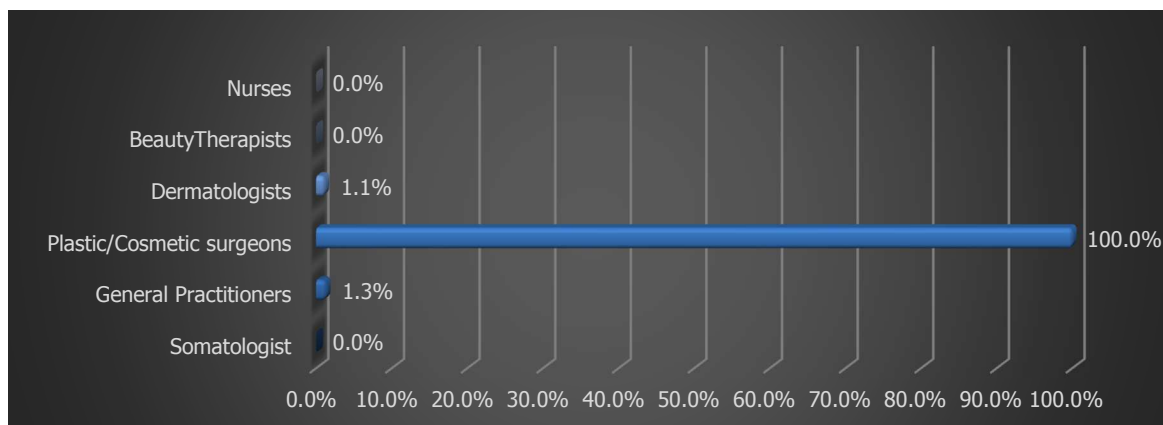


FIGURE 4.25: PROFESSIONAL CATEGORIES OFFERING ABDMINOPLASTY (n=76)

Abdominoplasty is commonly known as a tummy tuck. It is a surgical operation that flattens the abdomen by removing excess fat and flesh from the abdomen and tightening the muscles of the abdominal wall. Depending on the desired effects, the surgery can take between one and five hours; the complexity of a patient's situation determines whether the procedure is completed as an in-patient or outpatient procedure. General anaesthesia is given to the patient prior to the surgery (Spiegelman & Levine 2006:517).

4.4.20 Blefaroplasty

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.26. The results regarding this surgical procedure were anticipated, and seem to be a true reflection of reality. Neither somatologists (0%), beauty therapists (0%) nor nurses (0%) were selected as professionals performing this procedure; this makes sense, because surgery requires extensive training, even after qualifying as a doctor.

The results indicate the selection of 75/76 (98.7%) plastic/cosmetic surgeons, while dermatologists and general practitioners were selected by fewer respondents, at 1/76 (1.3%) each.

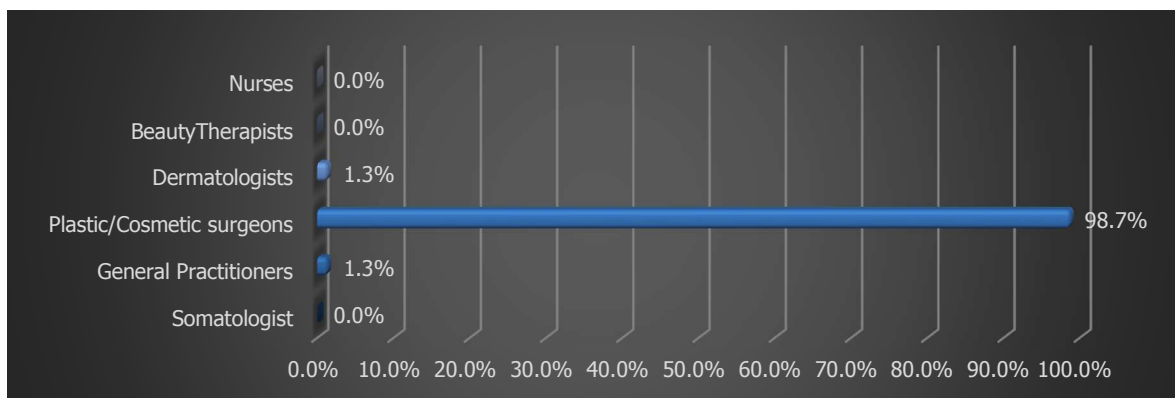


FIGURE 4.26: PROFESSIONAL CATEGORIES OFFERING BLEFAROPLASTY (n=76)

According to Pitanguy and Amorim (2003:58), a blepharoplasty (which is also referred to as an eyelid lift) is a surgical reconstruction or repair of an eyelid, usually done on an outpatient basis. It involves removal of excess skin, muscle and fat in order to reduce sagginess of the eyelid. Blepharoplasty may also be carried out to eliminate or reduce vision problems resulting from excess fat or skin around the eyelids. This procedure is generally performed by plastic/cosmetic surgeons or well-trained physicians who have had sufficient training.

4.4.21 Rhinoplasty

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.27. The responses to a question about this procedure are not surprising, given the nature of this surgery and the educational knowledge required. The results indicate 94/76 (97.4%) respondents selected plastic/cosmetic surgeons as performing this procedure, followed by general practitioners, selected by 1/76 (1.3%) respondent and, surprisingly, somatologists, which was also selected by 1/76 (1.3%) respondent. No dermatologists, nurses or beauty therapists perform this procedure (Cannon & Rhee 2012:1033).

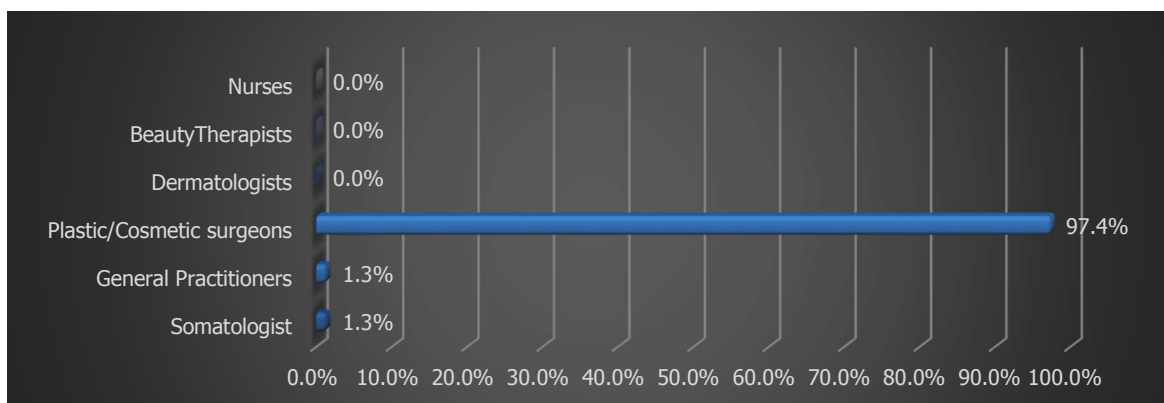


FIGURE 4.27: PROFESSIONAL CATEGORIES OFFERING RHINOPLASTY (n=76)

Rhinoplasty, universally branded as a nose job, is a surgical procedure done around the nose area. This surgery can be carried out in order to restructure the nose, to make the nose either smaller or larger, to change the angle of the nose in relation to the upper lip, modify the angle of the nose, correct bumps, indentations, or other flaws of the nose. Depending on the desired effects, some cartilage and bone may be removed, or tissue may be added from another part of the body through the use of fillers. The surgery is performed using either general or local anaesthesia, usually as an outpatient procedure, although it often requires a one-day stay in the hospital or surgery centre. The surgeons who perform this surgery are usually plastic/cosmetic surgeons or surgeons who have training in otolaryngology (ear, nose and throat speciality) (Constantian 2009:22).

4.4.22 Breast augmentation

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.28. The results justifiably indicate that somatologists, beauty therapists, and dermatologists do not perform this procedure – none of the respondents indicated that these professionals performed this procedure. A high number of respondents, 75/76 (98.7%), reported that these procedures are performed by plastic/cosmetic surgeons, with one respondent selecting general practitioners (1.3%), with the same (1.3%) nurses selected.

These results are reflective of practice in countries where MA is both regulated and registerable, however it is not within the scope of nurses to carry out this procedure (cf. Appendix C) (Sarwer & Crerand 2004:99).

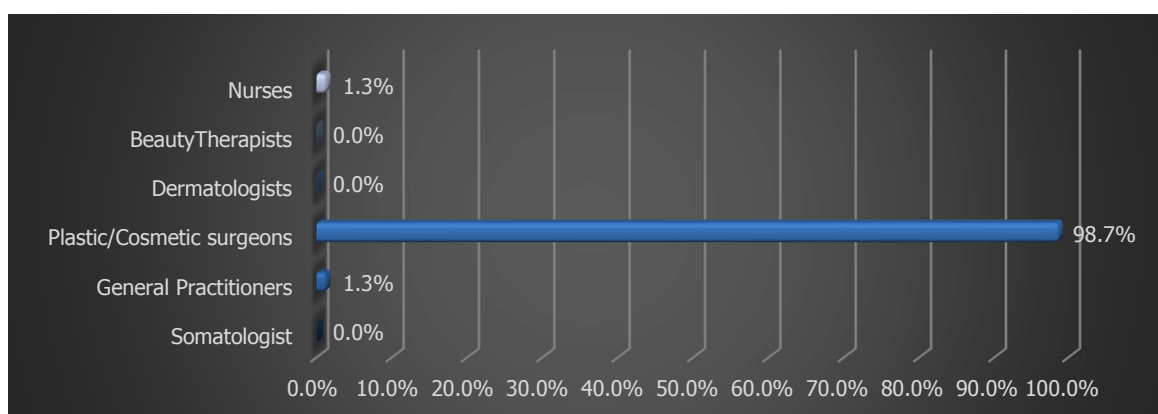


FIGURE 4.28: PROFESSIONAL CATEGORIES OFFERING BREAST AUGMENTATION (n=76)

Breast augmentation refers to a surgical procedure generally known as breast implants. This surgery is usually performed with the aim of enlarging the breasts or increasing the

volume of the breasts. There are two types of breast implants, namely, saline and silicone, which are implanted via a cut under the breasts, under the arms or around the nipple area (Balaniuk & Melo 2006:387).

4.4.23 Breast reduction

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.29. An unexpected finding of this study was the presence of somatologists 1/76 (1.3%) among the professionals performing this surgical procedure because it is not within the scope of nurses to carry out this procedure (cf. Appendix C). This response may be due to minimal understanding of this surgery by respondents. Beauty therapists, nurses and dermatologists cannot carry out breast reduction surgery. Unsurprisingly, plastic/cosmetic surgeons were selected by 74/76 (97.4%) respondents as the professionals performing breast reduction surgery.

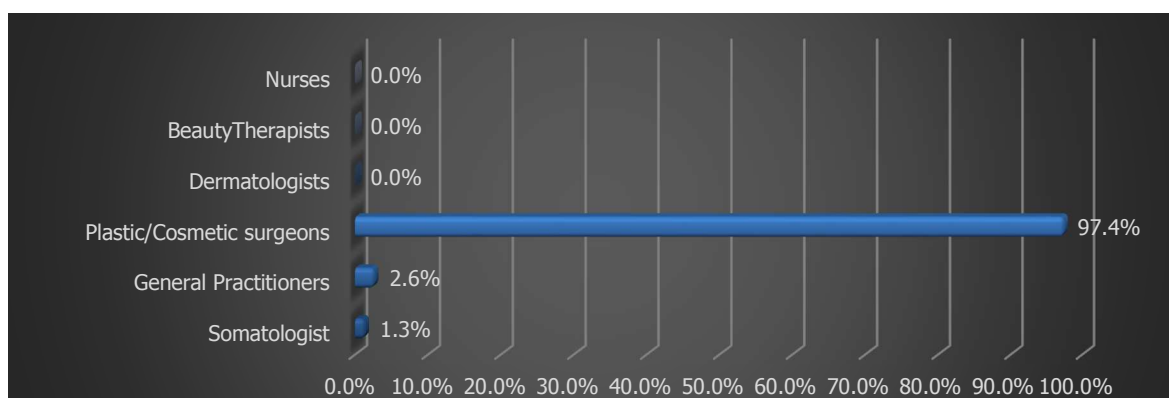


FIGURE 4.29: PROFESSIONAL CATEGORIES OFFERING BREAST REDUCTION (n=76)

Breast reduction is also referred to as reduction mammoplasty. It is a surgical procedure aimed at reducing the size of breasts or reducing the size of the areola. The reduction of the breasts is achieved by removing some skin and tissue from the breast. This surgery is performed by plastic/cosmetic surgeons in hospitals or surgery centres, with general anaesthesia. The surgery usually takes 3-5 hours and requires that the patient stays in the hospital overnight (Beer, Spicher, Cierpka & Meyer 2004:12). Awareness of the nature of this surgery makes it clear that it can only be performed by plastic/cosmetic surgeons or doctors, and dermatologists who have undergone the required additional training (Rohrich, Gosman, Brown, Tonadapu & Foster 2004:1724).

4.4.24 Surgical facelift

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.30. The professional categories

involved in performing surgical facelifts were selected as follows: plastic/cosmetic surgeons were selected by all 76/76 (100%) and dermatologists by 1/76 (1.3%). The rest of the professions (general practitioners, nurses, somatologists and beauty therapists) were not indicated as professionals that perform this surgery. The results for this item of the questionnaire are logical, as a facelift is a medical procedure and requires a speciality in the art of surgery.

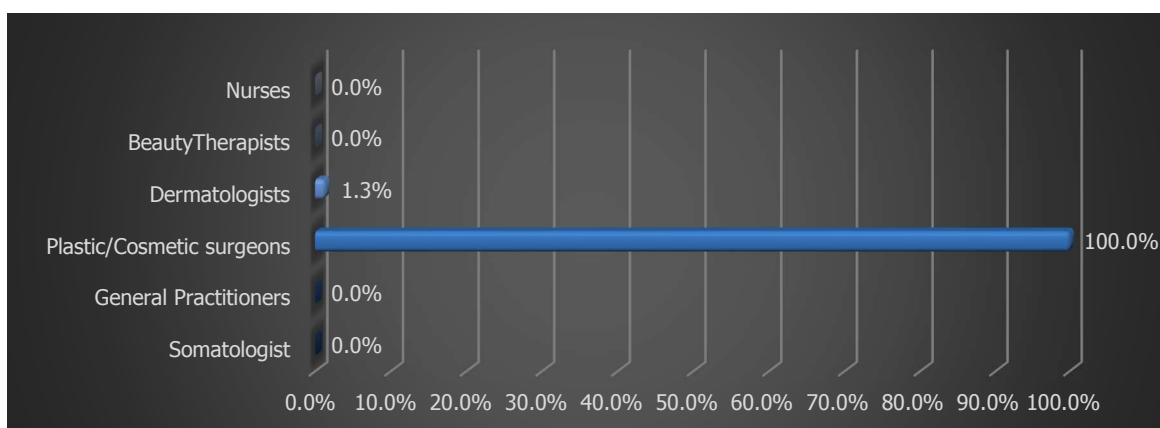


FIGURE 4.30: PROFESSIONAL CATEGORIES OFFERING SURGICAL FACELIFTS (n=76)

A surgical facelift is a method used to remove excess facial skin in order to make the face appear younger. A typical facelift is done by making incisions at the hairline or in the hair as well as in front of the nose. The benefits of this surgery can last up to 10 years. The surgery is performed in an outpatient setting in surgery centres and in hospitals (Matarasso, Elkwood, Rankin & Elkowitz 2000:1185).

4.4.25 Autologous fat transfer as filler

The respondents were asked to indicate which of the professionals performed this treatment; the results are presented in Figure 4.31. According to the responses to this question, nurses were selected by 6/76 (7.9%), somatologists by 18/76 (23.7%), general practitioners by 18/76 (23.7%), dermatologists by 50/76 (65.8%) and plastic/cosmetic surgeons by 72/76 (94.7%) respondents, as professionals performing this treatment intervention.

The results for nurses and somatologists were not expected, considering that this is a surgical procedure that requires extensive training in medicine.

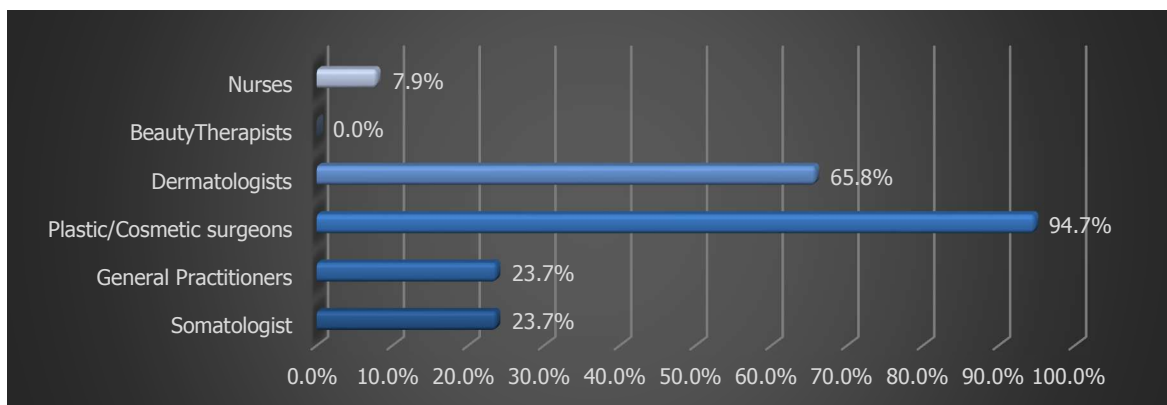


FIGURE 4.31: PROFESSIONAL CATEGORIES OFFERING AUTOLOGOUS FAT TRANSFER AS FILLER (n=76)

This is a technique in which a patient's own body fat is utilised to increase the volume of sunken areas. The word "autologous" refers to the use of one's own tissue or fat. The procedure consists of three steps. The first phase involves mild liposuction of extra fat, followed by the cleaning and isolation of fat cells. The third and last step involves the injection of the fat cells into target areas on the face. This procedure is generally performed by plastic/cosmetic surgeons and dermatologists (Monheit, Coleman 2006:108).

4.4.26 Surgical hair transplant

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.32. The findings indicate that neither nurses nor beauty therapists performing this surgery, which is sensible considering the nature of the surgery. It is surprising that somatologists were reported to perform this surgery by 1/76 (1.3%) respondent. General practitioners were selected by 5/76 (6.6%), dermatologists by 26/76 (34.2%) and plastic/cosmetic surgeons were selected by 72/76 (94.7%).

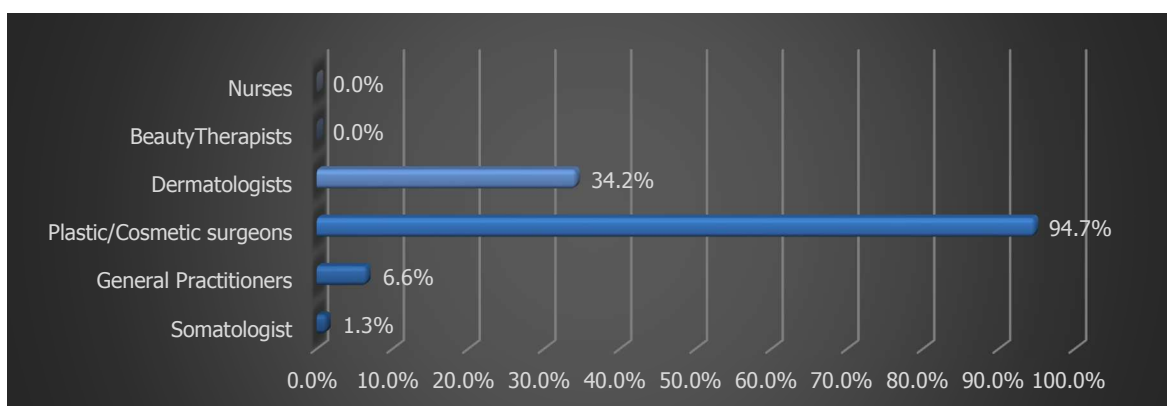


FIGURE 4.32: PROFESSIONAL CATEGORIES OFFERING SURGICAL HAIR TRANSPLANT (n=76)

Surgical hair transplantation is a surgical procedure that involves the removal of thin strips of hair-bearing scalp from the back of a patient's head and using it to fill an area with either thin or no hair. Most of these surgeries are performed in the doctor's rooms under local anaesthesia. The procedure involves cleaning of the scalp, followed by anaesthesia, and finally the removal of the strip of scalp. Depending on the targeted area, the surgery can take between four and eight hours to complete (Panfilov 2007:570). This surgery is performed by trained doctors who are qualified in this particular procedure (Bernstein, Rassman, Rashid & Shiell 2002:783).

4.4.27 Fractional laser treatments

The respondents were asked to indicate which of the professionals performed this treatment; the results are presented in Figure 4.33. The responses to this question reveal that beauty therapists were selected by 1/76 (1.3%), nurses by 3/76 (3.9%) and somatologists by 6/76 (7.9%) as professionals doing these treatments. Since this laser is invasive in nature, it is understandable that general practitioners were selected by 14/76 (18.4%), plastic/cosmetic surgeons by 68/76 (89.5%) and dermatologists also by 68/76 (89.5%) of the respondents.

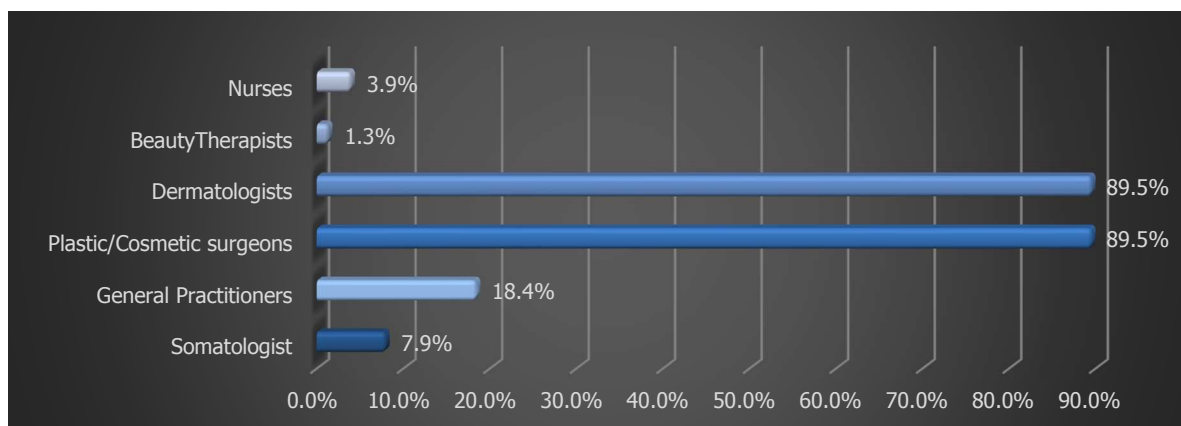


FIGURE 4.33: PROFESSIONAL CATEGORIES OFFERING FRACTIONAL LASER TREATMENTS (n=76)

There are two types of Fraxel laser currently available, the erbium type fractional lasers, which are gentle, such as the Fraxel (which is generally referred to as "non-ablative"), and the carbon dioxide lasers. These lasers are better suited for use on younger skin – not older than 50 years – and it is used to improve mild to moderate acne scarring and fine lines/wrinkles, sun damage (on all parts of the body) and melasma, to improve the texture of the skin and to decrease precancerous lesions by replacing sun-damaged skin with new skin (Tanzi, Wanitphakdeedecha & Alster 2008:675). Non-physician staff performing this

procedure should be appropriately licensed and trained, and supervised directly by a qualified, on-site physician (Bogle 2007:427) (cf. Section 2.5.1).

4.4.28 Photodynamic therapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.34. Based on the results of the questionnaire, beauty therapists were selected by 6/76 (7.9%), nurses by 20/76 (26.3%), and general practitioners by 29/76 (38.2%) of the respondents as professionals they knew performed photodynamic therapy; while 55/76 (72.4%) indicated that plastic/cosmetic surgeons offered this therapy, 57/76 (75%) indicated that somatologists offered this therapy and 70/76 (92.1%) selected dermatologists as giving this treatment.

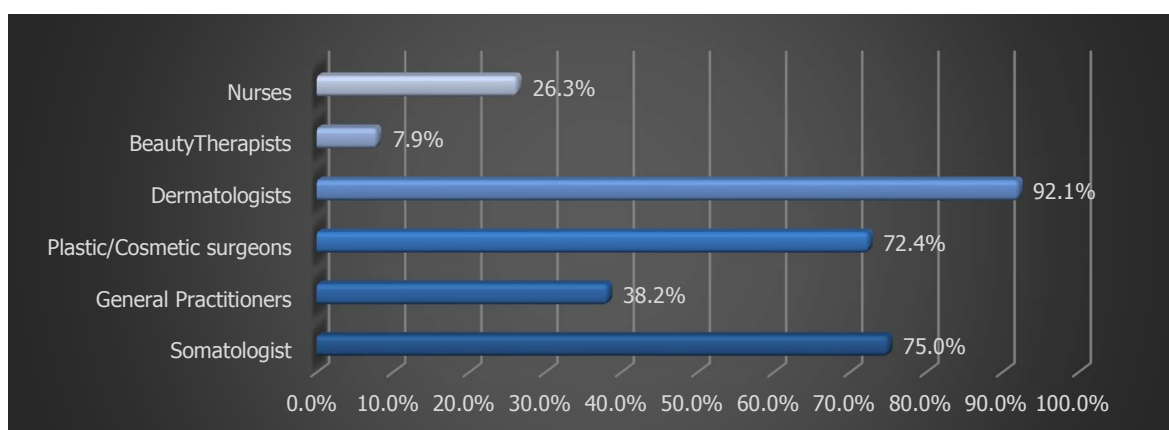


FIGURE 4.34: PROFESSIONAL CATEGORIES OFFERING PHOTODYNAMIC THERAPY (n=76)

Dougherty, Gomer, Henderson, Jori, Kessel, Korbek, Moan and Peng (1998:890) explain that photodynamic therapy is a treatment that utilises pills called a photosensitiser or photosensitising agents (Porphyrin precursors) and a specific type of light. When these photosensitisers are exposed to a specific wavelength of light, they produce a form of oxygen that is able to kill nearby cells; basically each of the photosensitisers are activated by the light of a precise wavelength, which itself determines the depth at which the light can travel into the body. Thus, the practitioners of these treatments use precise photosensitisers and wavelengths of light to treat a variety of areas in the body with photodynamic therapy. This treatment is generally used to treat superficial basal cell carcinoma, actinic keratosis, in-situ squamous cell carcinoma and nodular basal cell carcinomas after removal of the bulk of the lesion, specifically those of the neck and head. The results are expected and can be understood in relation to the accessibility of these photodynamic therapeutic devices – they are currently not difficult to obtain (Raulin & Karsai 2011:359).

4.4.29 Acne phototherapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.35. Not many beauty therapists were selected as professionals do acne phototherapy – they were selected by 8/76 (10.5%), nurses by 22/76 (28.9%) and general practitioners by 32/76 (42.1%) respondents. On the other hand, 41/76 (53.9%) respondents indicated that plastic/cosmetic surgeons, 66/76 (86.8%) respondents selected somatologists and 73/76 (96.1%) selected dermatologists.

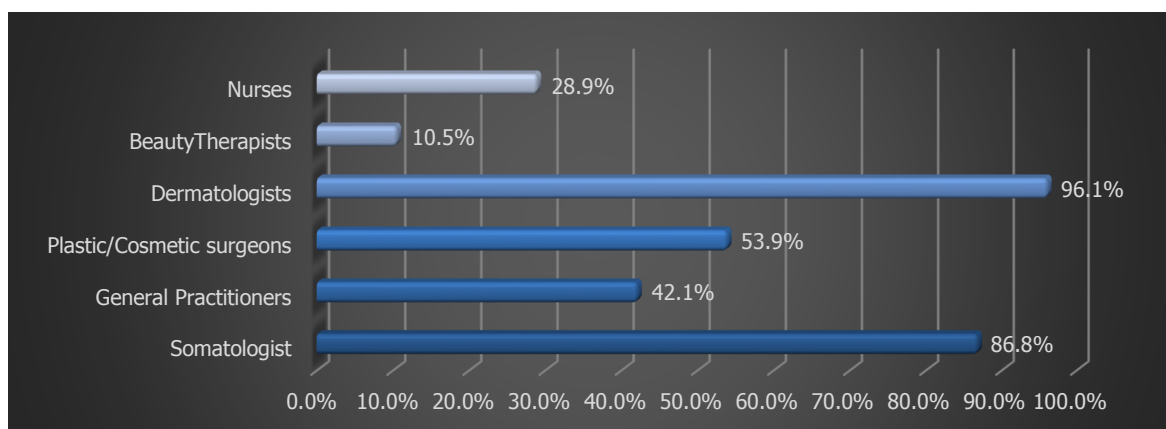


FIGURE 4.35: PROFESSIONAL CATEGORIES OFFERING ACNE PHOTOTHERAPY (n=76)

Acne light therapy is a painless treatment used to eliminate imperfections on acne-prone skin by killing acne bacteria and by reducing the size of sebaceous (oil-producing) glands, in order to give the skin a chance to recover on its own. The swelling and redness present on skin with acne is caused by a type of bacteria that can be killed by exposing it to a variety of light. Before the procedure, the practitioner may apply medication to the skin to make it more sensitive to light (photosensitiser). The treatments make use of blue and red light or, at times, a combination of blue and red light. A patient needs to have multiple treatments before maximum results will be visible (Charakida, Seaton, Charakida, Mouser, Avgerinos & Chu 2004:211). This treatment is slightly more common than other therapies, and the results are indicative of this

4.4.30 I-Pixel laser

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.36. The results of the questionnaire show that no beauty therapists are doing this treatment, 2/76 (2.6%) selected nurses, and somatologists were selected by 7/76 (9.2%) as performing these treatments; while general practitioners were selected by 17/76 (22.4%), plastic/cosmetic surgeons by 69/76 (90.8%)

and dermatologists by 70/76 (92.1%) respondents, the latter most often selected as professionals that perform this treatment.

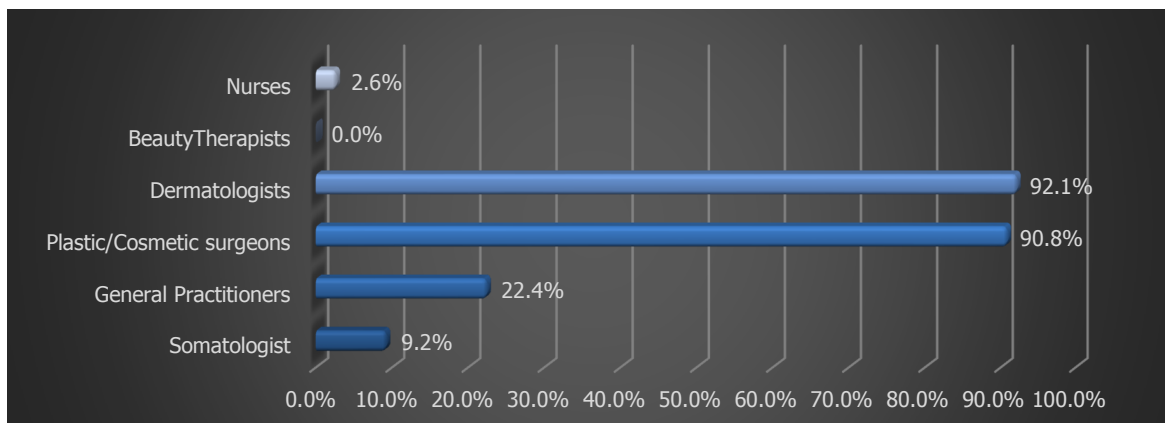


FIGURE 4.36: PROFESSIONAL CATEGORIES OFFERING TREATMENT WITH I-PIXEL LASER (n=76)

This is a type of fractional laser treatment intended to mend the appearance of aging, sun damage and pigmentation. This laser targets microscopic dots of skin “pixels” in the epidermis and upper layer of the dermis, causing the targeted cells to break down. The nearby skin is safe, thereby ensuring short healing time. Newly generated skin cells “fill in” the areas targeted by the laser. This treatment uses light technology to target and address damaged skin cells with photothermolysis, which is a combination of heat and light. This treatment is suited for many types of skin and radically mends the appearance of scarring caused by acne, imperfections, pitting and hyperpigmentation; this treatment also reduces the size of the pores and assists in smoothing out coarse skin (Andrews, Phillips & Hopen 2001:16).

4.4.31 Varicose vein sclerotherapy

The respondents were asked to indicate which of the professionals performed this treatment.

The respondents indicated the professionals who carry out this treatment as follows: somatologists 59/76 (77.6%), plastic/cosmetic surgeons 52/76 (68.4%) and dermatologists 64/76 (84.2%). Fewer general practitioners, at 50%, were selected, while nurses were selected by 27/76 (35.5%) and beauty therapists by 3/76 (3.9%) respondents as professionals that perform this treatment (cf. Figure 4.37).

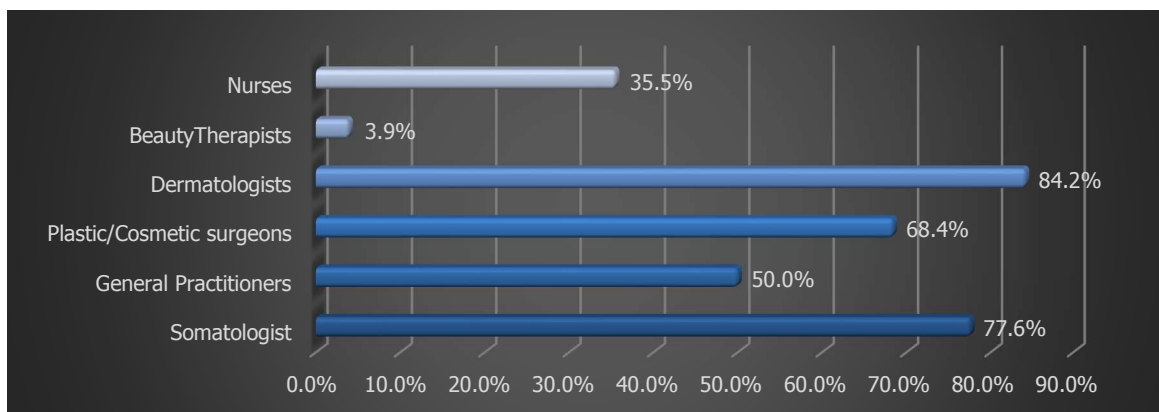


FIGURE 4.37: PROFESSIONAL CATEGORIES OFFERING VARICOSE VEIN SCLEROTHERAPY (n=76)

Sclerotherapy involves an injection of a distinct chemical (sclerosant) into varicose veins. By damaging and scarring the interior lining of the vein it causes the vein to close. Throughout the procedure, the leg affected is raised in order to drain the blood. The process takes place in doctors' rooms or clinics; the duration of the procedure is between five and 30 minutes, depending on the number and size of the varicose veins to be treated (Alos, Carreno, Lopez, Estadella, Serra-Prat & Marinel-Lo 2006:101) (cf. Section 2.5.). The questionnaire results are a reflection of the ability of all these professionals to treat varicose veins.

4.4.32 Infrared therapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.38. According to the responses to this question, dermatologists were selected by 70/76 (92%), plastic/cosmetic surgeons by 66/76 (86.8%) and somatologists by 64/76 (84.2%) of the respondents as professionals that perform these treatments. General practitioners were selected by 54/76 (71.1%), nurses by 34/76 (44.7%) and beauty therapists by 1% of the respondents.

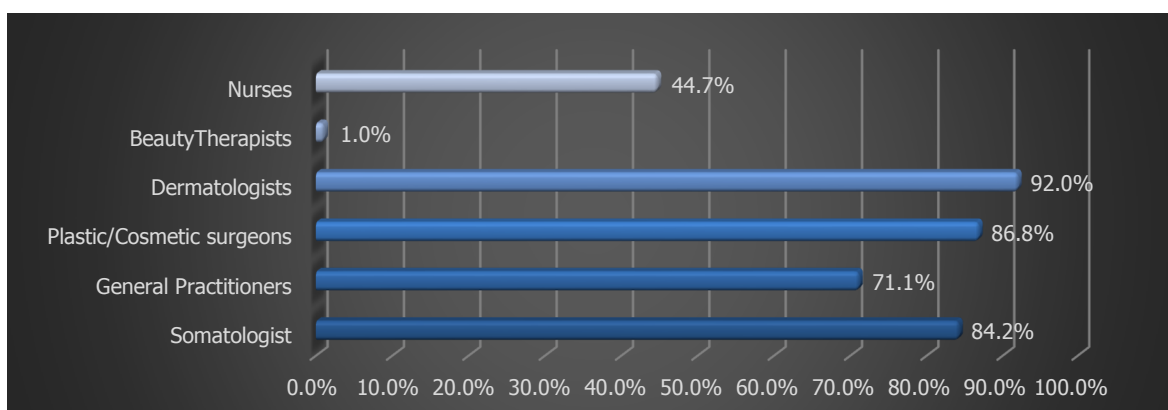


FIGURE 4.38: PROFESSIONAL CATEGORIES OFFERING INFRARED THERAPY (n=76)

Infrared therapy uses the therapeutic power of infrared wavelengths of light. Once this type of energy is applied to injured or painful areas, it radically raises circulation, promotes healing and decreases inflammation. The key aspect of this treatment is nitric oxide, which is key to the benefits of infrared light therapy; nitric oxide is essential to the health of the arteries. Infrared energy stimulates the release of nitric oxide, which improves the flow of blood to the treated area. Thus, the increased flow of blood results in oxygen and nutrients being brought to the injured tissue, which promotes faster healing, and reduces pain and inflammation (Gold 2007:1238). This treatment is commonly carried out by all the professions involved in MA, thus explaining the results.

4.4.33 Ultrasound imaging/sonography

The respondents were asked to indicate which of the professionals performed this diagnostic procedure, and the results are presented in Figure 4.39. The responses to this question reveal that beauty therapists were selected by 1/76 (1.3%), nurses by 16/76 (21.1%) and somatologists by 26/76 (34.2%) respondents as the professionals that carry out this procedure. A greater number of selections were made for general practitioners, 37/76 (48.7%), plastic/cosmetic surgeons, 60/76 (78.9%), and dermatologists, by 62/76 (81.6%) respondents.

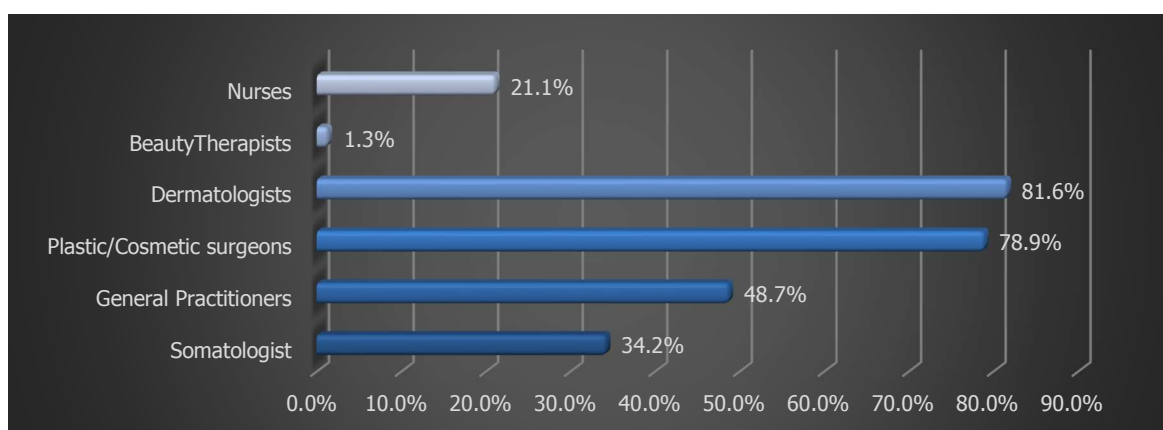


FIGURE 4.39: PROFESSIONAL CATEGORIES OFFERING ULTRASOUND IMAGING / SONOGRAPHY (n=76)

According to Sono-Elastography (2011:691), ultrasound imaging (sonography) uses high-frequency sound waves to view the inside of the body. Ultrasound images are captured in real time and are therefore able to show movement of the body's internal organs, including blood flowing through the blood vessels. In contrast to X-ray imaging, there is no ionising radiation exposure associated with ultrasound imaging. The procedure involves placing a transducer directly on the skin or at times (not in MA) inside a body opening, followed by

an application of a thin layer of gel to the skin, to ensure that the ultrasound waves are transmitted from the transducer through the gel into the body. This intervention is non-invasive and, according to the recommended scope of practice for beauty therapists and somatologists, these professional groups should not be performing this intervention (SAAHSP 2012:2), which is used for diagnosis purposes or assists in understanding the physiology of the skin or the inside of the body.

4.4.34 Intense pulsed light therapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.40. The responses to this question show that all the professional groups perform this treatment. Most selections involved dermatologists, by 69/76 (90.8%), somatologists, by 67/76 (88.2%), and plastic/cosmetic surgeons by 63/76 (82.9%) respondents; with fewer selections for beauty therapists, 5/76 (6.6%), nurses, 30/76 (39.5%), and general practitioners by 45/76 (59.2%) of the respondents as those that perform intense pulsed light therapy.

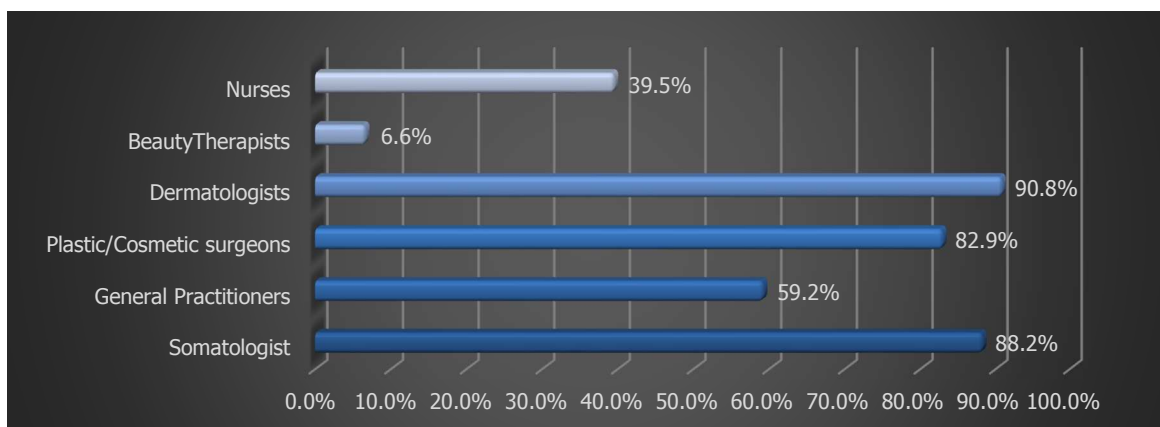


FIGURE 4.40: PROFESSIONAL CATEGORIES OFFERING INTENSE PULSED LIGHT THERAPY (n=76)

Photo rejuvenation is a minimally invasive technique that treats sun damage, broken capillaries, and photo-aged skin and rosacea facial vascular disorders by considerably decreasing spots/blemishes, flushing, redness and blushing. This treatment offers patients a healthier, smoother, younger-looking skin. Pulses of intense light are delivered to the skin through very precise filters. The level of energy is delivered in specific settings in order to maximise the desired results. The tissues capture the light energy, which encourages the production of collagen. As a result of the formation of new collagen, aging skin softens; reducing wrinkles and fine lines, and the redness associated with rosacea is significantly and intensely decreased. This treatment should preferably be repeated in a series of

treatments (generally six), at a frequency of every three to four weeks, in order to achieve the ideal results, although the number and frequency of treatments are dependent on the area being treated as well as the skin's condition (Raulin *et al.* 2003:78) (cf. Section 2.5.1). The medical aesthetician must be trained before he/she can administer this treatment modality (Raulin & Greve 2002:156).

4.4.35 Nd:YAG lasers

The responses to this question, as illustrated in Figure 4.41, indicate that no respondents selected beauty therapists and nurses; somatologists were selected by (6.6%), general practitioners were selected by 19/76 (24.4%) respondents; nurses by 30/76 (39.5%), plastic/cosmetic surgeons by 67/76 (88.2%) and dermatologists by 69/76 (90.8%) respondents as professionals they knew that perform this treatment intervention.

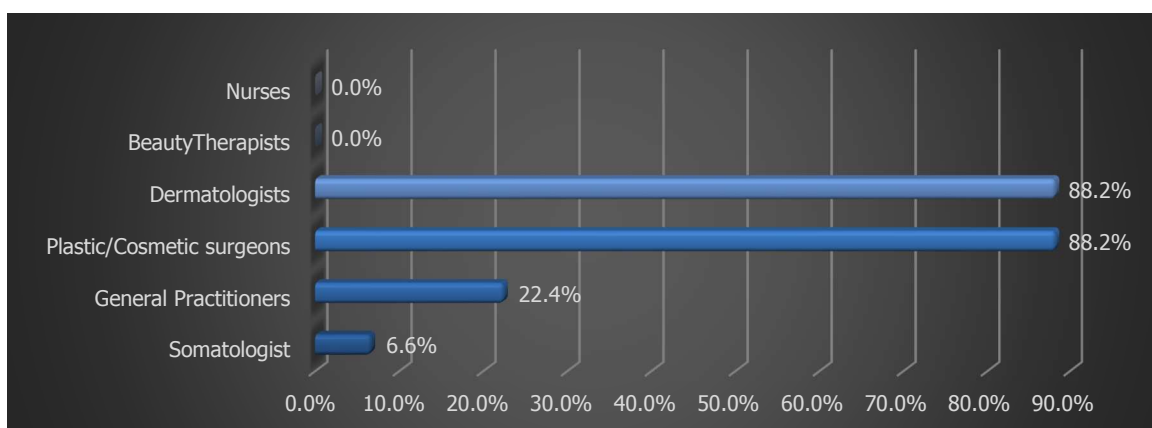


FIGURE 4.41: PROFESSIONAL CATEGORIES OFFERING ND:YAG LASERS (n=76)

The term YAG laser is generally used for solid-state lasers that are founded on neodymium-doped. YAG is an acronym for yttrium aluminium garnet, a synthetic crystal material that came to be prevalent in the form of laser crystals in the 1960s. The yttrium ions in YAG can be substituted by laser-active rare earth ions without affecting the lattice structure, because these ions have a comparable size. YAG is a host medium with favourable properties, mainly for high-power lasers and Q-switched lasers emitting at 1064 nm and it is capable of reaching deep into the skin (Kovacevska, Dimova & Georgiev 2013:131). Nd:YAg has several uses, among which to remove solar lentigines, naevus of Ota, tattoos and hair. As this is a laser treatment targeting the deeper layers of the skin, the study results are understandable (cf. Section 2.5.1). Given the nature of this treatment intervention, only professionals trained in this modality should provide this treatment. It is generally performed by plastic/cosmetic surgeons, according to an article by Friedman, Jih, Burns, Geronemus, Kimyai-Asadi and Goldberg (2004:858).

4.4.36 Laser hair removal

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.42. Among the professional categories that perform this treatment, beauty therapists were selected least as professionals who perform this treatment, by 6/76 (7.9%) respondents, general practitioners were selected by 24/76 (31.6%) and nurses by 27/76 (35.5%) respondents, while a greater number of selections were made for plastic/cosmetic surgeons, by 42/76 (55.3%), dermatologists, by 64/76 (84.2%), and somatologists by 67/76 (88.2%) of the respondents.

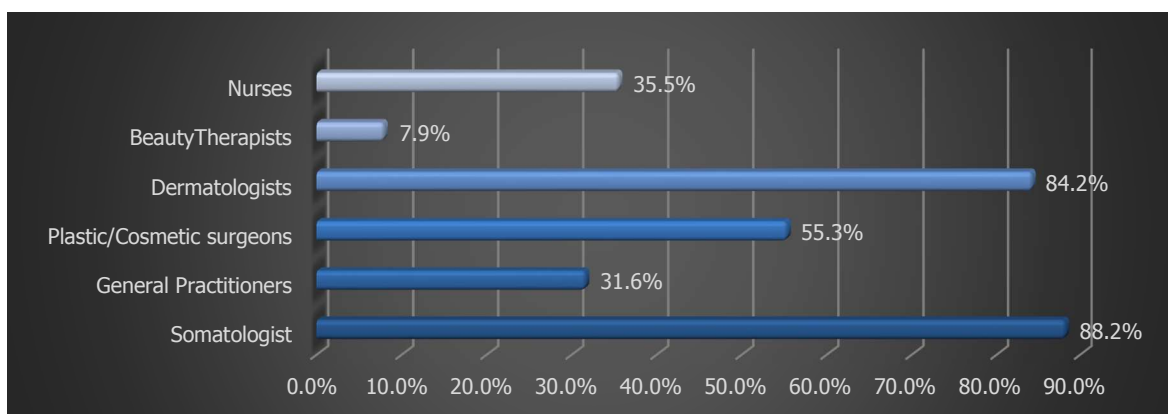


FIGURE 4.42: PROFESSIONAL CATEGORIES OFFERING LASER HAIR REMOVAL (n=76)

Laser hair removal is sometimes referred to as permanent hair reduction. A variety of technologies are available for performing hair removal, among which equipment used for Nd:YAG, diode (laser), intense pulsed light, and RF electrical energy. Laser hair removal is usually performed on the arms, legs, face and the bikini (groin) area (Ibrahimi, Avram, Hanke, Kilmer & Anderson 2011:94). Laser hair removal is a popular hair reduction intervention and is commonly administered in health and skincare salons, explaining why so many somatologists carry out this treatment. Laser hair removal is performed by all the professional groupings involved in MA (cf. Section 2.5).

4.4.37 Alexandrite laser

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.43. Beauty therapists and nurses were not selected as professionals that perform this treatment; while 4/76 (5.3%) selected somatologists. General practitioners were indicated by 17/76 (22.4%), plastic/cosmetic surgeons by 68/76 (89.5%) and dermatologists by 69/76 (90.8%) of the respondents, as professionals carrying out these treatments.

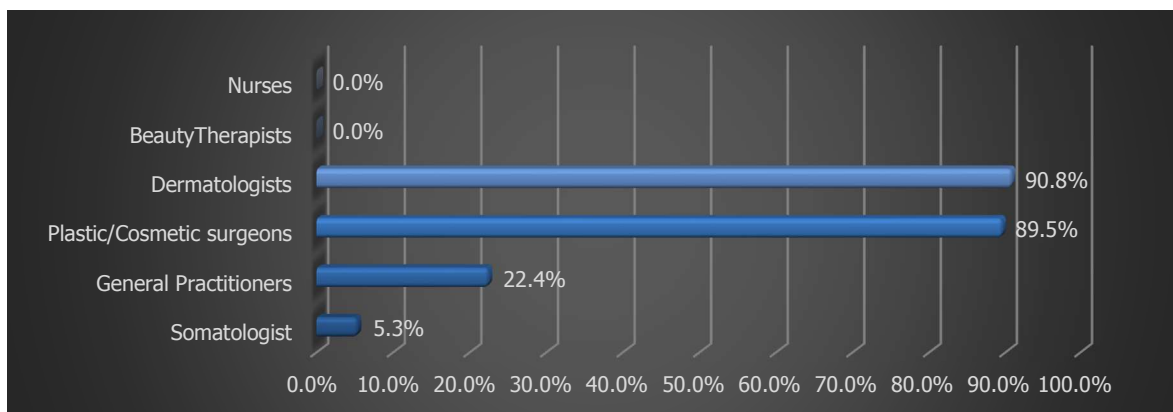


FIGURE 4.43: PROFESSIONAL CATEGORIES OFFERING ALEXANDRITE LASER (n=76)

These lasers produce a precise wavelength of light in the infrared spectrum (755 nm) and are considered to be red-light lasers. Alexandrite lasers are also available in Q-switched mode, which refers to the method of making the laser produce high-intensity beams in very short pulses. These lasers are generally used to reduce hair growth (Haedersdal & Wulf 2006:10). These lasers are considered to be medically based due to the depth at which they work on the skin (Raulin *et al.* 2003:80).

4.4.38 LED phototherapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.44. Beauty therapists were selected by 6/76 (7.9%) respondents as performing this therapy; 25/76 (32.9%) of the respondents selected nurses and 27/76 (35.5%) respondents selected general practitioners as the professionals that perform this procedure. Plastic/cosmetic surgeons were selected by 57/76 (75%), somatologists by 65/76 (85.5%) and dermatologists by 68/76 (89.5%) respondents.

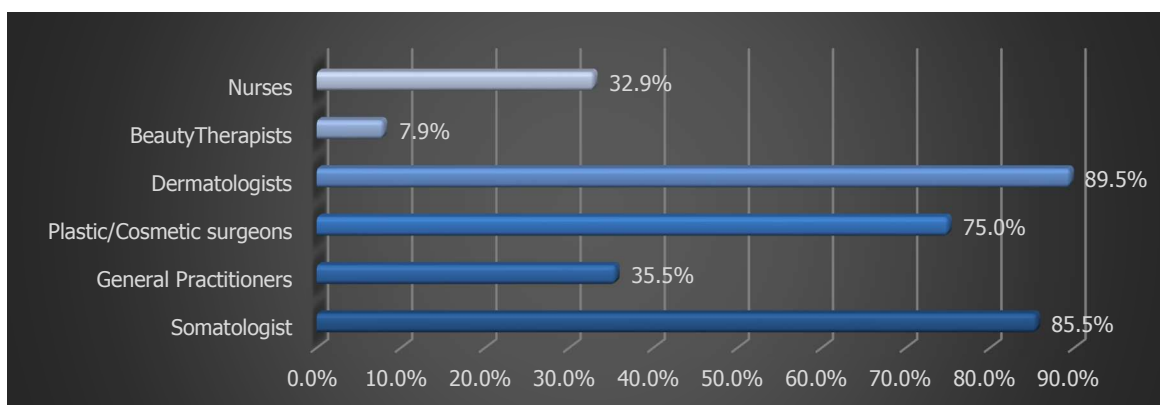


FIGURE 4.44: PROFESSIONAL CATEGORIES OFFERING LED PHOTOTHERAPY (n=76)

Baker (2015:online), describes light-emitting-diodes (LED) as offering a relaxing and painless skincare treatment that adds volume to aged skin by enhancing production of collagen and treating mild to moderate acne. LED treatment is sometimes called LED red-light or LED light therapy. LED phototherapy works by distributing energy-producing packs of light into the deeper layers of the skin. Red-light LED stimulates the fibroblasts that produce collagen, which results in a younger-looking skin, reduces fine lines and wrinkles, treats sun damage and stretch marks, and reduces redness after intense pulsed light or laser treatments. This treatment is a safe one and has minimal health-threatening side effects, so all the professions can perform the treatment, as reflected by the results in Figure 4.45 (Ahluwalia 2008:420).

4.4.39 Micro-needling

The micro-needling treatment is performed by some professionals from each group, as the results in the graph in Figure 4.45 indicate. Most selections were made for somatologists and dermatologists, both by 68/76 (89.5%) respondents, and plastic/cosmetic surgeons by 86/76 (85.5%) respondents. Fewer respondents selected general practitioners, 36/76 (47.4%), nurses, 29/76 (38.2%), and beauty therapists, 4/76 (5.3%), as professionals offering micro-needling treatments.

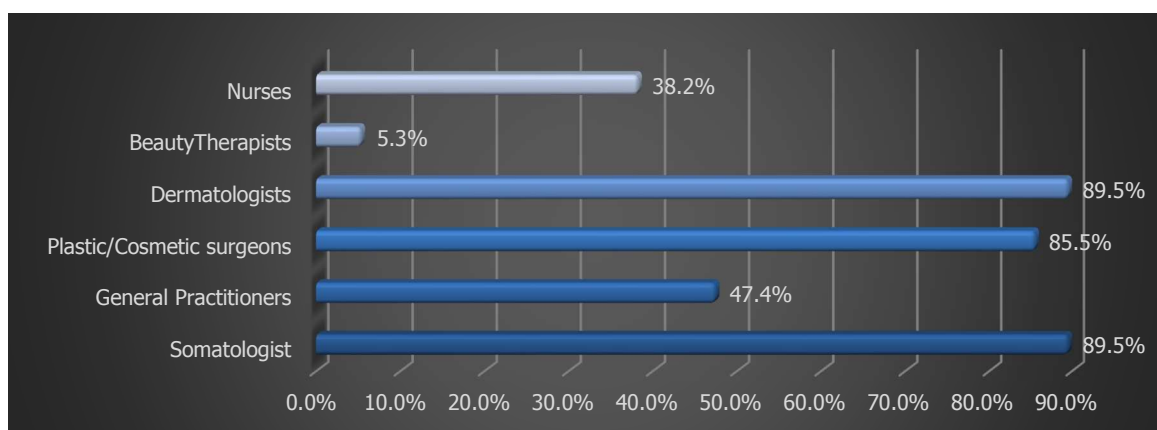


FIGURE 4.45: PROFESSIONAL CATEGORIES OFFERING MICRO-NEEDLING (n=76)

According to Puri (2015:207), micro-needling is also known as skin needling or collagen induction therapy (CIT) and percutaneous collagen inducing (PCI) therapy. This procedure is classed under non-invasive skin rejuvenation and involves the use of a device that comprises fine needles. The needles are used to puncture the upper layers of the skin with the objective of creating a controlled injury to the skin, which then prompts the body to create new collagen and elastin. The indications for this treatment are scarring and uneven skin texture. This treatment is offered by both aestheticians (somatologists) and

dermatologists; however, home devices are also available. The needles used in this treatment vary in size, with smaller needles achieving superficial improvement; which could be the reason for the results presented in Figure 4.45, as there are needles that can be used by beauty therapists and somatologists (these needles do not penetrate the skin too deeply) (Gellis 2014:online).

4.4.40 Lipolysis

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.46. The results show that somatologists and beauty therapists were selected by 1/76 (1.3%) respondents; this is surprising, considering they are not trained to do this procedure at all. As expected, more selections were made for plastic/cosmetic surgeons, by 69/76 (90.8%) respondents; followed by dermatologists, who were selected by 8/76 (10.5%) respondents, and general practitioners by 5/76 (6.6%) respondents.

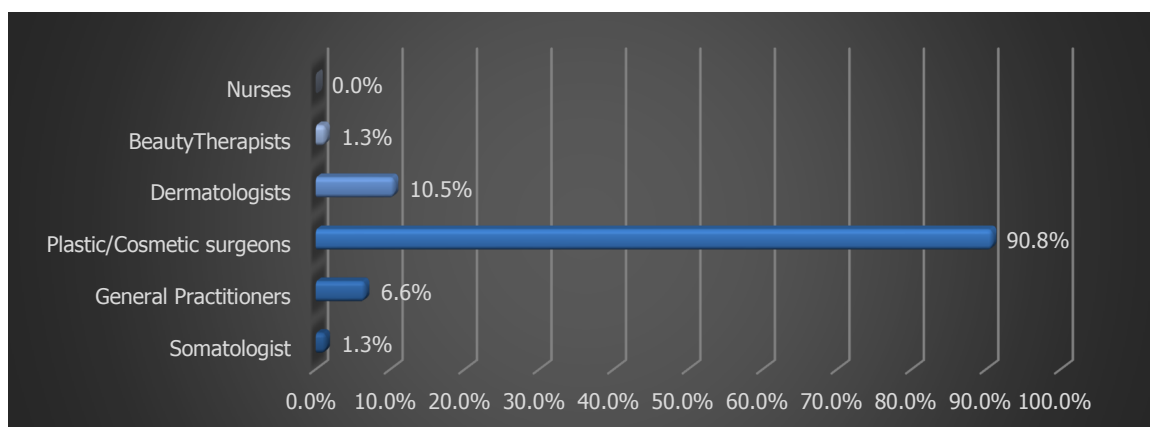


FIGURE 4.46: PROFESSIONAL CATEGORIES OFFERING LIPOLYSIS (n=76)

Lipolysis refers to the breaking down of lipids; it involves hydrolysis of triglycerides into glycerol and free fatty acids. The hormones that induce lipolysis include epinephrine, ghrelin, norepinephrine, cortisol and testosterone. Lipolysis is considered to be a medical procedure that basically removes and melts undesirable fatty deposits on any part of the body, resulting in a change of the shape of the body or face. This procedure targets the deeper layers of the skin. The treatment involves an active substance, naturally found in the body, being injected straight into the subcutaneous tissue, thereby stimulating the release of fat stores. Results of this procedure can be expected after two to three treatments (Atiyeh, Ibrahim & Dibo 2008:842).

4.4.41 Mesotherapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.47. The data collected on this treatment indicates that 4/76 (5.3%) of the respondents selected beauty therapists, 26/76 (34.2%) selected general practitioners, and 30/76 (39.5%) selected nurses, while most selections were made for somatologists, by 70/76 (92.1%), dermatologists, by 59/76 (77.6%), and plastic/cosmetic surgeons, by 47/76 (61.8%) respondents.

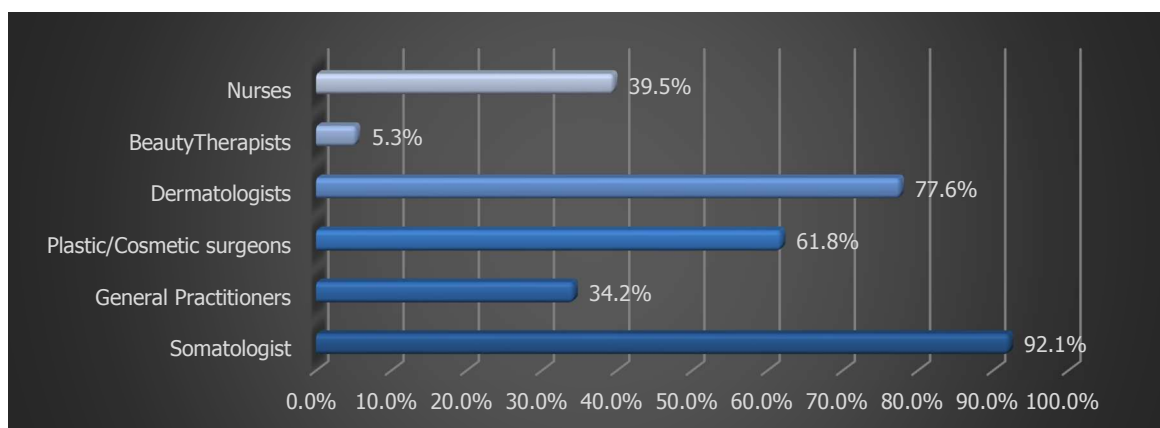


FIGURE 4.47: PROFESSIONAL CATEGORIES OFFERING MESOTHERAPY (n=76)

Mesotherapy is a non-surgical cosmetic medicine treatment. This therapy involves the use of numerous injections of homeopathic and pharmaceutical medications, vitamins, plant extracts and other ingredients into subcutaneous fat. Mesotherapy is used to combat the effects of aging skin, reduce the appearance of cellulite and assist with weight loss, body contouring and face/neck rejuvenation (Rohrich 2005:1425). Mesotherapy is generally performed by physicians, although trained non-physicians can administer the treatment too, since it is not necessarily considered a medical practice, according to Rotunda and Kolodney (2006:465).

4.4.42 Tripolar radio frequency

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.48. The results of this study indicate fewer respondents selecting beauty therapists, selected by only 3/76 (3.9%), followed by nurses, were selected by 12/76 (15.8%), and general practitioners, selected by 21/76 (27.6%) respondents. Somatologists were selected by 22/76 (28.9%), respondents, while 62/76 (81.6%) respondents selected plastic/cosmetic surgeons and dermatologists as professionals performing this treatment.

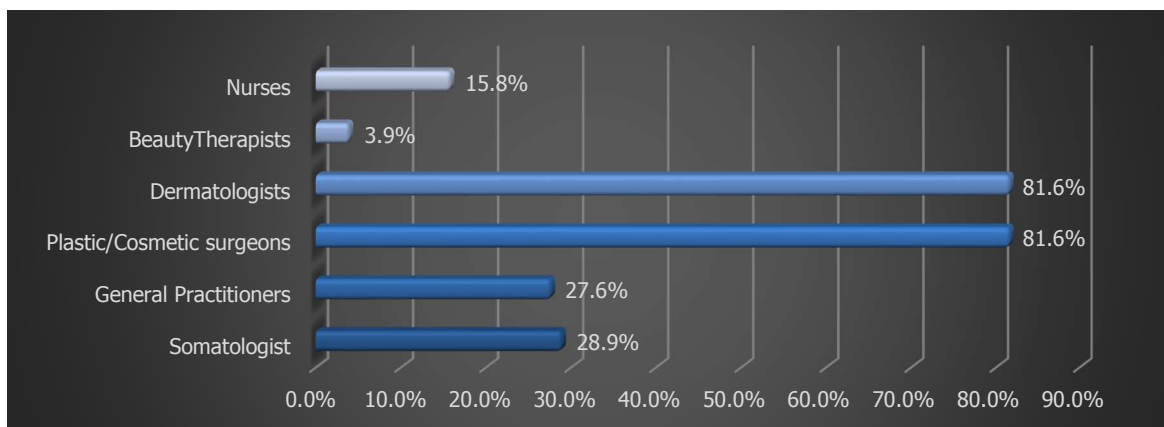


FIGURE 4.48: PROFESSIONAL CATEGORIES OFFERING TRIPOLAR RADIO FREQUENCY TREATMENT (n=76)

TriPolar radio frequency (RF) technology is an advanced and proprietary third-generation radio frequency technology. TriPOLar overcomes the limitations of previous mono-polar and bi-polar technologies. TriPOLar technology renders a painless treatment involving controlled energy being delivered via three or more electrodes to a limited area being treated. These treatments deliver instant, noticeable body and facial contouring effects from the first treatment, without surgery.

This technology is effective in rejuvenating and firming the skin, reducing the appearance of fine lines and wrinkles, contouring facial skin, sculpturing the body and reducing unwanted fat deposits, and reducing the appearance of cellulite and stretch marks. A series of treatments is required for notable results (Beasley & Weiss 2014:80). Due to the nature of this treatment, it can be carried out by all the professional categories working in MA in SA.

4.4.43 Medical tattooing

The graph in Figure 4.49 indicates that medical tattooing is performed by all professions working in MA. The professional categories that were selected by respondents as performing these treatments is as follows: plastic/cosmetic surgeons were selected by 60/76 (78.9%), dermatologists by 51/76 (67.1%) and somatologists by 32.2% respondents; while fewer selections were for nurses, 5/76 (6.6%), beauty therapists, 6/76 (7.9%) and general practitioners, 16/76 (21.1%).

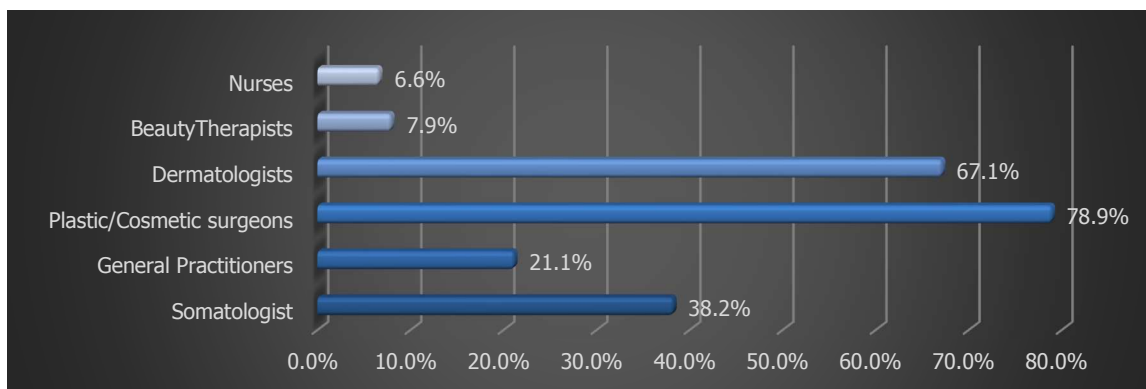


FIGURE 4.49: PROFESSIONAL CATEGORIES OFFERING MEDICAL TATTOOING (n=76)

Medical tattooing is also known as permanent make-up, which is a non-surgical procedure. It is used to improve shape and enhance colour of body areas resulting from causes such as removal of the areola after cancer. Special coloured pigments are entrenched into the dermis of the skin through tiny injections with an extremely fine needle or cluster of needles (Vassileva & Hristakieva 2007:367). It is generally acceptable that this treatment is performed by plastic/cosmetic surgeons, dermatologists and somatologists; the results for nurses and beauty therapists were not anticipated (Raulin & Greve 2002:156).

4.4.44 Permanent make-up

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.50. The somatologists' responses to the questionnaire reflect De Cuyper's finding, as most of them were selected somatologists were selected by 96.1% of respondents. Plastic/cosmetic surgeons were selected by 52/76 (68.4%) respondents, while 24/76 (31.6%) respondents indicated that dermatologists perform this procedure – which is not surprising. It is, however, interesting that 5/76 (6.6%) respondents selected nurses, 3/76 (3.9%) selected general practitioners and 12/76 (15.8%) selected beauty therapists.

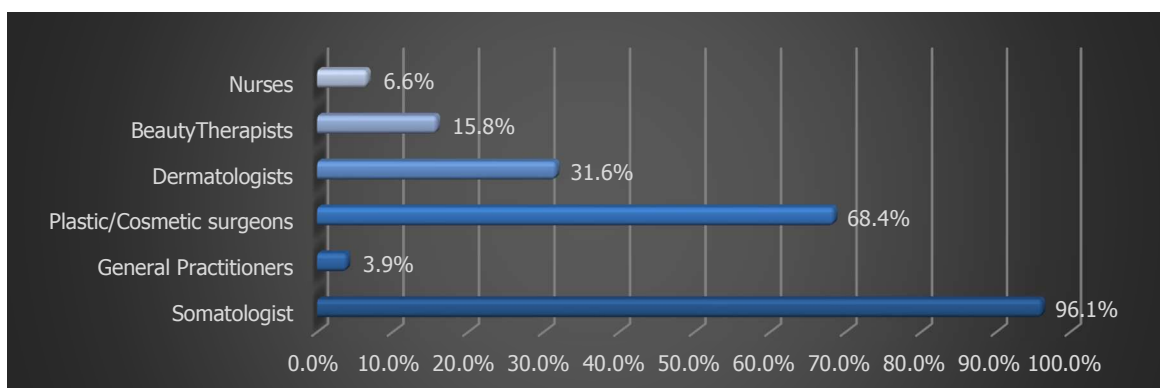


FIGURE 4.50: PROFESSIONAL CATEGORIES OFFERING PERMANENT MAKE-UP (n=76)

Permanent make-up is a cosmetic technique that uses permanent pigmentation of the dermis as a means of producing designs that resemble make-up, such as eyeliner and applying various permanent enhancing colours to the skin of the lips, eyelids and face. This technique is often performed by somatologists (cosmetologists) (De Cuyper 2008:30). This treatment is not included in their respective curricula (Wenzel, Welzel, Hafner, Landthaler & Bäumlner 2010:233).

4.4.45 Thermotherapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.51. The data indicates that the professional groupings that were selected for carrying out these treatments most are dermatologists, selected by 65/76 (85.5%) respondents, plastic/cosmetic surgeons, by 58/76 (76.3%), and somatologists by 39/76 (51.3%). It is interesting that plastic/cosmetic surgeons are reported to perform more of these treatments than somatologists, in light of the concerns that these professionals encounter. The expectation is that somatologists would do more of this procedure, as they encounter conditions that require these sorts of treatments more often than plastic/cosmetic surgeons would. Nurses were selected by 18/76 (23.7%), general practitioners by 15/76 (19.7%) and beauty therapists by 5/76 (6.6%) respondents.

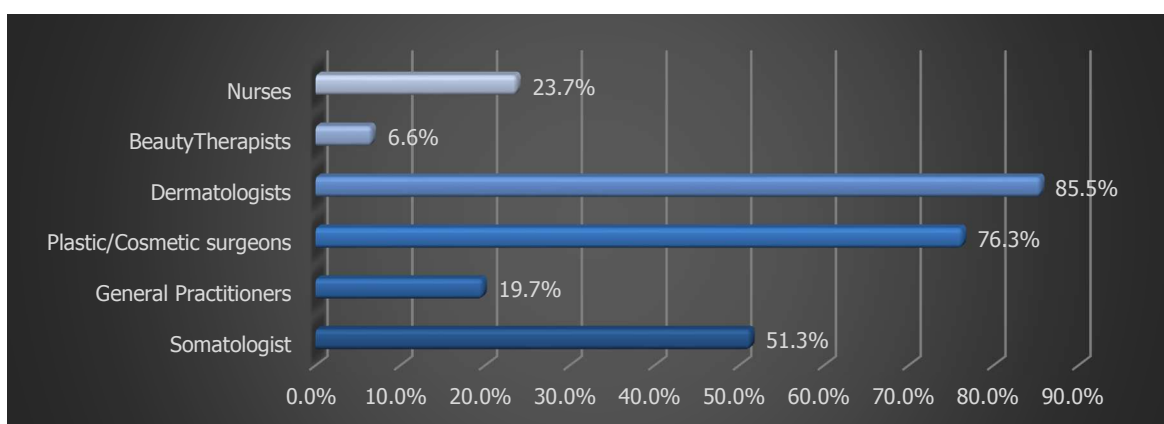


FIGURE 4.51: PROFESSIONAL CATEGORIES OFFERING THERMOTHERAPY (n=76)

Thermotherapy is basically heat therapy. It refers to the use of heat to reduce pain in muscles, soft tissues and joints, as well to improve health. This therapy also has opposite effects on tissue metabolism, inflammation, oedema, blood flow and connective tissue extensibility. This type of therapy takes different forms, such as hot compressors, ultrasound, wax, hot water, heating pads, cordless heat therapy wraps and whirlpool baths.

Thermotherapy can be utilised in rehabilitation facilities as well as at home (Knowlton 2001:nd).

4.4.46 Ultrasound therapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.52. Dermatologists were selected by 63/76 (82.9%) of the respondents, and 58/76 (76.3%) selected plastic/cosmetic surgeons. This was expected, considering the nature of treatment and procedures that these two professional groupings perform, especially since ultrasound is beneficial for healing. Neither is it surprising that somatologists were selected by 58/76 (76.3%) respondents, as ultrasound is included in their curricula and is used commonly in their establishments. General practitioners were selected by 43/76 (56.6%), nurses by 26/76 (34.2%) and beauty therapists by 10/76 (13.2%) respondents; these results were expected due to the wide variety of concerns that this treatment modality can treat. It is important to note the various scopes of practice (cf. Appendix C).

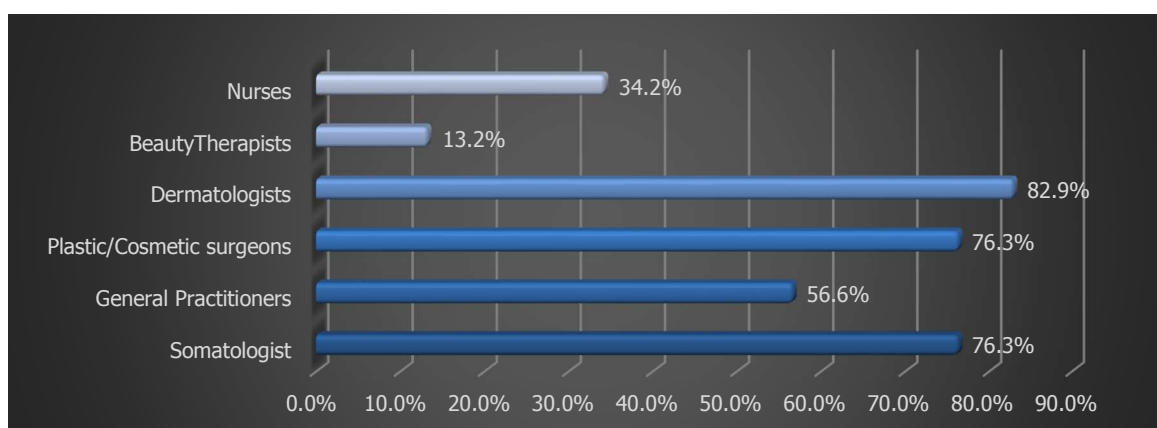


FIGURE 4.52: PROFESSIONAL CATEGORIES OFFERING ULTRASOUND THERAPY (n=76)

Ultrasound therapy uses a machine that produces therapeutic high-frequency sound waves, and is commonly used as a treatment modality for injuries resulting from sports. Treatment involves use of ultrasonic waves or sound waves of high frequency that are not audible to the human ear, that are created by means of mechanical vibration in the metal treatment head of the ultrasound device/machine. A special ultrasound gel is placed on the skin to ensure maximum contact between the treatment head and the skin's surface, as well as to provide a medium through which the sound waves can travel. The therapeutic effects of this therapy include reduction of pain and healing time, possibly an increase the production of collagen, thereby having a positive effect on fibrous scar tissue that may form after an injury or certain MA procedures. The effect of ultrasound are an increase in local blood

flow and can be used to help reduce local swelling and chronic inflammation, which can result after certain MA procedures (Knowlton 2001:nd).

4.4.47 Radio frequency therapy

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.53. As many as 68/76 (89.5%) respondents selected somatologists, and dermatologists were selected by 67/76 (88.2%) respondents, which may be because these professionals encounter skin conditions, such as acne, which require the therapeutic effects of this treatment, especially for pain relief. Furthermore, 58/76 (76.3%) selected plastic/cosmetic surgeons, general practitioners were selected by 47.4%, nurses by 26/76 (34.2%) and beauty therapists by 10/76 (13.2%) of the respondents.

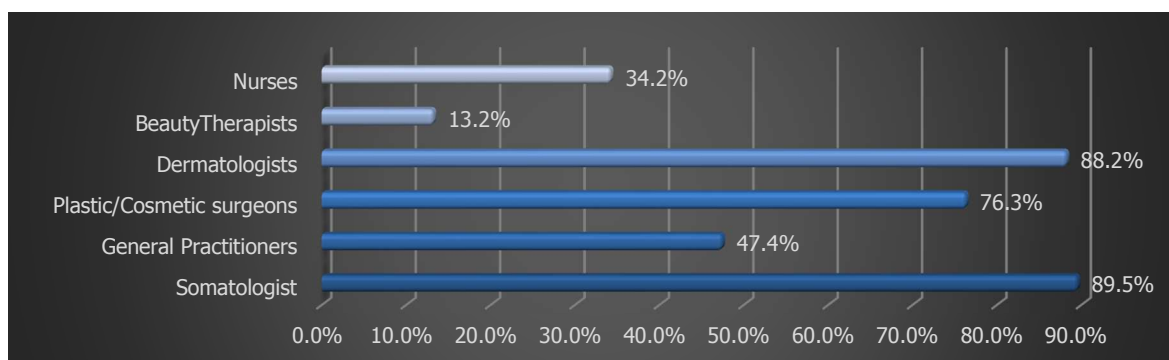


FIGURE 4.53: PROFESSIONAL CATEGORIES OFFERING RADIO FREQUENCY THERAPY (n=76)

Radio frequency is a procedure used chiefly to decrease pain (pain can be experienced with some of the skin conditions involved within MA, and therefore radio frequency can assist with managing pain where necessary). An electrical current created by a radio wave is utilised to heat up a small area of nerve tissue, thereby reducing pain signals from that specific area. This therapy is used to assist patients with chronic pain, neck pain, lower back pain and pains related to degeneration of joints from arthritis. The results of pain reduction can be experienced for up to a period of 12 months and in some cases longer, although this period is dependent on the location and cause of the pain (Sadick & Makino 2004:91).

4.4.48 Thread Lift

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.54. As expected, the results indicate

that plastic/cosmetic surgeons were selected by 70/76 (92.1%) of the respondents, as this is a cosmetic procedure included in these surgeons' scope of practice. Dermatologists were selected by 24/76 (31.6%); with the lowest number of selections being for general practitioners, by 1/76 (1.3%), and somatologists by 3/76 (3.9%). This is surprising when taking into consideration the nature of their work environment and training. As anticipated, since this is an invasive procedure, neither nurses nor beauty therapists perform this procedure (Wu 2009:n.d.).

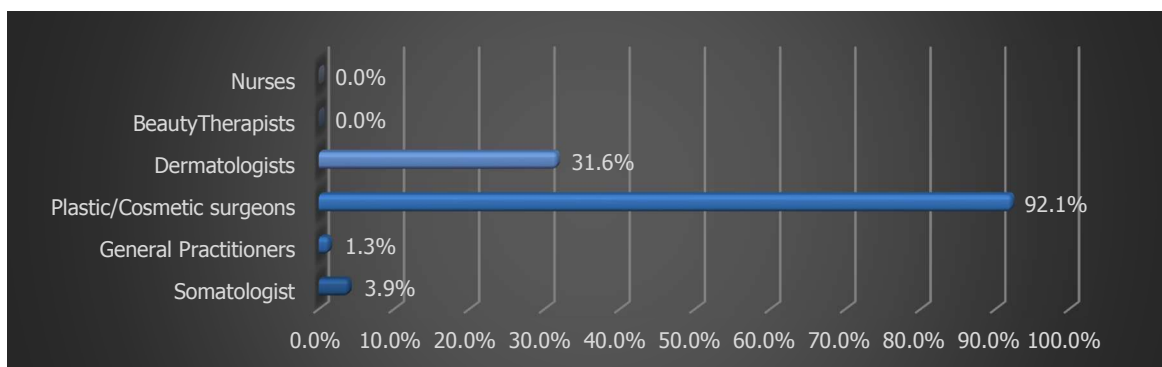


FIGURE 4.54: PROFESSIONAL CATEGORIES OFFERING THREAD LIFT (n=76)

Thread lift is an advanced facial rejuvenation procedure designed to gently elevate loose skin around the brows, cheeks and jaw areas. As a result of the unique design of the Promoltalia's delicate thread filaments used in this procedure, the surrounding tissues act to hold the filaments in place without causing visible scars. It can also be referred to as "thread facelift". The threads used are not absorbable and are guided along previously designated contour lines, thereby improving precision; it is a convenient alternative to the traditional facelift surgery. It is designed to be less invasive and has immediate and noticeable results, with fewer risks (Abraham, DeFatta & Williams 2009:179).

4.4.49 Vein Cautery

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.55. Vein cautery is, according to respondents performed by somatologists, selected by 60/76 (78.9%), plastic/cosmetic surgeons, by 38/76 (50%), and dermatologists, by 57/76 (75%) of the respondents, understandably so, as they encounter varicose veins often in their patients and are trained to do this modality. Nurses were selected by 32/76 (42.1%) respondents, and general practitioners by 28/76 (36.8%).

The results for general practitioners and nurses are somewhat surprising as this is not part of their scope of practice, although it is possible that they can undergo training on administering this treatment after obtaining their qualifications (Beck 2008:online). As many as 3/76 (3.9%) respondents indicated that beauty therapists perform vein cauterization treatments, which is not expected, as they were not trained to administer this treatment, and lack the extensive human physiology knowledge needed to understand the nature of varicose veins and the treatment thereof.

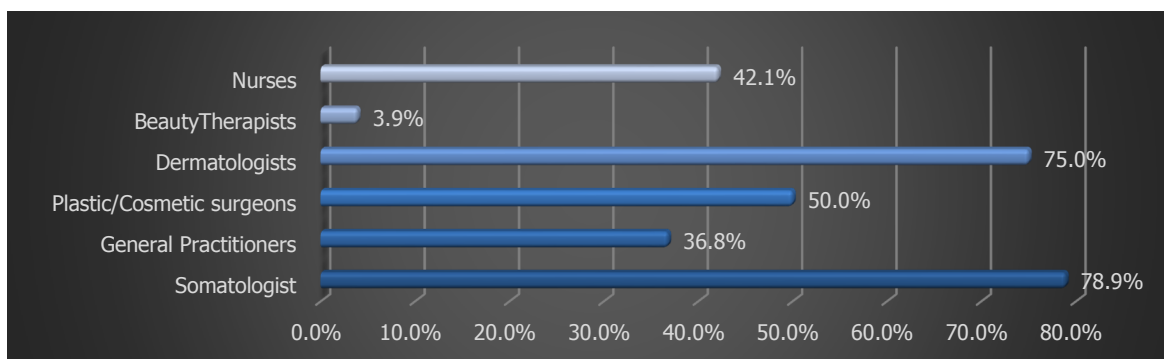


FIGURE 4.55: PROFESSIONAL CATEGORIES OFFERING VEIN CAUTERY (n=76)

Cautery is the process of burning a part of the body. It also includes removal or closing off a part of it, resulting in the destruction of some tissue in an attempt to mitigate bleeding and damage, to remove unwanted growths and minimise potential medical harm. There are two methods that can be used to cauterise, namely, electro cauterization and chemical cauterization (Friedman 2008:8).

4.4.50 Camouflage therapy

The respondents were asked to indicate which of the professionals performed this treatment (cf. Figure 4.56).

The findings indicate that somatologists were selected by 66/76 (86.8%) and plastic/cosmetic surgeons by 63/76 (82.9%) respondents; this is not surprising since both professions involve dealing with aesthetic concerns needing this intervention. In total 30/76 (39.5%) respondents selected beauty therapists, dermatologists were selected by 29/76 (38.2%), nurses by 7/76 (9.2%) and general practitioners by 4/76 (5.3%) respondents; which is surprising, as these professionals did not undergo extensive training on the use of make-up and the technicalities thereof.

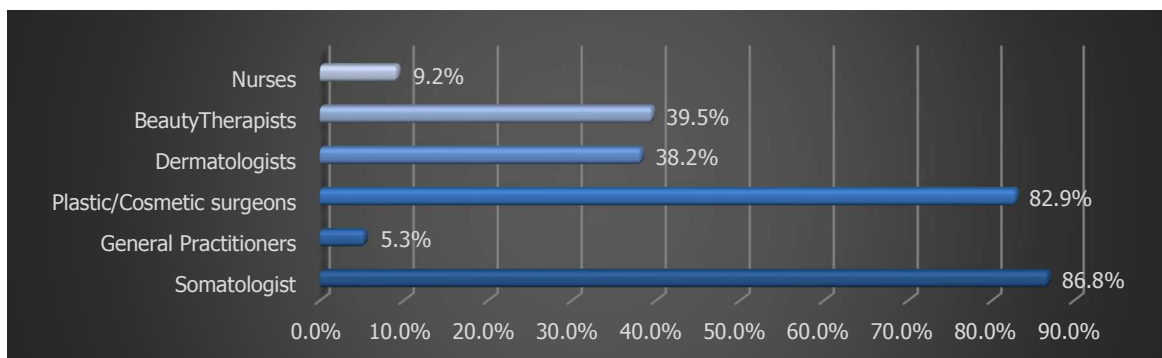


FIGURE 4.56: PROFESSIONAL CATEGORIES OFFERING CAMOUFLAGE THERAPY (n=76)

LeRoy (2000:415) explains camouflage therapy as a system of cosmetic techniques that patients can use to assist them to cope constructively with the psychological and physical trauma of their disfigurements. It is known as a system since the techniques are interrelated. This therapy is aimed at concealing imperfections resulting from conditions such as acne or burns, vitiligo, melasma and hyperpigmentation, among other concerns. The concealment should appear natural, non-oily, opaque, and be long lasting, waterproof, fragrance free and easy to apply. Often, patients require training to enable and equip them with the necessary skills to apply the technique, thus, it has been important for somatologists (specifically) to have camouflage techniques as part of their training programme.

Training in camouflage therapy is important, because the application and adherence practices differ from systematic make-up foundations. Every dermatologist, doctor and nurse should be familiar with camouflage products in order to help a patient effectively (Antoniou & Stefanaki 2006:279).

4.4.51 Electrolysis

The respondents were asked to indicate which of the professionals performed this treatment, and the results are presented in Figure 4.57.

The findings indicate selection by 70/76 (92.1%) respondents for somatologists, 54/76 (71.1%) respondents for dermatologists, 37/76 (48.7%) respondents for nurses and 30/76 (39.5%) respondents for plastic/cosmetic surgeons. General practitioners were selected by 25/76 (32.9%) respondents and beauty therapists by 10/76 (13.2%) respondents.

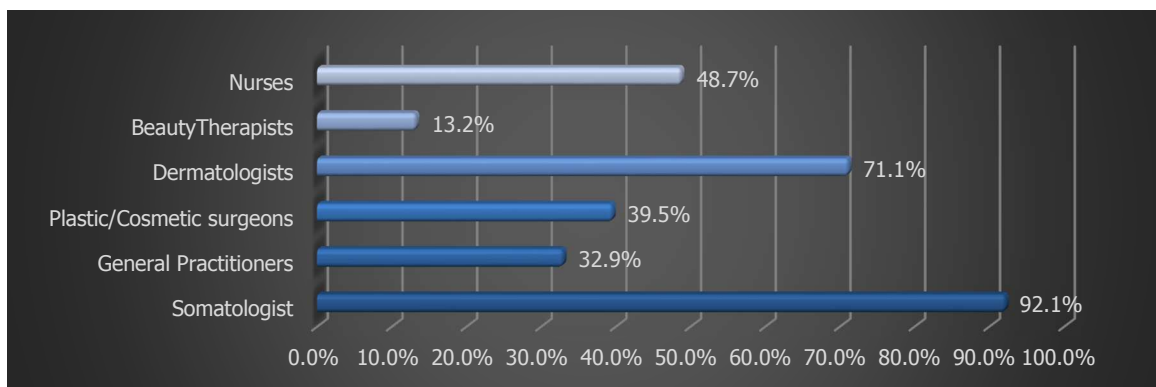


FIGURE 4.57: PROFESSIONAL CATEGORIES OFFERING ELECTROLYSIS (n=76)

Electrolysis is a technique that uses a direct electric current to drive an otherwise non-spontaneous chemical reaction. This technique is generally used to retard hair follicles so that they produce fewer hairs. This procedure is administered by inserting a fine probe into the hair follicle at the surface of the skin, after which the hair is removed using tweezers (Small 2009:1231). The findings relating to somatologists, dermatologists and plastic/cosmetic surgeons are expected, because members of these professions receive training to do this intervention, whereas general practitioners, beauty therapists and nurses do not. It may be, however, that the latter professionals completed further training (e.g. short courses) to perform this intervention. According to Jesitus (2012:online), electrolysis should be done by a trained aesthetician.

4.5 CONCLUSIVE SUMMARY

This chapter presented the results obtained from sections A, B and C of the structured questionnaire. The chapter started by presenting demographic data of the respondents, their qualifications and years of experience in their respective fields (Section A of the structured questionnaire). Next, the researcher presented the respondents' opinions on the importance of various knowledge domains/learning outcomes that they believed should be included in an MA programme (Section B of the structured questionnaire); and finally the chapter concluded by describing the respondents' views on the performance of different MA procedures or treatments by various professionals (Section C of the structured questionnaire).

Chapter 5 deals with the responses to Section D of the structured questionnaire, which looks at specific skin conditions and those professional groupings that, according to the respondents, are seen to be managing these conditions.

CHAPTER 5

RESULTS AND DISCUSSION OF QUESTIONNAIRE SURVEY: SECTION D: SKIN CONDITIONS

5.1 INTRODUCTION

In Chapter 4 the results for Sections A, B and C of the structured questionnaire were discussed in depth. In this chapter, the results for Section D (skin conditions) are discussed. The data collected in Section D of the structured questionnaire are presented in graphs and discussed. The data for this research (as discussed already) were gathered using two processes, namely a desktop study and a structured questionnaire. The structured questionnaires were completed by stakeholders in MA (discussed in Chapter 3).

As mentioned in Chapter 4 (cf. Section 4.1), it is worth noting that there was a limitation to the questionnaire aspect of collecting data. Although approximately 200 questionnaires were sent to the different professionals identified, the majority of the respondents were somatologists; the other professionals were not represented in equal numbers, despite the numerous reminders sent to respondents to submit their completed questionnaires. This section of the questionnaire had an open-ended field at the end of the section; which was not completed by any of the respondents. The data represented in Chapter 4 and 5 represent the views of the sample and it is not necessarily a representation of the practice of MA.

5.2 SECTION D: SKIN CONDITIONS

This study aimed to develop a stratified learning programme, so it was imperative to explore common skin conditions that are usually treated or managed by MA professionals. Skin conditions result from anything that irritates, blocks or inflames the skin, causing symptoms ranging from redness, burning, and itching to swelling of the skin. Skin conditions can, furthermore, be the result of genetic make-up, irritants, allergies, certain diseases and immune system problems, which can cause hives, rashes and many other skin conditions. Various skin conditions are managed and treated by various professionals, therefore, an understanding of the various conditions often seen by MA professionals needed to be explored to determine who should be managing or treating the skin conditions identified.

5.2.1 Acne

The results shown in Figure 5.1 indicate that dermatologists should manage/treat acne, as these professionals were selected by 69/76 (90.8%), somatologists by 67 (88.2%) and general practitioners by 52/76 (69.7%) respondents – these professionals were most often reported by respondents as treating or managing acne. The professionals who should treat or manage acne, according to respondents, were plastic/cosmetic surgeons, who were selected by 33/76 (44%), nurses, by 18/76 (23.7%), and beauty therapists by 5/76 (6.6%) respondents. The results are reflective of the prevalence of this skin condition and the reality that all the professionals can either manage or treat acne.

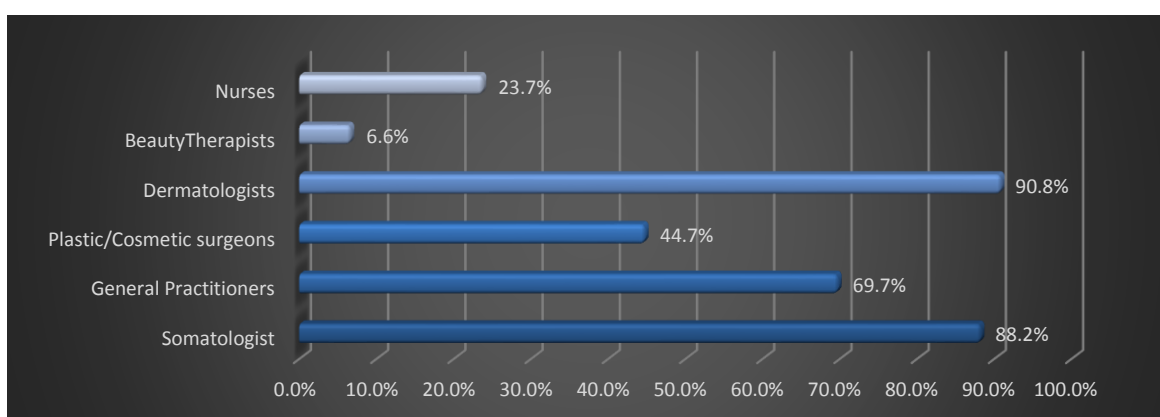


FIGURE 5.1: ACNE (n=76)

Acne is a skin condition also known as acne vulgaris, a skin disease that involves the oil glands at the base of hair follicles. This condition often occurs during puberty, when the sebaceous glands come to life; these glands are stimulated by male hormones produced by the adrenal glands of both women and men (Meixner, Schneider, Krause & Sterry 2008:189). Acne is managed and treated by various health professionals (Gollnick, Finlay & Shear 2008:280).

5.2.2 Photo aging

The findings illustrated in Figure 5.2 indicate the professionals who were selected as those that should treat or manage photo aging. Somatologists were selected by 65/76 (85.5%), dermatologists by 66/76 (86.8%) and plastic/cosmetic surgeons by 33/76 (43.4%) respondents; whereas other professions were selected as those that should manage this condition. Nurses were selected by 21/76 (27.6%), general practitioners by 15 (19.7%), and beauty therapists by 14 (18.4%) respondents. This condition is among the conditions

most commonly encountered by professionals in MA (MacKean & Gutkin 2003:408) and therefore the results support the literature.

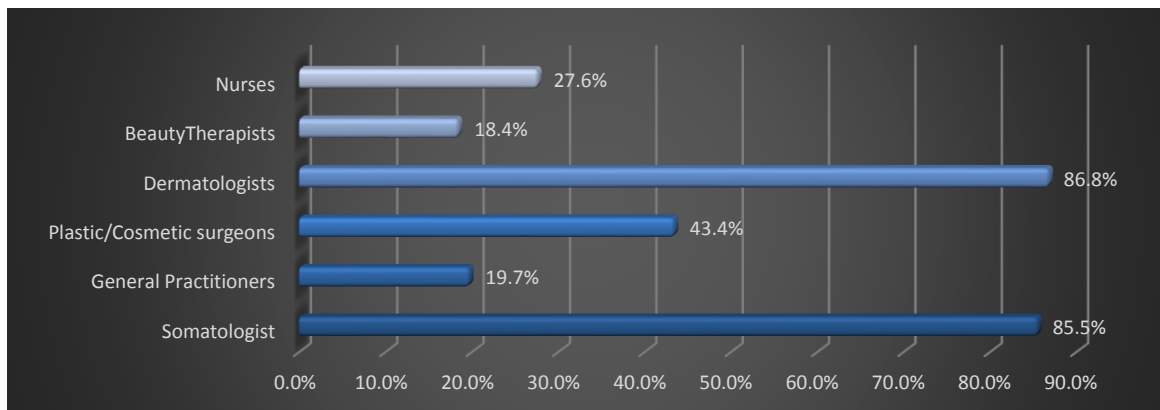


FIGURE 5.2: PHOTO AGING (n=76)

Photo aging is a term referring to characteristic changes to the skin resulting from or induced by chronic ultraviolet radiation, primarily from the sun, but also from artificial UV sources, and it is considered to be premature aging. The consequences of chronic exposure to ultraviolet radiation often results in aging due to the light itself. The symptoms involve the presence of fine lines and wrinkles, pigmentation, actinic keratoses, solar lentigines, broken blood vessels and leathery skin (Ichihashi, Yagi, Nomoto & Yonei 2011:23).

5.2.3 Striae distensae

Figure 5.3 illustrates the results relating to professionals who should treat or manage this condition. The results on this question are reflective of the fact that all the professionals in MA seem to treat striae distensae (as per the respondents' opinions). Dermatologists were chosen by 70/76 (92.1%), somatologists by 60/76 (78.9%) and plastic/cosmetic surgeons by 51 (67.1%) respondents. General practitioners were selected by 31/76 (40.8%), nurses by 18/76 (23.7%) and beauty therapists by 6/76 (7.9%) respondents.

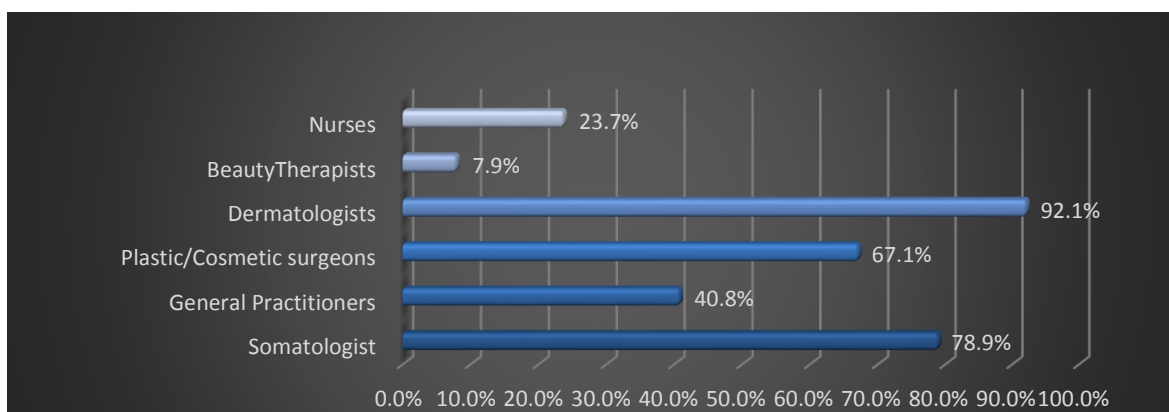


FIGURE 5.3: STRIAE DISTENSAE (n=76)

Striae distensae is a common skin condition that is commonly known as stretch marks, and it can impose a significant psychological burden on sufferers. Striae distensae present as linear dermal scars with an off-colour hue accompanied by epidermal atrophy, which is a form of scarring of the skin. This condition is treated by a variety of professionals (example: somatologists, beauty therapists, plastic/cosmetic surgeons, dermatologists etc.) through the use of a number of treatment modalities (such as product, LED, laser rejuvenation etc.). Striae distensae is treated by various health professionals (Peters, Coyle, Vredenburg, Desjardins Friedman & Reardon 2011:155).

5.2.4 Blepharochalasis

The results in Figure 5.4 indicate that plastic/cosmetic surgeons were selected most often as the professional group that should treat/manage this syndrome; they were indicated by 71/76 (93.4%) respondents. Dermatologists were selected by 29/76 (38.2%) and general practitioners by 9/76 (11.8%) respondents as professionals that should manage/treat this syndrome. Understandably, nurses were chosen by only 5/76 (6.6%) respondents and somatologists by 1/76 (1.3%), and beauty therapists were not selected as professionals that should be managing/treating this condition at all.

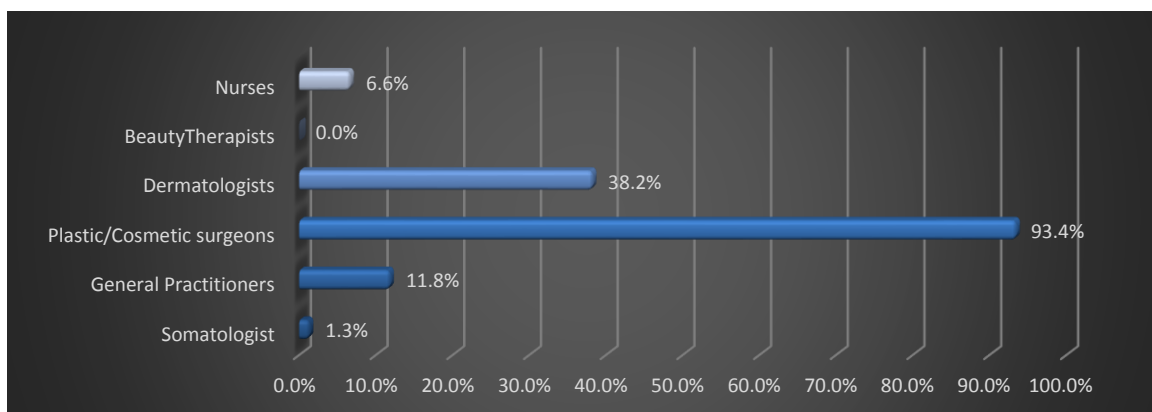


FIGURE 5.4: BLEPHAROCHALIASIA (n=76)

This is a rare syndrome of the eyelid characterised by remissions and exacerbation of eyelid oedema, which results in stretching and subsequent atrophy of the tissue of the eyelid, leading to the formation of redundant creases over the eyelid margins. The most common reason for this phenomenon is that it is part of normal aging and photo-aging. The treatment of this condition is surgical, although oral medication can also be given (Koursh, Modjtahedi, Selva & Leibovitch 2009:235). Treating or managing this syndrome often requires surgery carried out by plastic surgeons and deratosurgeons.

5.2.5 Sagging skin

The results for this question are illustrated in Figure 5.5. The results are reflective of existing literature. The least selected professionals who should manage this condition are general practitioners, who were selected by 8/76 (10.5%), nurses, by 4/76 (5.3%), and beauty therapists, by 1/76 (1.3) respondent(s). The professionals that were selected most as professionals that should manage this condition are plastic/cosmetic surgeons, who were selected by 69/76 (90.8%), dermatologists, by 43/76 (56.6%), and somatologists, by 20/76 (26.3%) respondents.

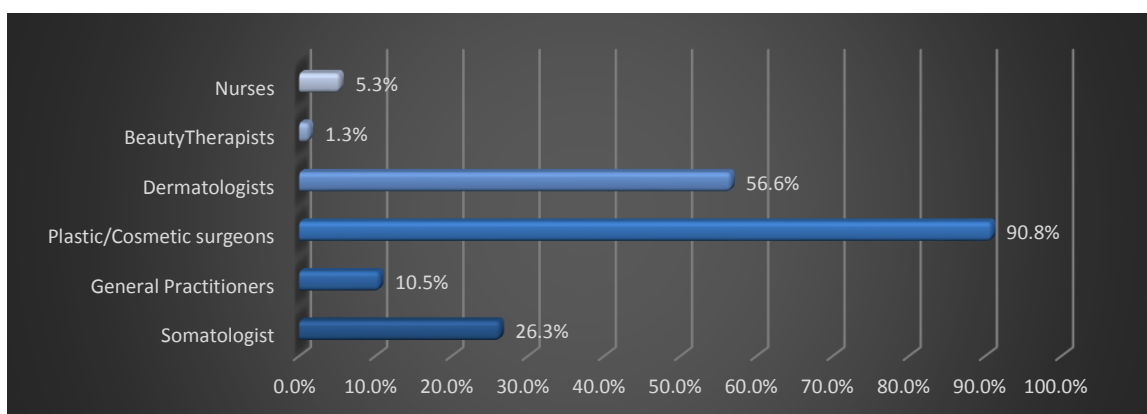


FIGURE 5.5: SAGGING SKIN (n=76)

Sagging skin is a condition of the skin that results from loss of collagen, which gives the skin its elasticity, and loss of facial fat, which results in the skin drooping. This condition can be treated using a number of treatment modalities, ranging from laser treatments to specialised creams designed to restore the fat content on the affected areas, or surgery. This condition is encountered by all the professionals in MA, though to varying degrees. Some patients desire quick results, therefore, MA professionals with faster result-delivery treatments encounter this condition most (Vlegaar & Bauer 2003:542).

5.2.6 Keloids

The results of this question are illustrated in Figure 5.6. Beauty therapists were not selected among those that should be managing this condition. Nurses were selected by 3/76 (3.9%) and somatologists by 1/76 (1.3%) respondent(s). As expected, and in agreement with the literature, dermatologists were selected by 67 (88.2%), plastic/cosmetic surgeons by 31/76 (40.8%) and general practitioners by 31/76 (40.8%) respondents as professionals that should manage or treat keloids. Literature indicates that keloids are treated by physicians (Juckett & Hartman-Adams 2009:253).

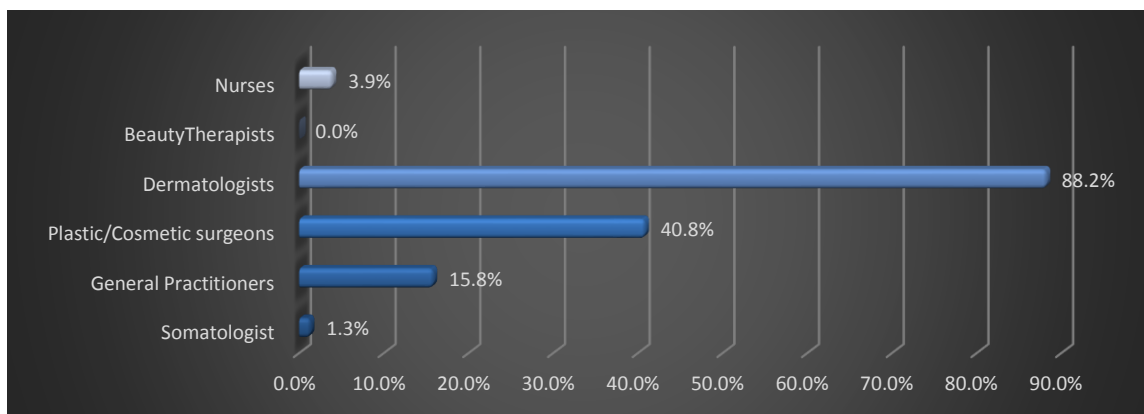


FIGURE 5.6: KELIODS (n=76)

Keloids can also be referred to as keloid scars; it is a growth of extra scar tissue where the skin has healed after injury. It is a tough, raised scar, which rises fairly abruptly above the surrounding skin. It is characterised by a smooth top and a pink or purple colour. Keloids are irregularly shaped and have a rubbery texture; and tend to enlarge progressively. Treatment of this condition includes compression therapy, laser treatments, retinoic acid, intralesional corticosteroid injections, imiquimod 5% creams, Botulinum toxin, among other strategies (Alster & Tanzi 2003:235).

5.2.7 Melasma

Melasma is generally treated by all professionals involved in MA, and the results of this study are reflective of this trend. The responses to this question are illustrated in Figure 5.7, and indicate that dermatologists were selected by 69/76 (90.8%), general practitioners by 18/76 (23.7%), somatologists by 13/76 (17.1%), plastic/cosmetic surgeons by 9/76 (11.8%), beauty therapists by 2/76 (2.6%) and nurses by 1/76 (1.3%) respondent(s) as professionals that should treat/manage melisma.

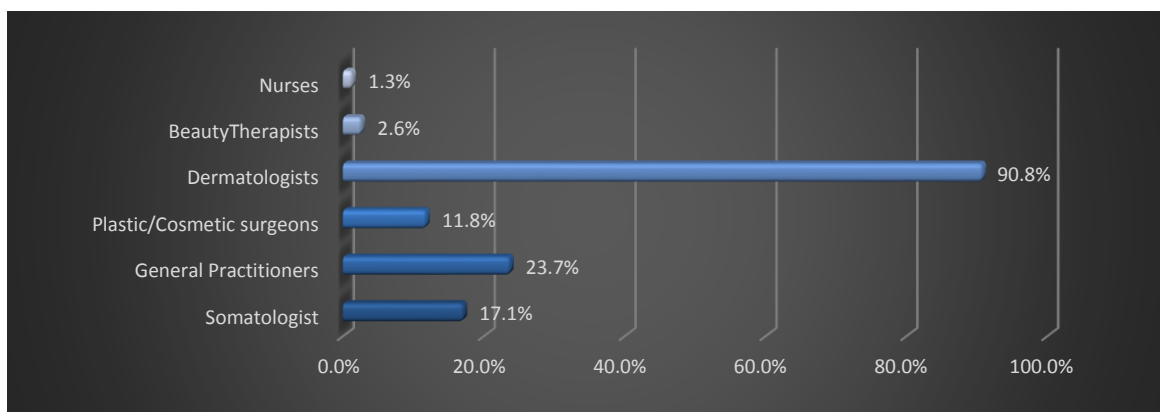


FIGURE 5.7: MELASMA (n=76)

Melisma is a common condition that is also known as chloasma faciei, and it is basically a pigmentation imperfection. This condition presents as brown, tan or blue-grey blemishes on the face, usually around the jawline, central face and cheekbones. This condition may be caused partly by prolonged sun exposure, hormonal changes and genetic predisposition. The common treatment is application of topical creams containing hydroquinone, with strict recommendations to apply sunscreen; it can also be treated using laser rejuvenation (Rokhsar & Fitzpatrick 2005:1645).

5.2.8 Rosacea

The results, as shown in Figure 5.8, indicate that the following professionals should be managing or treating this condition: dermatologists were selected by 71/76 (93.4%), somatologists by 20/76 (26.3%) and general practitioners by 18/76 (23.7%) respondents; whereas plastic/cosmetic surgeons were selected by 4/76 (5.3%), nurses by 2/76 (2.6%) and beauty therapists by 1/76 (1.3%) respondent(s).

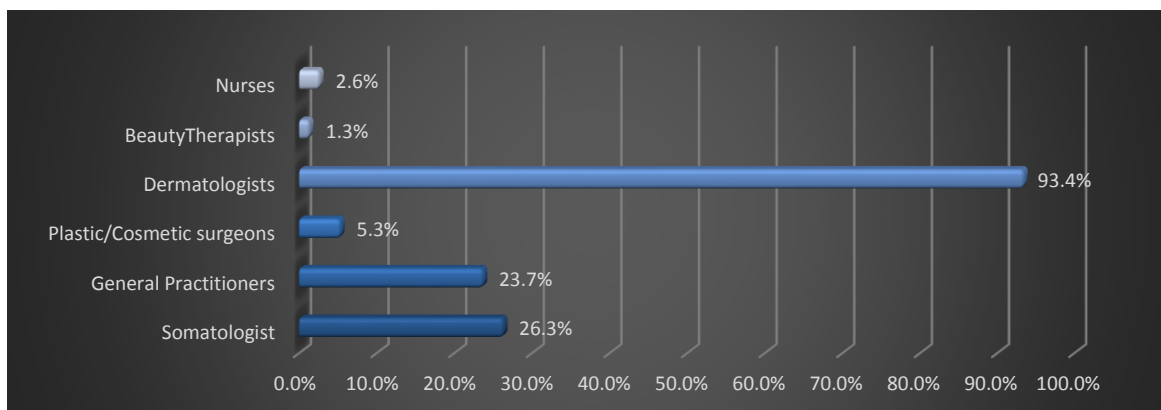


FIGURE 5.8: ROSACEA (n=76)

Rosacea is a common chronic skin condition that causes redness on the face and which often produces dilated capillaries, and small, red, pus-filled bumps under the skin. This condition often causes significant psychological, occupational and social problems. Treatment includes skincare, medicine, lasers, pulsed-light therapies, isotretinoin and lifestyle changes (Yamasaki *et al.* 2007:688). This condition is managed by all professionals in MA, mostly by dermatologists/Physicians and somatologists, the professionals would help reduce the redness on the face.

5.2.9 Atopic skin

As per the results illustrated in Figure 5.9, this condition is should be managed by most of the professionals except nurses and beauty therapists. Dermatologists were selected by

73/76 (96.1%), general practitioners by 11/76 (14.5%) plastic/cosmetic surgeons by 7/76 (9.2%) and somatologists by 6/76 (7.9%) respondents.

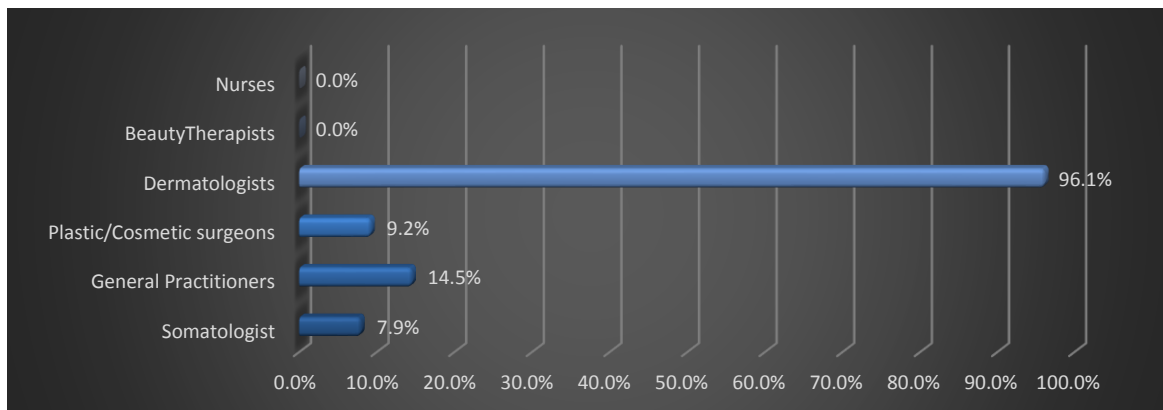


FIGURE 5.9: ATOPIC SKIN (n=76)

“Atopic” refers to a tendency of the skin to develop allergy conditions. Atopic skin is also known as atopic dermatitis and it is a long-term condition characterised by symptoms such as dry, red, swollen, cracked and itchy skin.

Most patients can be successfully managed with proper skincare, lifestyle changes, and identifying the exacerbating factors; other treatment modalities include medication and phototherapy (Homey, Steinhoff, Ruzicka & Leung 2006:178). Atopic skin cannot be treated within MA, however the symptoms can be managed within MA (e.g. dryness, redness)

5.2.10 Vitiligo

The findings to this question are illustrated in Figure 5.10. The results show that nurses and beauty therapists should not manage this condition; somatologists can manage this condition through limited scope, through skin needling in order to assist the appearance. Dermatologists were selected by 75/76 (98.7%), plastic/cosmetic surgeons by 6/76 (7.9%), general practitioners by 4/76 (5.3%) and somatologists by 2/76 (2.6%) respondents. Vitiligo is generally treated by doctors (Radtke, Schäfer, Gajur, Langenbruch, & Augustin 2009:134).

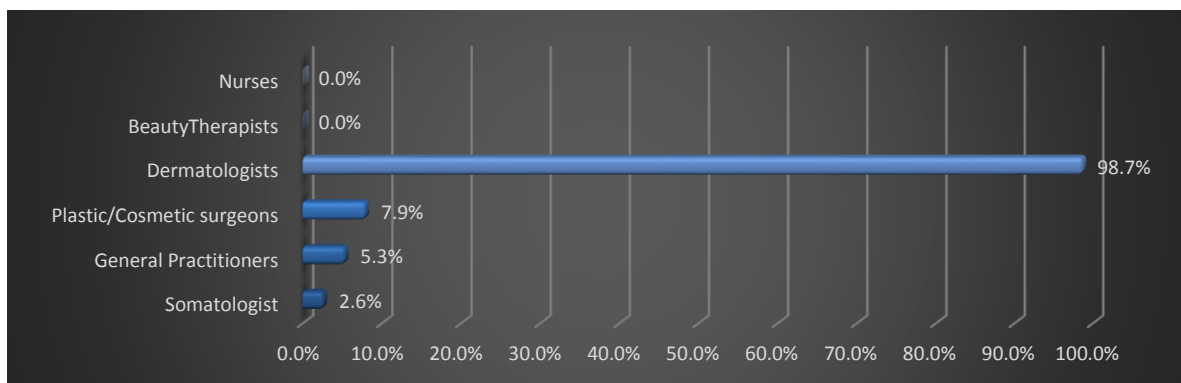


FIGURE 5.10: VITILIGO (n=76)

Vitiligo is a disease that causes loss of skin colour due to death of or reduced function of melanocytes. It affects the skin and is not specific to a particular area of the body – it may affect the hair, inside of the mouth and the eyes. Vitiligo affects all people, although it is more noticeable in people with darker skin. There are currently a number of treatment options for vitiligo, these are sunscreens, restoration of skin colour, camouflage treatment and bleaching of normal skin using topical creams, photochemotherapy and topical corticosteroids (Alkhateeb, Fain, Thody, Bennett & Spritz 2003:208).

5.2.11 Actinic (solar) keratosis

The results are illustrated in Figure 5.11, which shows that this condition should be managed and treated by all the professionals. Dermatologists were selected by 73/76 (96.1%) respondents, with fewer selections for plastic/cosmetic surgeons, who were selected by 17/76 (22.4%), and general practitioners, by 12/76 (15.8%) respondents. Somatologists were selected by 12/76 (15.8%) and nurses by 2/76 (2.6%); beauty therapists were not selected as professionals that should manage or treat actinic (solar) keratosis. Literature indicates that physicians treat this condition (Stockfleth & Kerl 2006:599). This is a pathology that can be managed within MA for the benefits of improving the appearance as opposed to treating it within the realm of MA.

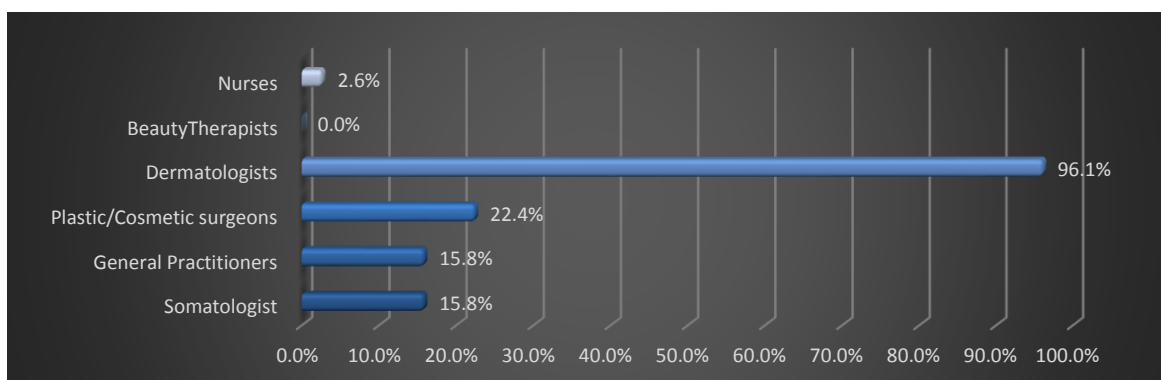


FIGURE 5.11: ACTNIC (SOLAR) KERATOSIS (n=76)

Actinic keratosis is a scaly and rough patch on the skin, which develops as a result of chronic exposure to the sun. It commonly occurs in light, fair skins. The common locations of these patches are the face, back of the neck, ears, scalp, upper chest, hands and forearms. Actinic keratosis is precancerous, with treatment options ranging from topical creams (imiquimod, 5-fluorouracil, diclofenac), photodynamic therapy and most commonly through Cryotherapy (Roewert-Huber, Stockfleth & Kerl, 2007:18).

5.2.12 Seborrhea Dermatitis

Figure 5.12 reports the results of this question, namely, that all the professionals in MA should treat/manage this skin condition. Dermatologists were selected by 74/76 (97.4%), general practitioners by 1/76 (1.4), plastic/cosmetic surgeons by 8/76 (10.5%), and somatologists by 3/76 (3.9%) respondents. Both nurses and beauty therapists were selected by 1/76 (1.3%) respondent.

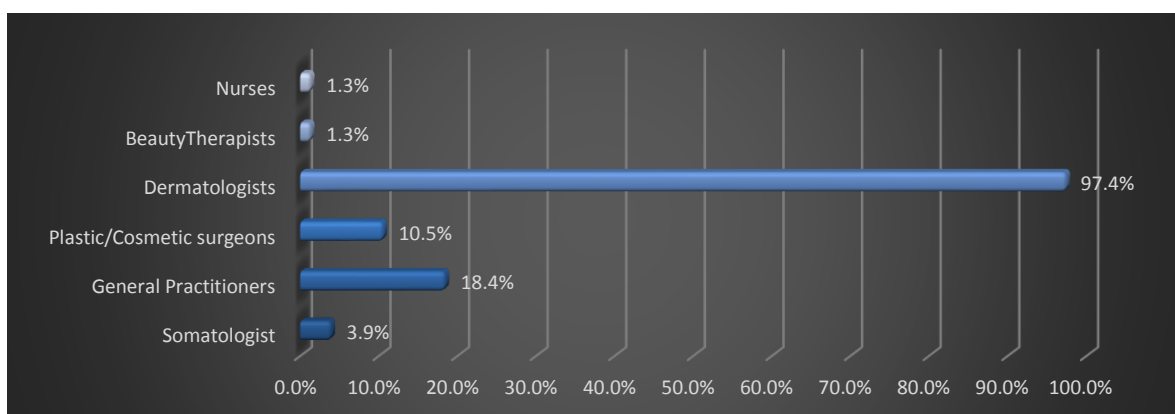


FIGURE 5.12: SEBORRHEA DERMATITIS (n=76)

Seborrhea is a common skin condition. It involves the inflammation of the skin in localised parts of the body, around areas of high sebaceous production. It causes an itchy, red rash and white scales. In cases where it occurs on the scalp, it is called dandruff. It may occur on the face, including the folds around the nose and ears, the forehead, eyelids and eyebrows. Cortisone-based medications are often used to treat this condition, antifungal medications and exposure to UV rays may reduce the symptoms of seborrhea (Birnbaum, Zvulunov, Hallel-Halevy, Cagnano, Finer, Ofir & Birk 2006:749). Literature indicates that doctors are the professionals treating this skin condition most (Hansen, Wilkinson, Hansen, & Argenziano 2009:599). The findings of this study, however, show that all the professionals involved in MA treat/manage this skin condition. Taking into consideration that this is more a skin disease, it cannot be treated within MA, however, the symptoms may be managed through some forms of treatment interventions within MA.

5.2.13 Premature aging

The results shown in Figure 5.13 indicate that somatologists were selected by 67/76 (88.2%), dermatologists by 45/76 (59.2%) and beauty therapists by 28/76 (36.8%) respondents as professionals that should manage or treat this condition. The other professionals in MA were also selected, although at lower rates. Beauty therapists were selected by 28/76 (36.8%), nurses by 19/76 (25%) and plastic/cosmetic surgeons by 13/76 (17.1%) respondents.

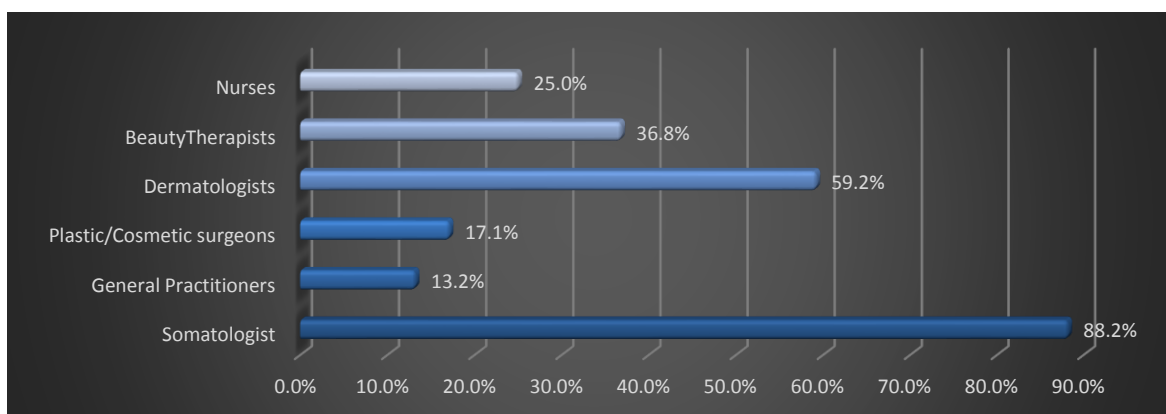


FIGURE 5.13: PREMATURE AGING (n=76)

Premature aging in the context of this study refers to effects of aging being experienced earlier than expected, due to incorrect use of products, chronic sun exposure and various other factors. Another type of premature aging is known as progeria, which refers to the aging process happening at a rate faster than normal. Progeria is a group of rare genetic disorders that mimic physiological aging, making sufferers appear to be older than they are.

5.2.14 Excessive hair growth

The findings for this question are shown in Figure 5.14. The results show that beauty therapists were selected by 1/76 (1.3%), nurses by 7/76 (9.2%) and somatologists by 22/76 (28.9%); dermatologists by 68/76 (89.6%), general practitioners by 52/76 (68.4%) and plastic/cosmetic surgeons by 31/76 (40.8%) of the respondents as those that should treat/manage this condition. Treating this skin condition often requires formal training (Plouffe 2000:79).

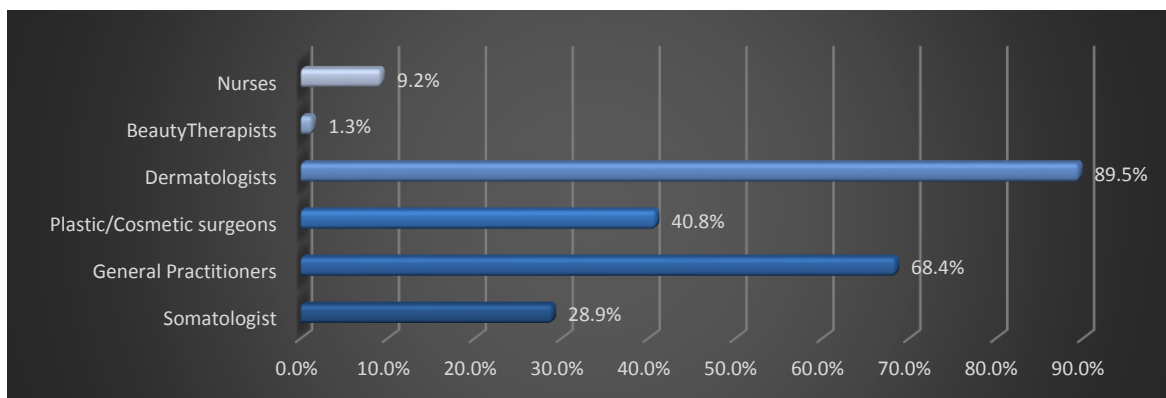


FIGURE 5.14: EXCESSIVE HAIR GROWTH (n=76)

This condition is also known as hirsutism, which is a condition involving unwanted, male-pattern hair growth in women. It results in excessive, stiff and pigmented hair on body areas where men generally grow hair (face, chest and back). This condition may result from excess male hormones called androgens, primarily testosterone, and sufferers may be genetically predisposed. The excess hair growth is limited to one or more areas including the mustache, beard, chest, and genital region. This condition can be referred to as Hirsutism, which is usually associated with increased or reduced exposure to hormones. Treatment options range from shaving, waxing, bleaching, laser hair removal, and in some cases, taking the contraceptive pill for women as well as laser hair removal methods (Plouffe 2000:79).

5.2.15 Cellulite

The results (Figure 5.15) indicate that all professionals in MA should be involved in treating/managing cellulite. Somatologists were selected by 67/76 (88.2%), dermatologists by 62/76 (81.6%) and plastic/cosmetic surgeons by 57/76 (75%) respondents; with general practitioners selected by 31/76 (40.8%), nurses by 27/76 (35.5%) and beauty therapists by 12/76 (15.8%) respondents.

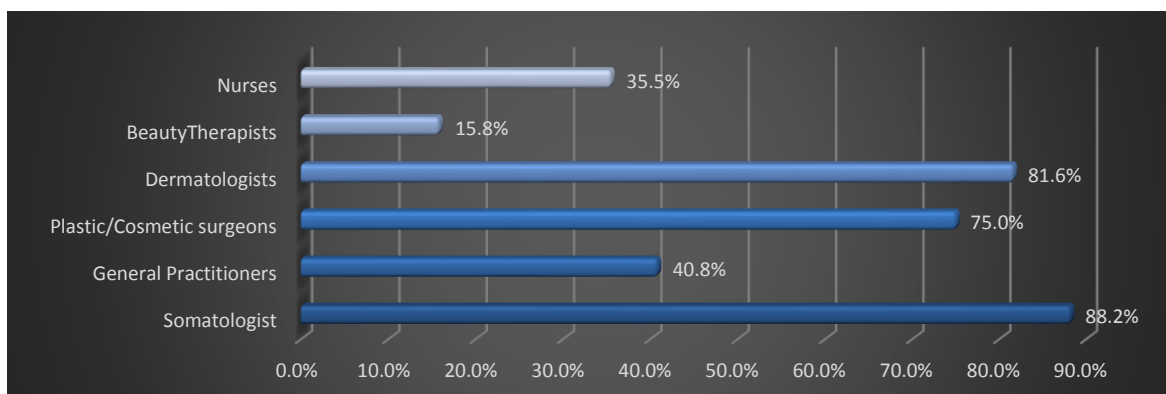


FIGURE 5.15: CELLULITE (n=76)

Cellulite is known as adiposis edematosa, dermopanniculosis deformans, status protrusus cutis, and gynoid lipodystrophy in the field of medicine; and as cottage cheese skin, orange peel syndrome in informal language. The fat lobules are overextended, resulting in pressure on the septae, which then causes dimpling of the overlying skin. Areas that usually exhibit cellulite are the thighs, buttocks and abdomen, and it is more common among adolescents and adults. Cellulite can be treated using methylxathines, dietary supplementation, massage treatments, laser or light therapy, mesotherapy, collagenase and wraps (Avram 2004:181).

5.2.16 Scars (variation)

The results for this question are indicated in Figure 5.16, which show that all the professionals in MA are treating/managing this condition. Scars are treated by different professionals using a variety of interventions. Dermatologists were selected by 69/76 (90.8%), plastic/cosmetic surgeons by 65/76 (85.5%), somatologists by 61/76 (80.3%), general practitioners by 35/76 (46.1%), nurses by 30/76 (35.5%) and beauty therapists by 10/76 (13.2%) respondents.

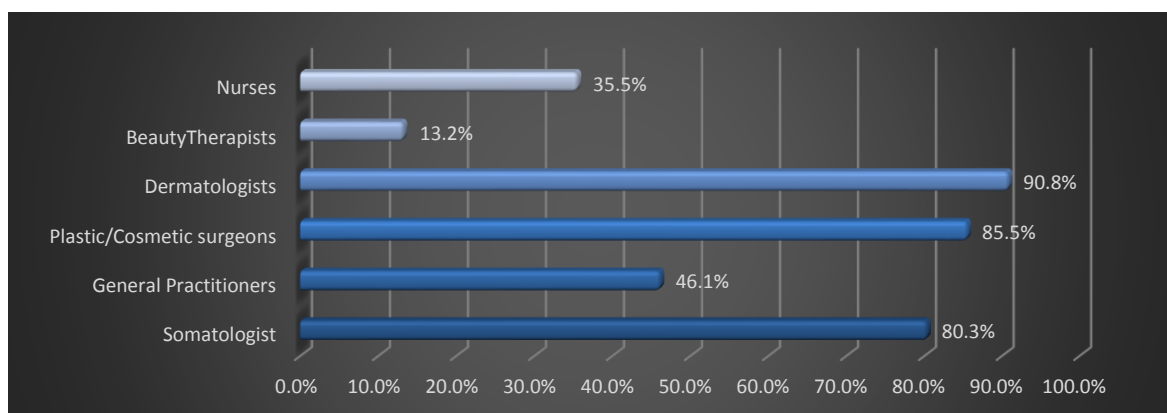


FIGURE 5.16: SCARS (VARIATION) (n=76)

Scarring is a process by which wounds are repaired. Damage to deeper layers of the skin (dermis) is required to produce a scar. Scars result in structural changes in the dermis, which is perceived to be an alteration of the architecture of the normal surface features. The appearance of scars varies according to the nature of the wound, the anatomical location of the wound as well as a variety of genetic factors. Improving the appearance of scars involves methods such as laser, photodynamic therapy, creams, microdermabrasion – treatment depends on how the scar appears (Cerde 2005:1598).

5.2.17 Varicose veins

The findings illustrated in Figure 5.17, show that all professionals are treating/managing this skin condition. The results indicate that dermatologists were selected by 66/76 (86.8%), somatologists by 60/76 (78.9%), plastic/cosmetic surgeons by 52/76 (68.4%), general practitioners by 44/76 (57.9%), nurses by 27/76 (35.5%) and beauty therapists by 5/76 (6.6%) respondents.

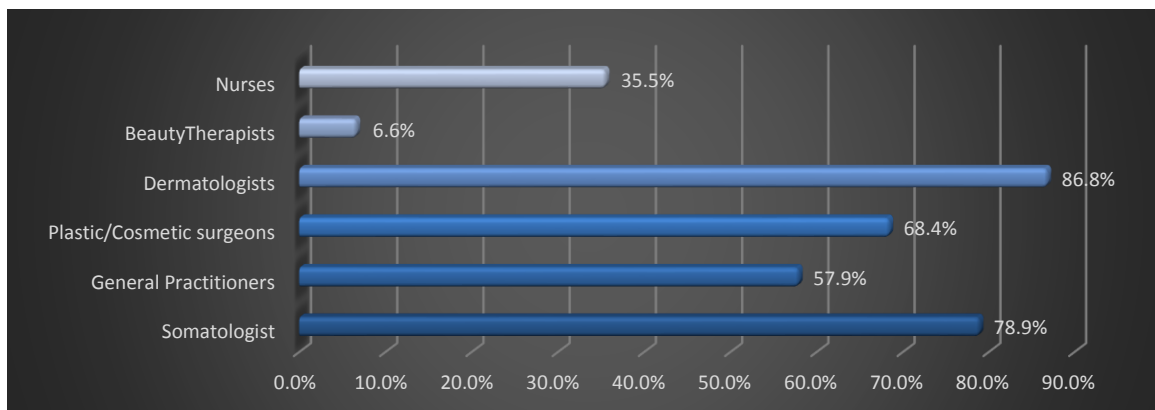


FIGURE 5.17: VARICOSE VEINS (n=76)

Varicose veins are enlarged veins. Any vein has the potential to become varicose, although the most common veins that are likely to be varicose are those in the legs and feet. Standing and walking increases the pressure on the veins in the lower legs, hence varicose veins are common on lower parts of the body. There are many different treatments available for this condition. The treatments differ based on the size and location of the varicose veins, and include sclerotherapy, ablation, surgery, photo therapy, leg elevation and wearing compression stockings (Beebe-Dimmer, Pfeifer, Engle & Schottenfeld 2005:175). This skin condition can be treated by all the professionals in MA by means of various modalities within their scopes of practice (Furumoto, Cho and McDaniel 1998:n.d.).

5.2.18 Telangiectasia

The results (illustrated in Figure 5.18) show that all the professionals should treat/manage this skin condition, and the professions were selected as follows: dermatologists were selected by 68/76 (89.5%), somatologists by 63/76 (82.9%), plastic/cosmetic surgeons by 44/76 (57.9%), general practitioners by 34/76 (44.7%), nurses by 24/76 (31.6%) and beauty therapists by 7/76 (9.2%) respondents. The results are not surprising, as this condition can be managed by all the professions using various modalities and equipment, depending on the professionals' scopes of practice.

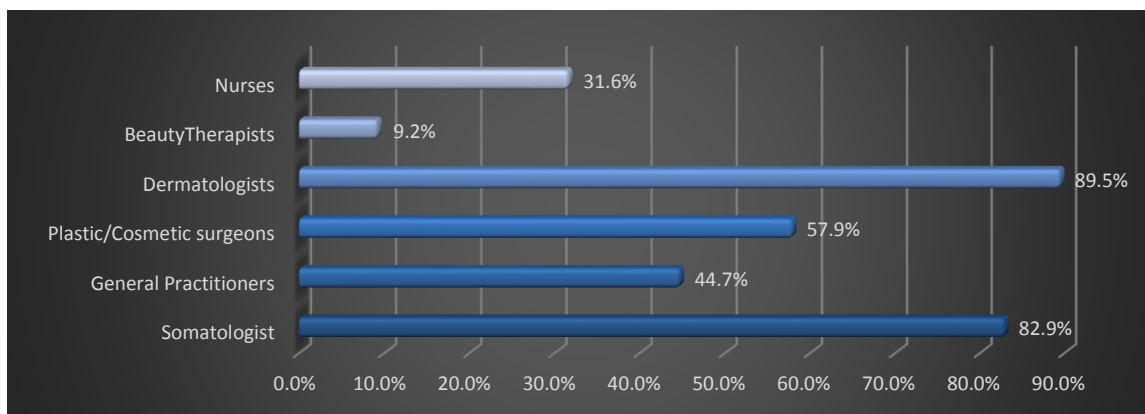


FIGURE 5.18: TELANGIECTASIA (n=76)

Telangiectasia is a condition characterised by dilatation of the capillaries, causing them to appear as small purple or red clusters, often spidery in appearance, on the skin or on the surface of the organ. Treatment options include laser, intense pulsed light, minor surgery, or sclerotherapy (Shovlin *et al.* 2000:66).

5.2.19 Ingrown hairs

The findings (cf. Figure 5.19) indicate that all the professionals in MA should treat/manage ingrown hairs within their practices. The selections made by the respondents are as follows: somatologists were selected by 65/76 (85.5%), dermatologists by 58/76 (76.3%), nurses by 41/76 (53.9%), general practitioners by 37/76 (48.7%), beauty therapists by 15/76 (19.7%), and plastic/cosmetic surgeons by 9/76 (11.8%) respondents.

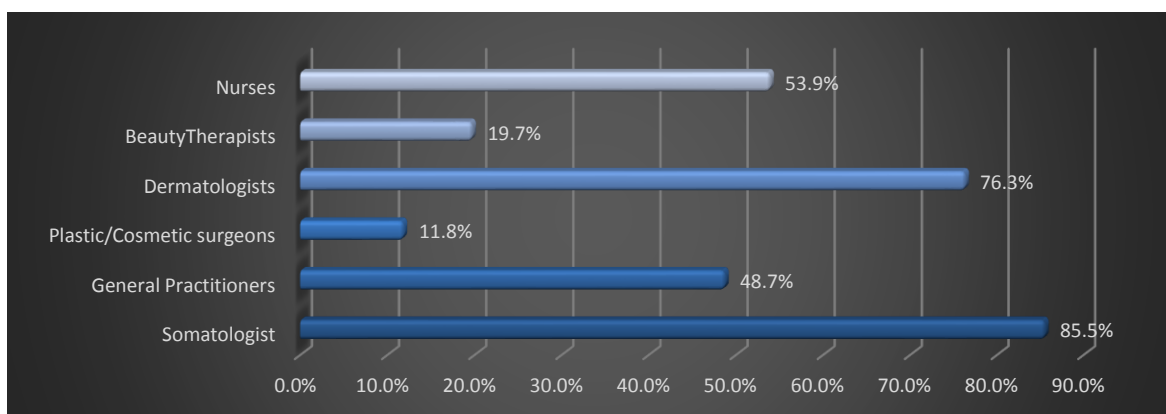


FIGURE 5.19: INGROWN HAIR (n=76)

Ingrown hairs occur when shaved or tweezed hair grows back into the skin, causing pain, inflammation and tiny bumps in the areas where the hair was removed. It is basically a common condition resulting from hair removal. Although ingrown hairs can heal on their own, existing treatments include chemical depilatories, topical creams, laser hair removal,

and medical removal by making a small incision and pulling the hair out (Shovlin *et al.*, 2000:68).

5.3 SUGGESTIONS FOR DEVELOPING A STRATIFIED, COMPETENCY-BASED LEARNING PROGRAMME FOR MEDICAL AESTHETICS IN SOUTH AFRICA

Since the nature of this learning programme is stratified and competency based, it is important to consider the following aims when developing the programme:

- to ensure that outcomes as well as the activities that will promote the attainment of the learning outcomes and assessment standards are developed;
- to describe the teaching, learning and assessment activities that are to be implemented concretely, including time frames of activities and assessments particular to the stratified competency based learning programme, and
- To ensure that the programme is stratified according to the relevant aspects as indicated in the discussions of the results earlier in this chapter (knowledge, treatment modalities and skin conditions), so that the research problem identified in Chapter 1 is addressed.
- Lastly, to ensure that when evaluating the weight of the recommendations for both the treatment interventions (Chapter 4) and skin conditions, that it would be of more value if the percentage of the recommendations are higher than the percentage of respondents that took part in the questionnaire.

5.4 CONCLUSION

The use of the mixed methods approach proved to have been of significance in collecting the data relevant to this particular study, especially with the overall goal of the study being to expand the quality of the education and training aspect of MA by developing a stratified competency-based learning programme for the various professions within medical aesthetics in SA.

Presenting and correlating the results to literature discussed in Chapter 2 (cf. 2.3) as well as the desktop study (cf. 2.11), confirmed the realisation of the above-mentioned overall goal of this study, including the objectives of the study, namely, to gain deeper insight into the current status of MA education by an in-depth discussion of the relevant issues, challenges/limitations and requirements that are involved in MA education in SA; to provide

factual descriptions of the processes involved in the approval and certification of a stratified competency-based learning programme for MA practitioners, and to explain how each of those aspects would apply practically to the practice of MA; to determine and understand which skin conditions should be treated by which of the different professions involved in MA; to determine the knowledge, skills and competencies of MA; to establish a set of criteria needed for the academic development and implementation of MA in South Africa, and to determine the relevance thereof; and using the results to provide the content for a stratified competency-based learning programme for MA in SA. The open-ended field at the end of this section was not completed by any of the respondents (cf. 5.1).

In Chapter 6, ***A stratified competency-based learning programme for medical aesthetics in the South African context***, the proposed stratified competency-based learning programme will be presented and discussed.

CHAPTER 6

A STRATIFIED COMPETENCY-BASED LEARNING PROGRAMME FOR MEDICAL AESTHETICS IN THE SOUTH AFRICAN CONTEXT

6.1 INTRODUCTION

In this chapter, the aim is to answer the main research question, which is: What would a stratified competency-based learning programme consist of in order to provide students with the required knowledge, skills and competencies to function as professional medical aestheticians in the South African healthcare environment?

To answer this main research question, a number of research sub-questions were answered. In Chapter 1 an overview of the study was given, including the context and background, the problem statement, scope, overall goals, and aims, and the research design was introduced. In Chapter 2 the context and concept of a stratified competency-based learning programme for MA in SA were examined through a literature and desktop study. Chapter 3 gave a detailed account of the processes of the empirical aspects of the research and in Chapter 4 and 5 the results of the data collection stage were presented and discussed. In this chapter, a stratified competency-based learning program for MA in SA is designed as per SAQA guidelines.

In the section to follow, the data collected (desktop and literature study and the questionnaires), analysed and presented in Chapters 4 and 5 formed the basis for the identification and design of a stratified competency-based learning programme (a short learning programme) for MA in SA in order to address the existing limitations discussed in Chapter 2 (cf. 2.4 & 2.4.1). This proposed stratified learning programme (a short learning programme) is strictly aligned with the principles of competency-based learning programmes (cf. 2.10.4.6). The proposed short learning programme consists of knowledge, skills (treatment interventions/skin conditions) and competencies (skin conditions/treatment interventions) required by MA practitioners in SA. The researcher found that a formal programme that leads to a qualification would not be a viable option for MA practitioners that work full-time but rather recommends a Short Learning Programme (SLP).

6.2 PROPOSING A STRATIFIED COMPETENCY-BASED LEARNING PROGRAMME FOR MEDICAL AESTHETICS IN SOUTH AFRICA

6.2.1 Introduction

This section of the chapter presents a stratified, competency-based learning programme (a short learning programme) for MA in SA. Stratification (as mentioned in Chapter 2), refers to adapting the programme to suit the various professionals involved in MA in SA, especially in relation to the required competencies for practising MA. The lack of access to a registered stratified competency-based learning programme for MA in SA (that is inclusive to the various professionals involved in MA in SA), has led to the development of the learning programme presented in this chapter. Although courses and seminars on various modalities and the use of certain devices for MA exist, there is a need for a stratified, competency-based learning programme for MA in the South African context. It is the researchers wish that upon successful implementation of the proposed programme inspires the development of a devoted, professional approach to associated specialisation areas of MA. The programme may also be accredited as Continuous Professional Development (CPD).

The discussion of the proposed short learning programme begins with the purpose of the programme, identification of target groups and their needs, unit competency, identifying knowledge and skills required, and learning and assessment activities programme levels, followed by more detailed proposals for the stratified competency-based learning programme (a short learning programme) for MA in SA. The presented proposed stratified competency-based learning programme for MA in SA, is developed through the guidance of SAQA documentation in relation to registering and developing a short programme as well as the Higher Education Qualification Sub-Framework.

6.2.2 Type specifications

Upon reflection and critical considerations of the outcomes of this study, the researcher feels that this programme should be at an NQF Exit Level 7. It would not be appropriate to pitch it at a lower level, because it is a postgraduate learning programme; and would not be appropriate as the intention to increase accessibility to the programme for all the professionals (as per this study).

The volume of learning required for the programme is related to the total minimum number of credits required, and the minimum number of credits required for the exit level on the programme. The number of credits required at the exit level of this programme is 119, although this short learning programme presented in this chapter will hold 120 (not for the purpose of acquiring a qualification, as per the proposed programme for MA. Each of the learning units/modules presented in Figure 6.1 will be allocated 10 credits. nCredits represent a measure of all the learning activities engaged in by the students (as explained in Section 6.2.17). The credit rating system rates 10 notional study hours as equivalent to one credit (SAQA:2013).

It is well documented and commonly understood that to achieve 1 credit towards a unit standard or qualification will take the average person 10 hours to master the embedded knowledge, skills and understanding required. It is therefore commonly understood that 120 credits will take the average person 1 200 hours to meet the requirements of the qualification. In most cases, 120 credits is considered to be the minimum number of credits awarded for a full qualification and that, therefore, it would take the average person 1 year to complete such a qualification. A short learning programme therefore usually contains less than 120 credits (SAQA: 2004).

Classification of Educational Subject Matter (CESM) in the case of this study – the stratified competency based learning programme (a short learning programme) would be classified under Health Care and Health Sciences.

6.2.3 Designators

A degree designator refers to a common field of study and is stated in the qualification terms and described through statements of anticipated educational training and outcomes and their associated assessment criteria. A designator meets the generic specifications laid down for the qualification type of which it is a variant (SAQA:2013). In the case of this stratified competency-based learning programme for MA in SA, a designator is not applicable (taking the explanation to account, plus, since it is not a degree).

6.2.4 Qualifiers

Short Learning Programme (SLP) in MA.

The term Short Learning Programme describes all short programmes, whether credits are awarded or not, and is inclusive of skills programmes, credit-bearing short courses and non-credit-bearing short courses (SAQA:2004).

6.2.5 Abbreviations

The abbreviation for this programme will be SLP (MA). In full it would be – Short Learning Programme: Medical Aesthetics. A definition of a short learning programme is highlighted (cf. 6.2.4)

6.2.6 Purpose of the programme and target group

The purpose of the proposed stratified competency-based learning programme (a short learning programme) is to advance and develop healthcare professionals across a wide variety of disciplines, particularly as discussed in Chapter 1. This programme is a part-time, one-year SLP that aims to develop students' theoretical and practical competencies. The programme outlines and incorporates all relevant and important aspects to be covered by MA education; including knowledge content, treatment interventions as well as skin conditions commonly encountered in MA (cf. Section 2.3).

This programme is multidisciplinary/across disciplines (meaning it will be offered to all the professionals identified in this study) and may serve to strengthen and deepen students' knowledge of MA. The most important purpose of the programme is to enable working professionals from various disciplines in healthcare to embark on advanced development by means of efficient studies of modern thinking, research practice and research methods in MA. This qualification demands an extraordinary level of academic engagement and academic independence, as well as the capacity to relate knowledge to a variety of circumstances, in order to undertake highly skilled and professional work. The programme includes carrying out a research project and reporting the research project under supervision. This programme would entail recognition by the statutory and professional bodies of the various professions involved in MA, such as SAAHSP. Another purpose of this programme is to support the prospect of a change in career path by means of the rigorous, attentive and applied specialisation needed by current market and regulatory or statutory body needs.

The SLP in MA was developed to address needs of somatologists, beauty therapists and healthcare professionals, such as general practitioners, dermatologists and nurses, who practice MA on a regular basis, and those who have identified the need to develop their aesthetic medicine knowledge and skills related to MA applications. The researcher has seen fit to make this learning programme a SLP, specifically because it is a “stratified” programme; additionally, because the various professionals involved in MA in SA undergo different education and training. The SLP further ensures that the programme does not exclude any of the professionals involved in MA practice.

The short learning programme should be facilitated by experienced professionals in MA, who have curricular vitae with suitable experience and training in MA. It is the desired outcome that successful completion of this qualification inspires the development of a professional approach to specialising in areas within the MA field whilst ensuring that industry-specific requirements are met, thereby addressing the needs of the general public as well as practitioners within this fast-growing industry (cf. Chapter 2).

6.2.7 Minimum admission requirements

The minimum admission requirement is an appropriate qualification in an appropriate healthcare-based profession (somatology, medical degree, nursing or dermatology qualification etc.). In some professional contexts, the minimum admission requirement will be a qualification in a field within healthcare on a NQF Level 6 or higher as per SAQA document on short learning programmes (SAQA:2015).

6.2.8 Recognition of prior learning (RPL)

Recognition of Prior Learning (RPL) refers to finding a way in which to find a way to recognize the learning that has taken place outside traditional learning contexts. RPL has basically two aspects. The first is the ability for students through RPL to be accredited with certain learning achievements. The second is the assessment of students through RPL to gauge the students’ potential for entry to a specific learning programme. If the objectives of facilitating access to, and mobility and progression within education, training and career paths as well as accelerating the redress of past unfair discrimination in education, training and employment opportunities are to be met.

Traditional methods of assessment e.g. written examinations are an option for students who have experienced learning in formal institutions. For the purpose of this study RPL will be available, especially in order to widen the access to the stratified competency-based learning programme in MA in SA; the RPL will include written and practical testing of both skills and knowledge of the students who apply for it.

6.2.9 Progression

Completion of this programme in MA will not translate into progression or form part of credit for admission to an associated Master's degree in any domain. A qualification will not be awarded for early exit from this learning programme.

6.2.10 Articulation options

This programme articulates parallel with various advanced diplomas in different health sciences at NQF Level 7.

This programme doesn't articulate vertically with other appropriate qualifications within health sciences at an NQF Level 7. This stratified competency-based learning programme may however appear on other learning programmes not credit bearing toward another qualification.

6.2.11 Moderation options

Anyone assessing a learner or moderating the assessment of a learner against this qualification must be registered and appointed by the provider according to existing moderation guidelines of the HEQC. In the case of this stratified competency-based learning programme, moderators would need to have had MA training and in possession of a confirmed qualification in the field (most appropriate would be dermatologists or plastic/cosmetic surgeons whom are specialising in MA), with suitable experience.

6.2.12 Level descriptors/scope of knowledge

The learner should be able to demonstrate: Knowledge of MA and engagement in the practice of MA; an understanding of the theories, research methodologies, methods and techniques relevant to MA; and an understanding of applying specific knowledge in varying contexts within MA.

Knowledge literacy: The learner should be able to interrogate multiple sources of knowledge in MA; and to synthesise knowledge and processes of knowledge production in MA.

Method and procedure: The students should have an understanding of the intricacies and uncertainties of selecting, applying or performing appropriate MA treatments and procedures, processes or techniques to uncommon client concerns in MA practice.

Problem solving: The learner should possess the ability to use a range of specialised skills and methods to recognise, analyse and address complex and/or abstract MA-related conditions, drawing analytically on the body of knowledge and methods appropriate to MA discipline or practice.

Ethics and professional practice: The learner should possess the ability to identify and adhere to ethical issues based on critical reflections about the appropriateness of various ethical value systems in MA contexts.

Accessing, processing and managing information: The learner should possess the ability to critically review information gathering, evaluation and management processes in specialised contexts in order to develop creative responses to problems and other issues.

Producing and communicating information: The learner should have the ability to communicate and present academic, professional and occupational philosophies and texts efficiently to a range of patients; offering innovative insights, intense interpretations and appropriate resolutions to MA issues.

Context and systems: The learner should have the ability to operate effectively within an MA environment, and manage an MA environment through an understanding of the roles and connections between various features of MA.

Management of learning: The ability to apply, in a self-critical manner, effective learning strategies that address own and others' professional and continuing learning needs.

Accountability: The learner should possess the ability to take full accountability for own work, decision making and use of resources, and full responsibility for the decisions and actions of self and others, where applicable.

6.2.13 Exit level outcomes/competencies

- Conducting an effective MA patient consultation and designing an appropriate treatment plan after accurate use of diagnostic tools in MA.
- Possessing specialist knowledge to manage adverse effects and complications of MA procedures/treatment interventions.
- Possessing detailed knowledge of relevant pharmacological conditions and an understanding of the principles of advanced cosmetic chemistry in MA.
- Being able to manage infections in MA and possessing detailed knowledge of basic pathology pertaining to MA; and being able to identify and describe skin conditions applicable to MA.
- Possessing knowledge of business skills and professional development in MA.
- Integrating and being cognisant of the psychological aspects of dealing with MA patients.
- Possessing the required competencies and specialised knowledge about treatment mechanisms and procedures used in MA practice and the considerations.
- Possess specialist knowledge on human anatomy and physiology of the skin in relation to MA and face and body contouring techniques in MA, including designing a basic eating plan for weight control.

6.2.14 Assessment criteria

These assessment criteria are functionally integrative for all the exit level outcomes (c.f. Section 6.2.10):

- Use diagnostic tools in MA effectively and accurately.
- Identify and manage adverse effects of MA procedures and treatment interventions.
- Identify and explain pharmacological conditions related to MA.
- Describe and elucidate aspects of infection control in MA.
- Understand and apply the principles of advanced cosmetic chemistry in MA.
- Apply all aspects of conducting a MA patient consultation and design an appropriate treatment plan.
- Apply business skills and professional development in MA: Identify aspects and applicable legislation that would ensure successful management of an MA practice as a business.

- Explain the differences between ethnic/dark skin and white/Caucasian skin in relation to MA.
- Apply techniques and measures used to manage complications in MA.
- Integrate and be cognisant of the psychological aspects of dealing with MA patients.
- Provide detailed descriptions of treatment mechanisms and procedures used in MA practice and the considerations. The treatment interventions include but are not limited to energy-based devices, dermal fillers, Botulinum toxin and peeling agents (mechanical and chemical).
- Identify, describe and explain face and body contouring techniques in MA; including formulating a basic eating plan for patients wanting to control their weight.
- Detailed descriptions of human anatomy and physiology of the skin in relation to MA.
- Identify and discuss basic pathology pertaining to MA.
- Identify and describe skin conditions applicable to MA.

Assessments can be measured and conducted through theoretical examinations, clinical assessments, portfolios, observations, oral questioning, and assignments and through work integrated learning and more as presented in (cf. 6.2.19). The assessments will be aligned with all features of the programme (cf. 2.10.4.1).

6.2.15 Required knowledge and skills

This component of the stratified learning programme is focused on addressing the knowledge that is lacking among various healthcare professionals involved in MA in SA. Different aspects of this component apply to different professional groups, depending on prior knowledge from either their respective qualifications or additional training that they might have undergone. Figure 6.1 illustrates the knowledge components and the various professionals that require education in certain knowledge topics. The required knowledge, skills and competencies, as discussed in Chapter 4, Section B, form the outline of the learning units that will be covered in the programme (cf. 4.3). The content of the various learning units as presented in figure 6.1 were discussed in (cf. 4.3).

In Figure 6.1 is a schematic overview of the different learning units that are included and indicative of the various professionals whom would be required to do the particular units; as a result of the outcomes not having being covered in their initial training in their respective fields of training. Therefore the various knowledge aspects are specified and the professionals needing the knowledge are indicated (cf. 4.3). The unit standards of the presented programme are illustrated.

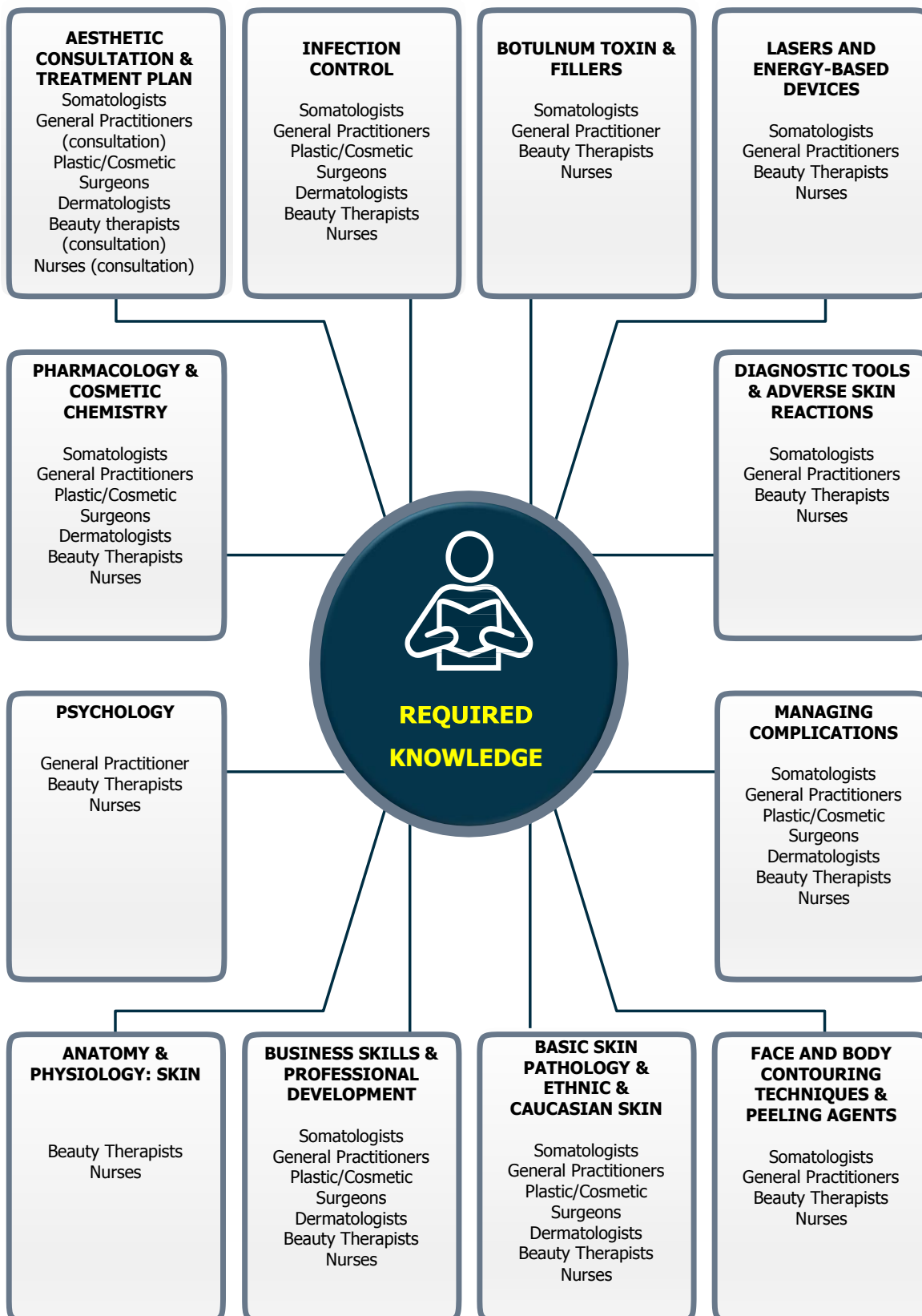


FIGURE 6.1: STRATIFIED KNOWLEDGE REQUIRED FOR MA (COMPILED BY THE RESEARCHER KHUMALO 2014)

UNIT OUTCOMES OF EACH UNIT STANDARD

Anatomy and physiology: Skin

The student should have a thorough understanding of cells, metabolism of cells, functions of cells and the role cells play in the functioning and structure of the skin. Must have an understanding of the functions of all the systems of the body and the roles in MA profession.

Face and body contouring techniques & peeling agents

The students must have knowledge on selecting the most appropriate peeling agents with the required strength, and being proficient in providing anaesthesia in the form of regional blocks.

Possess knowledge of face and body contouring, and have an understanding of radiofrequency, ultrasound, cryolipolysis and liposuction.

Botulinum toxin & fillers

Be well equipped to administer Botulinum toxin and fillers through education and knowledge of the anatomy and physiology of the face.

Effectively identify injection sites for neurotoxin administration, the care thereof and design plans.

Managing complications

Possess knowledge and practical skills of managing complications that result from various MA treatment interventions (products and treatment modalities),

Ability to manage complications resulting from adverse skin reactions (especially because adverse skin reactions can escalate to complications).

Basic skin pathology and ethnic and caucasian skins

Student should have knowledge of basic pathologies related to the skin.

Possession of advanced comprehension and skills in order to manage pathological indications relating to aesthetics with competence and confidence.

Knowledge of the various skin conditions and how different skins react; as well as various strategies for dealing with different skins to suit a particular skin (ethnic and caucasian skin).

Business skills and professional development

Having an understanding of MA business management; strategies for establishing a successful MA business, efficient business record keeping skills, understanding and application of customer service and marketing.

Infection control

Have an understanding and knowledge base of bacteria, infection, procedures and guidelines to reduce the chances of infections.

Pharmacology & cosmetic chemistry

Certain treatments and interventions may have an effect on the client's existing medications. Furthermore, many medications have effects on the skin. For these reasons:

Students should have knowledge of the principles of pharmacology and the application of that knowledge into their MA interventions

Should be able to outline the basic elements of cosmetic chemistry and chemical processes in relation to cosmetic products, ingredients and the various compositions of skin care products.

Aesthetic consultation & treatment plan

Should be able to provide detailed information and explanations to patients about treatment interventions,

Students should be able to accurately facilitate informed consent, managing expectations in a realistic manner, and be able to design designing an appropriate and client specific treatment plan

The ability to execute a structured approach to diagnosis and decision making related to MA treatment interventions.

Effectively communicate with patients during client consultation.

Diagnostic tools & adverse skin reactions

Students should be able to utilise various methods and tools for diagnosing abnormal skin conditions.

Students should be proficient in the use of the various tools and methods for diagnosis and analysis of the skin, such as magnifying lamps, pinch tests, biopsies, wood lamps, Tzanck and diascopy.

Should be able to accurately identify possible contraindications of procedures, treatment interventions or products applied to the skin

Psychology

Students should have the required psychological skills and ability to effectively deal with MA patients exhibiting various psychological states.

Lasers and energy-based devices

Students will need to have a sound understanding of the history and principles of lasers and other energy-based devices;

Students should have awareness of the safety precautions and relevant protocols involved with the use of laser and energy-based devices.

6.2.16 Stratified Treatment Interventions

This section lists the various treatment interventions that were included in the questionnaire (cf. Appendix E). After discussion of the findings, the interventions were used as point of departure for proposing treatment interventions (cf. Chapter 4).

TABLE 6.1: STRATIFICATION OF TREATMENT INTERVENTIONS
(Table continues on next page)

DESCRIPTION OF TREATMENT	PROFESSIONS					
	Somatologists	General Practitioners	Plastic/Cosmetic surgeons	Dermatologists	Beauty therapists	Nurses
Chemical peels	x	x	x	x		
Microdermabrasion	x	x	x	x		
Botulinum toxin	x	x	x	x		
Hyaluronic acid wrinkle	x	x	x	x		
Synthetic wrinkle fillers		x	x	x		
Collagen wrinkle fillers		x	x	x		
Autologous wrinkle fillers		x	x	x		
Calcium-based fillers		x	x	x		
Artefill fillers		x	x	x		
Silicon fillers	x	x	x	x		
Poly-L-lactic acid (filler for the correction of facial lipoatrophy in patients infected with human immune deficiency virus)		x	x	x		

Titan (a non-surgical skin tightening treatment using infrared light to heat the dermis)	x	x	x	x	x	x
Pulsed dye lasers (PDL)	x	x	x	x		
Thermage lasers	x	x	x	x		
Carbon dioxide lasers		x	x	x		
Cryotherapy rejuvenation	x	x	x	x		x
Cry-Meso peel	x	x	x	x		x
Liposuction		x	x	x		
Abdominoplasty		x	x			
Blefaroplasty		x	x			
Rhinoplasty		x	x			
Breast augmentation		x	x			
Breast reduction		x	x			
Surgical face lift		x	x			
Autologous fat transfer as filler		x	x	x		
Surgical hair transplant			x	x		
Fraxel laser treatments			x	x		
Photodynamic therapy	x	x	x	x		
Acne phototherapy	x	x	x	x	x	x
I-Pixel laser	x	x	x	x		x
Varicose vein sclerotherapy	x	x	x	x		x
Infrared therapy	x	x	x	x	x	x
Ultrasound imaging/ sonography (using high-frequency sound waves to view soft tissue with a small transducer)		x	x	x		
Intense pulsed light therapy	x	x	x	x	x	
Nd: YAG lasers		x	x	x		x
Laser hair removal	x	x	x	x	x	x
Alexandrite laser	x	x	x	x		x
LED photography	x	x	x	x	x	x
Micro-needling	x	x	x	x		x
Lipolysis		x	x	x		
Mesotherapy	x	x	x	x		x
Tripolar radio frequency	x	x	x	x		x
Medical tattooing	x	x	x	x		x
Permanent make-up	x	x	x	x		x
Thermotherapy	x	x	x	x		x
Ultrasound therapy (using a machine that makes high frequency sound waves for therapeutic purposes)	x	x	x	x	x	x
Radio frequency therapy	x	x	x	x	x	x
Thread lift		x	x	x		
Vein cauterly	x	x	x	x	x	x
Camouflage therapy	x	x	x	x	x	
Electrolysis	x	x	x	x	x	x

6.2.17 Skin conditions

The preceding research processes (literature and desktop study and the structured questionnaires provided a foundation to identify skin conditions, stratify relevant training and discuss the findings in Chapter 5 (cf. 5.2). The various skin conditions and the professionals who treat or manage the conditions are presented in Table 6.2. It is also of value to note that the diseases such as acne, rosacea, atopic dermatitis, solar keratosis, will be treated by medical doctors and that in instances where the other professionals are involved, will be for managing the symptoms of those diseases as opposed to treating the diseases.

TABLE 6.2: STRATIFICATION OF SKIN CONDITIONS (COMPILED BY THE RESEARCHER KHUMALO 2015)

DESCRIPTION OF CONDITIONS	PROFESSIONS					
	Somatologists	General Practitioners	Plastic/Cosmetic surgeons	Dermatologists	Beauty therapists	Nurses
Acne	x	x	x	x	x	x
Photo aging	x	x	x	x	x	x
Striae distensae	x	x	x	x	x	x
Blepharochalasia	x	x	x	x		x
Sagging skin	x	x	x	x	x	x
Keloids	x	x	x	x		
Melasma	x	x	x	x		
Rosacea	x	x	x	x	x	x
Atopic skin	x	x	x	x		
Vitiligo	x	x	x	x	x	
Actinic (solar) keratosis	x	x	x	x	x	x
Seborrhea	x	x	x	x	x	x
Premature aging	x	x	x	x	x	x
Excessive hair growth	x	x	x	x	x	x
Cellulite	x	x	x	x	x	x
Scars (variation)	x	x	x	x	x	x

6.2.18 Teaching and learning activities

An overview of the teaching and learning activities of the proposed stratified competency-based learning programme for MA practitioners in SA (cf. 6.2.14) are illustrated in Figure 6.2.

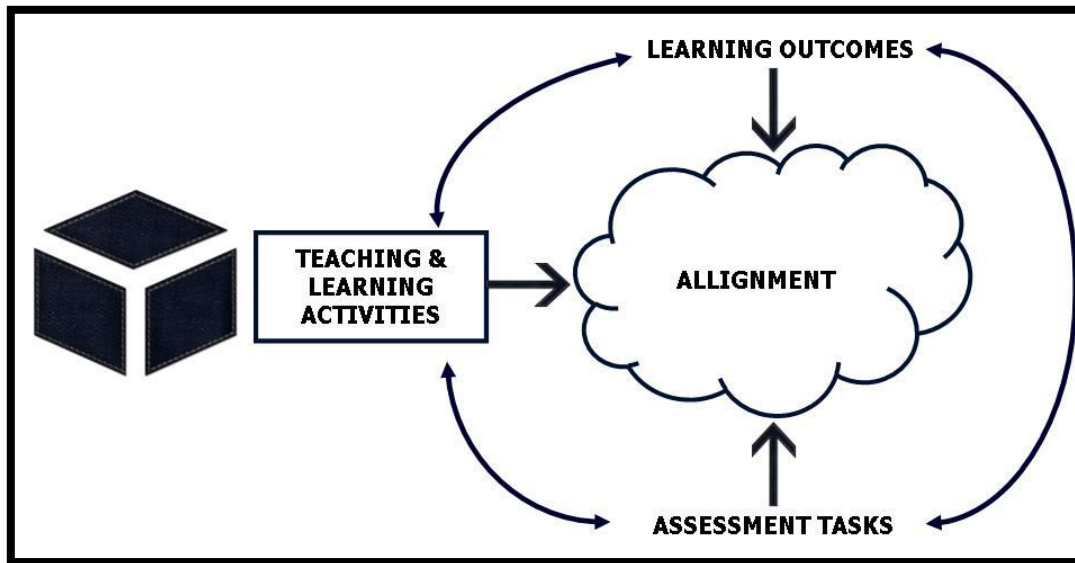


FIGURE 6.2: OVERVIEW OF TEACHING AND LEARNING ACTIVITIES (COMPILED BY THE RESEARCHER KHUMALO 2015)

Teaching and learning activities will include:

- Assessments (summative and formative assessments)
- Student self-study
- Training on a variety of products
- Workshops
- Group discussions
- Assignments (oral and practical delivery)
- Presentations
- Concept mapping
- Problem solving
- Debates
- Peer assessments
- Research project
- Practical demonstrations
- Work integrated learning

6.2.19 Assessment activities

The proposed stratified competency-based learning programme's assessment activities are illustrated in the Figure 6.3.

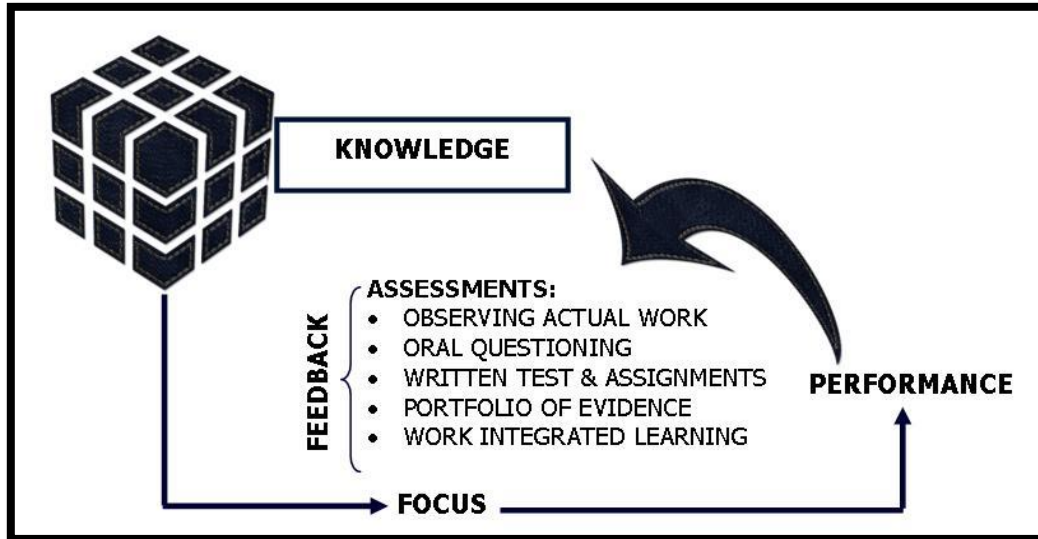


FIGURE 6.3: ASSESSMENT ACTIVITIES (COMPILED BY THE RESEARCHER KHUMALO 2015)

Assessment activities for this programme are:

- Practical assessments
- Oral questioning
- Written tests and assignments
- Portfolio of evidence
- Work integrated learning
- Peer assessments
- Presentations
- Research projects
- Portfolios
- Summative and formative assessments
- Presentations
- Practical assessments
- Assignments
- Knowledge synthesis

The philosophies of integrated assessment are incorporated in this programme to ensure that the purpose of the programme is met, namely to equip healthcare professionals with adequate and necessary knowledge, skills and competencies to provide MA treatments in accordance with an integrative approach.

Competence will be developed through a combination of self-study, group work and practical and workshop applications. An integrated assessment approach forms a fundamental part of all the planned learning activities. Each module will be assessed throughout the course of the year. Assessments for the programme would be communicated timeously to the students to ensure optimum preparations by the students.

Within the process of assessing the students, 50% of the total number of assessments will be moderated by external and internal facilitators of the programme. The moderators are essential to ensure the quality and readiness of the students in relation to the needs of the MA field.

In Section 6.3 an illustration of the design and the activities that will be taking place throughout the duration of the course are illustrated in a diagram.

6.3 THE PROPOSED PROGRAMME ACTIVITIES

In Figure 6.4, the various activities and aspects of the stratified competency-based learning programme are shown. The aspects include the knowledge needed in MA, the skills and competencies that the students should possess upon successful completion of this proposed stratified competency-based learning programme for MA in SA; the learning and assessment activities are also included; and most importantly, the learning outcomes of the programme are clearly stated.

6.3.1 Aspects of the learning programme



FIGURE 6.4: STRATIFIED COMPETENCY-BASED LEARNING PROGRAMME (SHORT LEARNING PROGRAMME) FOR MA PRACTITIONERS IN SA: PROGRAMME ACTIVITIES AND DESIGN (COMPILED BY THE RESEARCHER KHUMALO 2015)

*Figure 6.1 contributes to the skills and competencies, hence the inclusion under the skills & competencies segment of **Figure 6.4***

6.3.2 Summary of activities and processes of the proposed programme activities/process

The processes and activities of the proposed short learning programme are illustrated in Figure 6.4.

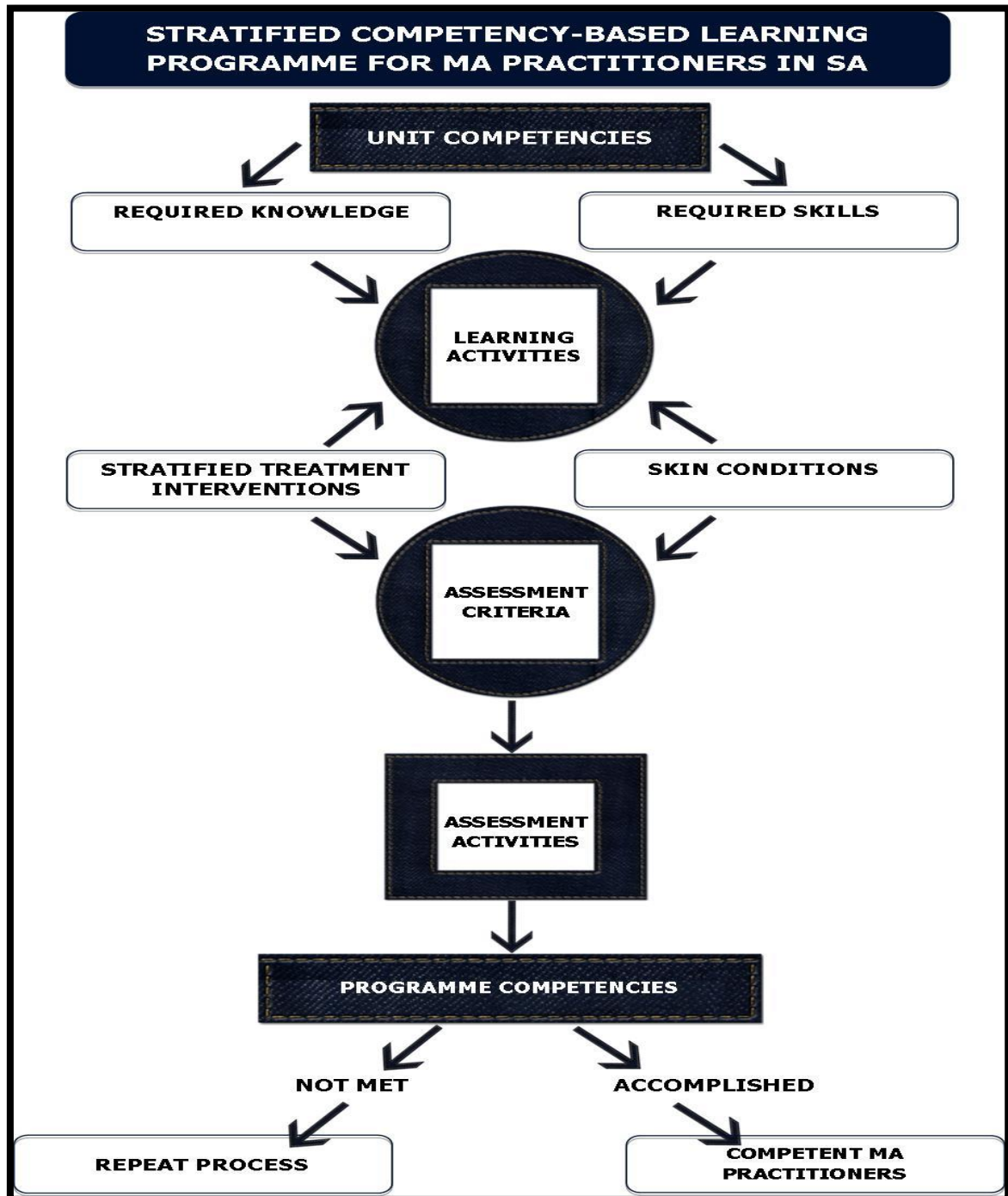


FIGURE 6.5: SUMMARY OF THE ACTIVITIES AND PROCESSES OF THE PROPOSED STRATIFIED COMPETENCY-BASED LEARNING PROGRAMME-SHORT LEARNING PROGRAMME (COMPILED BY THE RESEARCHER KHUMALO 2015)

In the case when a student has not met the competencies/outcomes of the programme or a particular unit; the student would need to repeat the programme or the particular unit that they would have not met the outcomes/competencies of. It would also be crucial to ensure that alternative/additional materials and instructional strategies are identified to address previous areas of difficulty. The student would need to re-register for that unit as the short learning programme is based on unit standards.

6.4 CONCLUDING SUMMARY

In this Chapter a proposed stratified competency-based learning programme for MA practitioners in the higher-education realm in SA was presented (Objective F, cf. Section 1.4.3).

Chapter 7, **Conclusion, recommendations and limitations of the study**, includes an overview of the study as well as a review of the research questions that were being addressed in this study; along with some factual conclusions of the findings. The limitations of the study will also be identified and discussed briefly. Conclusions of the study will also be drawn.

CHAPTER 7

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

7.1 INTRODUCTION

The overarching purpose of this study was to develop a stratified competency-based learning programme for practitioners of MA in SA. The study also seeks to meet the need for educational competence in the practice and implementation of MA in SA. The aim was guided by six objectives (cf. Section 1.4.3). To accomplish the aim of this study it was essential to reach a number of prerequisite goals. The literature review conducted for this thesis (cf. Chapter 2) was essential for determining what MA means, what the educational aspect of MA involves, and what treatments the various professionals involved in MA practice. The understanding gained of the guidelines for developing a competency-based learning programme was very valuable. Upon achieving these fundamental steps, the research was able to move forward.

This chapter provides the conclusions and recommendations that resulted from this study and serves to provide an overview of the findings of the study and to conclude the study. This chapter begins with an overview of the study and an explanation of the value and unique contribution of the study, and it is followed by a discussion of the recommendations and limitations encountered throughout the research process.

7.2 OVERVIEW OF THE STUDY

This study designed a stratified competency-based learning programme for MA practitioners in SA. The purpose of designing such a programme was explained in Chapter 1 (cf. Section 1.1). The stratified competency-based learning programme was designed by applying a mixed methods approach, which included a literature review, desktop study, and application of structured questionnaires. Each of the methods are discussed in detail in Chapter three (cf. Sections 3.2.2 & 3.3). The empirical stage was carried out to address one main research question and two sub-research questions (cf. Section 1.3). The main research question was:

What would a stratified competency-based learning programme consist of in order to provide students with the required knowledge, skills and competencies to function as professional medical aestheticians in the South African healthcare environment?

This question was answered through the desktop study and the structured questionnaire that was completed by various healthcare professionals, as explained in Chapter 1.

The researcher pursued a further two other questions in a quest to answer the main research question, these questions were:

- a) *What key knowledge, skills and competencies are required by MA practitioners in the South African context?*
- b) *What should the scope of practice be for professional MA practitioners in SA?*

These subsidiary research questions were also answered during the empirical phase of the study, and by means of responses to Sections B, C and D of the structured questionnaire.

The outcomes of the desktop study and the literature review were presented in Chapter 2 (cf. 2.11); the outcomes chiefly formed the basis for the structured questionnaire as well as the guidance around the scopes of the various professions. In this chapter MA in the South African and international context was studied and discussed; and the scope of practice for the various professionals was highlighted. Furthermore, MA education was discussed (cf. 2.4 & 2.5.1) along with various aspects of developing a learning programme (cf. 2.8), with the aim of developing a stratified competency-based learning programme (a short learning programme) for MA in SA.

Data collection started with both the literature and desktop study, and proceeded to the application of structured questionnaires. One version of the structured questionnaire was emailed to the various professionals who were identified as MA practitioners in SA (cf. 3.3.3.3). Due to the slow response from the email method, the structured questionnaires were then hand-delivered to some (somatologists, general practitioners and beauty therapists) of the respondents. All the respondents were asked to complete the structured questionnaire (cf. Appendix E), which comprised four sections (Sections A, B, C and D).

Section A collected demographic data from the respondents; Section B addressed the knowledge content required for an MA programme; Section C dealt with common treatment interventions involved in MA; and, lastly, Section D addressed common skin conditions often encountered in MA practice. The questions of the structured questionnaire were suggested by the desktop study.

The data collected from the study were presented in two chapters: Chapter 4, which presented the results from Sections A, B and C; and Chapter 5, which presented the results from Section D of the structured questionnaire; both chapters incorporated both the qualitative and quantitative data that were collected. As mentioned in Chapter 4 and 5 (cf. Sections 4.1 & 5.1) there was a limitation to the structured questionnaire aspect of the data collection. Although the structured questionnaires were sent out to as many of the professionals as possible (cf. 3.2.2.1), the majority of the respondents were somatologists; the other professionals were not represented in equal numbers, despite numerous reminders sent to respondents to request that they return the questionnaires. The data represented in both Chapters 4 and 5 represent the views of the sample and is not necessarily a representation of the practice of MA.

The objectives of the study were accomplished (cf. 1.4.3), and contributed to answering the research questions (cf. 1.3). Having conducted the study, it was clear to the researcher that implementing a stratified competency-based learning programme (short learning programme) for MA in SA was fundamentally important, because such a programme would help to address the research problem that had been identified, which was, *the lack of a stratified competency-based learning programme for MA in SA. The research problem was addressed preceding the research processes.*

This study addressed the research problem by developing a stratified competency-based learning programme for MA, which was possible as a result of the data collection and data analysis phases of the study.

In Chapter 6 the researcher presented the proposed stratified, competency-based learning programme for MA practitioners in SA. The rationale for the programme was discussed in detail in Chapter 6 (cf. Section 6.2.1).

7.2.1 Factual conclusions

The results of this study indicate that there are no mechanisms that regulate the practice of MA in SA across all the professions involved; which then cements the need for and importance of SA having both a stratified competency-based learning programme for MA, and more robust regulatory mechanisms (cf. 2.4.1). Another important finding of this study is the importance of collaborative work in MA and patient care by capitalising on the strengths and specialities of the various professionals involved in MA in SA. This study

further highlights the popularity of MA among patients and the extraordinary rate at which it is growing worldwide and in SA (cf.2.4); chiefly through the literature study. It also emerged that professionalising the field of MA can be beneficial for advancing the field. The importance of defining the knowledge, skills and competencies for MA practitioners was confirmed. The researcher also found that all the various professionals could benefit from this programme in terms of improving the negative stigma that MA is confronted with, and assist to eradicate the ill effects of malpractice (cf. 1.2.3). The researcher also found that there is currently limited literature describing MA in SA. The lack of an inclusive stratified competency-based learning programme for MA in SA and that there is one which is only offered to general practitioners (cf. 2.4.1). It could further be concluded that whilst in other countries MA is regulated and that in other countries there are standardised MA learning programmes, which is not the case in SA (cf. 2.5.1).

7.3 VALUE AND UNIQUE CONTRIBUTION

The absence of a stratified competency-based learning programme for MA practitioners indicates the value of this study, because it addresses the research problem (cf.1.3). Considering the various healthcare professionals involved in MA, each possessing different skills and competencies; and the absence of formal, comprehensive MA education, stratified according to the knowledge base of the various groups of practitioners, the existence of a stratified competency-based learning programme remains important and valuable.

The value of the study is that prior to this study, as mentioned above (cf. 2.7.1), there wasn't a stratified competency-based learning programme for MA in SA; this study therefore provides descriptions of the various professionals involved in MA in SA. Furthermore, this study highlighted that prior to this study, the only MA training available in SA was only available to general practitioners, which limited access to the other professionals involved in MA in SA.

The researcher believes this study was valuable as it provided evidence of the need for a short stratified competency-based learning programme for MA for all professionals in MA in the South African context.

The study was useful as it provides evidence in support of the need to regulate MA in SA as with other countries; as a result of the contrasts to other countries where MA is regulated.

The researcher believes that this research has added value and made a contribution to the existing knowledge related to MA education and practice in SA. Thus, the researcher has contributed and added value to MA in SA by developing a stratified competency-based learning programme for MA practitioners in SA (cf. 6.2). The researcher anticipates that the proposed stratified competency-based learning programme, together with the knowledge obtained from the study, may advance the practice of MA, and promote the MA education arena by yielding well-trained practitioners who can enter the MA profession. The quality, reliability and validity of the research were ensured by using a sound research approach and methodology. Furthermore, the research is envisaged to form the basis of further research in MA practice or education.

It became apparent during the research that neither the practice of MA nor its education and training in SA was stratified according to the knowledge base of the various professionals involved in MA. Another contribution and value of the proposed stratified competency-based learning programme is the potential influence this study may have towards regulating and professionalising MA.

Prior to this study there existed no stratified competency-based learning programme for MA practitioners in SA (available to all the professionals involved in MA in SA), therefore, the researcher believes that the product of this study can make a unique and imperative contribution to MA as a whole; especially since there is very limited scientific literature on MA in the South African context, nor was there a stratified, competency-based learning programme for MA practitioners in SA prior to this study. Developing the proposed programme described in Chapter 6, translates into creation of new possibilities for developing and ensuring optimum training for practitioners of MA in SA, resulting in an improved patient centred approach.

7.4 LIMITATIONS OF THE STUDY

The researcher encountered limitations throughout the study. The researcher acknowledges the following limitations to the study.

7.4.1 Limited scientific literature in the area of medical aesthetics in South Africa

As mentioned briefly in Chapter 1 (cf. Section 1.1), the MA field in SA has limited scientific literature. There is, however, a pool of anecdotal literature on MA. It was challenging to

use references from the South African context, which obliged the researcher to refer to personal experience and conversations with professionals involved in MA. The researcher compensated for this shortfall by exploring and utilising literature from other countries, where MA is more advanced and where scientific literature exists, which was used to address the lack of literature in SA for the purpose of this study and for developing the proposed stratified learning programme.

7.4.2 Sample size

Because there is no regulatory body for all MA practitioners, it was challenging to identify actual population sizes of the various professionals involved in MA. Being unable to estimate the sample size accurately was a limitation. The researcher approached various professional and regulatory bodies for contact details of their members; in some cases only telephone or cell numbers of professionals were provided (cf. 3.3.3.4 & 3.2.2.1). The researcher was compelled to make phone calls to the professionals identified, in order to get their email addresses; this was a challenge and added to the duration of the study (cf. Sections 4.1; 5.1). As mentioned in Chapter 4 and 5 (cf. Sections 4.1 & 5.1) there was a limitation to the structured questionnaire aspect of the data collection. Although the structured questionnaires were sent out to as many of the professionals as possible (cf. 3.2.2.1), the majority of the respondents were somatologists; the other professionals were not represented in equal numbers, despite numerous reminders sent to respondents to request that they return the questionnaires. The data represented in both Chapters 4 and 5 represent the views of the sample and is not necessarily a representation of the practice of MA.

7.4.3 Response rate

The rate of response to the structured questionnaires was slow, and therefore the anticipated and planned duration of the data collection had to be extended. The structured questionnaire was sent to stakeholders of MA in SA. Taking into consideration the rapid pace of the MA profession, it was anticipated that not all stakeholders checked their email regularly, that some would not have time to complete the questionnaire, or would not be accustomed to working closely with computers. Few responses were received in spite of several emails and reminders. The researcher resorted to delivering the structured questionnaires to MA businesses and salons by hand; and then collecting them from the

various practitioners. The researcher also took advantage of an international congress of MA (CIDESCO) to identify and distribute the questionnaire (cf. 1.6; 1.9 & 7.4.2).

7.4.4 Length of the structured questionnaire

Following reflections on the research process, particularly the data collection phase, the researcher is of the opinion that the structured questionnaire used for collecting data may have been too long. However, all the sections of the questionnaire were significant, and had to be included. Considering the variety of components involved in MA, it was necessary to include the most common components related to the aims of the study, hence the length of the structured questionnaire used in this study. The researcher believes that the length of the questionnaire may have contributed to the data collection phase being prolonged beyond the anticipated scheduled time. Regardless of the length the structured questionnaire, the questionnaire remained valuable and was able to achieve its purpose. Therefore despite the pilot study being carried out, it appears, upon reflections by the researcher that, a similar structured questionnaire could be used in future research, however be shorter, without omitting any of the aspects of MA.

7.5 CRITIQUE OF THIS RESEARCH

After having conducted the research, the researcher acknowledges a number of matters that could have been done differently in this research study. The following points can be raised as critique of this research study:

- The researcher acknowledges that the questions on the structured questionnaire could have been structured differently. The researcher acknowledges that the questionnaire may have been misinterpreted by some participants; particularly Section B of the questionnaire, which addressed the knowledge component of MA. The question may have not been clear, as it failed to highlight the knowledge components lacking in each of the professions that participated in the study.
- The researcher also acknowledges that it may have been possible to collect richer data by using interviews. Interviews could have led to a more thorough understanding of the various components of the questionnaire, and would have ensured that the input of the respondents were understood in complete fullness, as there would have been an opportunity for probing to take place.

The researcher believes the objectives, goals and aims of the study were met through the use of both the desktop study and questionnaires.

7.6 VALIDITY AND RELIABILITY

All the respondents of the pilot study met the inclusion criteria (cf. 3.3.3.6), and the feedback obtained from pilot of the structured questionnaire ensured the validity of the structured questionnaire. In this study, triangulation was achieved by using more than one method to collect data; the data collected by both methods complemented the data collected by each of the separate methods. The incorporation of both qualitative and quantitative approaches in this study contributed to the validity of the data; in addition to application of the researcher's knowledge and experience. Triangulation of the data was therefore achieved via the desktop study; structured questionnaires and the researcher's experience (cf. 3.4.1).

Reliability of this study was enhanced by the *split-halves reliability* prediction, as alluded to in Chapter 3. This process was the most suited and applicable to ensure further reliability of this study. This method, together with the researcher's own self-reflections and subject experience concerning the process of data analysis and interpretations; and her involvement in the data-collection stage, further enhanced the reliability of the structured questionnaires as well as the research process as a whole.

The qualitative phase (desktop study) of this study made use of Lincoln and Guba's frame of measures to ensure transferability, credibility and confirmability and trustworthiness (Creswell 2013:23), and was maintained together with dependability and authenticity; these strategies were discussed in detail in Chapter 3 (cf. section 3.4.1: Table 3.1).

7.7 RECOMMENDATIONS

The researcher's objective in this study was to develop a stratified learning programme for MA; however, the researcher discovered much more throughout the process of conducting this research. This section sets out the recommendations that the researcher makes a result of the study. In order for the outcome of the study to bring about valuable results and have a significant impact in the MA field and the education thereof; the researcher takes the initiative to make the following recommendations:

- A pre-test/pilot of the proposed stratified competency-based learning programme is recommended, as it may identify issues related to the implementation process, which was not the main focus for this study.
- Education institutions may make use the comparisons between what is suggested in the scopes of practice of the various professionals in MA in the SA context. Furthermore education institutions should use the proposed programme (cf. 6.2) to offer MA qualifications, courses or programmes.
- The results of this study should be published at national and international conferences.
- Further research may be conducted into assessing whether the scope of practice of each of the professionals involved I MA in SA are indeed appropriate and are evidence based.
- Considering that the MA field is a constantly changing one; MA practitioners should be required to undergo continuous professional development.
- A regulatory body for all MA practitioners has proven to be a very important aspect and, after this study, it is recommended that such a body be established.
- Based on the experience gained from conducting this study, future research in MA should avoid relying on email to contacting respondents.
- The programme should further be tested as part of a post doc project, in order to refine the programme itself and test it.

7.8 CONCLUDING REMARKS

The results of this research indicated that the development of a stratified competency-based learning programme for MA practitioners will be beneficial for improving MA practice. The proposed programme would not only enhance the quality of education; but the stratified competency-based learning programme would also address the needs of the various professionals entering the MA field. The programme could also add value to the quality of MA treatment interventions, the effective treatment of skin conditions and the effects of aging on the skin.

The researcher notes that the representation of the various professionals in the MA profession were uneven; hence the bias in the findings as the majority of the respondents were somatologists. The data represented in both Chapters 4 and 5 represent the views of the sample and is not necessarily a representation of the practice of MA.

The researcher wishes to emphasise that she believes that a study such as this one, and other studies that might result from this one, may assist in improving the quality of professionals engaged in both MA practice and MA education, and to overcome the challenges faced by MA, such as regulatory measures/structures.

This study and similar studies will ensure that MA practice is trustworthy and effective, leading to a more credible and regulated MA field.

Identified research questions that the researcher believes requires further exploration through research are:

- Whether or not the scopes of practice of the various professionals are appropriate and evidence based?
- What the necessary steps towards regulation and professionalization of MA I SA would entail?

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PERSONAL COMMUNICATION

Henrico, K. 2013. Lecturer: Department of Somatology, Faculty of Health Science. Personal communication on 14 February.

APPENDICES

APPENDIX A:
ETHICAL APPROVAL

APPENDIX B:
SAQA LEVEL DESCRIPTORS

APPENDIX C:
COMPETENCIES OF GP, DERMATOLOGISTS, COSMETIC/PLASTIC SURGEONS AND
BEAUTY THERAPISTS

APPENDIX D:
COMPETENCIES OF NURSES

APPENDIX E1:
REQUEST TO PARTICIPATE IN THE RESEARCH

APPENDIX E2:
QUESTIONNAIRE TO THE VARIOUS PROFESSIONALS

APPENDIX F:
UFS EVASYS PROCEDURE

APPENDIX G:
SUMMARY OF QUESTIONNAIRE RESULTS

APPENDIX H:
LANGUAGE EDITING CONFIRMATION

ETHICAL APPROVAL



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REC Reference nr 230408-011
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MS V KHUMALO
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Dear Ms Khumalo

ECUFS NR 15/2014
MS V KHUMALO

(DEPT SOMATOLOGY, UNIVERSITY OF JOHANNESBURG)
DIVISION HEALTH SCIENCES EDUCATION, UFS

PROJECT TITLE: A STRATIFIED COMPETENCY BASED LEARNING PROGRAMME FOR PRACTITIONERS OF MEDICAL AESTHETICS IN SOUTH AFRICA.

1. You are hereby kindly informed that at the meeting held on 4 February 2014 the Ethics Committee approved the above research project on condition that the Evaluation Committee Report has to be submitted before the study may be conducted.

[Upon receipt of the above document, an approval letter will be issued by the Ethics Committee. Only thereafter may the study be conducted].

2. Committee guidance documents: Declaration of Helsinki, ICH, GCP and MRC Guidelines on Bio Medical Research. Clinical Trial Guidelines 2000 Department of Health RSA; Ethics in Health Research: Principles Structure and Processes Department of Health RSA 2004; Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa, Second Edition (2006); the Constitution of the Ethics Committee of the Faculty of Health Sciences and the Guidelines of the SA Medicines Control Council as well as Laws and Regulations with regard to the Control of Medicines.
3. Any amendment, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.
4. The Committee must be informed of any serious adverse event and/or termination of the study.
5. All relevant documents e.g. signed permission letters from the authorities, institutions, changes to the protocol, questionnaires etc. have to be submitted to the Ethics Committee before the study may be conducted (if applicable).
6. A progress report should be submitted within one year of approval of long term studies and a final report at completion of both short term and long term studies.



SAQA LEVEL DESCRIPTORS

South African Qualifications Authority (SAQA)**Refined Level Descriptors for a 10 - Level NQF****1. Definitions**

In these level descriptors any word or expression to which a meaning has been assigned in the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995) shall have such meaning and, unless the context indicates otherwise -

“applied competence” means the ability to put into practice in the relevant context the learning outcomes acquired in obtaining a qualification;

“autonomy of learning” means the capacity of a learner for lifelong learning and includes the extent to which a learner can undertake action for learning independently, the extent to which a learner takes responsibility for his or her own learning and the extent to which a learner is self-reflexive about and can evaluate the quality of his or her learning and eventually that of others;

“level descriptor” means that statement describing achievement at a particular level of the NQF;

“NQF” means the National Qualifications Framework (NQF) as already in the Act.

2. Level Descriptors

- Level descriptors describe an increasing complexity in learning outcome (including skills and personal development), and that progression is a key principle underlying the framework.
- Level descriptors are cumulative, and assume learning achieved at previous levels in the framework.
- Level descriptors are not learning outcomes or assessment criteria. They provide a broad frame from which the specific and contextualized outcome and assessment criteria for a particular programme can be derived.
- Level descriptors are descriptive, and not prescriptive statements, i.e. the competencies listed at a particular level in the framework broadly describe the learning achieved at that level, but an individual learning programme may not necessarily meet each and every criterion listed.
- Level descriptors embrace learning in a wide variety of contexts (vocational, occupational, academic and professional) and environments (classroom, laboratory, field, clinic, community etc.)
- Level descriptors do not describe years of study

3. Reading the Level Descriptors

The philosophical underpinning of the NQF is applied competence, in line with the outcomes-based theoretical framework adopted in the South African context. Applied competence has three constituent elements: foundational; practical; and reflexive competences. Foundational competence embraces the intellectual / academic skills of knowledge together with analysis, synthesis and evaluation (information processing and problem solving). Practical competence includes the concept of operational context and reflexive competence incorporates learner autonomy.

These refined generic descriptors differ from previous versions of level descriptors, in that, the distinction between ‘applied competence’ and autonomy of learning’, has been collapsed to avoid duplication between the latter and the application of knowledge.

Another development has been the incorporation of the first five Critical Cross-field Outcomes (CCOs) as developed for the context of the South African NQF into the refined descriptors. It is expected that the CCOs be contextualized and demonstrated in the qualification outcomes developed from these generic descriptors.

4. Descriptor categories

The generic competencies described for Levels 5 to 10 are encapsulated in the following ten categories:

- Scope of knowledge
- Knowledge literacy
- Method and procedure
- Problem solving
- Ethics and professional practice
- Accessing, processing and managing information
- Producing and communicating information
- Context and systems
- Management of learning
- Accountability

Level Descriptors Level 5-10

NQF Level	Level Descriptors
Typically, a learning programme leading to the award of a qualification or unit standard at this level aims to develop learners who demonstrate:	
5	<p>Scope of knowledge:</p> <ul style="list-style-type: none"> • knowledge of the main areas of one or more fields, disciplines or practices, including an understanding of the key terms, concepts, facts, principles, rules¹ and theories of that field, discipline or practice. <p>Knowledge literacy:</p> <ul style="list-style-type: none"> • an awareness of how knowledge (or a knowledge system) develops and evolves within the area of study or operation. <p>Method and Procedure:</p> <ul style="list-style-type: none"> • an ability to select and apply standard methods, procedures, and/or techniques within the field, discipline or practice, and to plan and manage an implementation process within a supported environment. <p>Problem solving:</p> <ul style="list-style-type: none"> • an ability to identify, evaluate² and solve defined, routine and new problems within a familiar context, and to apply solutions based on relevant evidence and procedures and/or other forms of explanation appropriate to the field, discipline or practice. <p>Ethics and professional practice³:</p> <ul style="list-style-type: none"> • an ability to take account of, and act in accordance with prescribed organisational and professional ethical codes of conduct, values and practices and to seek guidance on ethical and professional issues where necessary. <p>Accessing, processing and managing information⁴ :</p> <ul style="list-style-type: none"> • an ability to gather information from a range of sources, including oral, written and/or symbolic texts⁵, to select information appropriate to the task, and to apply basic processes of analysis, synthesis and evaluation on that information. <p>Producing and communicating information:</p> <ul style="list-style-type: none"> • an ability to communicate information reliably, accurately and coherently, using conventions appropriate to the context, either in writing, verbally or in practical demonstration, including an understanding of and respect for conventions around intellectual property, copyright and plagiarism. <p>Context and systems⁶:</p> <ul style="list-style-type: none"> • an ability to operate in a range of familiar and new contexts, demonstrating an understanding of different kinds of systems, their constituent parts and the relationships

	<p>between these parts, and how actions in one area impact on other areas within the same system.</p> <p>Management of learning:</p> <ul style="list-style-type: none"> • an ability to assess own and others' performance and to take appropriate action where necessary; an ability to take responsibility for own learning within a structured learning process and to promote the learning of others. <p>Accountability:</p> <ul style="list-style-type: none"> • an ability to answer for own actions, to work effectively with and respect others, and, in a defined context, to take supervisory responsibility for others and for the responsible use of resources where appropriate.
6	<p>Scope of knowledge:</p> <ul style="list-style-type: none"> • detailed knowledge of the main areas of one or more fields, disciplines or practices, including an understanding of and an ability to apply the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice; • knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices. <p>Knowledge literacy:</p> <ul style="list-style-type: none"> • an understanding of different forms of knowledge, schools of thought and forms of explanation typical within the area of study or operation, and an awareness of knowledge production processes. <p>Method and Procedure:</p> <ul style="list-style-type: none"> • an ability to evaluate, select and apply appropriate methods, procedures and/or techniques in processes of investigation or application within a defined context. <p>Problem solving:</p> <ul style="list-style-type: none"> • an ability to identify, evaluate and solve problems in unfamiliar contexts, gathering evidence and applying solutions based on evidence and procedures appropriate to the field, discipline or practice. <p>Ethics and professional practice:</p> <ul style="list-style-type: none"> • an understanding of the ethical implications of decisions and actions, within an organisational or professional context, based on an awareness of the complexity of ethical dilemmas. <p>Accessing, processing and managing information:</p> <ul style="list-style-type: none"> • an ability to evaluate different sources of information; to select information appropriate to the task, and to apply well-developed processes of analysis, synthesis and evaluation on that information. Producing and communicating information: • an ability to present and communicate complex information reliably and coherently using appropriate academic/ professional/occupational conventions, formats and technologies for a given context. <p>Context and systems:</p> <ul style="list-style-type: none"> • an ability to make decisions and act appropriately in familiar and new contexts, demonstrating an understanding of the relationships between systems, and of how actions, ideas or developments in one system impact on other systems. <p>Management of learning:</p> <ul style="list-style-type: none"> • an ability to evaluate performance against given criteria, and accurately identify and address own task-specific learning needs in a given context, and to support the learning needs of others. <p>Accountability:</p> <ul style="list-style-type: none"> • an ability to work effectively in a team or group, and to take responsibility for own decisions and actions and those of others within well-defined contexts, including the responsibility for the use of resources where appropriate.
7	<p>Scope of knowledge:</p> <ul style="list-style-type: none"> • integrated knowledge of the main areas of one or more fields, disciplines or practices, including an understanding of and an ability to apply and evaluate the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice;

	<ul style="list-style-type: none"> • detailed knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices. <p>Knowledge literacy:</p> <ul style="list-style-type: none"> • an understanding of knowledge as contested and an ability to evaluate types of knowledge and explanations typical within the area of study or practice. <p>Method and Procedure:</p> <ul style="list-style-type: none"> • an understanding of a range of methods of enquiry in a field, discipline or practice, and their suitability to specific investigations; • an ability to apply a range of methods to resolve problems or introduce change within a practice. <p>Problem solving:</p> <ul style="list-style-type: none"> • an ability to identify, analyse, critically reflect on and address complex problems, applying evidence-based solutions and theory-driven arguments. <p>Ethics and professional practice:</p> <ul style="list-style-type: none"> • an ability to take decisions and act ethically and professionally, and the ability to justify these decisions and actions drawing on appropriate ethical values and approaches, within a supported environment. <p>Accessing, processing and managing information:</p> <ul style="list-style-type: none"> • an ability to develop appropriate processes of information gathering for a given context or use; • an ability to independently validate the sources of information, and evaluate and manage the information. <p>Producing and communicating information:</p> <ul style="list-style-type: none"> • an ability to develop and communicate one's own ideas and opinions in well-formed arguments, using appropriate academic, professional, or occupational discourse. <p>Context and systems:</p> <ul style="list-style-type: none"> • an ability to manage processes in unfamiliar and variable contexts, recognising that problem solving is context- and system-bound, and does not occur in isolation. <p>Management of learning:</p> <ul style="list-style-type: none"> • an ability to accurately identify, evaluate and address own learning needs in a self-directed manner, and facilitate collaborative learning processes. <p>Accountability:</p> <ul style="list-style-type: none"> • an ability to take full responsibility for own work, decision making and use of resources and limited accountability for the decisions and actions of others in varied or ill-defined contexts.
8	<p>Scope of knowledge:</p> <ul style="list-style-type: none"> • knowledge of and engagement in an area at the forefront of a field, discipline or practice; • an understanding of the theories, research methodologies, methods and techniques relevant to the field, discipline or practice; and an understanding of how to apply this knowledge in a particular context. <p>Knowledge literacy:</p> <ul style="list-style-type: none"> • an ability to interrogate multiple sources of knowledge in an area of specialisation, and to evaluate knowledge and processes of knowledge production. <p>Method and Procedure:</p> <ul style="list-style-type: none"> • an understanding of the complexities and uncertainties of selecting, applying or transferring appropriate standard procedures, processes or techniques to unfamiliar problems in a specialised field, discipline or practice. <p>Problem solving:</p> <ul style="list-style-type: none"> • an ability to use a range of specialised skills to identify, analyse and address complex and/or abstract problems drawing systematically on the body of knowledge and methods appropriate to a field, discipline or practice. <p>Ethics and professional practice:</p> <ul style="list-style-type: none"> • an ability to identify and address ethical issues based on critical reflection on the suitability of different ethical value systems to specific contexts. <p>Accessing, processing and managing information:</p>

	<ul style="list-style-type: none"> • an ability to critically review information gathering, evaluation and management processes in specialised contexts in order to develop creative responses to problems and issues. <p>Producing and communicating information:</p> <ul style="list-style-type: none"> • an ability to present and communicate academic, professional or occupational ideas and texts effectively to a range of audiences, offering creative insights, rigorous interpretations and solutions to problems and issues appropriate to the context. <p>Context and systems:</p> <ul style="list-style-type: none"> • an ability to operate effectively within a system, or manage the system based on an understanding of the roles and relationships between elements within the system. <p>Management of learning:</p> <ul style="list-style-type: none"> • an ability to apply in a self-critical manner learning strategies which effectively address own and others' professional and ongoing learning needs. <p>Accountability:</p> <ul style="list-style-type: none"> • an ability to take full responsibility for own work, decision making and use of resources, and full accountability for the decisions and actions of others where appropriate.
9	<p>Scope of knowledge:</p> <ul style="list-style-type: none"> • Specialist knowledge to enable engagement with and critique of current research or practices; • an advanced scholarship or research in a particular field, discipline or practice. <p>Knowledge literacy:</p> <ul style="list-style-type: none"> • an ability to evaluate current processes of knowledge production and to choose an appropriate process of enquiry for the area of study or practice. <p>Method and Procedure:</p> <ul style="list-style-type: none"> • a command of and ability to design, select and apply appropriate and creative methods, techniques, processes or technologies to complex practical and theoretical problems. <p>Problem solving:</p> <ul style="list-style-type: none"> • an ability to use a wide range of specialised skills in identifying, conceptualising, designing and implementing methods of enquiry to address complex and challenging problems within a field, discipline or practice; • an understanding of the consequences of any solutions or insights generated within a specialised context. <p>Ethics and professional practice:</p> <ul style="list-style-type: none"> • an ability to make autonomous ethical decisions which affect knowledge production, or complex organisational or professional issues, an ability to critically contribute to the development of ethical standards in a specific context. <p>Accessing, processing and managing information:</p> <ul style="list-style-type: none"> • an ability to design and implement a strategy for the processing and management of information, in order to conduct a comprehensive review of leading and current research in an area of specialisation to produce significant insights. <p>Producing and communicating information:</p> <ul style="list-style-type: none"> • an ability to use the resources of academic, professional/occupational discourses to communicate and defend substantial ideas that are the products of research or development in an area of specialisation²; • a range of advanced and specialised skills and discourses appropriate to a field/discipline/practice, to communicate to a range of audiences with different levels of knowledge/expertise. <p>Context and systems:</p> <ul style="list-style-type: none"> • an ability to make interventions at an appropriate level within a system, based on an understanding of hierarchical relations within the system, and the ability to address the intended and unintended consequences of interventions. <p>Management of learning:</p>

	<ul style="list-style-type: none"> • an ability to develop own learning strategies which sustain independent learning and academic or professional development, and can interact effectively within the learning or professional group as a means of enhancing learning. <p>Accountability:</p> <ul style="list-style-type: none"> • an ability to operate independently and take full responsibility for own work, and where appropriate accountability for leading and initiating processes and implementing systems, ensuring good resource management and governance practices.
10	<p>Scope of knowledge:</p> <ul style="list-style-type: none"> • expertise and critical knowledge in an area at the forefront of the field, discipline or practice; • the ability to conceptualise new research initiatives, and create new knowledge or practice. <p>Knowledge literacy:</p> <ul style="list-style-type: none"> • an ability to contribute to scholarly debates around theories of knowledge and processes of knowledge production in an area of study or practice. <p>Method and Procedure:</p> <ul style="list-style-type: none"> • an ability to develop new methods, techniques, processes, systems or technologies in original, creative and innovative ways appropriate to specialised and complex contexts. <p>Problem solving:</p> <ul style="list-style-type: none"> • an ability to apply specialist knowledge and theory in critically reflexive, creative and novel ways to address complex practical and theoretical problems. <p>Ethics and professional practice:</p> <ul style="list-style-type: none"> • an ability to identify, address and manage emerging ethical issues, and to advance processes of ethical decision-making, including monitoring and evaluation of the consequences of these decisions where appropriate. <p>Accessing, processing and managing information:</p> <ul style="list-style-type: none"> • an ability to make independent judgements about managing incomplete or inconsistent information or data in an iterative process of analysis and synthesis, for the development of significant original insights into new complex and abstract ideas, information or issues. <p>Producing and communicating information:</p> <ul style="list-style-type: none"> • an ability to produce substantial, independent, in-depth and publishable work which meets international standards, is considered to be new and/or innovative by peers, and makes a significant contribution to the discipline, field, or practice; • an ability to develop a communication strategy to disseminate and defend research, strategic and policy initiatives and their implementation to specialist and non-specialist audiences using the full resources of an academic/professional, or occupational discourse. <p>Context and systems:</p> <ul style="list-style-type: none"> • an understanding of theoretical underpinnings in the management of complex systems to achieve systemic change; • an ability to independently design, sustain and manage change within a system or systems. <p>Management of learning:</p> <ul style="list-style-type: none"> • an ability to demonstrate intellectual independence, research leadership and management of research and research development in a discipline, field or practice. <p>Accountability:</p> <ul style="list-style-type: none"> • an ability to operate independently and take full responsibility for own work, and where appropriate to lead, oversee and be held ultimately accountable for the overall governance of processes and systems.

Footnotes:

1. A field of knowledge, by definition, must always be larger than the specific content of the programme.
2. This includes the ability to recognize when the problem falls outside of the individual's scope of competence and who to refer it to.

3. This category refers to the capacity to act in accordance with accepted professional ethical standards. This does not preclude appropriate consideration being given towards other worldviews or viewpoints.
4. Accessing and processing information is inextricably linked with the use of information and communication technology (ICT), tools and processes. The descriptors in this category assume that ICT skills appropriate to each level are embedded in the overall competence.
5. 'Text' is meant in the broadest sense.
6. Systems refer to knowledge systems, economic, environmental and social systems. An understanding of the inter-relatedness of systems and of how actions in one area impact on others is not repeated in the level descriptors but is expected to be displayed at all levels of operation.
7. This would embrace an ability to produce a dissertation or research report which meets the standards of scholarly/professional writing/presentation, and has a life beyond the immediate context and timeframe.

**COMPETENCIES OF GP, DERMATOLOGISTS, COSMETIC/PLASTIC SURGEONS,
BEAUTY THERAPISTS AND SOMATOLOGISTS**

1. GENERAL PRACTITIONERS JOB DESCRIPTION

General practice doctors (also known as general practitioners or GPs) are the charming medical professionals that people go to when they are first seeking medical advice and treatment.

Competencies and Job description include:

- Prescribe or administer treatment, therapy, medication, vaccination, and other specialized medical care to treat or prevent illness, disease, or injury.
 - Order, perform, and interpret tests and analyze records, reports, and examination information to diagnose patients' condition.
 - Collect, record, and maintain patient information, such as medical history, reports, and examination results.
 - Monitor patients' conditions and progress and reevaluate treatments as necessary.
 - Explain procedures and discuss test results or prescribed treatments with patients.
 - Advise patients and community members concerning diet, activity, hygiene, and disease prevention.
 - Refer patients to medical specialists or other practitioners when necessary.
 - Deliver babies.
 - Coordinate work with nurses, social workers, rehabilitation therapists, pharmacists, psychologists, and other health care providers.
 - Direct and coordinate activities of nurses, students, assistants, specialists, therapists, and other medical staff.
 - Operate on patients to remove, repair, or improve functioning of diseased or injured body parts and systems.
 - Plan, implement, or administer health programs or standards in hospitals, businesses, or communities for prevention or treatment of injury or illness.
 - Train residents, medical students, and other health care professionals.
 - Prepare government or organizational reports which include birth, death, and disease statistics, workforce evaluations, or medical status of individuals.
 - Conduct research to study anatomy and develop or test medications, treatments, or procedures to prevent or control disease or injury.
- (MyPlan:online) 2016 <http://www.myplan.com/careers/family-and-general-practitioners/description-29-1062.00.html>

2. DERMATOLOGISTS JOB DESCRIPTION

Cosmetic dermatology is a subfield of dermatology that serves individuals with aesthetic concerns. Cosmetic dermatologists provide medical and surgical treatments to people with problems such as bacterial or fungal infections, aging, acne, allergic reactions, unwanted hair, benign skin growths, and uneven skin pigmentation. They need to have completed medical or osteopathy school, hold a medical license to practice, and have completed at least four years of additional training. Many also become board certified as dermatologists.

Some of the factors that damage the skin are stress, fluctuating hormone levels, too much sun exposure, unhealthy lifestyle, underlying medical conditions, and aging. Cosmetic dermatologists offer consultation, diagnosis, and treatment to patients who are interested in improving their skin condition. The procedures and services that cosmetic dermatologists use - such as Botox injections, laser hair removal, skin tightening, chemical peels, sclerotherapy, collagen fillers, and microdermabrasion - may lead to revitalized, blemish-free skin. There are also cosmetic dermatologists who specialize in areas such as hair loss, hyperhidrosis (excessive sweating), or laser tattoo removal.

Aside from performing common or specialized cosmetic procedures, cosmetic dermatologists may contribute to scientific research in hospitals and universities. They seek to find intervention for skin cancer, accelerated aging, and other skin infections by examining cellular and genetic components that may contribute to skin problems and studying molecular biology. Furthermore, their research findings aid in the development of safe, new products and technologies for skin enhancement.

(Vitacare 2016:online) <http://www.vitacare.co.za/dermatology-dermatologist-skin-doctor-in-south-africa/>

3. PLASTIC/COSMETIC SURGEON JOB DESCRIPTION

People suffering from injuries, birth defects, and other genetic deformities, or improperly developed bone structure, go to plastic surgeons for help. Often, reconstruction of facial features is involved. Surgery also reshapes or corrects hands, feet, ears, torso, and other exterior body parts. These operations may be needed to improve a patient's bodily functions or appearance.

Skin grafts, the transplanting of tissue, are one of the common procedures. Skin may be transferred to a damaged area from another part of the body, or from a donor. Other types of operations include collagen injections, rhinoplasties, and chemical peels. Plastic surgeons perform face lifts, tummy tucks, and breast enhancements and reductions. More complex procedures entail sexual reassignment (commonly known as a sex change) and contracture surgery (drawing together muscle or scar tissue to correct a deformity).

The responsibilities of a plastic surgeon include:

- Meet with a patient to learn complaints, symptoms, needs and desires, and medical history;
- Diagnose the problem, suggest a medical procedure to correct it, and explain the benefits and risks;
- Schedule the operation and line up the necessary nurses, anesthesiologists, assistants, specialists, or other medical professionals who are needed;
- Perform procedures to improve the patient's appearance, repair damaged tissues, or correct deformities;
- Meet with the patient following the surgery and make post-operative recommendations;
- If maintaining a private office, hire and supervise administrative and medical staff, and oversee finances; and
- Receive continuing education, read medical manuals, and attend conferences.

(HCSW:online) <http://www.healthcaresalaryworld.com/plastic-surgeon-job-description/>

4. BEAUTY THERAPISTS

For most beauty therapists based in salons and spas job duties will involve some front of house duties such as booking appointments and managing phone calls. The ability to up sell beauty products are also an important part of a beauty therapist job as common commission and bonus schemes offer an excellent additional incentive to beauty therapists.

A beauty therapist's main role is carrying out treatments that enhance the appearance and confidence levels of a client as well as improving their general well-being and relieving stress levels. New procedures, treatments and areas of specialism surface regularly but the most common areas and tasks involved in beauty therapy jobs include:

- Hair removal: Both temporary and permanent forms of hair removal are now common place in most beauty salons, from sugaring and waxing to more advances electrolysis procedures.
- Massage: Massage can cover the whole body, head, neck, shoulders or full body. There are also options to specialise in specific types including shiatsu, Thai and holistic or aromatherapy.
- Manicures and pedicures: A full range of nail treatments will be carried out. Nail extensions and the application of nail art are very common procedures among beauty therapists.
- Tanning treatments: With an increased public awareness of sun damage the method of applying tanning treatments is now also a very common procedure in many beauty salons.

- Eye lash and eye brow services: These treatments include tasks such as eye brow tinting, eyebrow shaping, threading and even eyelash perming.
- Specialist treatments: Beauty therapists will often require advanced training to carry out specialist treatments but will certainly add a string to your bow. Duties can include electrolysis and laser therapy.

(Salon Job Seeker:online) <http://www.salonjobseeker.com/Beauty-therapist-job-description>

5. SOMATOLOGISTS

The training serves as a guide for highlighting the scope of practice of somatologists, as suggested:

YEAR 1

Soma Techniques I - Practical en Theory : Basic skincare, dermatology and make-up

Body Therapy I - Practical en Theory : Body analysis, massage, waxing and manicure

Anatomy and Physiology : Basic systems of the body, muscles and skeletal system

Chemistry en Physics : Energy, matter en electricity

Marketing and Sales techniques : Marketing, promotions and sales

Psychology : Motivation, emotions and personality

Nutrition : Metabolism, meal planning and basic elements

YEAR 2

Soma Techniques II - Practical en Theory : Specialised skincare, aging skin and acne

Body Therapy II - Practical en Theory : Specialised body treatments, slimming and heat therapy

Anatomy and Physiology : Lymphatic system, digestive system

Chemistry and Physics : Ingredients and composition of foods

Marketing and Sales techniques : Business plan, layout and location of salon

Psychology : Memory, psychological problems and therapy

Nutrition : Links between diet and disease

YEAR 3

Soma Techniques III - Practical en Theory : (Aromatherapy, Reflexology, Bridal make-up, photography make-up and permanent make-up)

Spa Therapy : Spa management and spa treatments

Anatomy and Physiology : Specialized massage and exercises

Chemistry and Physics : Laser therapy, chemical peel and micro needling

Nutrition : Holistic approach on health

(<http://www.ca.ac.za/modules/courses/print.php?id=13&lang=eng>)

Further notes:

- Somatology – a Holistic Science

Somatologists continue to practice beauty therapies, the field of study is far wider and more complex, as one would expect from an ever-advancing scientific field. Somatology encompasses more than pure science too, since its approach is holistic, a concept that was previously thought to fall outside the scope of science.

Somatology addresses the client's overall health, well-being and appearance in a holistic manner, since true aesthetic beauty is reliant on every facet of the body being in top condition and optimal balance, both that which is visible and that which underlies or underscores appearance.

- A Profession

Most importantly, a somatologist does not simply perform the job of a beauty therapist. Somatology is a recognised profession and a highly specialised career field for which one requires several years of intensive study and training in order to qualify and treat clients professionally and with confidence.

(<http://www.isacarstens.co.za/articles/what-is-the-study-of-somatology/>)

COMPETENCIES OF NURSES

<i>Government Notice No. R. 2598</i>	<i>30 November 1984</i>
<i>as amended by</i>	
<i>No. R. 1469</i>	<i>10 July 1987</i>
<i>No. R. 2676</i>	<i>16 November 1990</i>
<i>No. R. 260</i>	<i>15 February 1991</i>

South African Nursing Council
Regulations Relating to the Scope of Practice of Persons Who are Registered or Enrolled under the
Nursing Act, 1978

The Minister of Health and Welfare has, on the recommendation of the South African Nursing Council, in terms of Section 45(1)(q) of the Nursing Act, 1978 (Act 50 of 1978), made the regulations as set out in the Schedule hereto.

SCHEDULE**CHAPTER 1 – DEFINITIONS**

1. In these regulations "the Act" shall mean the Nursing Act, 1978 (Act 50 of 1978), and any expression to which a meaning has been assigned in the Act, shall bear such meaning and, unless the context otherwise indicates-

"child" shall include the unborn child;

"co-ordination" shall mean the bringing together of the acts of members of the health team to meet the spectrum of identified health needs of an individual or a group;

"diagnosing" shall mean the identification of, and discriminating between physical, psychological and social signs and symptoms in man;

"health needs" shall mean those signs, symptoms and processes which denote the individual's interaction with any actual or potential health problem and which require nursing intervention;

"midwifery regimen" shall mean the regulation and implementation of those matters which through midwifery intervention, have an influence on the course and management of pregnancy, all stages of labour and the puerperium and includes the provision of care plans, their implementation and evaluation and the recording of the course of pregnancy, labour and puerperium and of any health problem and the care received by the mother and child whilst in the charge of the midwife;

"nursing regimen" shall mean the regulation of those matters which, through nursing intervention have an influence on the preventive, promotive, curative or rehabilitative aspects of health care and includes the provision of nursing care plans, their implementation and evaluation thereof and recording of the course of the health problem, the health care received by a patient and its outcome whilst a patient is in the charge of the nurse;

"prescribing" shall mean giving the written directions regarding those treating, nursing care, co-ordinating, collaborating and patient advocacy functions essential to the effective execution and management of the nursing regimen;

"registered person" shall mean a person who is registered as a nurse or as a midwife in terms of the Act or as a medical practitioner or dentist in terms of the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act 56 of 1974);

"treatment" shall mean selection and performance of those therapeutic measures essential to the effective execution and management of the nursing regimen.

CHAPTER 2 - THE SCOPE OF PRACTICE OF REGISTERED NURSES

2. The scope of practice of a registered nurse shall entail the following acts or procedures, which may be performed by scientifically based physical, chemical, psychological, social, educational and technological means applicable to health care practice:

- a. The diagnosing of a health need and the prescribing, provision and execution of a nursing regimen to meet the need of a patient or group of patients or, where necessary, by referral to a registered person;
- b. the execution of a program of treatment or medication prescribed by a registered person for a patient;
- c. the treatment and care of and the administration of medicine to a patient, including the monitoring of the patient's vital signs and of his reaction to disease conditions, trauma, stress, anxiety, medication and treatment;
- d. the prevention of disease and promotion of health and family planning by teaching to and counselling with individuals and groups of persons;
- e. the prescribing, promotion or maintenance of hygiene, physical comfort and re-assurance of the patient;
- f. the promotion of exercise, rest and sleep with a view to healing and rehabilitation of a patient;
- g. the facilitation of body mechanics and the prevention of bodily deformities in a patient in the execution of the nursing regimen;
- h. the supervision over and maintenance of a supply of oxygen to a patient;
- i. the supervision over and maintenance of fluid, electrolyte and acid base balance of a patient;
- j. the facilitation of the healing of wounds and fractures, the protection of the skin and the maintenance of sensory functions in a patient;
- k. the facilitation of the maintenance of bodily regulatory mechanisms and functions in a patient;
- l. the facilitation of the maintenance of nutrition of a patient;
- m. the supervision over and maintenance of elimination by a patient;
- n. the facilitation of communication by and with a patient in the execution of the nursing regimen;
- o. the facilitation of the attainment of optimum health for the individual, the family, groups and the community in the execution of the nursing regimen;
- p. the establishment and maintenance, in the execution of the nursing regimen, of an environment in which the physical and mental health of a patient is promoted;
- q. preparation for and assistance with operative, diagnostic and therapeutic acts for the patient;
- r. the co-ordination of the health care regimens provided for the patient by other categories of health personnel;
- s. the provision of effective patient advocacy to enable the patient to obtain the health care he needs;
- t. care of the dying patient and the care of a recently deceased patient within the execution of the nursing regimen.

CHAPTER 3 - THE SCOPE OF PRACTICE OF A REGISTERED MIDWIFE

3. The scope of practice of a registered midwife shall entail the following scientifically based acts or procedures which apply to the practice of midwifery and which relate to the mother and child in the course of pregnancy, labour and the puerperium:
 - a. the diagnosing of a health need and the facilitation of the attainment of optimum physical and mental health for the mother and child by the prescribing, provision and execution of a midwifery regimen or, where necessary, referral to a registered person or by obtaining the assistance of a registered person, as the case may be;
 - b. the execution of a programme of treatment or medication prescribed by a registered person;
 - c. the prevention of disease relating to pregnancy, labour and the puerperium and the promotion of health and family planning by teaching and counselling individuals, families and groups of persons, by implementation of family planning skills and by monitoring the health status of the mother and child;
 - d. the monitoring of-
 - i. the progress of pregnancy, labour and the puerperium;
 - ii. the vital signs of the mother and child;
 - iii. the reaction of the mother and child to disease conditions, trauma, stress, anxiety, medication and treatment;
 - e. the prevention of complications relating to pregnancy, labour and the puerperium including:
 - f. the performance of an episiotomy;
 - g. the suturing of first and second degree tears or an episiotomy;
 - h. the administration of a local anaesthetic;

- i. the administration of medicine to the mother or child;
- j. the prescribing, promotion or maintenance of hygiene, physical comfort and reassurance of the mother and child;
- k. the promotion of exercise, including ante-natal and post-natal exercises, rest and sleep;
- l. the facilitation of body mechanics and the prevention of bodily deformities in the execution of the midwifery regimen;
- m. the supervision over and maintenance of a supply of oxygen to the mother and child;
- n. the supervision over and maintenance of fluid, electrolyte and acid base balance of the mother and child;
- o. the facilitation of the healing of wounds, the protection of the skin and the maintenance of sensory functions in the mother and child;
- p. the facilitation of the maintenance of bodily regulatory mechanisms and functions in the mother and child;
- q. the facilitation, maintenance and, where necessary, the improvement of the nutritional status of the mother and child;
- r. the promotion of breastfeeding;
- s. the supervision over and maintenance of elimination by the mother and child;
- t. the facilitation of communication by and with the mother and father or family in the execution of the midwifery regimen;
- u. the establishment and maintenance, in the execution of the midwifery regimen, of an environment in which the physical and mental health of mother and child is promoted;
- v. preparation for and assistance with operative, diagnostic and therapeutic acts for the mother and child;
- w. the co-ordination of the health care regimens provided for the mother and child by other categories of health personnel;
- x. the provision of effective advocacy to enable the mother and child to obtain the health care they need;
- y. care of the dying patient and a recently deceased patient within the execution of the midwifery regimen.

CHAPTER 4 - THE SCOPE OF PRACTICE OF ENROLLED MIDWIVES

- 4. The scope of practice of an enrolled midwife shall entail the following acts or procedures which apply to the practice of midwifery:
 - a. The identification of a health need and the promotion of the health of the mother and child by means of examination and advice during, and supervision over and handling of, normal pregnancy, uncomplicated labour and normal puerperium;
 - b. the promotion or maintenance of hygiene and physical comfort and the reassurance of the mother and child;
 - c. the promotion of exercise, rest and sleep;
 - d. the control, promotion and maintenance of the following in the mother and child:
 - e. Respiratory functions;
 - i. intake and output functions;
 - ii. blood pressure, temperature, pulse rate and foetal heart;
 - f. the promotion, maintenance and improvement of the nutritional status of the mother and child;
 - g. the promotion of breastfeeding;
 - h. the provision of information on health and family planning;
 - i. the care of a dying patient, a recently deceased patient and a stillborn infant.

CHAPTER 5: THE SCOPE OF PRACTICE OF ENROLLED NURSES

- 5. The scope of practice of an enrolled nurse shall entail the following acts and procedures as part of the nursing regimen planned and initiated by a registered nurse or registered midwife and carried out under his direct or indirect supervision:
 - a. The carrying out of nursing care to fulfil the health needs of a patient or a group of patients;
 - b. caring for a patient, and executing a nursing care plan for a patient, including the monitoring of vital signs and the observation of reactions to medication and treatment;

- c. the prevention of disease and the promotion of health and family planning by means of information to individuals and groups;
- d. the promotion and maintenance of the hygiene, physical comfort and reassurance of a patient;
- e. the promotion and maintenance of exercise, rest and sleep with a view to the healing and rehabilitation of a patient;
- f. the prevention of physical deformity and other complications in a patient;
- g. the supervision over and maintenance of a supply of oxygen to a patient;
- h. the supervision over and maintenance of the fluid balance of a patient;
- i. the promotion of the healing of wounds and fractures, the protection of the skin and the maintenance of sensory functions in a patient;
- j. the promotion and maintenance of the body regulatory mechanisms and functions in a patient;
- k. the feeding of a patient;
- l. the promotion and maintenance of elimination in a patient;
- m. the promotion of communication by and with a patient in the execution of nursing care;
- n. the promotion of the attainment of optimal health in the individual, the family, groups and the community;
- o. the promotion and maintenance of an environment in which the physical and mental health of a patient are promoted;
- p. preparation for and assistance with diagnostic and therapeutic acts by a registered person;
- q. preparation for and assistance with surgical procedures and anaesthetic;
- r. care of a dying patient and a recently deceased patient.

CHAPTER 6: THE SCOPE OF PRACTICE OF ENROLLED NURSING ASSISTANTS

- 6. The scope of practice of an enrolled nursing assistant shall entail the following acts and procedures as part of the nursing regimen planned and initiated by a registered nurse or registered midwife and carried out under his direct or indirect supervision:
 - a. The promotion and maintenance of the health of a patient, a family and a community;
 - b. the provision of health and family planning information to individuals and groups;
 - c. the care of a patient and the execution of a nursing care plan for a patient;
 - d. the promotion and maintenance of the hygiene of a patient, a family and a community;
 - e. the promotion and maintenance of the physical comfort, rest, sleep, exercise and reassurance of a patient;
 - f. the prevention of physical deformity and other complications in a patient;
 - g. the supervision over and maintenance of a supply of oxygen to a patient;
 - h. the taking of the blood pressure, temperature, pulse and respiration of a patient;
 - i. the promotion and maintenance of the body regulatory functions of a patient;
 - j. the promotion of the nutrition of a patient, a family and a community;
 - k. the maintenance of intake and elimination in a patient;
 - l. the promotion of communication with a patient during his care;
 - m. the preparation of individuals and groups for the execution of diagnostic procedures and therapeutic acts by a registered person;
 - n. the preparation for and assistance during surgical procedures under anaesthetic;
 - o. the care of a dying patient and a recently deceased patient.

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REQUEST TO PARTICIPATE IN THE RESEARCH

University of Johannesburg
Cnr.Siemert and Beit Street
Doornfontein Campus
P.O. Box 17011
2028

Dear potential participant,

My name is Valencia Khumalo from the University of Johannesburg, department of Somatology. I am currently registered as a Doctoral student at the University of Free State under the supervision of Dr Johan Bezuidenhout and co-supervision of Dr Craig Lambert and Prof. Werner Sinclair. I will be conducting questionnaires as part of my research (data collection), which will explore the knowledge, competencies and skills of medical aesthetics in South Africa. I would like to invite you to participate in this study. The aim of the study is to develop guidelines of knowledge, skills and competencies required by professional MA practitioners in the South African context. The study seeks to add value in the practice and implementation of MA in South Africa chiefly by gathering and analysing data from other countries (e.g. USA and Brazil) where MA is well developed.

There will be no risks or discomfort to you in filling in the questionnaire. The questionnaires will be conducted in an atmosphere of utmost privacy to you, without any disturbances; the questionnaire can also be filled in in the comfort of your own space.

I hereby request your permission for your participation. The data will be used by the researcher, supervisor(s), and independent coder. The questionnaires will be kept under lock and key for an estimate of five years after publication of the research results. Thereafter it will be destroyed.

The participants' names, or any information that would identify them, will not appear on the notes or on transcripts, in order to maintain confidentiality. Your identity as the participant will not be revealed when the study is reported or published. Participants have the right to autonomy and can withdraw at any stage from the research process should the need arise. The findings of the study will be made available in a published article. The research proposal was approved by the Free State University, Faculty of Health Sciences: Ethics Committee.

Your participation in this study is completely voluntary. Should questions arise with regard to the study, please do not hesitate to contact me (Valencia Khumalo). You can reach me at work on (011) 559 6464/6514. Alternatively, you can contact me on my cell phone number 082 424 2508 or email: vkhumalo@uj.ac.za.

Ms Valencia Khumalo
(082 424 2508)

Date

Dr Johan Bezuidenhout
(082 202 4298)

Date

Dr C.Vincent-Lambert

Date

QUESTIONNAIRE TO THE VARIOUS PROFESSIONALS

Dear Participant

This email serves as a reminder to please take time to complete the survey mentioned below.

Dear Participant

You have been identified as an important person to participate in this study on developing a stratified competency based learning programme for medical aesthetics in South Africa. The purpose of this feedback is to gain your perspective regarding the different aspects involved within medical aesthetics.

Below is a link to the online questionnaire. Your responses will be kept entirely confidential. The questionnaire is web-based and is conducted by an independent vendor. Your personal details will not be published or attached to any findings, to further guarantee your anonymity we will not report any results that have less than three respondents. The survey is user-friendly and you should be able to complete it within 15-20 minutes or less.

We appreciate your participation in advance and value your responses. Our hope is this process will help develop a stratified competency based learning programme for medical aesthetics in South Africa, in order to grow and lay a foundation for medical aesthetics in the world of academia.

If you have any questions, please contact the researcher at vkhumalo@uj.ac.za.

To begin, please click the survey link below:

[DIRECT_ONLINE_LINK]

Mark as shown: Please use a ball-point pen or a thin felt tip. This form will be processed automatically.
 Correction: Please follow the examples shown on the left hand side to help optimize the reading results.

1. Section A - Biographical Information

This section of the questionnaire refers to biographical information

- 1.1 Gender
 Male Female
- 1.2 Age
 19-29 30-40 41-51
 51-60 Older
- 1.3 Your highest qualification
 Grade 11 or lower (std.9 or lower) Post-Matric Diploma or certificate Grade 12 (Matric, Std 10)
 Baccalaureate Degree(s) Other
- 1.4 If you answered 'other' to number 1.3 please specify
- 1.5 What is your qualification?
 Somatologist Plastic Surgeon General Practitioner
 Nurse Dermatologist Beauty Therapist
 Other
- 1.6 If you answered 'other' to number 1.5 please specify
- 1.7 How many years experience do you have in your area of qualification?
 0-2 years 3-5 years 6-more years
- 1.8 How many years experience do you have in Medical Aesthetics?
 0-2 years 3-5 years 6-more years

2. Section B: Educational course content for Medical Aesthetics

	Essential	Useful	Not needed
2.1 How important is the knowledge of diagnostic tools within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 How important is the knowledge of adverse effects of medical aesthetics procedures within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 How important is the knowledge of conducting aesthetic consultation within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4 How important is the knowledge of pharmacology within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5 How important is the knowledge of infection control within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6 How important is the knowledge of advanced cosmetic chemistry within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7 How important is the knowledge of an aesthetic treatment plan within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8 How important is the knowledge of business skills and professional development within medical aesthetics education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



2. Section B: Educational course content for Medical Aesthetics [Continue]

- | | | | | |
|------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|
| 2.9 | How important is the knowledge of the differences between ethnic/dark skin and white/caucasian skin within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.10 | How important is the knowledge of the techniques used to manage complications within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.11 | How important is the knowledge of psychology within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.12 | How important is the knowledge of Botulinum Toxin within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.13 | How important is the knowledge of lasers and energy based devices within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.14 | How important is the knowledge of peeling agents within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.15 | How important is the knowledge of face and body contouring techniques within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.16 | How important is the knowledge of anatomy of the skin within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.17 | How important is the knowledge of the physiology of the skin within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.18 | How important is the knowledge of basic pathology within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.19 | How important is the knowledge of fillers within medical aesthetics education? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.20 | Please feel free to make comments and additions relating to this section (B) | | | |

3. Section C: The practice of treatment interventions within Medical Aesthetics

This section seeks to determine which professionals perform certain treatment interventions within Medical Aesthetics.

Select the particular profession(s) for the relevant treatment interventions:

- | | | | | |
|-----|---------------------------|-----------------------------------------|------------------------------------------------|----------------------------------------------------|
| 3.1 | Chemical Peels | <input type="checkbox"/> Somatologist | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.2 | Microderm abrasion | <input type="checkbox"/> Somatologist | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.3 | Botulinum toxin/Botox | <input type="checkbox"/> Somatologist | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologist | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.4 | Hyaluronic acid wrinkle | <input type="checkbox"/> Somatologist | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.5 | Synthetic wrinkle fillers | <input type="checkbox"/> Somatologist | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.6 | Collagen wrinkle fillers | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |



3. Section C: The practice of treatment interventions within Medical Aesthetics [Continue]

- | | | | | |
|------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|-----------------------------------------------------|
| 3.7 | Autologous wrinkle fillers | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.8 | Calcium based fillers | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.9 | Artefill fillers | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.10 | Silicon fillers | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.11 | Poly-L-lactic acid (filler for the correction of facial lipoatrophy in patients infected with human immune deficiency virus) | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.12 | Titan (a non-surgical skin tightening treatment using infrared light to heat the dermis) | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.13 | Pulsed Dye lases (PDL) | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.14 | Thermage lasers | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetics Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.15 | Carbon dioxide lasers(CO2) | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.16 | Cryotherapy rejuvenation | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.17 | Cry-Meso Peel | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.18 | Liposuction | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.19 | Abdominoplasty | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.20 | Blefaroplasty | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.21 | Rhinoplasty | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practioners | <input type="checkbox"/> Plastic/cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.22 | Breast augmentation | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.23 | Breast reduction | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.24 | Surgical face lift | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |



3. Section C: The practice of treatment interventions within Medical Aesthetics [Continue]

- | | | | |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|-----------------------------------------------------|
| 3.25 Autologous fat transfer as filler | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.26 Surgical hair transplant | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetics surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.27 Fraxel laser treatments | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.28 Photodynamic therapy | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.29 Acne Phototherapy | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.30 I-Pixel laser | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.31 Varicose vein sclerotherapy | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.32 Infrared Therapy | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty therapists | <input type="checkbox"/> Nurses |
| 3.33 Ultrasound imaging/Sonography (Use of high-frequency sound waves to view soft tissues, it uses small transducer | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.34 Intensend pulsed light therapy | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.35 Nd: YAG lasers | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.36 Laser hair removal | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.37 Alexandrite laser | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.38 LED photography | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.39 Micro-needling | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.40 Lipolysis | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.41 Mesotherapy | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 3.42 Tripolar Radio Frequency | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |



3. Section C: The practice of treatment interventions within Medical Aesthetics [Continue]

- 3.43 Medical tattooing
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.44 Permanent make up
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.45 Thermotherapy
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.46 Ultrasound therapy (use of a machine that makes high frequency sound waves and used for therapeutic purposes)
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.47 Radio frequency therapy
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.48 Thread lift
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.49 Vein cautery
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.50 Camouflage therapy
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.51 Electrolysis
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 3.52 Please feel free to make comments or give additions to this section(C)

4. Section D: Skin Conditions

This section seeks to determine which skin conditions should be treated by which professions

Please select the particular profession(s) for the relevant treatment interventions:

- 4.1 Acne
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 4.2 Photoaging
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 4.3 Striae distensae
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 4.4 Blepharochalasia
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 4.5 Sagging skin
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses
- 4.6 Keloids
 Somatologists General Practitioners Plastic/Cosmetic Surgeons
 Dermatologists Beauty Therapists Nurses



4. Section D: Skin Conditions [Continue]

- | | | | |
|-----------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|----------------------------------------------------|
| 4.7 Melasma | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.8 Rosacea | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.9 Atopic Skin | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.10 Vitiligo | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.11 Actinic(Solar) keratosis | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.12 Seborrhea | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.13 Premature aging | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.14 Excessive hair growth | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.15 Cellulite | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.16 Scars (variation) | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.17 Varicose veins | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.18 Telangiectasia | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.19 Ingrown hair | <input type="checkbox"/> Somatologists | <input type="checkbox"/> General Practitioners | <input type="checkbox"/> Plastic/Cosmetic Surgeons |
| | <input type="checkbox"/> Dermatologists | <input type="checkbox"/> Beauty Therapists | <input type="checkbox"/> Nurses |
| 4.20 Please feel free to make comments or give additions to this section(D) | | | |

Thank you for completing the questionnaire



 UFS EvaSys Procedure | February 2014

Using EvaSys

1. Purpose of this document

The purpose of this document is to provide an outline for the process of using the Directorate for Institutional Research and Academic Planning's (DIRAP's) EvaSys survey software. This document includes information about:

- the EvaSys system;
- DIRAP's EvaSys office;
- the process of using EvaSys;
- services that the EvaSys office provides; and
- the costs involved in using EvaSys.

2. About EvaSys

EvaSys is a web-based survey program for creating and distributing surveys. A questionnaire is developed on EvaSys after which a survey is created linking a questionnaire to its respondents.

There are three possible methods to use for the distribution of the questionnaire, namely, the hard copy method, the email method, and the single password method (see Box 1). When using the latter two methods, respondents complete questionnaires online.

EvaSys processes responses to online surveys automatically and no further data capturing needs to be done by the person who is running the survey. Completed hard copy questionnaires are scanned at the EvaSys scan station which means that the responses are also automatically captured with no further manual data capturing necessary.

The results of the survey are available immediately after a response has been submitted by a respondent to an online survey and immediately after a completed hard copy questionnaire has been scanned. The results can be exported in PDF, Excel and SPSS format.

3. DIRAP's EvaSys office

The EvaSys office is a sub-division of the Monitoring and Institutional Research (MIR) unit of DIRAP. All EvaSys-related enquiries are managed by this office.

EvaSys is mainly used by DIRAP to conduct module evaluations across departments and faculties at February 2014

the UFS. The module evaluation project was piloted in 2013 and continues to expand.

EvaSys has also been used to distribute and collect surveys for various users external to DIRAP, including UFS staff members and postgraduate students. Both the academic departments (e.g. the Department of Computer Science and Informatics, and the Department of Dietetics) and the support service divisions (e.g. the Centre for Teaching and Learning, Human Resources and the Finance division) have used EvaSys to conduct *ad hoc* surveys. In these cases the EvaSys office provided training to at least one staff member to teach him/her how to create the online questionnaire and how to extract data from the system. The EvaSys office assists in distributing questionnaires and provides limited technical support.

BOX 1: EvaSys Survey Collection Methods

Email method

An email is sent to each respondent containing a link to access the questionnaire. The respondent clicks on the link to access and complete the survey. Results are immediately available on EvaSys once a respondent submits a questionnaire. It is possible for a respondent to partly complete a questionnaire and temporarily save it. The questionnaire can then be accessed again by clicking on the link in the email. Once a questionnaire has been submitted, however, the link will no longer work. The EvaSys office cannot obtain email addresses of UFS staff or students; the user is responsible for obtaining addresses of respondents for a survey.

Single password method

In order to complete the survey a respondent must go to a web address using the URL supplied and enter a password. The user creates the password and is responsible for making the link and password available to the respondents of the survey. The EvaSys office cannot place the link and password for a survey on Blackboard or a website.

Hard copy surveys

The user downloads the questionnaire in PDF format and is responsible for the printing and distribution of questionnaires. The user is also responsible for the booking of the EvaSys scanner and for scanning the completed questionnaires (see costs for information on the costs of using the EvaSys scanner).

4. Using EvaSys

Students who are enrolled for a Master's or PhD degree at the UFS as well as academic and non-academic UFS staff members may use EvaSys for research related to their work/studies at the university.

Figure 1 provides an overview of the workflow involved in the EvaSys process.

The process begins when the student/staff member (hereon referred to as the user) approaches the EvaSys office to make an appointment with an EvaSys officer. The user will be asked to forward the proposed questionnaire, if available, to the EvaSys officer.

The first appointment constitutes the initial consultation between the user and the EvaSys office. The EvaSys officer will explain how the system works and how to use the system.

To ensure research quality and ethical conduct, the user must provide the following required documents to the EvaSys officer:

- A research proposal, approved by the study supervisor in the case of a Master's or PhD student, or by the head of department/departmental chair or equivalent line manager in the case of a staff member.
- Proof of ethical clearance from a relevant academic department or faculty (including informed consent from intended respondents where relevant).
- A questionnaire which has been approved as part of the ethical clearance process.
- A list in Excel format of the email addresses of respondents if the email method of questionnaire distribution is to be used.

Once all the required documentation has been received the EvaSys officer will schedule a second appointment with the user. During this appointment the user and EvaSys officer will confirm the methods to be used to create the questionnaire on the EvaSys system, to distribute the questionnaire, to collect responses, and to extract the survey results from the system. They will also agree on the timeframe for the survey and the estimated costs. All of this will be captured in an EvaSys Project Agreement to be signed by both the user and the EvaSys officer.

Once agreement has been reached, the EvaSys officer will provide the user with an EvaSys user

manual as well as a username and password to access the system.

In cases where the user will themselves create the questionnaire on the system, the EvaSys Officer will give a brief training session to the user. The user will then create the questionnaire and the EvaSys officer will email a test questionnaire to the user as per the agreed timeframe. Should any changes be required, the user will make these changes.

Alternatively, the EvaSys officer will create the questionnaire on the system and email the test questionnaire to the user for approval as per the agreed timeframe. Should any changes be required, the user will email the details of such changes to the EvaSys officer.

Once the specified changes to the questionnaires have been made, the EvaSys Officer will email the corrected questionnaire to the user. This step is repeated until the user confirms in writing via email that the questionnaire is ready to be distributed to respondents.

In the case of an online survey using the email collection method (see Box 1), the EvaSys officer will open the online survey collector and distribute the questionnaire via email. The user can access the results of the survey when the survey collector is open in cases where users created their own questionnaires. Reminders can be sent to non-responders at any time by the EvaSys officer on request from the user, irrespective of whether the user or the EvaSys officer created the questionnaire.

In cases where the single password collection method is used (see Box 1), the user distributes the URL of the link to the online questionnaire once the EvaSys officer has opened the survey collector. The user also sends reminders as s/he sees fit.

The EvaSys officer will close the survey collector on the agreed upon date, unless the user notifies the EvaSys officer that the collection period should be extended.

In cases where users created their own questionnaires, the user can access the results of a survey on the system irrespective of whether the collector is open (i.e. preliminary results) or closed (i.e. final results). In cases where the EvaSys officer created the questionnaire, the EvaSys Officer will send the final survey results to the user in PDF, Excel or SPSS format as has been agreed.

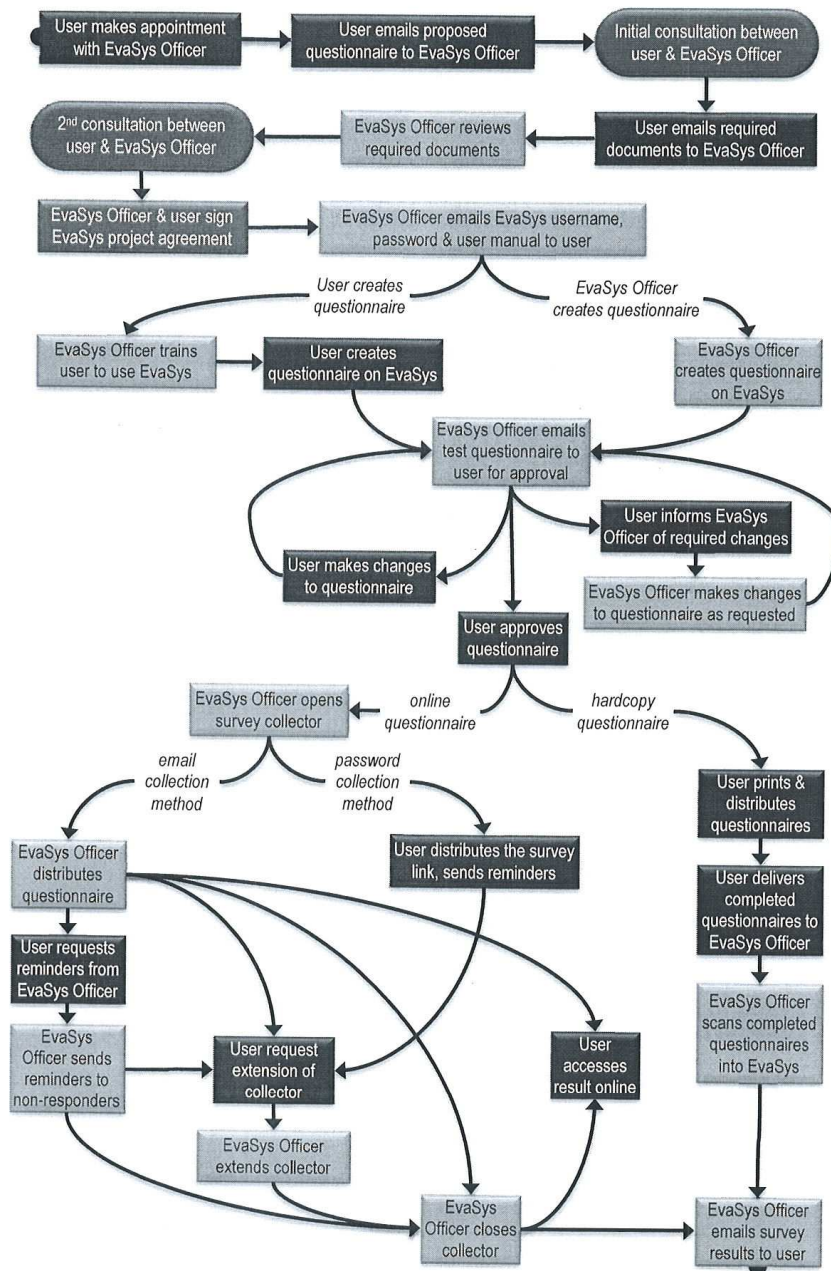


FIGURE 1: If/then Diagram of EvaSys Process

5. Services and costs

The costs of institutional software licences are usually carried by the Information and Communication Technology (ICT) division. However, the EvaSys software was acquired by DIRAP for institutional research that is conducted by the directorate and the licensing costs are therefore carried by DIRAP.

To allow DIRAP to make the software available to researchers outside the directorate, DIRAP must employ a dedicated EvaSys officer. To carry the cost of this officer DIRAP will charge a consultation fee as well as additional service fees depending on the nature of the agreement between the EvaSys office and the user.

5.1. Project types

The EvaSys Office will offer three types of projects as follows:

A Service Project is limited to one (1) questionnaire per project and includes the following services:

- Use of EvaSys software;
- one (1) consultation hour;
- an electronic user manual;
- sending a test questionnaire to the user;
- opening and closing a survey collector;
- distribution of questionnaires and sending reminders where the email collection method is used;
- one (1) technical support hour;
- loading of the questionnaire on to EvaSys;
- extracting the final survey results; and
- emailing results, response rate and a method summary to the user.

A DIY Project is limited to one (1) questionnaire per project and includes the following services:

- Use of EvaSys software;
- one (1) consultation hour;
- an electronic user manual;
- sending a test questionnaire to the user;
- opening and closing a survey collector;
- distribution of questionnaires and sending reminders where the email collection method is used;
- one (1) technical support hour; and
- one (1) training session lasting one (1) hour for up to two (2) users

An Annual Subscription project is available only to internal users (i.e. academic and support service departments of the UFS). The subscription is

limited to five (5) DIY Projects per year and includes the following services:

- Use of EvaSys software;
- five (5) consultation hours;
- unlimited electronic user manuals;
- sending test questionnaires to user;
- opening and closing survey collectors;
- distribution of questionnaires and sending reminders where the email collection method is used;
- five (5) technical support hours; and
- one (1) training session lasting one (1) hour for up to ten (10) users.

The EvaSys office can also provide the following additional services/products at an additional cost:

- Scanning completed hard copy questionnaires into EvaSys;
- technical support beyond service hours included in project fees; and
- hard copy user manuals.

The EvaSys Officer cannot print hard copy questionnaires, collect responses using hard copy questionnaires, or analyse results.

5.2. Costs as of 1 February 2014

Service/ product	Rate	
	Internal users	External users
• Service Project	R970 per project	R1 160 per project
• DIY Project	R550 per project	R745 per project
• Annual Subscription	R2 350 per year	N/A
• Hard copy scanning	R120 per hour	R180 per hour
• Additional technical support	R300 per hour	R450 per hour
• Hard copy user manual	R50 per manual	R85 per manual

Internal users are those users who pay via journal transfer from an existing UFS financial entity number to the EvaSys entity number. All other users are considered external users.

Irrespective of which services a user utilises, fees per project type remain constant. For example, should a user select a DIY Project but not require training or technical support, the cost associated with the project is still R550 for internal users or R745 for external users.

Services will be invoiced for payment and 50% of the total estimated cost must be paid prior to the start of the project. The remainder of actual costs will be due within 30 days after completion of the project.

All costs associated with the printing of hard copy questionnaires, the collection of responses using hard copy questionnaires, and the analysis/interpretation and writing up of results must be covered by the user.

RESEARCH DEVELOPMENT
07 -02- 2014
UNIVERSITY OF THE FREE STATE

Document approved by:  ----- Dr Lis Lange Senior Director: DRAP
 ----- Dr Glen Taylor Senior Director: DRD
Contact: Enna Moroeroe or Anneri Meintjes T: 051 401 2432 or 051 401 9082 E: MoroeroeEM@ufs.ac.za or MeintjesA@ufs.ac.za

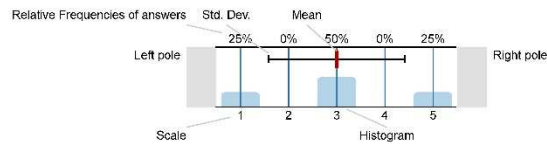
SUMMARY OF QUESTIONNAIRE RESULTS

Stratified competency based learning programme for Medical Aesthetics in South Africa

Stratified competency based learning programme for Medical Aesthetics in South Africa 

Legend

Question text



n=No. of responses
av.=Mean
dev.=Std. Dev.
ab.=Abstention

1. Section A - Biographical Information

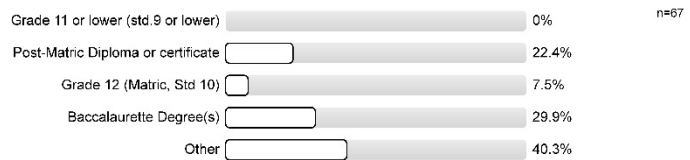
1.1) Gender



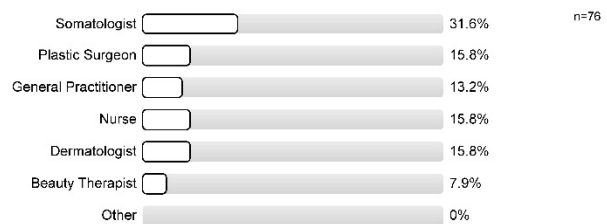
1.2) Age



1.3) Your highest qualification



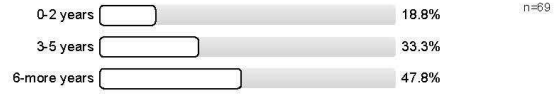
1.5) What is your qualification?



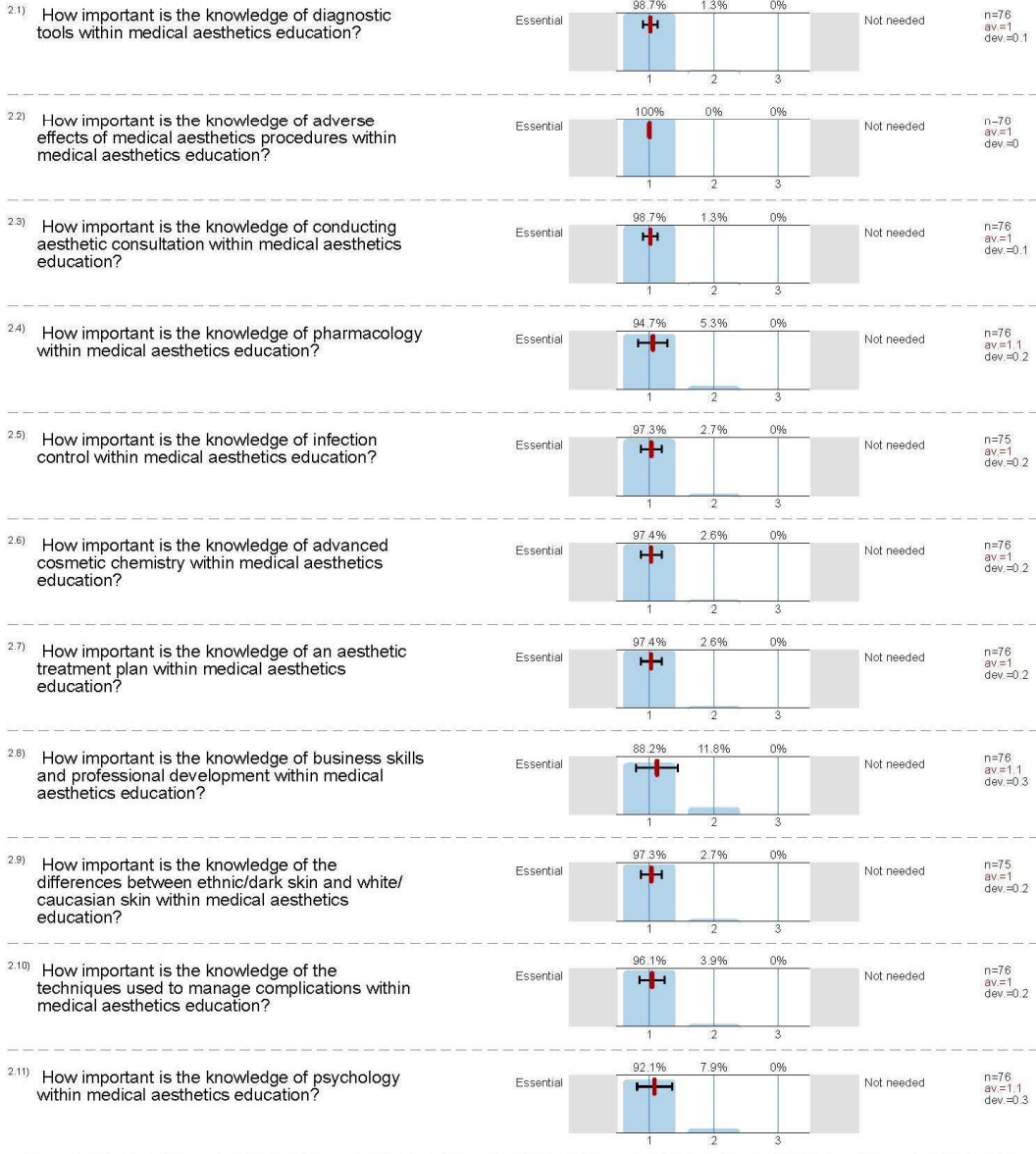
1.7) How many years experience do you have in your area of qualification?

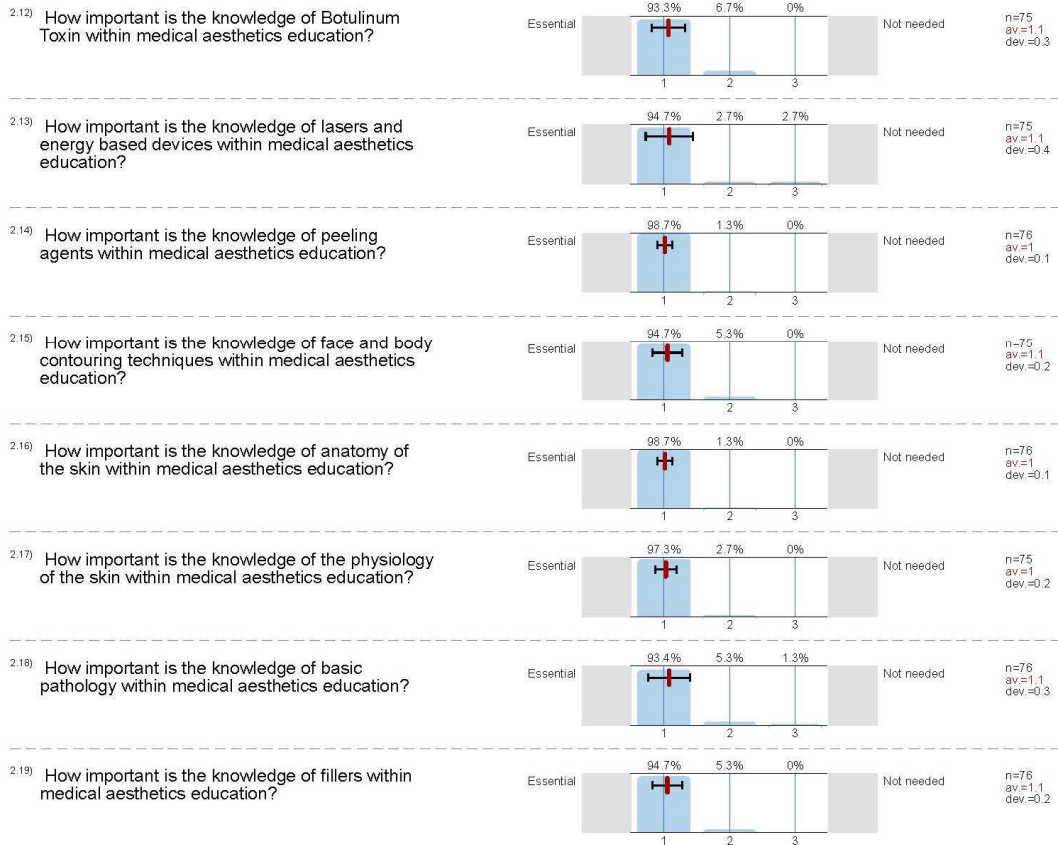


1.8) How many years experience do you have in Medical Aesthetics?

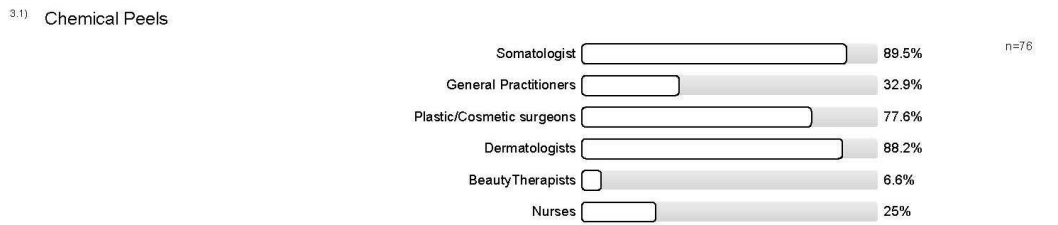


2. Section B: Educational course content for Medical Aesthetics

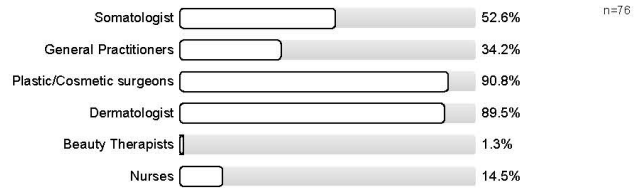




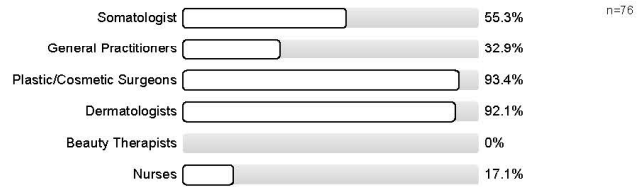
3. Section C: The practice of treatment interventions within Medical Aesthetics



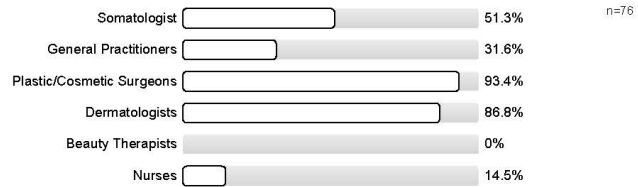
3.3) Botulinum toxin/Botox



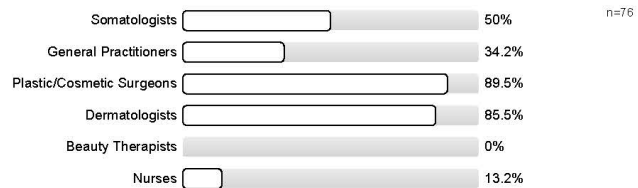
3.4) Hualuronic acide wrinkle



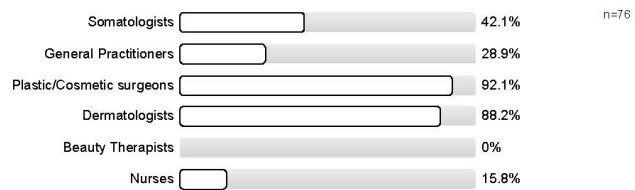
3.5) Synthetic wrinkle fillers



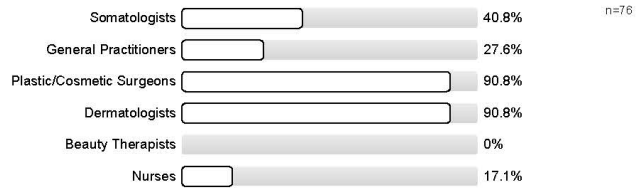
3.6) Collagen wrinkle fillers



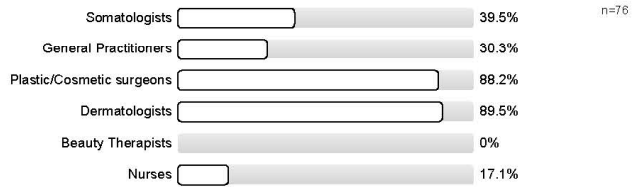
3.7) Autologous wrinkle fillers



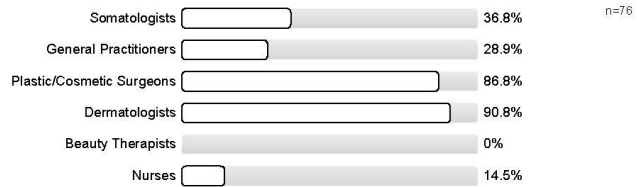
3.8) Calcium based fillers



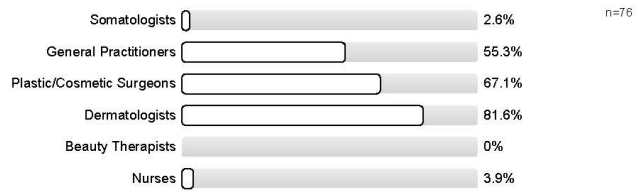
3.9) Artefill fillers



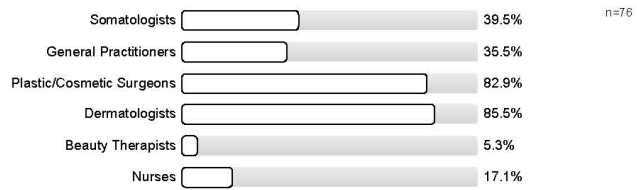
3.10) Silicon fillers



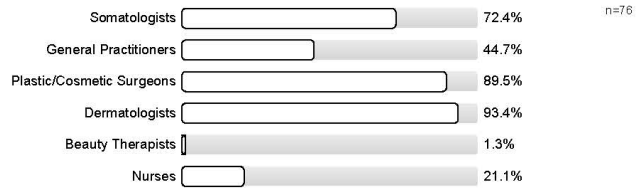
3.11) Poly-L-lactic acid (filler for the correction of facial lipoatrophy in patients infected with human immune deficiency virus)



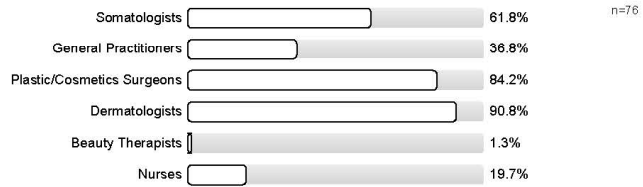
3.12) Titan (a non-surgical skin tightening treatment using infrared light to heat the dermis)



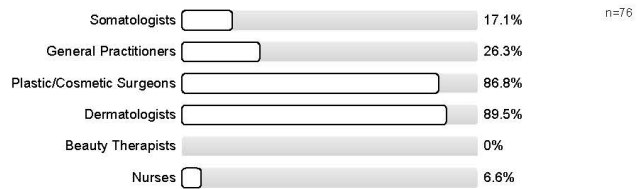
3.13) Pulsed Dye lasers (PDL)



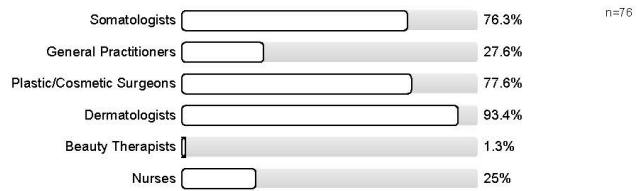
3.14) Thermage lasers



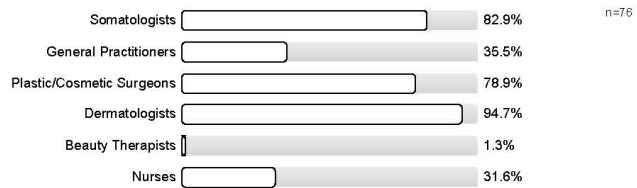
3.15) Carbon dioxide lasers(CO2)



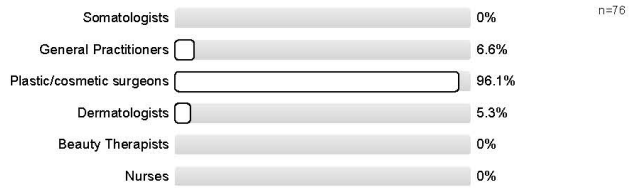
3.16) Cryotherapy rejuvenation



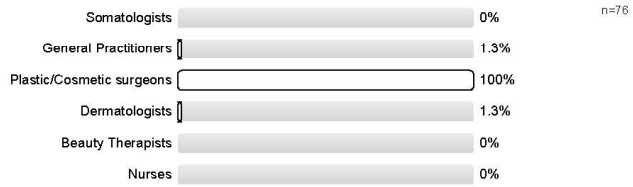
3.17) Cry-Meso Peel



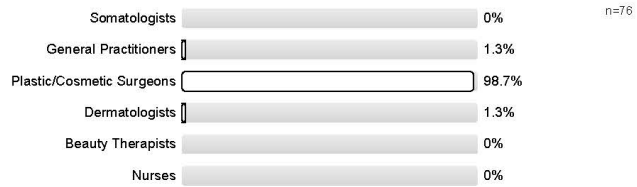
3.18) Lyposuction



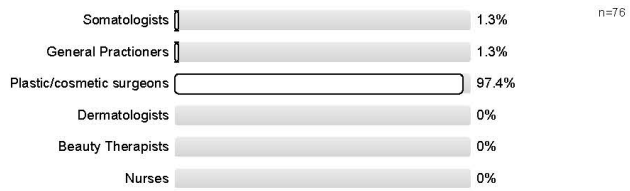
3.19) Abdominoplasty



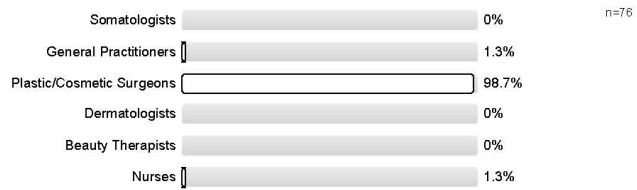
3.20) Blefaroplasty



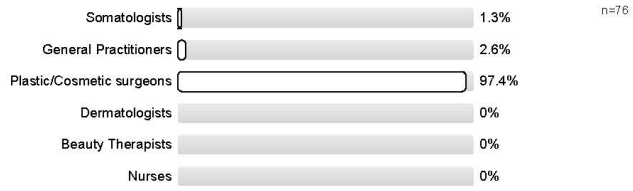
3.21) Rhinoplasty



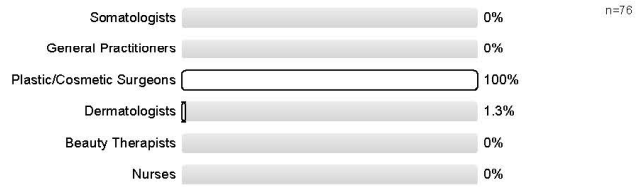
3.22) Breast augmentation



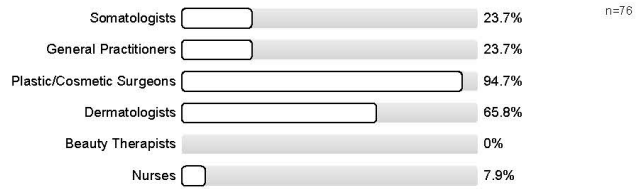
3.23) Breast reduction



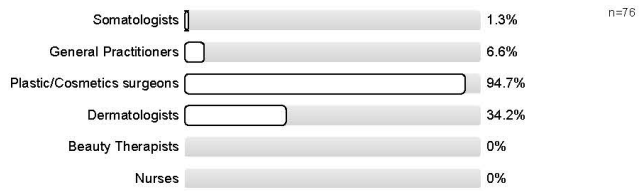
3.24) Surgical face lift



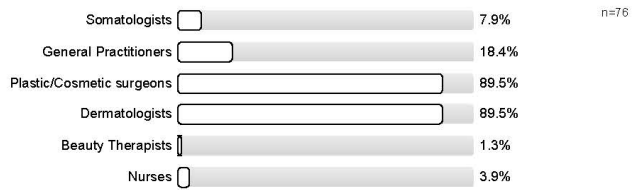
3.25) Autologous fat transfer as filler



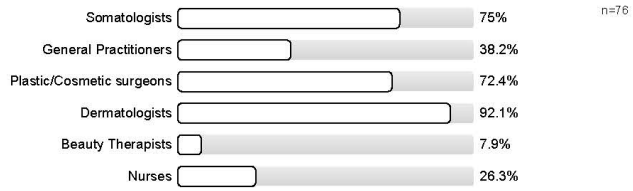
3.26) Surgical hair transplant



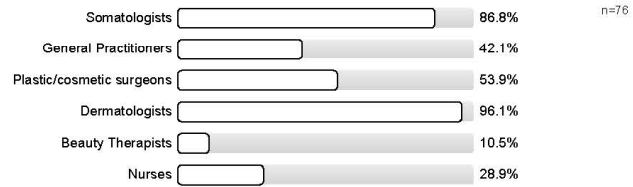
3.27) Fraxel laser treatments



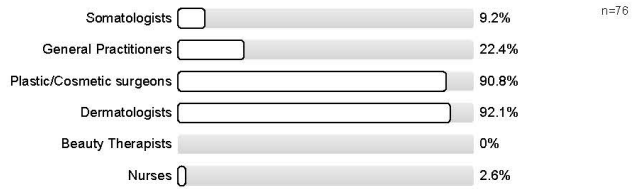
3.28) Photodynamic therapy



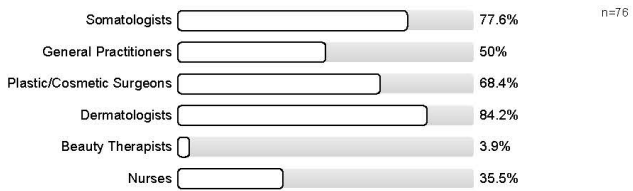
3.29) Acne Phototherapy



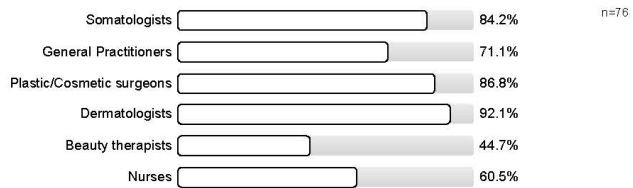
3.30) I-Pixel laser



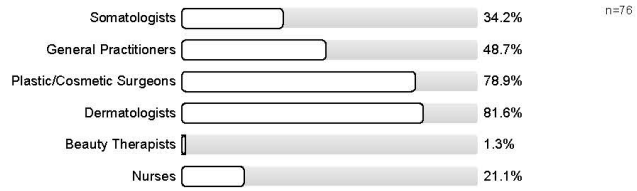
3.31) Varicose vein sclerotherapy



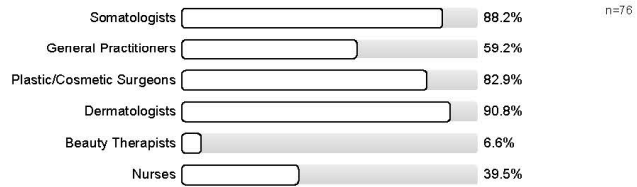
3.32) Infrared Therapy



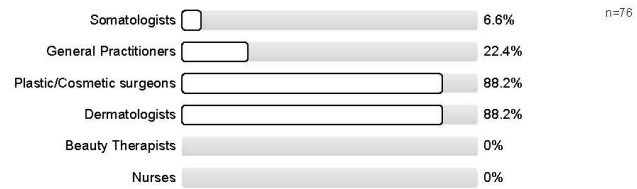
3.33) Ultrasound imaging/Sonography (Use of high-frequency sound waves to view soft tissues, it uses small transducer



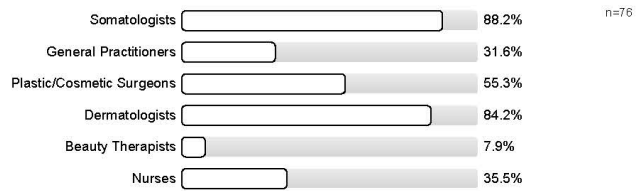
3.34) Intensed pulsed light therapy



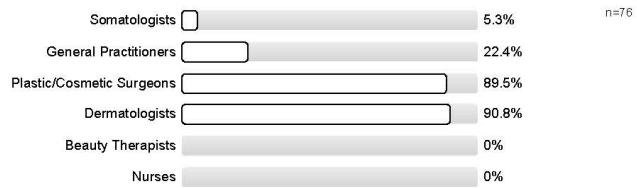
3.35) Nd: YAG lasers



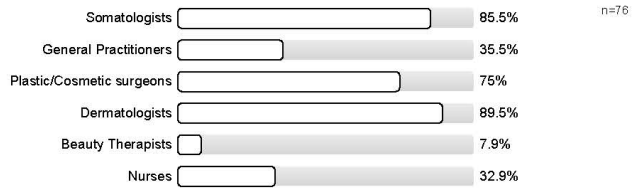
3.36) Laser hair removal



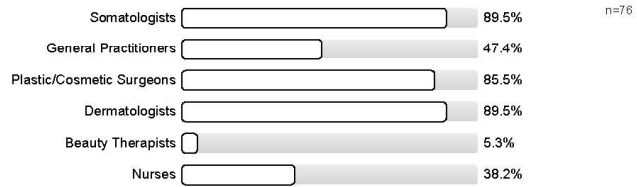
3.37) Alexandrite laser



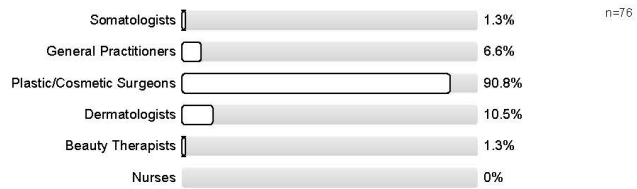
3.38) LED photography



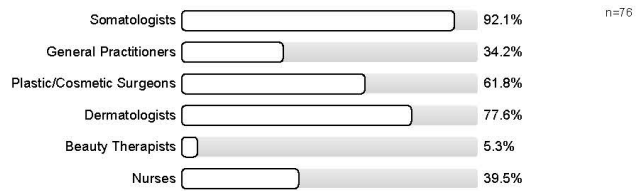
3.39) Micro-needling



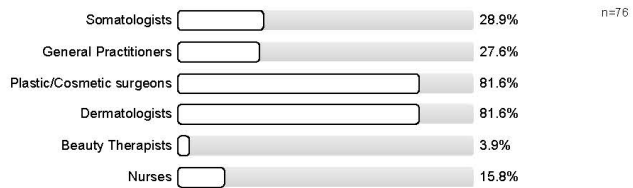
3.40) Lipolysis



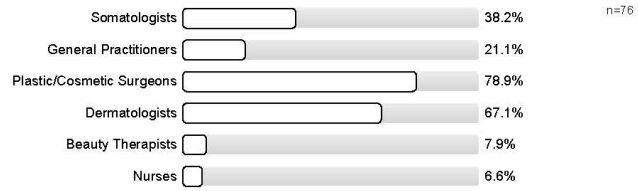
3.41) Mesotherapy



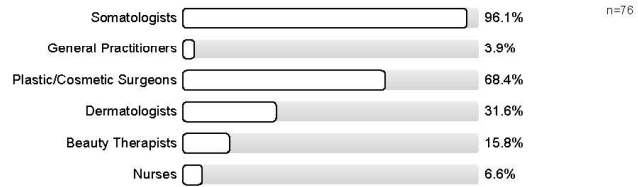
3.42) Tripolar Radio Frequency



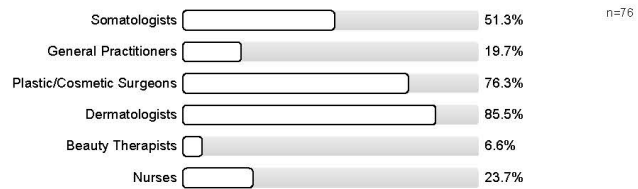
3.43) Medical tattooing



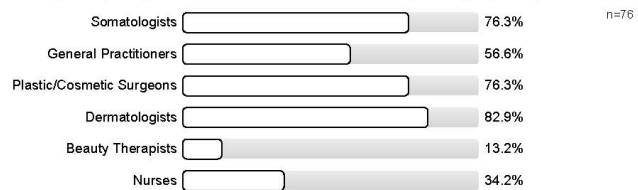
3.44) Permanent make up



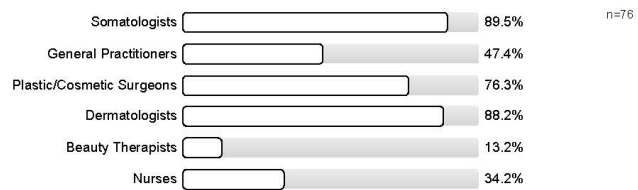
3.45) Thermotherapy



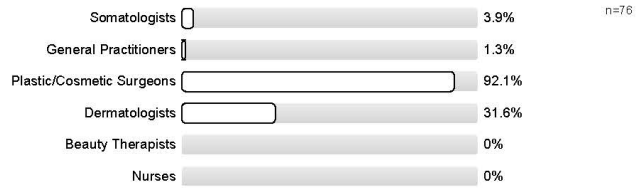
3.46) Ultrasound therapy (use of a machine that makes high frequency sound waves and used for therapeutic purposes)



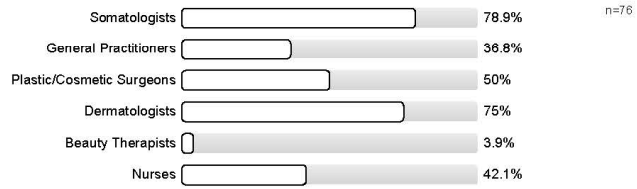
3.47) Radio frequency therapy



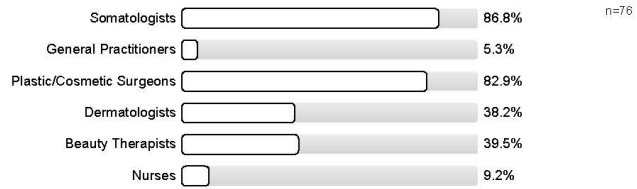
3.48) Thread lift



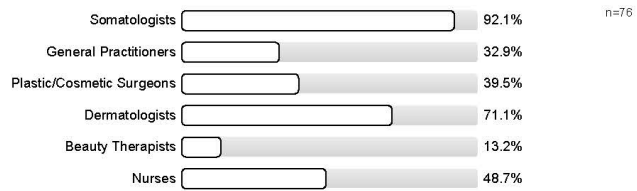
3.49) Vein cauterly



3.50) Camouflage therapy

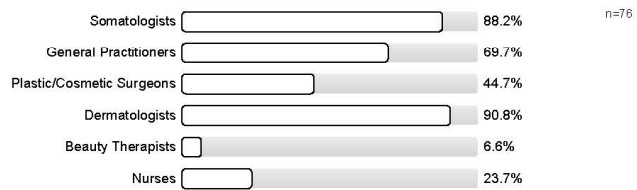


3.51) Electrolysis

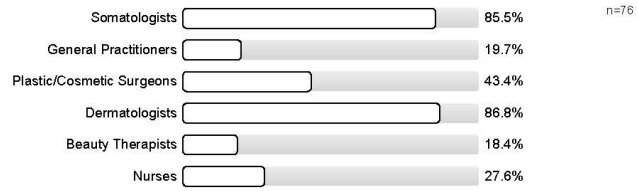


4. Section D: Skin Conditions

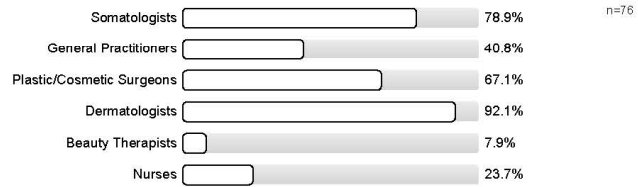
4.1) Acne



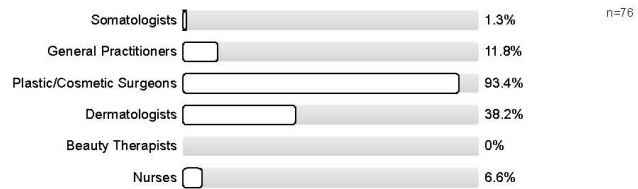
4.2) Photoaging



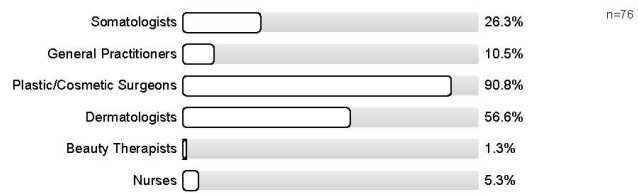
4.3) Striae distensae



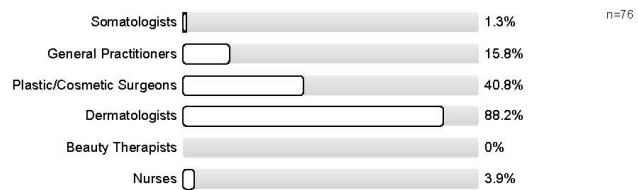
4.4) Blepharochalasia



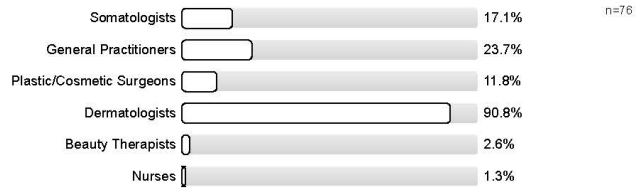
4.5) Sagging skin



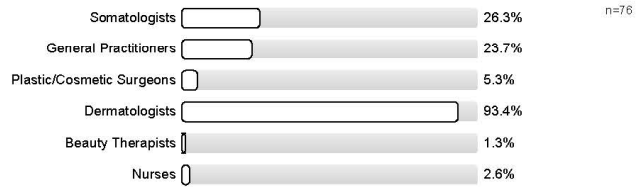
4.6) Kelioids



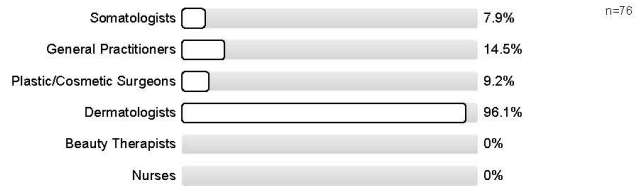
4.7) Melasma



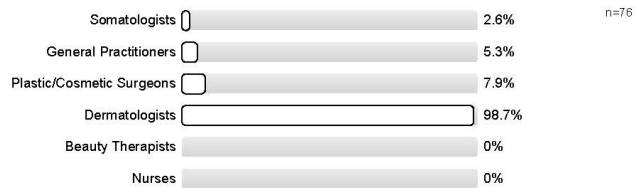
4.8) Rosacea



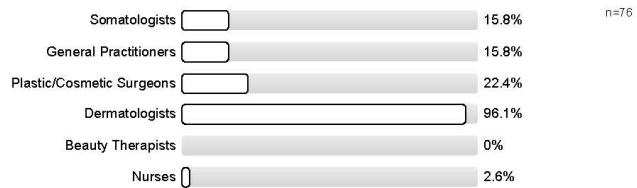
4.9) Atopic Skin



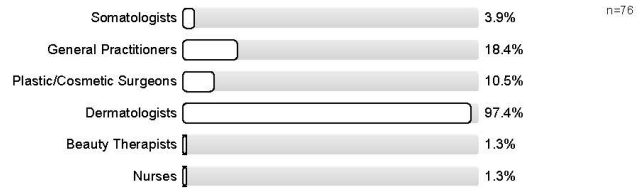
4.10) Vitiligo



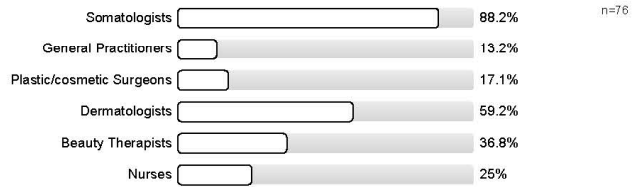
4.11) Actinic(Solar) keratosis



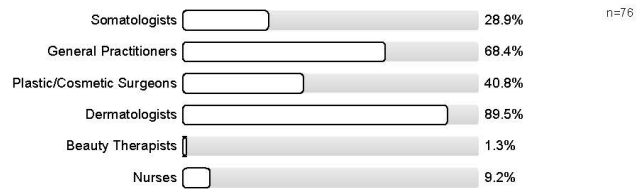
4.12) Seborrhea



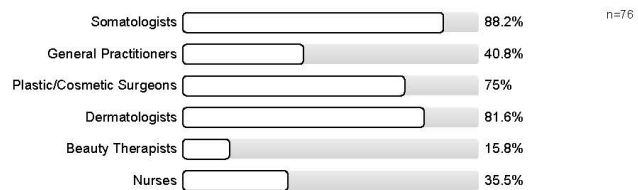
4.13) Premature aging



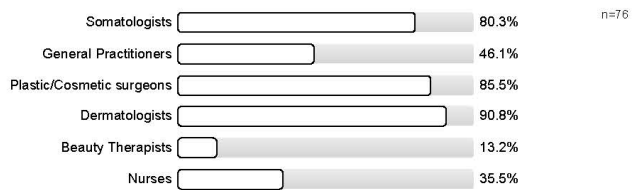
4.14) Excessive hair growth



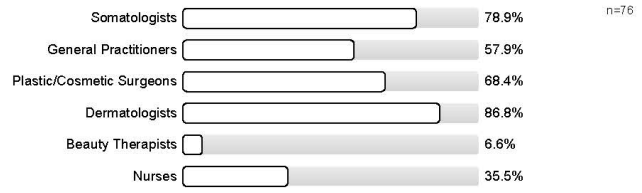
4.15) Cellulite



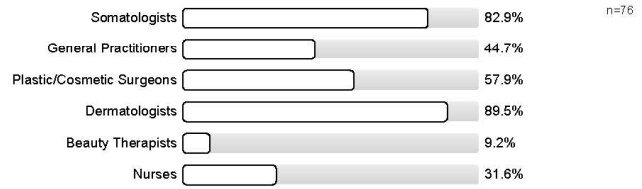
4.16) Scars (variation)



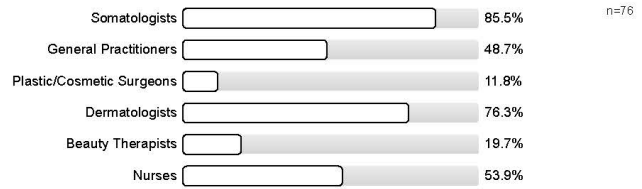
4.17) Varicose veins



4.18) Telangiectasia



4.19) Ingrown hair



LANGUAGE EDITING CONFIRMATION

Invoice

1 February 2016

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Thesis: A stratified competency-based learning programme for practitioners of medical aesthetics in South Africa	
Editing of thesis (English) 68 pages @ R50/page (Invoice for a further 200 pages was submitted in November 2015, and I have received this payment)	R3 400 000
Translation of summary 580 words @ 0.50c/word	R290.00
TOTAL	R3 690.00

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