



Nurses' Challenges in Non-Surgical Aesthetics - a Literature Review

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This thesis is a literature review about *Nurses' Challenges in Non-Surgical Aesthetics*. The purpose of this literature review was to describe the challenges nurses face in non-surgical field of aesthetics. The thesis provides information that is simple to read, and understand despite the challenging and new concepts including aesthetics. This literature review is suitable for health care professionals and students who are currently working, or aiming to work in the field of aesthetics.

The theoretical framework describes the key terms of aesthetic nursing, and the most common non-surgical aesthetic treatments. The theoretical framework will provide the needed information to grasp the results of the literature review.

The research method used in this thesis was a literature review. The literature was conducted by using reliable databases and academic sources. The data had been gained from databases such as ProQuest Central, CINAHL (EBSCOhost), Helmet and Finna. The review contained two books and two electronic publications. The used literature was chosen based on the topic, keywords and a year of publication. Critical appraisal of data was conducted on all of the articles, before using the inductive approach of the qualitative content analysis.

The key results of the literature review show, that nurses face numerous of challenges in the field of non-surgical aesthetics. These challenges can be divided into three main categories: the challenges regarding the lack of laws and regulations, nurses' education, and nurses' responsibilities. These challenges must be recognized by the nurses performing in the aesthetic field. The key results were evaluated profoundly and critically. The results can be used as a guidance for health care professionals and students who want to gain more information regarding the field of aesthetics.

Nurses' challenges in non-surgical aesthetics are important to study due to the growing industry of aesthetic nursing, with a remarkable global phenomenon. Non-surgical aesthetic nurses face challenging healthcare environments and are expected to hold more responsibility, and expanded roles. This literature review can be used as directional basis for further research. It is suggested that in the future, the focus is directed specially towards the ethics, laws and regulations of the non-surgical field of aesthetic nursing.

Keywords: non-surgical, cosmetic nursing, aesthetic nursing, challenges, nursing practice

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1 Introduction

Aesthetic nursing is a growing and complex area of independent branch of practice. Previously the field of aesthetics has been termed “cosmetic”, according to Ford, Bentley & Worth (2011). This field is one of the world’s fastest growing areas of healthcare. The Mintel report (2010) stated that over 92% of cosmetic interventions are non-surgical. The role of the aesthetic nurse has changed over the past decade, taking on many tasks which were previously seen as the doctor’s.

Aesthetics is associated with art and beauty (Collins Dictionary 2019). This implies that the practice of aesthetic nursing is about highlighting and enhancing a person’s appearance, by applying artistic skills to achieve it. Aesthetic nurses usually work in private practices; some run their own businesses and others work for larger companies. (Mintel 2010.)

Aesthetic medicine is defined as a set of non-invasive or minimally invasive clinical procedures, that aims to rejuvenate the dermis and reverse the signs of the ageing process (O’Keefe & Hoitink 2013). The procedures are intended to improve the physical appearance and satisfaction of the customer. Aesthetic medicine is a new trend in modern medicine, as a general rule where a needle is replacing a scalpel. Procedures of aesthetic medicine consist of injections of neurotoxins and dermal fillers, chemical peels and mesotherapy among other. (The American Academy of Aesthetic Medicine 2019.)

Nurses’ challenges in non-surgical aesthetic practice is important to study due to the lack of regulations. It is an important field of medicine that is not often taken as seriously as it should (Collier 2019). The changing field includes disadvantages since it’s rapidly modifying. It contains a lack of regulations and training issues. (Dobbs 2013.) By studying the chosen topic, nurses can consider if they are capable to carry out any or all of the individual non-surgical procedures in their practice. Nurses should consider their individual education, authority and their competency to perform the procedures. (The Queensland Nurse 2016.)

The purpose of the thesis is to answer a question; *what challenges nurses face in non-surgical aesthetic practice*. The aim is to create a clear review that can be used as a guidance for health care professionals who want to gain more information regarding the field of aesthetics.

2 Description of the Theoretical Framework

The key concepts of this thesis include aesthetics, aesthetic nursing, medical aesthetics, and non-surgical aesthetic treatments. These will be defined in detail, in the following chapter.

2.1 Non-Surgical Aesthetics

According to Dobbs (2013) the word “aesthetics” refers to a set of principles concerned with the nature and appreciation of beauty. Treatments that are used to help customers look more youthful. Aesthetics (esthetics) are rooted in the branch of philosophy that is directly related to the relationship between the senses, and matter of beauty, art, and taste. However, in a beauty industry, aesthetics refers directly to the health and beautification of the skin. (Estheticianedu 2019.)

Aesthetic nursing is a growing field of nursing, that focuses on what has previously been termed as “cosmetic” nursing. Aesthetic nursing is mainly practiced in the independent sector. There is a misconception, where aesthetic nurses primarily inject botulinum toxins and dermal fillers, but their job includes many aspects of skin problems. (Monson & Corliss 2017.) Professional training in non-medical skin care used to go hand in hand with cosmetology. Nowadays the health and medical aspects of the skin care are more recognized, with specialized aesthetician (or esthetician) training and licensing. Aesthetic nursing can include a variety of skin care procedures. Depending on the cosmetic problem, a range of non-surgical options are available. Nurses must be able to evaluate the best possible treatment options for their patients. These can be made by considering factors such as: effectiveness, cost, recovery time and safety. (Monson & Corliss 2017.) According to The Canadian Society of Aesthetic Specialty Nurses (2019), a comprehensive assessment and excellent communication skills are essential to managing patient care and promoting optimal outcomes.

Medical aesthetics stands for procedures that are aimed to improve the physical appearance and satisfaction of a customer. Aesthetic medicine is a new trend in modern medicine, where a needle is replacing a scalpel. Procedures of aesthetic medicine consist of injections of neurotoxins and dermal fillers, chemical peels and mesotherapy among other. (The American Academy of Aesthetic Medicine 2019.) According to PR Newswire (2015), aesthetics is a branch of medical science, that focuses on improving appearance of an individual and improving consumer confidence. Based on National Laser Institute (2017), medical aesthetics stands for a specialty that focuses on improving cosmetic appearance through the treatment of conditions such as scars, skin laxity, wrinkles, moles, liver spots, excess fat, cellulite, skin discoloration, and spider veins. The medical aesthetics industry is one of the world’s fastest-grow-

ing areas of healthcare. This unprecedented growth has led to a proliferation of nurse practitioners and doctors entering the aesthetics industry. (Dobbs 2013.) The key trends of the medical aesthetics market include a solid change towards non-surgical aesthetics (Monson & Corliss 2017).

2.2 Non-Surgical Aesthetic Treatments

Non-surgical refers to medical treatments that do not involve cutting open the body (Cambridge Dictionary 2019).

The following table 1 describes the most popular non-surgical aesthetic procedures, their effectiveness, recovery time and use.

Table 1: Common Non-Surgical Procedures Nurses Perform

Procedure	Effectiveness	Recovery time	Reason for treatment
Chemical peels	Moderately effective to effective.	Recovery time depends on strength of peel.	Facial rejuvenation, fine lines, pigmentation and photo-damage. One or multiple sessions.
Microneedling / Mesotherapy	Moderately effective.	May leave skin red or puffy for a few days, bruising possible.	Fine lines, wrinkles. Stimulates the production of collagen and elastin. For smoother feeling of the skin. Multiple sessions.
Injectable fillers (e.g. Juvederm, Restylane)	Very effective	Short recovery time, bruising possible Used less commonly than botulinum	Can be used to treat small, as well as deeper wrinkles and lines, nasolabial folds and the volume

		toxin, but can be combined with it	Repeat the treatment every 6 to 12 months
Botulinum toxin Type A	Very effective	No recovery time, bruising possible	Can be used to relax selected facial muscles, smoothens out the lines and wrinkles Also used for a prevention of wrinkles, repeat the treatment every three to four months
Laser	Effective to very effective	Some recovery time	Used for minor skin imperfections such as large pores and sun spots, multiple treatments often necessary

Griew, L. 2019. 15 Non-surgical Cosmetic Treatments Popular in 2019

2.2.1 Chemical Peels

Chemical peels have been used for decades. In Egypt, Cleopatra VII has been alleged to bathe in milk in order to gain a beautiful and soft skin. Still today, lactic acid is used in the peeling of the skin. (Rajanala & Vashi 2017.)

Chemical peels can improve the skin's condition and appearance by removing damaged skin cells. Chemical peels are cosmetic treatments that may be applied to the face, hands, and neck. In aesthetic treatments, chemical peels are important for the removal of superficial wrinkles and beneficial for the condition of the skin. Most common reasons for the treatment are scars, melisma, uneven skin tone, redness, sun damage, wrinkles and fine lines and hyperpigmentation. The peels can be superficial, medium-depth and deep. Superficial peels must be repeatedly used in order to receive the wanted results. The recovery from the treatment is fast due to the effects in the epidermis of the skin. Chemical peels and dermal fillers may

be done during one session. However, fillers must be injected first and the superficial peel applied after. (Cobbs 2013.)

Chemical peels are defined as the careful application of chemical agents, of different strength to the surface of the skin. Resulting in controlled destruction of the epidermis and dermis. Often chemical peels cause the skin to exfoliate and remove superficial lesions, followed by a regeneration of new epidermal and dermal tissues. Despite laser treatments are found effective for the treatment of static wrinkles, chemical peels have kept its own place as a simple and valid aesthetic treatment that doesn't require hardly any instrumentation to rejuvenate the skin. (Castillo, Keri 2018.)

2.2.2 Mesotherapy

Mesotherapy is a minimally invasive, non-surgical procedure. It consists of the intra- or subcutaneous injection of variable mixtures of compounds such as plant extracts, homeopathic agents, vitamins, bioactive substances and pharmaceuticals. Alcohol- or oil-based substances should not be used for mesotherapy because of the risk of cutaneous necrosis. (Konda & Thappa 2013.)

The method of mesotherapy is originally conceived in Europe. The term "mesotherapy" is originally from the Greek words "mesos" meaning *middle* and "therapeia" meaning *to treat medically*, i.e. injecting into the middle layer of skin. Despite the treatment being available for over 50 years, with a huge publicity and attention in Europe, USA and South America, mesotherapy is lacking a definite evidence for its efficacy. (Monson & Corliss 2017.)

Non-surgical options for facial rejuvenation are mainly fast, effective, and simpler ways to achieve desired goals. Mesotherapy may be used as an alternative for plastic surgery, many mesotherapists practice medical aesthetics due to the claims of beautifying effects of vitamins, minerals, homeopathic remedies, and natural proteins, that have been claimed to rejuvenate and eventually tone the injected areas of the face and body areas. Mesotherapy anti-aging treatments are recommended for patients in their mid-20s to prevent wrinkles from forming, and treatments for the face, neck, arms, and hands. (Monson & Corliss 2017.)

Medical and non-medical professionals are performing mesotherapy for anti-aging purposes. Studies of mesotherapy injection of cocktail-containing multivitamin solution, and non-cross-linked hyaluronic acid did not result in any significant clinical improvement. Histological effects, were also statistically insignificant. Despite the lack of clinical data, many new substances like platelet-rich plasma, peptides, growth factors and collagen are entering the field of mesotherapy. Many new indications and modifications like no needle mesotherapy are also on the rise. (Konda & Thappa 2013.)

2.2.3 Dermal Fillers

Dermal fillers are used to treat volume deficiency, scars and wrinkles. They can also be used for facial sculpting. Fillers are commonly used for facial contouring and augmentation of anatomical sites such as the lips. The number of fillers on the market extend each year. The perfect dermal filler should be safe, easy to store, hypoallergenic, easy to distribute, injectable with little time and painless to inject. The filler should not require allergy testing, patient should not get any downtime from the treatment, and there should be no risks of any complications. Unfortunately, this type of perfect dermal filler does not exist. (Ballin, Brandt & Cazzaniga 2015, 271-283.)

Dermal fillers are injections of gel, most commonly made from hyaluronic acid. A product that is able to fill in wrinkles and add volume to the tissues. Dermal fillers can be applied around the eyes, cheeks, mouth, lips and jawline. Hyaluronic acid fillers are able to maintain shape, even out volume loss, and provide hydration. Dermal fillers can be also made by using Calcium hydroxylapatite, which is found naturally in human bones, and is a mineral like compound. Polyalkylimide is a semi-permanent dermal filler. Polyactic acid is a non-toxic synthetic dermal filler, that stimulates the body's own collagen production. Polymethyl-methacrylate microspheres (PMMA) is considered as a semi-permanent filler. It is often used instead of collagen replacement. (American society of plastic surgeons 2019.)

Most of the dermal fillers available in Europe, are required to have CE marking. CE making conforms the essential requirements that have been set by the EU directives and regulations. However, CE marking is not a general safety label and does not guarantee that the product is safe nor high in the quality, as stated by the Finnish Safety and Chemicals Agency. (Tukes.) In USA dermal fillers are approved by the U.S. Food and Drug Administration. (American society of plastic surgeons 2019.)

2.2.4 Botulinum Toxin

Botulinum toxin injections has been used for cosmetic purposes since the late 1980s, with a rapidly growing following. Mainly due to the affordable cost, low risk treatment with no recovery time. (Monson & Corliss 2017.) Botulinum toxin type A (BoNT-A) injections are one of the latest and most revolutionary treatments in facial rejuvenation and aesthetic treatments. Correctly done, the injections target hyperkinetic muscles of facial expression. (Hexsel, Maz-zuco, Dal'Forno, Kraemer & Moreira Lima 2007, 417-426.)

The aging process changes the muscular behaviour. Continuous contractions may lead to static rhytides. It is considered to be the best alternative for treating dynamic wrinkles, alone or as a combination with other aesthetic treatments. (Hexsel et al. 2007, 417-426.)

Many people are concerned that botulinum toxin injections will leave an unnatural expressions or a frozen, asymmetrical features. An injection of botulinum toxin is able to eliminate deep lines and wrinkles. Commonly used to treat the area around forehead, between eye-brows at the corner of the eyes. However, it can also be used in the other areas of the face and body. Botulinum toxin is often used along with other cosmetic procedures. BoNT-A effects start in 24-72 hours after the treatment. (Monson & Corliss 2017.)

2.2.5 Laser

Skin is the largest and the most visible part of the human body. Laser treatment enables removal of moderate to deep lines, and wrinkles. Improvements in the laser technology makes it possible to target specific cells in skin layers. Accomplishing previously impossible treatments possible, like spider veins and small scars. (Monson & Corliss 2017.)

Lasers work by releasing intense beams of “light” that transfers into high levels of energy and heat. Laser has a specific wavelength, that affects on how deeply it penetrates the skin. Each skin condition and a reason for treatment require specific wavelength that gives the wanted results. (Monson & Corliss 2017.)

Lasers can be used for many cosmetic problems: tattoo removal, removal of unwanted hair, dilated blood vessels, spider veins, removal of wrinkles, pigmentation spots, freckles among many other possible treatments. (Monson & Corliss 2017.)

3 The Purpose, Aim & Research Question

The purpose of this literature review was to describe the challenges nurses face in the field of non-surgical aesthetic nursing. This review provides information that is simple to read and understand despite challenging and new concepts including the aesthetic field. This literature review answers to a question “What challenges nurses face in non-surgical aesthetic nursing”.

The aim of this thesis was to create a clear review that can be used as a guidance for health care professionals who want to gain more information regarding the field of aesthetics. This literature review can be also used as a directional basis for further research.

Research questions for *Nurses' Challenges in Non-Surgical Aesthetics - literature review*:

1. What challenges nurses face in non-surgical aesthetic practice?

4 Research Methods

4.1 Literature Review

The research method used in this thesis was a literature review. The intention of a literature review is to collect literature and studies of a specific subject. When collecting publications from the same subject, it is possible to structure the information already studied, get information about the contents of existing studies, and methods that have been used. (Suhonen, Axelin & Stolt 2016, 7.) A literature review can also be used as a basis for evidence-based practice (Salmond & Holly 2012, 3).

According to Peggy Ward-Smith (2016); nursing profession embraces evidence based practice (EBP). Literature review is a valuable method when reviewing a literature to identify and describe the best practice, or determine where further information is needed. All literature reviews use specific keywords and various search engines to locate previously published literature.

A literature review may be used to evaluate, develop and update current clinical practices. (Rother 2007, Polit & Beck 2012.) Forming a literature review can be divided into four stages, 1) formation of a research question, 2) data selection, 3) construction of the description and, 4) observation of the produced results. (Kangasniemi 2013, 292.) First step is to form a research question. This is a central step of the research. The research question is often presented in a form of a question. The chosen question may be viewed from one or multiple perspectives. (Kangasniemi 2013, 293.) Successful research question is not too broad or too narrow. The second step is data selection, which is guided by the formed research question. The goal is to find a relevant literature in order to answer the research question. (Rhoades 2011.) The literature of a narrative review is formed from previously written publications (Burns & Grove 2005, Grant & Booth 2009). Constructing the description is a key phase in a formation of a narrative literature review. The goal is to answer to the research question based on the collected publications. In order to be able to do so, the used literature must be well known and understood. The final step of the literature review is the observation of the produced results. It includes the reflection of the written content, chosen method and the ethics and reliability of the created literature. (Kangasniemi et al. 2013, 297.)

4.2 Inclusion & Exclusion Criteria

Inclusion criteria for the publications included an age limit, they must be written in the past 10 years. The publications must be evidence based and published by reliable sources. The publications must cover non-surgical view of the aesthetic practice. Exclusion criteria for the publications include texts older than ten years, the topic covers only surgical view, or is published by a company currently performing in the field of non-surgical aesthetics.

Table 2: Inclusion & exclusion Criteria for Data Collection

Inclusion criteria	Exclusion criteria
Written in the last ten years (2009-2019)	Written before the year 2009
Published by reliable and equal source	Published by a company performing aesthetic procedures
Evidence based	Point of views based on subjective opinions
Covers non-surgical view of aesthetic practice	Covers only surgical view of aesthetic practice
Peer reviewed and in the English or Finnish language	Not peer reviewed and in a language other than English or Finnish
Relevant to the research questions formed	Irrelevant to the research question

4.3 Data Search Process

The research was done by collecting evidence based material from previously written literature publications. The data includes four publications written on the topic: two books and two publications from electronical databases.

The two books used in this thesis were already known. For this reason, there was no need for a separate data collection of the books. The electronical publications were chosen based on their topic, keywords and a year of publication. The used data sources were Helmet, Laurea Finna, CINAHL and ProQuest. Helmet and Laurea Finna were used for books and CINAHL and ProQuest were used for electronical publications.

Helmet is a network of Helsinki Metropolitan Area Libraries. It consists 63 libraries and 3,4 million items. (Helmet.) Laurea Finna is a search interface to Laurea Library's collection, maintained by the Finnish National Library (Laurea). These factors affect to the reliability of the source.

The research was conducted in the following phases: data collection based on the title, data collection based on the abstract, and finally, data collection based on the full text.

The first data collection was done in electronical databases: CINAHL (EBSCOhost) and ProQuest Central. The search was made by using the search words "aesthetic nursing" OR "cosmetic nursing". As mentioned, more search terms were used in ProQuest due to the large amount of search results. These search terms conducted six publications from CINAHL (EBSCOhost) and 29 publications from ProQuest. After reading the titles of the publications, six of them were chosen based on their title.

The second phase included reading the abstracts of these six publications. Abstracts gave a comprehensive view of the publications' content. In this phase, it was noticed that some of the publications chosen based on their title, did not cover the inclusion criteria for this thesis. In the final phase, the literature articles were chosen based on the full content. This literature review included two articles found from the databases mentioned in the table 2.

The two books used in this thesis did not require a data collection since they were already known. However, the books were carefully read in order to guarantee them to match the inclusion criteria.

Table 3: Data Collection of Electronical Publications

Search term	Articles provided
Aesthetic nursing AND Cosmetic nursing	CINAHL (EBSCOhost) n=6 ProQuest Central n=29
	Chosen based on the title
	CINAHL (EBSCOhost) n=2 ProQuest Central n=4
	Chosen based on the abstract
	CINAHL (EBSCOhost) n=2 ProQuest Central n=2
	Chosen based on the full text
	CINAHL (EBSCOhost) n=1 ProQuest Central n=1

4.4 Critical Appraisal of Data

Critical appraisal is a careful process, where a context is systematically examined in order to judge its trustworthiness, and its value and relevance. The key goals of research work include gathering information and analysing the data to produce relevant information, which is why it is critical that reviewed literature is not weak in quality, irrelevant and/or biased. (Burls 2009.) During the phase of the data analysis, the researcher had come to the decision to use an already structured criterion to evaluate the quality of the used articles.

The writer of this thesis used The Critical Appraisal Skills Programme (CASP) for the two publications used in the thesis. The two books used in this thesis did not require a critical appraisal chart, since CASP tool is not reversible for the books. Critical appraisal is a process used to identify the strengths and weaknesses of a research articles.

CASP checklist is a simple checklist for the key study designs. All CASP checklists cover three main areas, which are validity, results and clinical relevance. Validity stands for accuracy of the study. The results of the study must be unbiased, giving more trustworthy effectiveness. (CASP 2017.) The second step focuses on the results of the research. The third step is for the clinical relevance, which refers for the local and global transformability.

CASP Checklist includes 10 questions, which help to analyse a qualitative research. Most of the questions must be answered “yes”, “no” or “can’t tell”. The writer of this thesis used a CASP Checklist as a tool for critical appraisal of data. Because there is no scoring tool, the writer of this thesis categorised all of the articles as “Superior”, “Good” and “Weak”. In order for an article to receive “Superior”, the score must be 9 or more. For “Good”, the score must be 6 to 8. In order for an article to be evaluated as “Weak”, the score must be lower than 6. Table 4 shows the process of critical appraisal.

Table 4: Critical Appraisal Chart

Author, Year, Country	Title	Findings	CASP Score
O'Keefe, E. & Hoitink, S. 2013. Australia	Cosmetic Nursing	Definition of aesthetic nursing: a set of non-surgical clinical procedures which aim to rejuvenate the dermis and reverse the sign of the aging process upon it. Clinical safety.	Superior
Monson, N. & Corliss, J. 2017. USA	Skin Care and Repair: Options for preventing and treating skin damage and common skin conditions	Separations of aesthetician and physician's work. Professional training and specializations.	Good

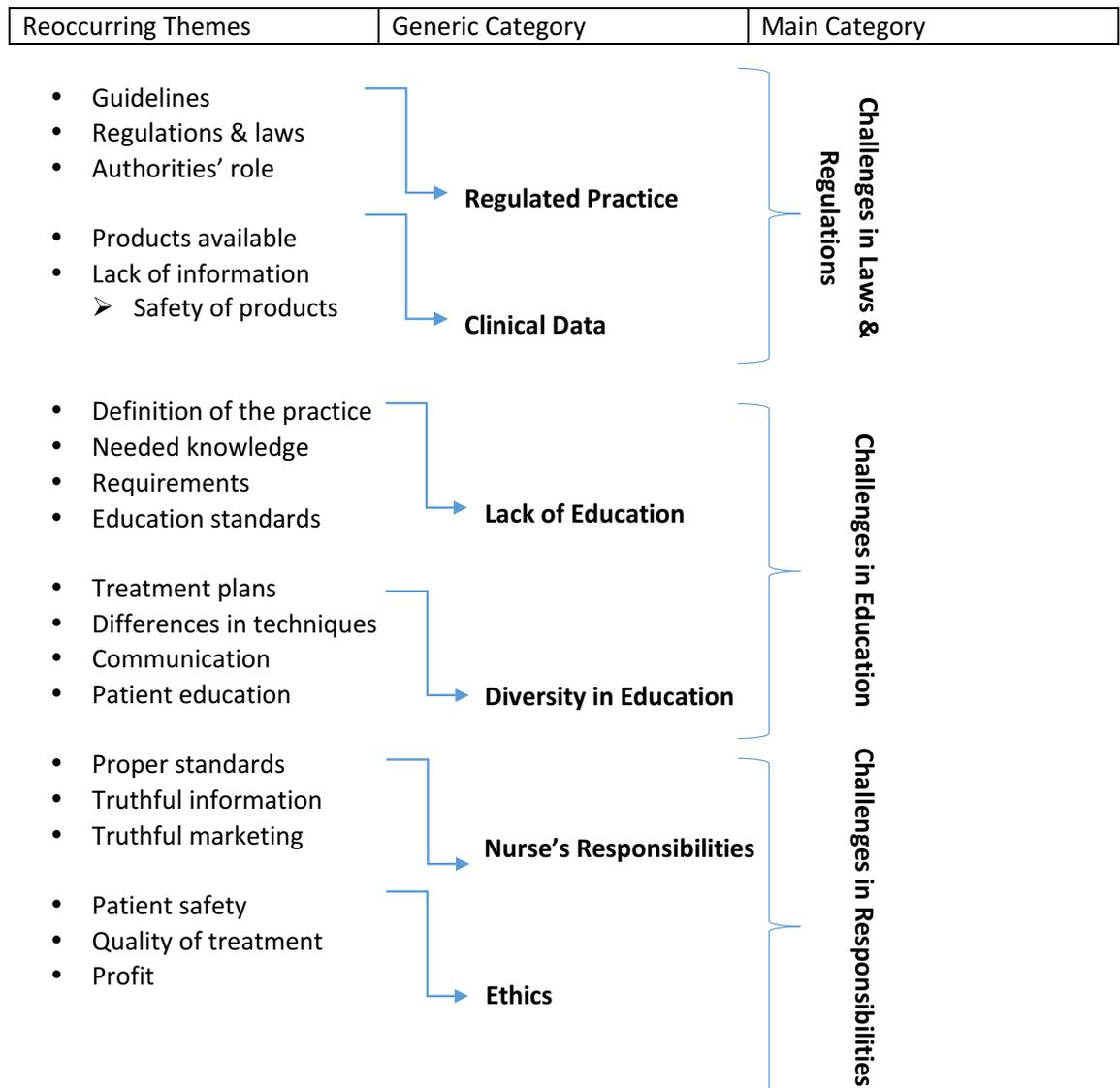
4.5 Qualitative Content Analysis

In a literature review the existing literature is written around the chosen topic (USC Libraries 2019.) The analysis of data is important in order to answer to the research question: What are Nurses' Challenges in Non-Surgical Aesthetics. The content can be analysed systematically or objectively. Content may be a book, journal, letters, interviews, dialogue, report and articles. (Tuomi & Sarajärvi 2013, 103.) Content analysis is commonly used research technique for qualitative data.

Content analysis is a method that can be used in qualitative or quantitative data, and in inductive or deductive way. Qualitative content analysis is often used in nursing studies. (Elo, Kyngäs 2008, 107) Qualitative content analysis can be separated into two sub-categories; deductive and inductive content analysis. The author of the following thesis used the inductive approach of qualitative content analysis. Due to its' ability to use concepts, which are retrieved from the data, whereas in deductive content analysis, the analysis is based on past knowledge. (Elo, Kyngäs 2008, 107) Both inductive and deductive processes include 3 main stages; preparation, organizing and reporting. The key concept of content analysis is coding. This means that many words of the text are classified into smaller content categories. The author of the following thesis used colour coding in order to create generic categories, and finally, main categories.

As mentioned, the analysis phase of the following thesis started by coding the topics. Each unit was analysed and coded with its own colour. Similar data was coded with the same colour. This made it possible to form groups. The coloured groups resulted in 4 generic categories, which were named based on the found data. After the generic categories were named, the main categories were created, which allowed the literature review process to move structurally. The content analysis process is displayed in Figure 1.

Figure 1: Content Analysis Process



5 Findings of the Literature Review

The findings presented within this research paper are based on the 4 analysed publications. There are numerous of challenges nurses face in the field of aesthetics. In this research these challenges were divided into the following main categories: challenges nurses face in the laws and regulations, challenges nurses face in the education, and challenges nurses face in responsibilities.

5.1 Challenges in Laws & Regulations

5.1.1 Regulated Practice

The expanding field of non-surgical aesthetic medicine has multiple challenges regarding the lack of regulations and laws. The market for non-surgical aesthetic medicine is unregulated: anyone can perform dermal fillers procedures or laser treatments, and the companies can advertise unrealistic results. This poses a danger to the consumer, and the authorities have taken a passive role in fixing these problems. (Bäsén 2011, 286.) There is a clear connection between nurses' actions and the lack of regulations in the field of aesthetics. Without clear guidelines regarding the application of aesthetic treatments and procedures (table 1), it is difficult to set treatment standards and guarantee patient safety. (O'keefe & Hoitink 2013.) Most countries in Europe and South America, have a great variety of products that are used in aesthetic medicine, such as dermal fillers. It can be difficult for nurses to know which products to use. For example, dermal fillers are very loosely regulated in most countries of Europe.

5.1.2 Clinical Data

Many hyaluronic acid fillers do not have at least one good clinical trial in their background. And still, they pretend to be as good as the products with wide trials. Especially in Europe, South America, and Asia, new dermal fillers are constantly entering the market. CE certification is required once a new product enters the European market. However, data from clinical trials is not required if there is a dermal with comparable substances existing in the European market. (Maio & Branzy 2014, 1-16.)

It is difficult for any practitioner to know, which products to use in their aesthetic practice. There is no guarantee that the product is safe to use, the adverse reactions studied, or the marketing of the product truthful. It is important for nurses to study about the different aesthetic products, their background, and clinical data. The knowledge is not easily acquired. Nurses must search for an evidence based clinical data, that is able to stand behind the manufacturer's or importer's words. (Maio & Branzy 2014, 1-24.)

There is a clear gap in the laws and regulations regarding the field of aesthetics. It is important to include nurses into the decision process. This can enhance the patient safety and treatment standards. Without the guidelines, it can not be ensured that the aesthetic nurses are aware of the needed standards in order to act safely in the aesthetic practice. (O'Keefe & Hoitink 2013.)

5.2 Challenges in Education

5.2.1 Lack of Education

According to the findings, aesthetic nursing is a booming field all around the world. Aesthetic medicine is defined as a set of non-surgical clinical procedures, that aims to rejuvenate the skin and reverse the signs of the ageing process. (O'Keefe & Hoitink 2013.) The field of aesthetics demands comprehensive knowledge of: the human's anatomy, proper patient selection, treatment planning, aesthetic procedures, general requirements, technical requirements, adverse effects, most common indications, and differences in techniques. (Maio & Branzy 2014, 21-121.)

Many countries do not have any regulations for the aesthetician's education. Nor do they offer specific education or training regarding the topic. It can be challenging for a nurse to learn the important topics of aesthetic practice, without a proper education. For example, in many European countries anyone can perform aesthetic procedures without a specific training. However, according to O'Keefe & Hoitink (2013) there is a clear need for structured education for nurses in which to perform the aesthetic treatments (table 1). With clear education standards, it is possible to enhance overall actions of aesthetic nursing.

5.2.2 Diversity in Education

Treatment planning can vary from one practitioner to another. Patients and clients can get multiple treatment plans for the exact indication. This can cause confusion. There are differences in the nurses' experiences, communication, and technical skills. Leading to a deviation in the treatment planning. Also cultural aspects, poor training in medical- and patient- communication, lack of time or patience to educate patients are barriers to obtain efficient results. (Maio & Branzy 2014, 21-24.) Without a correct education for aesthetic nurses, a safe practice can not be ensured (Kenny 2010).

Nurses who want to succeed in the field of aesthetics must understand that the majority of the customers are unaware of what they need. They may have gathered many opinions from

different aesthetic practitioners. It's important for a nurse to know and understand the indications and the correct actions in order to reach the wanted results. Nurses must also know, when a treatment is not needed for their customer. (Maio & Branzy 2014, 21-24.) However, without a correct education, this is challenging for a nurse to achieve. (Kenny 2010.)

5.3 Challenges in Responsibilities

5.3.1 Nurse's Responsibilities

The lack of laws and regulations enables nurses to jeopardize the safety of their customers. Also it makes it impossible to maintain proper standards in their actions, since there aren't any. (Kenny 2010.) It can be challenging for nurses to recognize their responsibilities in the field of aesthetics (Bäsén 2011, 24). Ideally, nurses should have a responsibility to be strict and honest with their customers, that are considering aesthetic treatments. Consumers lack impartial and truthful information regarding different treatment options. Most of the available information is produced by companies and clinics, that are performing the procedures. Usually this type of information is affected by the company's own marketing agenda. The information can be in a form of an advertising, instead of bios, realistic and reliable information, that the consumer is seeking for. (Bäsén 2011, 11.)

5.3.2 Ethics

There is a possibility for a nurse aesthetician to achieve a great amount of profit in the field of aesthetics. It should be practitioner's responsibility to maintain an ethical sustainability, that focuses to the patient safety and the quality of treatment. Instead they are focusing on low costs, and fast profits. (Kenny 2010.)

6 Discussion

6.1 Discussion of Results

The purpose of this literature review was to describe the challenges nurses face in the field of non-surgical aesthetic medicine. The findings of the literature review were based on 4 publications, which were profoundly selected and analysed. The aim of this thesis was to create a clear review that can be used as a guidance for health care professionals and students, that are currently working or aiming to work in the field of non-surgical aesthetics.

The results of this thesis indicate the numerous challenges nurses face in the field of aesthetics. According to the conducted literature review, these challenges affiliate with the laws and regulations, nurses' education, and responsibilities.

The lack of laws and regulations have a clear connection between the nurses' knowledge regarding the aesthetic nursing practice. There are no common rules to act by, which causes the diversity in the nurse's non-surgical aesthetic skills. The safety of non-surgical aesthetics should not only be the practitioner's responsibility. Especially in European countries the regulations and laws need to be clear in order to improve the safety of the used products, proper clinical settings, and patient safety. The field of non-surgical aesthetic medicine is rapidly changing and expanding. New products are entering the market without a guarantee of clinical data. It is challenging for nurses to know which products are safe to use. Authorities need to take a bigger role in creating a safe practice for nurses and their patients.

The field of aesthetics is very demanding and requires comprehensive knowledge. Nurses need a proper education and up to date training options to maintain the needed skills. So far it is only the nurse's responsibility to make sure that they have the needed training to practice safely in the aesthetic field.

It is challenging for nurses to know their own responsibilities in non-surgical aesthetics. The lack of laws and regulations enables nurses to jeopardize the safety of their customer. The responsibility of their treatment outcomes can be easily passed to the customer. There are no clear guidelines when a nurse is responsible of the treatment outcomes and possible errors.

In order to recognize the nurses' challenges in non-surgical aesthetics, the deficiencies must be identified. Nurses and authorities must work together in order to find common grounds for safer practice. This is not only beneficial for the customers, but also the nurses working in the demanding field of non-surgical aesthetics.

6.2 Limitations

The research was collected by using certain databases such as Helmet, ProQuest, Laurea Finna and CINAHL. These databases contain a limited information regarding non-surgical aesthetic nursing. However, there are more studies regarding the subject, but is constricted by a fee or access, for example, aesthetic companies and clinic's databases.

The amount of available data was limited, affecting to the variety of point of views. The lack of evidence based researches was apparent. Majority of the publications were written in the USA, which affects to the results found from the field of aesthetics. For example, the laws and regulations are different due to the supervision of FDA (US Food and Drug Administration).

Finland and the European Union lacks of laws and regulations in aesthetic nursing, resulting to the difficulty on finding information that is coherent with USA. Many of the found publications are written by companies that produce aesthetic devices or products. The results of these studies can be inaccurate and the outlook one-sided.

Language causes limitations, since the languages used are English and Finnish. For example, Chinese- and Hebrew-written publications would have opened a new ankle to the subject.

6.3 Trustworthiness & Ethical Issues of the Literature Review

The literature review used only peer reviewed articles, collected from reliable databases. Inclusion and exclusion criteria were distinct when collecting the data. Each publication followed the inclusion criteria that had been set from the start.

The collection of the data was documented carefully. The data collection can be repeated since no subjective choices were made during the collection. The sources used in the literature review are reliable and chosen with high standards. The writer of the publication is always mentioned.

Even if the publication sources are reliable and the documentation of the data collection is exact, the literature review is conducted by one person only. Negligence errors are possible and they may affect to the results and to the literature review as a whole.

The literature review responds only to the current situation and with a high probability it's not accurate after a period of time. As a field, it is rapidly changing and the results of the literature review will be outdated once new and more specific studies will be conducted.

6.4 Conclusion & Further Research Recommendations

As a conclusion, aesthetic nursing is not a widely studied field of medicine. The existing publications are not comparable between continents. They include outdated information, specifically about used treatments among the consumers.

The most popular treatments among the consumers are clear: botulinum toxin, dermal fillers, mesotherapy, chemical peel and laser. These treatments are popular most likely due to their effectiveness, easiness, recovery time and low price compared to surgical procedures.

There is a clear demand for the branch of aesthetical medicine. The field is rapidly changing and growing. New professionals are entering the field and the training and certificates are more required than ever. Nurses are expected to take more responsibility regarding the patient safety due to the countries' lack of laws, regulations and supervision.

Considering future researches, the growing and rapidly changing field of aesthetics should be taken into account. New treatment options, education of the professionals, and the ethics of the treatments should be more specifically researched. Healthcare workers in emergency room settings could benefit from a research that covers the risks of non-surgical aesthetic procedures and their possible treatment options.

Evidence based, safe treatments are beneficial for the professionals as well as the consumers of the medical aesthetics. Wider research data of the medical aesthetics and aesthetic nursing could be helpful when setting limits and regulations for the field, which seems to have a great deficiency of regulations or supervision.

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