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DERMATOLOGY NURSES' JOB DESCRIPTION

Literature review



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DERMATOLOGY NURSES' JOB DESCRIPTION

Literature review

This is the first dedicated reviews to synthesize the role of dermatology nurses for multiple dermatologic conditions. The results of this review utilizing systematic approach strongly supports the specific job description of the dermatology nurses. Hopefully, this review will encourage others to explore the role of dermatology nurses.

The purpose of this BA thesis was to explore the roles of the dermatology specialist nurse in the enhancement of patient recovery, empowerment of patients with skills and knowledge necessary to foster recovery from skin diseases. This has enabled us to uncover the specific roles of dermatology nurses, challenges encountered by dermatology nurses in the course of rendering their healthcare services.

The nurses play key roles in promoting good patient compliance through patient education about skin diseases, proper administration of medication and connecting patients with other supportive services. Also, nurse practitioners play instrumental role in evaluating and managing patients with dermatologic diseases.

The relationships between patient and nurse are crucial and nurse practitioners are well positioned to optimize the care for the patients by building strong, long-term relationships. Patients who have trusting relationships with their providers are more likely to listen and adhere to healthcare advice.

Factors that makes concordance with treatments hard for patients include lack of knowledge about existing skin condition, conflicting commitments, language/cultural differences, treatment may be complicated and disillusionment with treatments despite best efforts. Patient education plays a pivotal role in patient adherence in treatments and preventing skin diseases, for instance; skin cancer.

Dermatology nurses are challenged to explore the importance of identifying gaps that exist in current nursing care. Opportunity is available for nurses to explore how they can contribute to the nursing research process now and in the future.

KEYWORDS:

Dermatology, dermatology nurse, nursing, nursing role, skin disease and job description

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IHOTAUTISAIRAANHOITAJAN TYÖNKUVA

Kirjallisuuskatsaus

Ihotauteihin erikoistuneen sairaanhoitajan roolista ihotautipotilaan hoidossa on toistaiseksi vielä melko vähän kirjallisuutta. Tässä opinnäytetyössä ihotautisairaanhoitajan roolia on tarkasteltu tieteellisten tutkimuksien pohjalta hyödyntäen systemaattisen kirjallisuuskatsauksen näkökulmaa. Tämän opinnäytetyön avulla halutaan tutustuttaa lukija ihotauteihin erikoistuneen sairaanhoitajan rooliin ja työtehtäviin.

Opinnäytetyön tarkoitus oli tutkia ihotautisairaanhoitajan roolia potilaan hoidossa, potilaan hoitoon sitoutumisessa sekä elämän hallinnassa. Tässä kirjallisuuskatsauksessa on tutkittu ihotautisairaanhoitajan roolia ja haasteita, joita hän työssään kohtaa.

Ihotautisairaanhoitajilla on tärkeä rooli potilaan terveyden edistämässä potilaohjauksen ja ihotauteihin liittyvän tiedonjakamisen keinoin. Ihotautisairaanhoitaja voi myös lisäkoulutautumisen myötä saada entistäkin merkityksellisemmän roolin ihotautipotilaan hoidossa. Ihotautisairaanhoitajan koulutuksessa ja ammattioikeuksissa on kuitenkin paljon eroja maailmanlaajuisesti.

Sairaanhoitajan ja potilaan välinen hoitosuhde on todella merkittävä potilaan hoitoon sitoutumisen kannalta. Pysyvät hoitosuhteet vaikuttavat merkityksellisesti potilaan sitoutumisessa terveydenhoitopalveluihin ja hoitoon. Sairaanhoitajat ovat optimaalisessa asemassa näiden hoitosuhteiden luomisessa.

Haasteita potilaan hoitoon sitoutumisessa aiheuttaa mm. tiedonpuute sairaudesta sekä taloudelliset tekijät. Joskus myös kulttuuriset haasteet vaikuttavat potilaan hoitoon sitoutumiseen. Tämän vuoksi potilasohjaus on tärkeä osa potilaan motivoimisessa hoitoon, mutta myös sairauksien kuten ihosyövän, ehkäisemisessä.

Ihotautisairaanhoitaja kohtaa monia haasteita työssään, sillä ihotautihoitotyö erikoisalana on vielä melko alkutekijöissä, erityisesti Suomessa. Saatavilla oleva tieteellinen näyttö sekä hoitosuosituksien ihotautipotilaan hoidosta on vielä vähäistä ja nykypäivän sairaanhoitaja on tärkeässä roolissa myös hoidon kehittämisessä.

ASIASANAT:

Dermatologia, Ihotaudit, sairaanhoito, sairaanhoitajan rooli, ihosairaudet ja työnkuva

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1 INTRODUCTION

The nursing profession has a long history of commitment to improving health care. Nevertheless, the concept of dermatology nurse is still quite young specialty specially from nursing perspective. Dermatology as a distinct specialty was found in the mid-1800s by pioneering physicians in England, France, the German-speaking countries and the United States. In 1996, after several years of contemplation and investigation, the Dermatology nursing associations board of directors decided to begin the process of dermatology nursing certification and finally in 1998 the first dermatology nursing certification exam was held to registered nurses. Before that, management of skin disorders and other problems related to skin were diagnosed and treated by general practitioner. (Valentine 1999, 25; Chussil et al. 1999.)

The common opinion is that there is a gap to be filled considering awareness of the dermatologic nurse's responsibilities and tasks among nurses in Finland. When some of the countries such as USA and England offer degree specialty in dermatology nursing, there is barely the comprehensive knowledge or requirements related to dermatology in the nursing curriculum. When the privilege was offered to choose topic for theses from the list of topics, the chosen topic really was fascinating, versatile and helpful considering the future work as nurses.

At any given time, there are more than 3,000 skin conditions affecting one in two Americans (Jones & Kalabokes 2010). In United States the health care system relies heavily on primary care clinics to manage variety of dermatological conditions. However, nurse practitioners, physician assistant and primary care physicians often lack education in the basic dermatologic science, dermatopathology and research. The need for improving dermatology education has been identified based on the high rates of skin diseases. Studies indicate a knowledge deficit of primary care providers about common dermatoses. (Davila et al. 2010.)

Around 54% of the population of United Kingdom get affected by skin condition in their life. Skin cancer is the most common cancer in United states and approximately one in five Americans will develop the skin cancer. It means that nearly 9500 people in a day are diagnosed with skin cancer in U.S. (Cowdell & Ersser 2013; Guy et al. 2015.)

As these numbers are showing, so many people all over the world get affected by skin diseases. Hence, this thesis intends to increase the awareness about dermatology nurse's responsibilities among the health care professionals. The specific purpose of this BA thesis is to systematically explore the roles of the dermatology specialist nurse in the enhancement of patient recovery, and the empowerment of patients with skills and knowledge necessary to foster recovery from skin diseases.

2 CONCEPTS

The main concepts of the thesis are dermatology, nursing and job description. These concepts are described and explained in order to identify the variables of the research and the connection with each others.

2.1 Concept of dermatology

The term dermatology is the branch of medicine that concerns with the diagnosis, treatment and prevention of skin diseases; for instance ulcers, dermatitis, melanoma, infections, cosmetic issues, acne, eczema, moles, wounds and healing issues like scars, rosacea pore issues, sebaceous glands related issues, warts, rashes, psoriasis, impetigo, allergies, vascular related skin conditions, and pediatric skin diseases. Furthermore, dermatology nurses are registered nurses, in many cases nurse practitioners, working as specialists in the field of skin care, treatment of diseases, wounds, injuries, skin cancer screening, acne treatment, cosmetic procedures and post plastic surgery treatment. Also, dermatology nurses operate in clinical environment as well as private practice situations; dealing with people who may be in serious distress from different skin diseases. (Lyons & Ousley 2015, 3-5.)

A Nurse Practitioner is a registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice. A master's degree is recommended for entry level. Nurse practitioners provide primary care to patients independently or in cooperation with physicians. Frequent contact with patients and a pivotal role in patient education place nurse practitioners in an ideal position to prevent or minimize the effects of dermatology diseases. (Englert & Hughes 2012; International council of nurses 2018.)

The skin is the largest organ system of the body and is essential for human life. It forms a barrier between the internal organs and the external environment and participates in many vital body functions. However, it accounts for approximately 15% of the total adult body weight. Functions include protection against external physical, chemical and biological aggressor, as well as prevention of excess water loss from the body and thermoregulation. Specifically, the stratum corneum, the outermost layer of the epidermis provides protection. The epidermis is a continually renewing layer and gives

rise to derived structures for instance nails, sweat glands and pilosebaceous apparatuses. (Kolarsick et al. 2011.)

A systematic review conducted by Loescher et al. (2011) identified the barriers to advanced practice nurses' performances of skin cancer assessment, their ability to recognize and identify suspicious lesions, and their training for skin cancer detection. However, nurse practitioners need accurate, effective and efficient tools to guide them in diagnosing and educating patients with skin disease. Misdiagnosis of skin rashes for instance can result in unnecessary office visits, prescriptions, costs, patient suffering, disfigurement and even fatality.

Teaching students about skin cancer, sun protective behaviors, and the nurse's role in assessing and educating patients using moulages and simulation has determined to be a great method of teaching students as compared with the traditional curriculum. These methods also strengthened the physical assessment and decision-making skills of the nursing students. (Slegel & Eckardt 2017.)

2.2 Concept of nursing

According to the World Health Organization WHO (2018), nursing is defined as autonomous collaborative care of individuals of all ages, families, groups and communities. Nursing profession includes the prevention of the illness, promotion of the health and wellness and the care of the ill, disabled and dying person. In addition, the international council of nurses (2017) describes the concept of nursing that is also advocacy, promotion of a safe environment, research, participation in shaping health policy in patient and health systems management. Constant education of nursing skills and knowledge is also the essential key in nursing.

Moreover, the nurse is the person who has completed the basic program of nursing and is authorized by the appropriate regulatory authority to practice nursing in the country. Basic nursing education is formally recognized program of study that offers good general knowledge in the promotion of health, prevention of illness and the care of physically and mentally ill or disabled person. Nurse is prepared to be eligible to take care of the health care teaching, participate as a member of the health care team, supervise and train nursing and health care auxiliaries. (International council of nurses 2017.)

There has been recent expansion of nurse prescribing rights in England which impacts on the views of healthcare professionals. The qualitative study by Stenner et al. shows that participants were positive about their experiences of nurse prescribing having witnessed benefits from it. However the nurse prescribing rights varies internationally.

Training to become a nurse independent prescriber or nurse supplementary prescriber is combined and entails 26 taught days plus 12 days of learning in practice with a designated medical practitioner. The nurse independent prescriber role entails independent assessment, diagnosis and prescribing by a nurse. Nurse prescribing has been seen beneficial and improved significantly the accessibility in dermatology services. (Nursing and midwifery council 2006; Stenner et al. 2009.)

However, in this thesis the definition of nursing is used in general matter. It includes the promotion of health, wellness and the safety, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response and advocacy in the care of individuals, families, communities and populations (Hinkle & Cheever 2014, 5-7).

2.3 Concept of job description

Nowadays there are large number of different roles for nurses in working life. That gives the great opportunity for nurses to use existing skills and develop new competencies according to their own interests. But common problem is the lack of information of different roles to establish. Without the proper job description of the certain nursing role it is difficult to identify their learning and development necessary to progress. Job description clearly sets the expectations and help to avoid disappointment, role confusion and ultimately problems with turnover of nurse practitioner and physician assistants. (Parfitt 2014; Simone et al. 2016.)

When composing the job description, the aim is to identify and describe the duties and tasks of the job. One way to develop the job description is to identify and classify the duties of the role and merge the findings into main categories and subcategories. The job description of the role should be determined based on these tasks. These job descriptions form the educational requirements of that new academic major. It also benefits the development of curriculum of academic major based on these educational requirements. (Goudarzian et al. 2016.)

Furthermore, Cambridge dictionary in 2018 briefly defines the job description: " A list of the responsibilities that you have and the duties that you are expected to perform in your work". In this thesis the knowledge of work of dermatology nurses is conducted from research articles and studies which are related to the topic and then generating the job description based on the literature.

3 THE SKIN

The skin is the largest organ system of the body and is essential for human life. It forms a barrier between the internal organs and the external environment and participates in many vital body functions. However, it accounts for approximately 15% of the total adult body weight. Functions include protection against external physical, chemical and biological aggressor, as well as prevention of excess water loss from the body, transmission of sensory impulses, thermoregulation and serve a significant role in maintaining homeostasis. (Kolarsick et al. 2011; McLafferty et al. 2015.) Furthermore, the skin is constantly exposed to various endogeneous and exogenous factors that may impact its barrier function at the physical, mechanical, immunological and microbial levels. These factors have the potentials to initiate or exacerbate a variety of inflammatory skin conditions, especially those associated with barrier dysfunction. However, the barrier function of the skin depends upon a symbiotic relationship between resident microbial communities and host tissue. This symbiosis results from complex signals involved in both the innate and adaptive immune responses. Recent research indicates that both bacterial diversity and the relative abundance of different microbes present on and in the skin may contribute to skin barrier stability or dysfunction. (Friedman et al. 2017.)

The three layers of the skin form an effective barrier to the external environment. Collagen and elastic filaments of the dermal layer provide the underlying tensile strength of the skin, whereas the layer of subcutaneous fat provides a store of energy for the body. The high rate of cell proliferation in the epidermis and in epithelial tissue and the fact that this tissue is most frequently exposed to physical and chemical damage result in the exceedingly high rate of skin cancers found in humans as compared with other types of cancer. The skin is a complex arrangement of structures with a range of different, but important, functions. (Kolarsick et al. 2011.)

The outer most layer, the epidermis is the first viable tissue layer of the skin where pathology of several dermatological disorders resides. It is 50-100 micrometre thick and is composed primarily of keratinocytes. (Zakrewsky et al. 2015.) Also, it consists of a specific constellation of cells known as keratinocytes, which function to synthesize keratin, a long, threadlike protein with a protective role. The epidermis harbors several other cell populations, such as melanocytes, Langerhans cells, and Merkel cells, but the

keratinocyte cell type comprises most of the cells by far. The epidermis commonly is divided into four layers including the basal cell layer (stratum germinativum), the squamous cell layer (stratum spinosum), the granular cell layer (stratum granulosum), and the cornified or horny cell layer (stratum corneum). (Kolarsick et al. 2011.)

The middle layer, the dermis, is fundamentally made up of the fibrillar structural protein known as collagen. The dermis is an integrated system of fibrous, filamentous, and amorphous connective tissue that accommodates stimulus-induced entry by nerve and vascular networks, epidermally derived appendages, fibroblasts, macrophages, and mast cells. Other blood-borne cells, including lymphocytes, plasma cells, and other leukocytes, enter the dermis in response to various stimuli as well. The dermis comprises the bulk of the skin and provides its pliability, elasticity, and tensile strength. It protects the body from mechanical injury, binds water, aids in thermal regulation, and includes receptors of sensory stimuli. However, the dermis interacts with the epidermis in maintaining the properties of both tissues, for instance collaboration in repairing and remodelling the skin as wounds are healed.

The subcutaneous layer is found beneath the dermis and is a thin layer made up of corneocytes. Corneocytes are cells which don't have nucleus and are heavily enriched with intracellular keratin filaments. Corneocytes are held together in a "brick and mortar" structure by a lipid matrix composed of ceramides, free fatty acids, and cholesterol. Materials traversing the tortuous lipid channels, and/or traverse transcellularly through corneocytes, or enter the skin through hair follicles or sweat duct. Transport within the lipid bilayer however, is the most common mode of passage through the skin. (Zakrewsky et. al 2015.)

The thickness of the dermis and subcutaneous layers varies considerably, depending on the geographic location on the anatomy of the body. The eyelid, for example, has the thinnest layer of the epidermis, measuring less than 0.1 mm, whereas the palms and soles of the feet have the thickest epidermal layer, measuring approximately 1.5 mm. The dermis is thickest on the back, where it is 30-40 times as thick as the overlying epidermis. (Kolarsick et al. 2011.)

Nurses need to be knowledgeable about what is healthy skin. This is important, as the condition of the skin may often be a sign of underlying disease. Many nurses will be familiar with cyanosis where, because of poor delivery of oxygen to the tissues, the patient's skin appears blue. (McLafferty et al. 2015)

3.1 The common skin diseases

The main characters, appearance, prevalence, pattern and site of presence of different skin diseases are shortly presented in this thesis. The prevalence in reviewed studies and in population rates impacted on the selection of these common skin diseases. Most of the research articles which were reviewed for the thesis were considering these skin conditions such as skin cancer (melanoma and nonmelanoma), acne, psoriasis, Eczema and allergic contact dermatitis.

Allergic Contact Dermatitis (ACD) is one of the most challenging aspects of living allergic contact dermatitis is delayed clinical presentation. ACD results from a delayed hypersensitivity reaction that leads to a prolonged time between exposure and the actual activation of the dermatitis. Without patch-testing, this association may be nebulous and remain undiscovered. The success of patch-testing relies heavily on an education-centred treatment plan. Proper education implementation is known to improve patient outcomes. (Boghosian et al. 2017.)

More recently, several studies have been conducted that show that psychological stress may lead to the exacerbation of psoriasis. Psoriasis is a common chronic inflammatory disorder affecting over seven million adults in the United State and highly associated with significant morbidity. When compared with patients with a number of other skin diseases, psoriatics have been found to be more likely to report stressors preceding the onset of their disease, suggesting that psoriasis may be more stress-related than other skin diseases. Major stress has been noted to occur in 44% of patients prior to the initial flare of psoriasis, and recurrent flares of psoriasis attributable to stress have been reported in up to 80% of patients. However, Research has shown that phototherapy is a safe and effective treatment option for patients experiencing moderate to severe psoriasis. Home narrowband ultraviolet B phototherapy is also considered safe and cost-effective treatment and has been reported to be as effective as office-based NBUVB phototherapy. Psoriasis involves dysregulation of the immune system causing inflammation and hyperproliferation of keratinocytes resulting in thick scaly plaques. The pathogenesis is complex, and the exact cause is not yet well defined. (Matthews et al. 2017.)

There are four main factors which contribute to the development of acne lesions. The causes of the acne may be from the plugging of the follicles by debris, inflammation in

the skin surrounding the follicles, increased production of sebum (oily secretions) by the sebaceous glands or the presence of the bacteria within the acne follicle. In each individual, these causes may contribute in varying degrees to the onset, duration and type of acne. Other factors that affect to the development of acne in individual are hormones, genetics, medications, hair or skin care practices. Acne is a skin condition that affects people of all ages, although it is most common in adolescents. It is a condition that can be underestimated by healthcare professionals because it is generally not life threatening. The skin condition may be a simple cosmetic problem. However, acne can have profound psychological effects on an individual, and can result in reduced self-esteem, depression and suicide in extreme cases. (American skin association 2012; Mooney 2014.)

Skin cancer is the most commonly diagnosed cancer in the U.S. However, the actual number is difficult to estimate as the common types of cancer, basal cell and squamous cell skin cancer, are not required to be reported to cancer registries. Invasive melanoma accounts for only about 1% of all skin cancer cases, but most of skin cancer deaths. The incidence of melanoma of the skin has risen rapidly over the past 30 years. Many of the more than 5 million skin cancer cases that are diagnosed annually could be prevented by protecting skin from excessive sun exposure and not using indoor tanning devices. (American cancer society 2017.)

Warning signs of all skin cancers include changes in the shape, size, color, the appearance of a new growth on the skin, or sore that doesn't heal. Changes that progress over a month or more should be evaluated by a health care provider. High exposure to ultraviolet radiation, number of moles on the skin, skin type, genetics, personal history of previous malignant growth, and a history of being immunocompromised, which includes taking immunosuppressive medications, are factors that increase the risk of melanoma. Immunosuppressive medication is the drugs that transplant recipients take to prevent their body from rejecting the transplant, by so doing, suppressing the immune system. (Feuerstein & Geller 2008; American cancer society 2017.)

Melanoma is the most common serious form of skin cancer, a malignant growth that originates in melanocytes, the pigment-producing cells of the skin. The number of cases of basal cell and squamous cell skin cancer, are not required to be reported to registries so it is difficult to estimate. However, commonly they are known to occur widely. About 90% of basal cell carcinoma occurs on sun-exposed areas such as the face, nose, neck, ears, scalp, and arms. Typical basal cell carcinomas (BCC) appear as slowly growing,

shiny, skin colored to pink translucent papules with telangiectasia and a “pearly” rolled border. Squamous Cell Carcinoma (SCC) typically occurs in areas of skin that are heavily damaged by sun exposure, most commonly the head or neck, back, forearms, and dorsum of the hand. SCC typically appears as a discrete scaly erythematous papule on an indurated base, either on normal appearing skin or on an actinic keratosis. The lesion may grow over time and become ulcerated, itchy, or painful, or start bleeding. (Feuerstein & Geller 2008.)

3.2 Consequences of skin diseases

The consequences of skin diseases can vary from minor dry skin symptom to fatal suicidal behavior. In this chapter the most common consequences of skin diseases based on the reviewed articles are listed below.

3.2.1 Psychological distress

In view of this, acne is generally considered a minor disorder, but it is important to appreciate that the condition can result in severe psychological and social disturbances. The skin conditions often have profound psychological effects on the patient, causing severe distress. Patients may feel embarrassed, self-conscious, angry and frustrated about their skin condition, and the distress can be worsened by the reactions of others. (Mooney 2014.)

It is easy to dismiss these disturbances when the clinical presentation appears mild because the psychological effect on quality of life might not directly correspond with the symptoms observed. This can make assessment complex. An increased awareness of the psychological effect of acne and other skin conditions is important in improving quality of life for the patient. Early recognition of depression or psychological difficulties, alongside clinical findings, can promote holistic support for the patient, and is essential to ensure continual improvement in care. (Mooney 2014.) Post-adolescent acne can have significant psychosocial effects on individuals and should be managed with understanding and sensitivity (Moore-Bianconi 2012). It is well established that particularly in chronically relapsing cases of atopic dermatitis, the daily life of children and their families is severely affected by the disease, not just over a period of weeks, but mostly over several months or even years. (Heratizadeh 2014.)

3.2.2 Economic burden

In the recent study, the co-payments for visits to hospital and for medications and emollients comprised only a minority of the total costs for a patient, while travel costs and lost time were estimated to contribute most of the costs to patients. The costs of the treatments have the significant role when choosing treatments and has the impact to patient compliance and treatment concordance, especially for the patients with psoriasis. That might have the great impact on the economic burden in the patient's life. (Mustonen et al. 2014.)

Also, in Germany, total yearly cost of 1,425 euro per patient have been calculated resulting in costs of 1.6- 3.6 billion per year in society. Disease related costs affect patients and parents directly. (Heratizadeh 2014.)

3.2.3 Pruritus

Pruritus (itching) originates within the skin's free nerve endings, which are most heavily concentrated in the wrists and ankles. It is the stimulation of these nerve endings from scratching, which therefore leads to inflammation and itching. This process is frequently referred to as the itch-scratch cycle. Also, insomnia, which is a common concern for many older adults, is further exacerbated by pruritus. Lack of sleep may significantly affect quality of life. Also, patients with dry skin (xerosis) experience an intense pruritus, usually involving the anterolateral lower legs. Other commonly involved areas include the back, flank, abdomen, and waist. (Moses 2003.)

A thorough history and a careful physical skin examination are critical to the evaluation of pruritus. The physical examination also should include careful palpation of the lymph nodes, liver, and spleen. Most pruritic conditions can be diagnosed based on the presence of associated dermatitis, the distribution of the itching or rash, or a history of recent exposure to exogenous causes. (Moses 2003.)

3.2.4 Dry skin

Dry and itchy skin conditions are extremely common in all age groups and can affect 15 to 20 per cent of the population. Older people will universally have dry skin, due to the

ageing process, and dry skin is a symptom for many inflammatory dermatoses and cutaneous manifestation of internal disease. Dry skin (xerosis) occurs because of the impairment of the hypolipid system (stratum corneum) in the epidermis. This is a natural protective covering consisting of water, lipids and natural moisturizing factors. (Onselen 2011.)

Dry skin can be an uncomfortable and distressing symptom, especially when it is accompanied by itching. It may affect quality of life, because dry skin results in scaling and flaking. This may lead to a person restricting their social interactions and affect family life, work and hobbies. The most important treatment for dry skin conditions is emollients because they restore the skin barrier by providing a surface film of lipids. Emollient therapy will combat skin dryness and soothe sore, inflamed skin. (Onselen 2011.)

3.2.5 Scars and scarring

Scarring has major psychological and physical repercussions. Scars are often underestimated, but they can be disfiguring and aesthetically unpleasant. Scar management is important, and not just for the cosmetic appearance, but scars can also cause severe itching, stiffness, tenderness, scar contractures and pain. Dermatology nurses should understand the different types of scars, and the principles of scar management, so they can advise patients and be aware of psychosocial implications. The psychological effects of scarring include diminished self-esteem, stigmatization, disruption of daily activities, sleep disturbance, anxiety and depression. (Monstrey et al. 2014; Edwards 2016.)

A scar is an essential part of the natural healing process after trauma or surgery to the dermis or the epidermis. Any injury that extends into the dermis will always heal with a scar. A scar is the inevitable result of damage to the dermis of the skin. Skin tissue repair results in a broad spectrum of scar types, ranging from a "normal" fine line to a variety of abnormal scars, including widespread scars, atrophic scars, scar contractures, hypertrophic scars, and keloid scars. Many patients arrive at plastic surgery clinics with unrealistic expectations, so it is essential that adequate information is offered to the patient to understand that the scars cannot be removed completely. (Bayat et al. 2003; Edwards 2016.)

3.3 Common treatments of some skin diseases

Healthcare professionals and prescribers should be aware of the pathogenesis of the different skin diseases for instance, acne to manage the condition effectively, minimise unwanted side effects and avoid triggering post-inflammatory hyperpigmentation or scarring. However, there is wide range of available treatment, particularly when managing patients with skin colour. This will improve adherence to treatment regimens and improve patient outcomes. Also, it is imperative that treatment regimens are tailored appropriately. For instance, treatment of multiple pathogenic factors involved in the development of acne is essential and can be achieved using combination therapies. Post-adolescent acne can have significant psychosocial effects on individuals and should be managed with understanding and sensitivity. Poor knowledge of the disease process and late presentation may also delay treatment and can contribute to unnecessary suffering for the patient and potential permanent scarring. However, early intervention is desirable to prevent scarring and hyperpigmentation and to minimise associated psychosocial problems such as low self-esteem, clinical depression, social isolation, interpersonal issues and suicidal moods. (Moore-Bianconi 2012.)

Furthermore, assessment of patient with acne should be holistic. It is important to consider patient's medical history, family history, lifestyle and social history as well as psychological effect of the condition. (Moore-Bianconi 2012.)

The ultimate judgment regarding the propriety of any specific therapy or technique must be made by the physician and the patient in light of all the circumstances presented by the individual patient, and the known variability and biologic behavior of the disease. Adherence to the guidelines of acne management will not ensure successful treatment in every situation. There are various acne treatments which has been seen effective in acne management. Those include topical therapies, systemic agents and physical modalities, including lasers and photodynamic therapy. (Lyons & Ousley 2015; Zaenglein et al. 2016)

There are various topical agents of acne treatments such as retinoids and retinoid-like drugs, benzoyl peroxide, topical antibiotics, salicylic acids, sulfur, aluminum chloride, zinc and combinations of topical agents. Also the effectiveness of systemic antibacterial agents has been identified potential. Those antibacterial agents include for instance tetracyclines, macrolides, clindamycin and amoxicillin. Systemic antibiotics are the

standard of care for the management of moderate to severe acne and for the treatment of resistant forms of inflammatory acne. The hormonal agents stimulate increased sebum production in acne. Hormonal agents include contraceptive agents, spironolactone, antiandrogens and oral corticosteroids. The alternative therapies in the treatment of adult acne and acne vulgaris in adolescents to adults, include herbal agents, homeopathy, psychological approaches, massage therapy and Hypnosis. However, the treatments of acne are always considered by the severity and biologic behaviour of disease. (Lyons & Ousley 2015; Zaenglein et al. 2016)

Quality of life and social stigma are important considerations when managing dermatological diseases involving the face (European Dermatology Forum 2011). Establish the patient's expectations of treatment and manage these accordingly by explaining the disease process, correct application and effects of any products prescribed and the duration of treatment for realistic improvement in acne for instance. Also, establishing the potential of treatments to cause irritation is important to prevent side effects that may make the visual appearance of the skin worse. (Moore-Bianconi 2012.)

Topical delivery of nucleic acids (NAs) for the treatment of skin diseases is especially advantageous since it bypasses the challenges associated with systemic administration which suffers from enzymatic degradation in the gastrointestinal tract, clearance from the bloodstream, systemic toxicity and lack of targeting to skin and the ability to easily observe and treat sites of adverse reactions and improve patient compliance. However, the skin's protective barrier function limits the delivery of NAs into skin after topical application, although concurrently, it provides a means to directly target the diseased sites for the treatment of dermatological diseases. For instance; skin cancer, psoriasis, and atopic dermatitis. (Zakrewsky et al. 2015.)

Acupuncture is a form of traditional Chinese medicine that has been used to treat a broad range of medical conditions, including dermatologic disorders. Acupuncture improves outcomes measures in the treatment of dermatitis, pruritis, urticaria, hyperhidrosis and facial elasticity. Acupuncture is a component of traditional Chinese medicine that involves stimulation of specific points on the skin using needlepoints, pressure or heat. Its application is based on the theory that disease is caused by disruptions in the body's vital energy which flows along channels called meridians, that forms a network to connect the body's organs. (Ma & Sivamani 2015.)

Acupuncture holds a long history in China, where it continues to be regularly used independently and as an adjunct to modern medicine to treat a broad range of diseases including dermatologic disorders. One systematic review estimated the prevalence of complementary alternative medicine in US general population to be around 38% whereas the national prevalence of acupuncture is estimated to be between 0.6% and 1.4%. Complementary alternative medicine was used specifically to treat dermatologic conditions in 6% of participants in one large national survey of whom 9.3% used acupuncture. Also, evidence appears to support the role of neuromodulation of the immune system in mediating the pathogenesis of inflammatory and infectious skin conditions such as acne, dermatitis, urticaria and human papillomavirus (HPV). (Ma & Sivamani 2015.)

Furthermore, the relationship between diet and acne has been highly controversial. But before the 1960s, certain foods were thought to exacerbate acne. However, several studies during the last decade have prompted dermatologists to revisit the potential link between diet and acne. Dermatologists can no longer dismiss the association between diet and acne, compelling evidence exists that high glycaemic load diets may exacerbate acne. Also, dairy ingestion appears to be weakly associated with acne whereas the roles of Omega-3, fatty acids, antioxidants, zinc, vitamin A, and dietary fibre remain to be elucidated. (Bowe et al. 2010.)

4 THE PURPOSE OF THE THESIS AND THE RESEARCH QUESTIONS

The specific purpose of this BA thesis was to systematically explore the roles of the dermatology specialist nurse in the enhancement of patient recovery, and the empowerment of patients with skills and knowledge necessary to foster recovery from skin diseases.

The aim of this study was to create awareness among nurses, nursing students and educators of the specific roles by specialist dermatology nurses that enable patients with skin diseases to recover quicker or in chronic situations alleviate patient's sufferings.

Research Questions were:

1. What are the roles of the dermatology nurse in skin care?
2. What are the job challenges encountered by dermatology nurses?

5 METHODOLOGY

The methodology was chosen in collaboration of the authors of this thesis. In this chapter the main phases of the research process is described briefly to the reader.

5.1 Research method

The methodology for data collection was reviewing of literature with systematic approach. That is a summary of evidence on the topic by experts who used an arduous process for identifying, appraising and combining studies to answer the specific topic. Also, reviewing literature with systematic approach uses explicit and vigorous methods to identify critically appraised and synthesized relevant studies in order to answer predefined question. The methodology in respect to collection of data involves literature search data selection, describing the data selectively and analyzing the selected data. Literature review focuses on research articles, journals, and books in conformity to the topic and purpose for this study. (Aveyard 2014, 16-17.) Otherwise, a systematic review is a summary of evidence on a particular topic, typically by expert or an expert panel that uses a rigorous process for identifying, appraising, and synthesizing studies to answer a specific clinical question. This process makes research more accessible to health care providers, with best practice serves as a way of targeting interventions to reach desired patient outcomes, while controlling or even decreasing resource consumption. (Vickers 2009.)

5.2 Data collection

Data collection for this review is mostly electronic search using the main data bases available at the Turku University of Applied Sciences Network. Databases that are used in this thesis are CINAHL, FINNA, MedLine, PubMed, Google scholar, Cochrane, The Dermatology Nurses' Association and EBSCO. The best accessibility on articles' full text documents was with Cinahl. Hence, the aim was to review exhaustively many and many research articles and studies by using inclusion and exclusion criteria to assess and ensure which articles has the best relevancy considering our research

questions. The most common and frequent search terms that was used in the thesis were dermatology, nursing, nurse's role, skin, skin diseases and job description.

Thorough and well produced search process leads to a set of research evidence to consider for inclusion that minimizes bias. As part of the search process, systematic reviewers often review reference lists of other studies or conduct hand-searches to identify additional primary studies. Also use of manual search is significant for successful findings when searching valuable and quality data. (Vassar et al. 2016.) The manual search was also used in this thesis to enrich the findings. Many journals in dermatology field had good studies concerning the interest of the thesis. The dermatology journals had their own websites and had an open access on many of the good studies.

Also, the aim in this thesis was to discover as many relevant studies concerning evidence-based practice as possible to improve the validity. The term evidence-based practice is used to refer to the appropriate application of the study knowledge into practice. When more and more research has been carried out and the evidence within health and social care has expanded, the necessity of the research to bring them into the practice got more and more essential and valuable. Important decisions in health and social care should be based on scientific proof rather than a 'gut feeling' or past experience. (Aveyard 2014, 20-21.) By reviewing the most relevant and recent studies also improve the newsworthy of this thesis.

Struggle of finding relevant studies concerning the research questions was present especially in the beginning of the process. Few articles were also elucidating this fact. For instance, a PubMed search for "nursing research and dermatology" performed on June 18, 2006, resulted in a list of 11 references. In contrast, a Pubmed search done at the same time for "nursing research and oncology" resulted in 505 references. (Smith 2007.) That offers an idea of a contrast between the amounts of dermatologic and oncologic nursing research conducted. Also, American skin association is pointing out that dermatological research remains one of the most underfunded areas of medicine. American National Institutes of Health devotes less than 2% of its annual budget to discovering the cause and better methods of prevention, diagnosis and treatment of skin disorders. (American skin association 2012.)

5.3 Data analysis

This is a process of inspecting, cleansing, transforming and modeling data with the goal of discovering useful information, suggesting conclusions and supporting decision making or evidence synthesis which involves the extraction of details example, the method, setting and type of participants from original study including aggregate of original findings into categories and further into synthesis. (Hannes et al. 2011.) Content data analysis was used to gather and analyze our data in a tabulated format. (Appendix 1) Also the thematic analysis approach were used in the process of data analysis. The results of the research were categorized into the subthemes.

In addition, 23 studies were identified, the initial search of all databases identified 100 articles. Manually screened relevant abstract yielding eligible articles for inclusion criteria. Articles were excluded if they were out of scope, that is; did not evaluate a dermatologic condition, identify challenges encountered in dermatology nursing or assessed responsibilities of a dermatology nurse. After careful review, 23 relevant research articles, were included in this literature review utilizing systematic approach.

The results of the studies conducted by two authors of this thesis improves the reliability of this research. All the phases of the research process such as data collection and data analysis were done in the collaboration of the authors.

6 THE RESULTS OF THE RESEARCH

The issues of the research were concerning the role of the dermatology nurse and the challenges encountered by them. The results for the research questions were categorized by using the thematic analysis approach.

6.1 The role of the dermatology nurse

A Nurse Practitioner is a registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice. A master's degree is recommended for entry level. Nurse practitioners provide primary care to patients independently or in cooperation with physicians. Frequent contact with patients and a pivotal role in patient education place nurse practitioners in an ideal position to prevent or minimize the effects of dermatology diseases. (Englert & Hughes 2012; International council of nurses 2018.)

The findings of the research of the dermatology nurses' role in dermatologic patient care have been categorized into the themes. The following themes are; The role of the nurse in patient adherence, The role of the nurse in patient education, The role of the nurse in the nurse-patient relationship, The role of the nurse prescriber in dermatology and The role of the nurse in skin cancer detection.

6.1.1 The role of the nurse in patient adherence

Listening and explanation of treatments were aspects of nurse communication that were rated highly by patients. However, the information about the future needs, problems and treatments and instructions about taking medicines enhanced the patients' satisfaction about the care, but involving them in decision-making and giving information about medicines and their side effects were less consistent. These kind of clinical results require that patient needs to be involved more in the decision-making and to be offered more information about their medicines. However, the data were collected with questionnaire and they were showing that still even more than two out of three were satisfied with the involving in the decision-making and the information offered about the medication. Triangulated data of the study suggest that nurse prescribing enhances the

care of patients with dermatological conditions through improved prescribing decisions. (Courtenay et al. 2009.)

In addition, a study conducted by Schuttelaar et al. (2010), utilized Social Cognitive theory to motivate participant to learn to control and manage eczema successfully, led to the recognition of the role of the nurse practitioner as a motivator. The nurse practitioner explained the etiology of eczema, details about topical treatments, triggers and demonstrated application of those treatments. This helped participants to understand what they needed to undertake, and it led to improved adherence.

In patients being treated with mechlorethamine gel for instance, the dermatology nurse plays a significant role in patient assessment, identification of treatment goals, and management of treatment expectations. The nursing assessment can help establish several key factors that are important to the ongoing and successful use of mechlorethamine gel. In a nonjudgmental way, the dermatology nurse needs to determine how the patient is using the medication and if the nuances of application are understood and assess for side effects as well as signs of efficacy. (McCann 2016.)

Furthermore, in the management of scars and other aesthetic appearances, dermatology nurses should identify a number of aims concerning the treatment. Those could be for instance alleviating symptoms, assisting maturation process, preventing deformities, preventing growth retardation or assisting psychological wellbeing of the patient. Management of scars is a challenge, as no treatment is highly effective. It is important for the nurse to give a patient realistic expectation and to inform them that no scar can ever be removed completely. The management of newly healed wounds to prevent scar formation is one of the most profound things a nurse can do for patients' physical and mental wellbeing. It is important that nurses offer a good patient education and after-care advice if abnormal scarring develops. (Edwards 2016.)

For instance, patients can benefit from the increased understanding of psoriasis or other skin conditions provided by their nurse practitioners. Also, they also benefit from discussions with patients and their families about the factors that influence adherence and non-adherence. It is good that providers assess whether patients are satisfied with their treatment to minimize the risk of the non-adherence. Such engaged patients are likely to have fewer complications with their disease or therapy and also have more realistic expectations about the benefits and risks of their treatment. (Aldredge and Young 2016.)

The authors of recent studies concerning PeDeSi-tool has a clinical experience of using it over the past few years. This clinical experience has shown that in many patients with chronic skin disease there has been a positive behavioral change and an increased motivation to treat. (Cowdell & Ersser 2013; Flavell 2016.)

6.1.2 The role of the nurse in patient education

To actively engage the patient in the concordance process also improves the adherence with treatment recommendations. Although, it requires timely, systematic, and accurate assessments of the education and support needs of patients with long-term dermatological conditions in order to offer adequate patient education and guidance. Therefore, a tool to measure self-care ability could provide the basis for developing more tailored and effective programs of education and support. The efficiency of the 'person-centered dermatology self-care index' (PeDeSI) was tested in the clinical settings in dermatology centers in acute care hospitals in England. The results of the study showed that PeDeSi-tool was a valid, reliable and clinically practical tool to systematically assess the education and support needs of the dermatologic patient. The main objective of the index is to help patients, physicians, and nurses work collaboratively to assess the education and support that are required to enhance patients' self-management in the care of dermatologic problems. Self-management has a fundamental role in controlling skin conditions and in maintaining quality of life. (Cowdell et al. 2012.)

The assessment of patients' educational needs should begin in the first patient contact. Investing time in patient education and supporting towards a self-management improve the long-term benefits by reducing the negative impact of the skin disease, but also reducing pressures on dermatology resource. Patients who are able to develop and perform self-management skills independently with little input relieve the financial burden in health care system. The dermatology specialist nurse has an important role to play in educating patients with chronic skin disease. Utilizing the Person-centred dermatology self-care index tool in patient education and support could enhance patient care. Nurses need to be able to identify and evaluate the effectiveness of the care that they provide. (Flavell 2016.)

However, a systematic review, by Friedman et al. (2011) on effective teaching strategies and patient education determined that those involving structured, culturally appropriate and patient-centered features improved knowledge, decreased anxiety and increased

consumer satisfaction. Also, the PeDeSI is a tool that guides systematic and accurate assessment of the educational and support needs of a patient to enable those with long-term skin conditions to self-manage as effectively as possible. (Cowdell et al. 2013.)

Mycosis fungoides cutaneous T-cell lymphoma (MF-CTCL) is a subtype of cutaneous T-cell lymphoma. Cutaneous T-cell lymphomas refer to a serious but rare skin condition in which there is an abnormal neoplastic proliferation of lymphocytes. Dermatology nurses often serve as the primary contact for patients with mycosis fungoides cutaneous T-cell lymphoma (MF-CTCL) and are integral in-patient education, setting patients' expectations about disease symptoms, outcomes and response time after treatment (McCann et al. 2016). However, each practice setting follows its own protocol for MF-CTCL diagnosis, treatment, patient follow-up, and maintenance plans. The dermatology nurses play a key role in promoting good patient compliances through patient education about skin diseases, proper administration of medication and connecting patients with patient assistance programs or other supportive services. Support groups both nationally includes; Cutaneous Lymphoma Foundation, Leukemia and Lymphoma Society, Lymphoma Research Foundation and National Cancer Care foundation and locally could also help patients accept and manage their skin disease. It is vital for the dermatology nurse to recognize the impact of skin disease on a patient's quality of life and to address these issues along with providing options for additional support. (McCann et al. 2016.)

Furthermore, dermatology nurses also play key role in setting patient expectation, for instance MF-CTCL disease and treatments, and nurses often encounter many questions from patient. However, common patient questions are useful guide that the dermatology nurse can use during patient education opportunities. Also, patients need to assume an active role in the management of their skin disease (McCann et al. 2016).

The dermatology nurse as an effective patient educator, help learners to become skilled in monitoring their symptoms using their senses, particularly sight and touch, provide vital link between the healthcare providers (Thompson et al. 2014), also in the education of health choices and diet recommendations.

Psoriasis patients demonstrate high interest in the role of diet on their skin condition. When discussing with patients interested in dietary management of their psoriasis, health care professionals can use this opportunity to encourage and offer guidance as well as awareness of dietary changes. Those dietary changes are benefiting both psoriatic lesions and the cardiometabolic risk factors associated with psoriasis. (Afifi et al. 2017.)

Engaging in dietary recommendations and management options with psoriatic patients has the essential meaning in comprehensive care by preventing and managing of long-term skin disease. Thus, the popular literature contains many dietary recommendations for psoriasis, but the scientific literature is limited. And the challenge of finding comprehensive dietary guidance for the psoriasis patient is notable for the health care professionals such as dermatology nurses. Nevertheless, the dietary and lifestyle guidance is meaningful part of the nurses' job from any medical specialties. (Afifi et al. 2017.)

And in the randomized controlled trial of Afifi et al. (2017) shows that almost 90% of the psoriasis patients found it very or somewhat important that physicians discuss with patients the role of diet in managing skin disease and only 30.7% had discussed dietary changes with a dermatologist. That clearly emphasizes the importance of the nurses' role in discussions about dietary changes. (Afifi et al. 2017.) As the studies are also showing, the patients feel that the nurses' consultations are also more accessible (Courteney et al. 2011).

6.1.3 The role of the nurse in the nurse-patient relationship

The relationships between patient and nurse are crucial and nurse practitioners are well positioned to optimize the care for the patients by building strong, long-term relationships with them. Patients who have trusting relationships with their providers are more likely to listen and adhere to healthcare advice. That helps them to improve their active role in managing their psoriasis and skin health. The efficient management and care of psoriasis impact resulting also from the trust in the patient-nurse-relationship. As providers continue to build on their relationship with patients, they can improve the patients to adopt lasting healthy behaviours, adhere to therapy and increase patient awareness of new options for care. (Aldredge and Young 2016.)

Also the nurses believed that they have more time to spend with patients than doctors, which is the significant factor in long-term relationships with patient and patient engagement. It also secures the continuity of care when nurses were able to develop a better understanding of the patient's history and lifestyle. The 86% of the patients rated as very good or excellent the time that nurses were able to spend with them. Comparing to doctors' role in care of dermatology patient, time constraints means that they are frequently unable to meet the demands of the high number of patients with these

conditions. The relationship that nurses developed with patients with dermatological conditions were of central importance to prescribing decisions as the effective communication, nurse consultation style and continuity of care each contributed to effective nurse–patient relationships. (Courtenay et al. 2009.)

Results of the study shows that patients are satisfied with the extent of information about treatment benefits, risks and side effects provided by the nurse. Nurses offering time to answer questions and checking the patient’s recall and understanding are seemed valuable for patients. Because of the good listening skills, presence and understanding of nurses, patients gained more information and understanding, felt less rushed and more cared for. The nurses appeared also to have more time to spend with, were more approachable, easier to talk to and made patients feel more relaxed. Also, nurse consultations frequently involved a broader discussion about lifestyle behaviours. (Courtenay et al. 2011.) These factors improve the patients’ satisfaction on dermatology services.

In the case of the child patient, the whole family should always be treated holistically. Dermatology nurses provide effective eczema education to children with eczema and their parents, optimizing care, support and satisfaction, minimizing relapses, reducing the psychosocial impact of the condition and providing care equivalent to that of the dermatologist. Effective child and parent education is the key to successful self-management of eczema. When diagnosed, children and parents should learn to understand the condition through clear explanations, seeing treatment demonstrations and having ongoing support to learn practical skills to control eczema. (Thompson et al. 2014.)

6.1.4 The role of the nurse prescriber in dermatology

The authors of the recent study explored the views of dermatology patients about nurse prescribing. The results showed that patients believed that nurse prescribing improve the access to, and efficiency of dermatology services by increasing the number of available appointments, offering telephone access, providing local services, and improving efficiency. It has been seen valuable and reassuring, especially for patients requiring advice at short notice. Telephone contact with the nurse between appointments and an access to services was showing to be valuable and helped reduce the anxiety of patients associated with attending hospitals. Also, the great importance was placed on the

continuity of care when patient was offered to meet the same nurse over a period of time as it improved relationships and facilitated discussion of sensitive or embarrassing issues. (Courtenay et al. 2011.)

The study done in England shows the benefits of dermatology nurse prescribing. All participants in the study were positive and supportive of the nurse prescribers with whom they worked and reported benefits of nurse prescribing in dermatology, including enhanced service provision, efficiency and improved patient care. Also, doctors expressed confidence in the nurse's ability to choose cost-effective and evidence-based products in prescribing. Doctors provide an essential role in mentoring and supporting the nurses prescribing practice. (Stenner et al. 2009.)

However, the nurse prescribers require high level of experience, prescribing qualification and knowledge and skills in the field of dermatology in order to prescribe correctly for dermatological conditions and ensure the patient safety. Prescribing was considered to enhance and expand the nursing role and enabling nurses to take responsibility for prescribing decisions. (Stenner et al. 2009.)

Overall the essential outcomes of the study were diverse benefits of nurse prescribing in dermatology by improving the patient care, accessibility and efficiency of dermatology services and expanding the nursing role and the responsibilities in dermatology care. However, there is a fear that some of the nurses may be prescribing beyond their level of competence. (Stenner et al. 2009.)

Nurse prescribers provide advice to patients on general skin care, including using topical treatments effectively and how to prevent skin infection recurrence. Some skin infections also require the nurse prescriber to be aware of public health policy, to avoid the spread of skin infections that are communicable diseases. (Onselen 2018.)

6.1.5 The role of the nurse in skin cancer detection

Phelan and Heneghan also highlights the fact that nurses play even more significant role in primary and secondary skin cancer prevention. With rising health care costs, it is essential to further educate and empower nurses to screen, detect and educate as they are in an optimal position to provide these services. It is also important to take into consideration that giving the biopsy results to a patient, it is better speaking directly to a patient to have a great opportunity to discuss for instance sun-protection, need for

regular dermatological follow-ups and remind of monthly self-skin examination and such patient education that is needed. (Phelan & Heneghan 2008.)

According to the Phelan and Heneghan (2008) there are many nurses practicing in dermatology setting and most of the nurses were confident identifying skin cancer. Most of the dermatology nurses performs the total body skin examination in identifying suspicious lesions in their daily work and also feel confident about it based on the research. Dermatology nurses are trained to perform Total body skin examination (TBSE). Also, those who uses dermatoscopes and digital cameras when performing TBSEs, provide an important component in improving cancer screening and detection. Nurses practicing in dermatology setting should be aware of the importance of different technologies and dermatologic tools in skin cancer screening such as dermatoscopy and photography. It has been shown that use of these technologies in skin cancer screening translates into positive outcomes. Early detection of skin cancer screening is essential in decreasing morbidity and mortality.

6.2 The challenges in dermatology nursing

When categorising the common themes of the challenges that dermatology nurses' encounter in their work, the same issues can be seen often in different studies. The challenges of the dermatology nurses can be categorised into following themes; lack of dermatology nurse training, lack of adequate practices and tools in care of dermatologic patient and challenges in patients' concordance with treatments.

6.2.1 Lack of dermatology nurse training

A systematic review conducted by Loescher et al. (2011) identified the barriers to advanced practice nurses' performances of skin cancer assessment, their ability to recognize and identify suspicious lesions, and their training for skin cancer detection. The nurse practitioners need accurate, effective and efficient tools to guide them in diagnosing and educating patients with skin disease. Misdiagnosis of skin rashes for instance can result in unnecessary office visits, prescriptions, costs, patient suffering, disfigurement and even fatality.

The American Cancer Society (ACS) estimated in 2014 that, of the 5,330 new cases of cancer diagnosed in adolescents 15 to 19 years old, 6% were melanoma. Melanoma is one of the top three cancers affecting persons younger than 20 years old. That approves that how inevitable and significant is the role of preventive counselling in skin cancer prevention among adolescent. The one study, which was recently done in Arizona, was exploring the nurse practitioners' skin cancer knowledge, attitudes and primary prevention counselling practices among adolescent. The results of the current study show that nurse practitioners did not recognize skin cancer prevention as a prominent problem for their adolescent patients and did not increase preventive counselling for adolescents with risks for skin cancer. Also the study was resulting that the knowledge of nurse practitioners about skin cancer was moderate to low even though they had the strong feeling about their knowledge. (American Cancer Society 2015; Lucas et al. 2016.)

The development of educational interventions such as increasing dermatology curriculum in basic and advanced nursing programs may improve nurse practitioner understanding of skin cancer prevention and therefore might increase preventive practices among adolescent in the clinical setting. In addition, there is a short of current data for nurse practitioners about primary prevention counselling practices regarding adolescent patients in cancer prevention. (Lucas et al. 2016)

6.2.2 Lack of adequate practices and tools in care of dermatology patient

Ersser and Nicol (2010) distinctly highlights the broad challenges of how dermatology nurses become effective consumers of research and how they access and use the best available evidence to inform practice and ensure the patient safety in care. Evidence-based practice is about trying to make more effective clinical judgements to ensure that treatment and nursing care will lead to better patient outcomes. The aim of this process is to reduce the number of ineffective practices or those that cause more harm than good and to increase those that are more effective. Dermatology nurses need explanations such as how clinical factors relate; for example, how does a patient's level of stress affect disease severity, or how does phototherapy dose relate to erythema level. (Ersser & Nicol 2010.)

Dermatology nurses employ scientific knowledge in the care of dermatology patient in order to understand and explain the cause of their act. Many issues of dermatology

nurses are about knowledge management, the ability to effectively and appropriately use knowledge in a clinical situation to improve the quality of care. Nurses also need to seek support in this process by gaining familiarity with local, national, and international strategies that support the development of evidence-based practice. (Ersser & Nicol 2010.)

Consequently, it is hardly surprising that there has been negligible funding available for adding psychological expertise into routine dermatology practice. Another fundamental problem has been a skill gap resulting from the lack of training provided to both dermatologists and dermatology nurses. (Thompson 2014.) It is important that service managers and commissioners are aware of the recommendations of the groups described above. Dermatology nurses can assist in raising awareness and help make the case for having clear referral pathways for patients showing signs of significant psychological distress. (Thompson 2014.)

A two-stage study design by Bewley et al. (2014) was used to comprehensively identify the impact of psoriasis on patient with chronic psoriatic skin disease. In this study consist of both quantitative and qualitative components were identifying and describing two main categories which has the greatest impact on patient with psoriasis. Those two categories were disappointment with treatments and confusion regarding psoriasis associated with a lack of direction. (Bewley et al. 2014.)

Physical symptoms such as pain, itching and bleeding caused patient desperation and impaired their physical activities. The psychosocial impact of psoriasis was characterized by stress, hopelessness, struggle, fear and worry. Patients reported that these factors led to avoidance, limitation, hiding and isolation in their life. The participants of the study disclosed the attitudinal statements regarding their psoriasis and even a half of the participants reported that they had faced the situation where other people thought psoriasis is contagious and that may lead to isolating him/herself. Also 66 % told that they try to hide psoriasis from others. (Bewley et al. 2014.)

This research indicates that patients have disappointments with trialling different treatments. Many of them have long period of trying different treatments in their past and often no help was found experienced. Patients felt that topical medications were not helping their psoriasis to a great extent. Some of them who felt this way had been through a long and burdensome process with trial-and-error and that had led to a negative attitude and loss of faith toward topical medications. Treatments are not seen as

effective. However, the study revealed that patients also expressed unrealistic expectations of their treatments and for example 80 % of the participants expected treatments to work quickly. (Bewley et al. 2014.)

6.2.3 Challenges in patients' concordance with treatments

Patients non-concordance with treatment. Some factors that makes concordance with treatments hard for patients include lack of knowledge about existing skin condition, conflicting commitments (for instance; travelling and work), language/cultural differences, treatment may be too complicated and disillusionment with treatments despite best efforts. Santer et al. (2012) conducted a qualitative study looking at carers' views on treatment of eczema, illuminated how concordance was poor for multiple reasons: Parents in the study reported feelings of frustration with the prescribed treatments, the medical care received, not understanding basic advice for instance; how to measure out enough topical steroid to use on specific body areas, how to apply emollients in downward strokes and conflicting advice received from different healthcare providers. (Carr J. 2015.) Also, qualitative findings from the study on patient satisfaction feedback reveal a key theme being that the nurse consultant role is not fully understood (Mullen et al. 2014).

Also, as described by Ersser & Nicol (2010), "Treatment effectiveness depends not only on having evidence of beneficial treatments and making discerning clinical judgements but also on the patient's interpretation of the treatment plan, their motivation and understanding of it and how in practice they apply it to their lifestyle. Therefore, effective treatment fundamentally depends on people taking an active role in learning about their therapy and knowing how to utilize it correctly."

Previous studies on patient-centered care focusing on outpatient situation close to the patients' homes revealed that in this setting, atopic dermatitis patients are mostly insufficiently treated and show more severe limitations of quality of life than those observed in many other chronic skin diseases. Insufficient therapy may finally result in a reduction in therapeutic adherence. Without being supervised by a specialist, patients frequently use alternative medicine, although these approaches lack sufficient evidence of efficacy and are from the patients' perspective rated lowest compared with the benefit of conventional interventions. (Heratizadeh 2014.)

Without being supervised by a specialist, patients tend to randomly undertake multiple therapeutic attempts. Atopic Dermatitis patients frequently use alternative medicine. Also, although a variety of modern preparations of topical corticosteroids is available, a high percentage of patients with Atopic Dermatitis still show fear of corticosteroids, this contributes to poor adherence. (Heratizadeh 2014.)

7 ETHICS AND RELIABILITY

When planning on data collection, several ethical issues must be considered as bachelor thesis topic was based on previous knowledge on dermatology nursing job description. The topic was presented to our tutor at the Turku University of Applied Sciences and it got approved, thus studies was be conducted through literature review with systematic approach. A systematic review of the literature implies a scientific way of synthesizing a plethora of information, by exhaustively searching out and objectively analyzing the studies dealing with a given issue. (Tenk 2009.)

Hence, there is no need for privacy and confidentiality because no personal contact with patient and or writers of articles in the process of collecting data. However, ethical considerations was made as data was being collected and analyzed. Quotations were accurate, direct, and accounted for by the use of appropriate referencing according to Turku University of Applied Sciences Thesis guidelines, so no plagiarism occurred. Ethical assessment in systematic review helps to improve the ethical and methodological quality of this study. Ethical review means is advanced scrutiny and evaluation of research plan in the light of ethical practices generally followed in that particular discipline of science, with special emphasis on preventing any harm that the research or its result might cause to the research subjects. (Tenk 2009.)

Thorough and well produced search process leads to a set of research evidence to consider for inclusion that minimizes bias. As part of the search process, systematic reviewers often review reference lists of other studies or conduct hand-searches to identify additional primary studies. Reviewing reference lists and conducting hand-searches improves the quality of the data in this literature review. Also use of manual search is significant for successful findings when searching valuable and quality data and thus enriches the validity of this research. The manual search was also used in this thesis to enrich the findings. Many journals in dermatology field had good studies concerning the interest of the thesis offered on their own journal's websites which had an open access. (Vassar et al. 2016.) The articles published earlier than 2008 were excluded in the process of data collection. The use of as current studies as possible increases the literature review's newsworthy and validity.

Furthermore, the results of the studies conducted by two authors of this thesis improves the reliability of this research. All the phases of the research process such as data

collection and data analysis were done in the collaboration of the authors and thus the possible biases due to data collection and data analysis has been minimized.

8 DISCUSSION

The specific purpose of this BA thesis was to systematically explore the roles of the dermatology specialist nurse in the enhancement of patient recovery, and the empowerment of patients with skills and knowledge necessary to foster recovery from skin diseases.

Summarily, the dermatology nurses play key roles in promoting good patient compliance through patient education about skin diseases, proper administration of medication and connecting patients with patient assistance programs or other supportive services. Support groups that could also help patients accept and manage their skin disease. Also, nurse practitioners play instrumental role in evaluating and managing patients with dermatologic diseases, including psoriasis. The relationships between patient and nurse are crucial and nurse practitioners are well positioned to optimize the care for the patients by building strong, long-term relationships with them. Patients who have trusting relationships with their providers are more likely to listen and adhere to healthcare advice. That helps them to improve their active role in managing their psoriasis and skin health. The efficient management and care of psoriasis impact resulting also from the trust in the patient-nurse-relationship. As providers continue to build on their relationship with patients, they can improve the patients to adopt lasting healthy behaviors, adhere to therapy and increase patient awareness of new options for care. (Aldredge and Young 2016; McCann et al. 2016.)

The occupational rights of nurses vary internationally in dermatology. Nevertheless, nurse prescribers need to be trained and educated in order to ensuring safe and effective prescribing practices. Furthermore, Nurse prescribers provide advice to patients on general skin care, including using topical treatments effectively and how to prevent skin infection recurrence. Some skin infections also require the nurse prescriber to be aware of public health policy, to avoid the spread of skin infections that are communicable diseases. (Onselen 2018.)

However, as described by Ersser & Nicol (2010), "Treatment effectiveness depends not only on having evidence of beneficial treatments and making discerning clinical judgements but also on the patient's interpretation of the treatment plan, their motivation and understanding of it and how in practice they apply it to their lifestyle. Therefore, effective treatment fundamentally depends on people taking an active role in learning

about their therapy and knowing how to utilize it correctly.” Patients non-concordance with treatment. Some factors that makes concordance with treatments hard for patients include lack of knowledge about existing skin condition, conflicting commitments (for instance; travelling and work), language/cultural differences, treatment may be too complicated and disillusionment with treatments despite best efforts.

Also, Santer et al. (2012) conducted a qualitative study looking at carers' views on treatment of eczema, illuminated how concordance was poor for multiple reasons. Parents in the study reported feelings of frustration with the prescribed treatments, the medical care received, not understanding basic advice for instance; how to measure out enough topical steroid to use on specific body areas, how to apply emollients in downward strokes and conflicting advice received from different healthcare providers. (Carr J. 2015.) Also, qualitative findings from the study on patient satisfaction feedback reveal a key theme being that the nurse consultant role is not fully understood (Mullen et al. 2014).

This literature review using systematic approach has enabled us to uncover the specific roles of dermatology nurses, challenges encountered by dermatology nurses in the course of rendering their healthcare services, some patient empowerment strategies; for instance using the person-centred dermatology self-care index (PeDeSI tool) in promoting self-management in long-term skin conditions. PeDeSI is a tool that guides systematic and accurate assessment of the education and support needs of patients with long-term skin condition and to self-manage as effectively as possible. Exacerbating factors to skin condition, for instance psoriasis exacerbated by psychological stress. This Thesis will be utilized by nurses, student nurses, nurse educator, researchers.

Dermatological nursing continues to provide a challenging environment in which to work, and it's impossible to underestimate the valuable work dermatological nurses play in the health care system. Skin diseases are common and they are found in more than half of adult population, and are unquestionably one of the most common reasons of morbidity in adult general population. About one in every three of all patients at general practitioner suffers from a skin disorder. Most dermatologic diseases are chronic in nature and decrease the daily quality of life. Despite the high morbidity and substantial load for primary health care, epidemiological studies addressing the overall prevalence of skin diseases at population level are sparse and controversial. (Sinikumpu et al. 2014.) In 2014, 13 million people visited the GP for a dermatological reason, and often it is the dermatological nurse's specialist knowledge that leads to a successful diagnosis or

development of a treatment plan (Mair 2017). Surveys suggest that skin conditions affect around 54% of the UK population in a given year (Cowdell & Ersser 2013). Atopic dermatitis is a chronic inflammatory skin disease, affecting 20% of children and 1-3% of adult in Western industrialized countries (Heratizadeh 2014).

Skin cancer is the most common form of cancer in the United States, with more than 3.5million diagnoses made each year (Chen et al. 2015). Data for 2013 shows a 24% increase in skin cancer referrals into Liverpool Dermatology Clinic compared to 2012, in keeping with the Skin Cancer Registry prediction of a year-on-year increase in skin cancer incidence.(Mullen et al. 2014.) The two most common types of Cutaneous T-Cell Lymphoma (CTCL) are mycosis fungoides, which represent 50%-70% of all CTCL cases and Sezary syndrome, a more aggressive leukemic variant is approximately 1%-3% of all CTCL cases.(McCann et al. 2016.) To determine the overall prevalence of skin diseases a whole-body skin examination was performed for 1,932 members of the Northern Finland Birth Cohort, which is comprehensive longitudinal research program. A high prevalence of all skin diseases needing treatment was found. Half of the cases of skin findings were evaluated to be serious enough to require diagnostic evaluation, treatment or follow-up either in a general health care, occupational health care or secondary care setting. The remaining half were thought to be slight and self-treatment was advised. The most common skin finding was a benign skin tumor, inflammatory skin diseases(for instance; Atopic Dermatitis , eczema), psoriasis, rosacea and acne vulgaris. (Sinikumpu et al. 2014.)

Further studies could be conducted on the association between skin disorders sex or socioeconomic status, possible sex difference in skin diseases, strategies to improve patient's concordance, for instance; building trust and respect, good and clear communication skills, education (tailor-make education to suit families and check its effectiveness regularly. Never give up educating and experiment with different formats-visual, demonstrations and written care plans), ensure correct documentation at all times and are able to share it appropriately with other disciplines involved, particularly if there is issue with non concordance and finally, ensure clinic letters to general practitioners (GPs) are clear, concise and state quantities of treatments required. Discuss necessity for all healthcare practitioners to be engaged with the family and supporting their ongoing treatment plan. Also, Patient empowerment strategies and preventive measures of skin diseases. Considering the fact that effective management in many cases requires people

to take an active role in medication management on daily basis. However, treatment adherence is often poor. (Cowdell & Ersser 2013.)

Patient education plays a pivotal role in preventing skin diseases, for instance; skin cancer. To detect skin cancer in its early, treatable stages patient need to learn prevention and detection methods including protecting skin from Ultra Violet rays and screening for cancer. Patient need to take an active role in monitoring their skin for changes. They need to learn to do a full skin self-examination every month, be checked annually by a healthcare provider and have suspicious lesions evaluated. Also, patient must know to avoid exposure to the sun between 10am and 4pm., use sun screen with a minimum sun protection factor of 15 and wear protective clothing and sunglasses. Furthermore, nurse educators must understand the perception of racial and ethnic groups in relation to skin cancer and this information needs to be included in the education of student nurses. There need to be a shift in thinking about sun tanning before visible decline in rate of skin cancer.

The results of recent study by Guy et al. (2015) highlights how the number of adults treated for skin cancer increased between 2002-2006 and 2007-2011 to nearly 5 million adults annually. The annual total treatment costs for skin cancer increased to 8.1 billion annually. These results also showed that annual spending increased rapidly for skin cancers than for other cancers. (Guy et al. 2015.) This emphasizes the importance of prevention and early detection of skin cancer, where also nurses and dermatology nurses has an essential role. The meaning of the patient education in skin cancer prevention needs to be improved among the nurses and patient education about skin cancer and it's risks should be available to all age groups.

Long-term conditions continue to generate increasing pressure on the governments, healthcare systems, and the broader community. Political reforms all over the world advocate healthcare models and interventions that support patients to be motivated and active in the management of their conditions. (Wahl et al. 2016.) Self-management is the cornerstone of current UK government policy, in promoting self-management in long-term conditions. Effective management in many cases requires people to take an active role in medication management on daily basis; however, treatment adherence is often poor. (Cowdell & Ersser 2013.) Hence, self-management has emerged as a critical component of care for individuals with chronic diseases and as a result, programs have been designed to enhance the patient's ability to make decisions and take actions to care of their health. Patient education is a typical self-management intervention and may

vary from individual to population-wide social marketing approaches and from simple written information to different forms of counseling techniques. (Wahl et al. 2016.) Also, the PeDeSI is a tool that guides systematic and accurate assessment of the education and support need to enable people with long-term skin conditions to self-manage as effectively as possible. It provides a basis for evaluating and tracking the effectiveness of measures to support self-management, with purpose to help clinicians and patients to work collaboratively to assess the education and support required to enhance self-management. (Cowdell & Ersser 2013.)

The Scottish Intercollegiate Guidelines Network recommends that health professionals should be encouraged to examine patients' skin during other clinical examinations. Clinicians should be familiar with the seven points or the ABCDE checklist for assessing lesions and to be trained appropriately on using hand held dermatoscopy. (Vickers 2009.)

Teaching students about skin cancer, sun protective behaviors, and the nurse's role in assessing and educating patients using moulages and simulation has determined to be a great method of teaching students as compared with the traditional curriculum. These methods also strengthened the physical assessment and decision-making skills of the nursing students. (Slegel & Eckardt 2017.) Also, utilizing Strength-based approach "strategy to support" can help deal with challenging families. This is a fairly new concept in nursing although it has been utilised in the field of social care and more recently health visiting. It is based on the premise that the nurse/practitioner recognises the resilience of families and focuses on their potential rather than their deficits. In return it is hoped that people will take control of their lives in meaningful and sustainable ways. (Julie 2015.)

A PubMed search for "nursing research and dermatology" performed on June 18, 2006, resulted in a list of 11 references. In contrast, a Pubmed search done at the same time for "nursing research and oncology" resulted in 505 references. It approves that the number of nursing research in dermatology is significantly lower than the number of oncology nursing research. Of course, those numbers have increased by now, but it clearly shows how young is the field of dermatology nursing. Identifying gaps that exist in current dermatology nursing research can also direct practice and areas for future research. Dermatology nurses are challenged to explore the importance of identifying gaps that exist in current dermatology nursing care. Opportunity is available in

dermatology today for nurses to explore how they can contribute to the nursing research process now and in the future. (Smith 2007.)

9 CONCLUSION

The roles of health care professionals are rapidly evolving. Over recent years the nursing profession has taken on new challenges and extended roles in respect of patient care. Many nurses in senior roles work autonomously and at a higher level of practice, engaging in flexible cross boundary partnership working. However, in order to undertake such roles effectively, guidance is required to maintain standards (Bianchi 2012). The term dermatology is the branch of medicine that concerns with the diagnosis, treatment and prevention of skin diseases. Around 54% of the population of United Kingdom get affected by skin condition in their life and skin cancer is the most common cancer in the USA. (Cowdell & Ersser 2013; Guy et al. 2015.) Hence, this thesis intends to increase the awareness about dermatology nurse's responsibilities among health care professionals.

1. The articles reviewed for the thesis have clearly been showing that there is a lack of adequate dermatology training and education for nurses. The development of educational interventions such as increasing dermatology curriculum in basic and advanced nursing programs may improve nurses' knowledge and understanding of skin diseases, especially skin cancer of which mortality rate has increased last few decades. Also, studies indicate knowledge deficit of primary care provider about common dermatoses.
2. Dermatology nurses and nurse practitioners play instrumental role in evaluating and managing patients with dermatologic diseases. The continuous and long-lasting relationships between patient and nurse are crucial. Patients who have trusting relationships with their providers are more likely to listen and adhere to healthcare advice and services (Aldredge and Young 2016).
3. The role of the nurse is to actively engage the patient in the concordance process and also improve the patient adherence with treatment recommendations. Therefore, treatment fundamentally depends on people taking an active role in learning about their therapy and knowing how to utilize it correctly. Although, it requires timely, systematic, and accurate assessments of the education and support needs of patients in order to offer adequate patient education and guidance.

4. There is a huge gap between dermatology nursing specialty and other specialties, less studies done in this field of study and this explains the very high prevalence of skin diseases (Smith 2007). Identifying gaps that exist in current dermatology nursing research can also direct practice and areas for future research. Dermatology nurses are challenged to explore the importance of identifying gaps that exist in current dermatology nursing care. Opportunity is available in dermatology today for nurses to explore how they can contribute to the nursing research process now and in the future. Dermatology nurses must look at the evidence, combined with clinical expertise, when deciding what is best for patient in regards to skin diseases for instance in skin cancer screening. (Vickers 2009.)

REFERENCES

- Afifi, L., Danesh, MJ., Lee, KM., Beroukhim, K., Farahnik, B., Ahn, RS., Yan, D., Singh, RK., Nakamura, M., Koo, J. & Liao, W. 2017. Dietary behaviors in psoriasis: patient-reported outcomes from a U.S. National survey. *Dermatol Ther (Heidelb)*. Vol. 7(2), 227-242.
- Aldredge, L. & Young, M. 2016. Providing Guidance for Patients with Moderate-to-Severe Psoriasis Who Are Candidates for Biologic Therapy: Role of the Nurse Practitioner and Physician Assistant. *Journal of the Dermatology Nurses' Association*. Vol.8(1), 14-26.
- Aveyard, H. 2014. *Doing a literature review in health and social care: a practical guide*. 3rd. Edition. England: Open university press.
- American cancer society (ACS). 2017. Cancer facts and figures 2017. Consulted 13.3.2018 <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2017/cancer-facts-and-figures-2017.pdf>.
- American cancer society (ACS). 2015. Cancer facts and figures 2015. Consulted 26.4.2018 <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2015/cancer-facts-and-figures-2015.pdf>.
- American skin association (ASA). 2012. Consulted 15.3.2018 <http://www.americanskin.org/resource/acne.php>.
- American skin association (ASA). 2012. Research overview. Consulted 19.3.2018 <http://www.americanskin.org/research/>.
- Bewley, A., Burrage, DM., Ersser, SJ., Hansen, M. & Ward, C. 2014. Identifying individual psychosocial and adherence support needs in patients with psoriasis: a multinational two-stage qualitative and quantitative study. *Journal of the European academy of dermatology and venereology*. Vol. 28(6), 763-770.
- Bowe, W., Joshi, S., & Shalita, A. 2010. Diet and Acne. *Journal of American Academy of Dermatology*.
- British association of dermatologists. 2013. Quality Standards for Dermatology: Providing the right care for people with skin conditions. British Association of Dermatologists. Available at www.bad.org.uk/healthcare-professionals. Accessed 20/02/2018.
- Bayat, A., McGrouther, DA. & Ferguson, MWJ. 2003. Skin scarring. *British medical journal*. Vol. 326(11), 88-92.
- Bianchi, J. 2012. Implementing a Dermatology Pocket Guide. *Journal of Community Nursing*. Vol. 26 (6), 23-25.
- Boghosian, G., Bertolino, M., Musser, J., & Limone, B. 2017. Introducing the Contact Dermatitis Awareness Ribbon. *Journal of Dermatological Nursing*. Vol. 9(6), 295.
- Cambridge dictionary. 2018. Consulted 30.1.2018 <https://dictionary.cambridge.org/>.
- Cancer Care. Consulted 20.4.2018 www.cancer.org.
- Carr, J. 2015. Safeguarding in Dermatology: A collaborative Approach. *Dermatological Nursing*. Vol. 14(4), 23-27.
- Courtenay, M., Carey, N. & Stenner, K. 2009. Nurse prescriber–patient consultations: a case study in dermatology. *Journal of Advanced Nursing*. Vol. 65(6), 1207–1217.

- Courtenay, M., Carey, N., Stenner, K., Lawton, S. & Peters, J. 2011. Patients view of nurse prescribing: effects on care, concordance and medicine taking. *British association of Dermatologists*. Vol. 164(2), 396-401.
- Cowdell, F. & Ersser, S. 2013. The person-centred dermatology self-care index (PeDeSi). *Dermatology nursing*. Vol. 12(1), 45-47.
- Cowdell, F., Ersser, S.J., Gradwell, C. & Thomas, P.W. 2012. The person-centered dermatology self-care index a tool to measure education and support needs of patients with long-term skin conditions. *Archives of Dermatology*. Vol. 148(11), 1251-1255.
- Cutaneous Lymphoma Foundation. Consulted 20.4.2018 www.cfoundation.org/.
- Chen, C., Woyansky, S. & Zundell, C. 2015. The Effect of Education on Compliance with Skin Cancer Risk Reduction Guidelines. *Journal of the Dermatology Nurses' Association*. Vol. 7(2), 97-100.
- Chussil, J., Meyer, C., Vargo, N., Nankin, M. & Siegel, D. 1999. Development of dermatology nursing certification. *Dermatology nursing*. Vol. 11(5), 349-383.
- Davila, M., Christenson, L. & Sontheimer, D. 2010. Epidemiology and outcomes of dermatology in-patient consultations in a Midwestern U.S. University hospital. *Dermatology online journal*. Vol. 16(2), 12. Available at <https://escholarship.org/uc/item/64h8j3kz#main>.
- Edwards, J. 2016. Scars: an overview of current management and nursing care. *Dermatology nursing*. Vol. 15(2), 18-25.
- Englert, C. & Hughes, B. 2012. A review of actinic keratosis for the nurse practitioner: Diagnosis, treatment, and clinical pearls. *Journal of the American Academy of Nurse Practitioners*. Vol. 24(5), 290-296.
- Elsworth, G. & Nolte, S. 2016. Making Robust Decisions about the impact of Health Education Programs: Psychometric Evaluation of the Health Education Impact Questionnaire(heiQ) in diverse patient groups in Norway. *Patient Education and Counseling*. Vol. 99(10), 1733-1738.
- Ersser, S.J. & Nicol, N.H. 2010. The Challenges of Evidence-Based Practice for the Dermatology Nurse: When Should You Believe What Is Being Presented? *Dermatology Nursing*. Vol. 22(1), 1-3.
- Feuerstein, I. & Geller, A. 2008. Skin cancer education in transplant recipients. *Progress in Transplantation*. Vol. 18(4), 232-242.
- Friedman, A., Cosby, R., Boyko, S., Hatton-Bauer, J., and Turnbull, G. 2011. Effective teaching strategies and methods of delivery for patient education: a systematic review and practice guideline recommendations. *Journal of Cancer Education: the official Journal of the American Association for Cancer Education*. Vol. 26 (1), 12-21.
- Friedman, A., Baldwin, H., Bhatia, Neal., Eng, M., and Seite, S. 2017. The role of cutaneous microbiota harmony in maintaining a functional skin barrier. *Journal of Drug Dermatology*. Vol. 16 (1), 1-7.
- Finnish advisory board on research integrity (TENK) 2009. National Advisory Board on Research Ethics Helsinki. Ethical principles of research in the humanities and social and behavioral sciences and proposals for ethical review. Consulted 18.2.2018 <http://www.tenk.fi/sites/tenk.fi/files/ethicalprinciples.pdf>.
- Flavell, F. 2016. The Person-Centred Dermatology Self-Care Index tool (PeDeSi) — application in clinical practice. *Dermatology nursing*. Vol 15(1), 40-43.

- Goudarzian, S., Yamani, N., Amini, M. & Abazari, P. 2017. Developing the job description for diabetes nurse specialists: A Modified Delphi approach. *Nursing & midwifery studies*. Vol. 6(2), 5-7.
- Guy, G., Machlin, S., Ekwueme, D. & Yabroff, R. 2015. Prevalence and costs of skin cancer treatment in the U.S., 2002-2006 and 2007-2011. *American journal of preventive medicine*. Vol. 48(2), 183-187.
- Hannes, K., Noyes, J., Booth, A., Harden, A., Harris, J., Lewis, S. and Lockwood, C. 2011. Supplementary Guidance for Inclusion of Qualitative Research in cochrane Systematic Reviews of Interventions. Updated August 2011. Available at <http://cqrmg.cochrane.org/supplementa-handbook-guidance>.
- Heratizadeh, A. 2014 Therapeutic Patient Education. *Current Treatment Options in Allergy*. Vol. 1. 358-364.
- Hinkle, J. & Cheeve, K. 2014. *Textbook of medical-surgical nursing*. 13th. Ed. International edition.
- International council of nurses 2018. Nurse practitioner/advanced practice nursing network. Definition and Characteristics of the Role. Consulted 18.2.2018 <https://international.aanp.org/Home/Contact>.
- International council of nurses. 2017. Definition of nursing. Consulted 15.1.2018 <http://www.icn.ch/who-we-are/icn-definition-of-nursing/>.
- Jones, J. & Kalabokes V. 2010. Coalition of skin disease. *Journal of dermatology nurses' association*. Vol. 2(5), 214-217.
- Leukemia and Lymphoma Society. Consulted 20.4.2018 www.lls.org.
- Loescher, L., Harris, J. & Curiel-Lewandrowski, C. 2011. A systematic review of advanced practice nurses' skin cancer assessment barriers, skin lesion recognition skills and skin cancer training activities. *Journal of the American Association of Nurse practitioners*. Vol.23(12), 667-673.
- Lucas, MA., Loescher, LJ. & Pacheco, CL. 2016. Nurse practitioners' knowledge of prevention guidelines and counselling practices related to primary prevention of skin cancer among adolescents in Arizona. *Journal of the Dermatology Nurses' association*. Vol. 8(6), 368-377.
- Lymphoma Research Foundation. 2018. Consulted 20.4.2018 www.lymphoma.org.
- Lyons, F. & Ousley, L. 2015 *Dermatology for the advanced practice nurse*. New York: Springer publishing company.
- Kolarsick, P., Kolarsick, M. & Goodwin, C. 2011. Anatomy and Physiology of the skin. *Journal of the Dermatology Nurses' Association*. Vol. 3 (4), 203-213.
- Ma, C., & Sivamani, R. 2015. Acupuncture as a treatment modality in dermatology. *The Journal of Alternative and Complementary Medicine*. Vol. 21(9), 520-529.
- Mair, R. 2017. Say Hello to Dermatological Nursing. *Dermatological Nursing* 2017. Vol. 16(1). www.bdgn.org.uk.
- Matthews, S., Simmer, M., Williams, L., Fishman, P. & Shors, A. 2018. Transition of Patient with Psoriasis from Office-based phototherapy to Nurse-Supported Home phototherapy. *Dermatology Nurses' Association*. Vol. 10(1), 30.

- McCann, S., Chase, A., & Tawa, M. 2016. A practical guideline for managing the treatment of Mycosis Fungoides Cutaneous T-Cell Lymphoma with Mechlorethamine. *Journal of the Dermatology Nurses' Association*. Vol. 8(3), 180-189.
- McLafferty, E., Hendry, C. & Farley, A. 2012. The integumentary system: anatomy, physiology and function of skin. *Nursing Standard*. Vol. 27(3), 35-42.
- Monstrey S., Middelkoop E., Vranckx J., Bassetto, F., Ziegler, U. & Meaume, S. & Te'ot, L. 2014. Updated scar management practical guidelines: non-invasive and invasive measures. [Journal of Plastic, Reconstructive & Aesthetic Surgery](#). Vol. 67(8), 1017-1025.
- Mooney, T. 2014. Preventing psychological distress in patients with acne. *Nursing Standard*. Vol. 28(22), 42-48.
- Moore-Bianconi, A. 2012. Acne Vulgaris in Patients with Skin Colour: Special Consideration. *Nursing Standard*. Vol. 26(40), 43-49.
- Moses, S. 2003. Pruritus. *American family physician*. Vol. 68(6), 1135-1142.
- Mullen, L. & Jones, C. 2014. A service evaluation of a new nurse consultant-led Basal Cell Carcinoma clinic. *Dermatological Nursing*. Vol. 13(3), 39-44.
- Mustonen, A., Mattila, K., Leino, M., Koulu, L & Tuominen, R. 2014. Psoriasis Causes Significant Economic Burden to Patients. *Dermatology and therapy*. Vol. 4(1), 115-124.
- Nursing and midwifery council (NMC). 2006. Standards of proficiency for nurse and midwife prescribers. London. Consulted 19.3.2018 <https://www.nmc.org.uk/globalassets/sitedocuments/standards/nmc-standards-proficiency-nurse-and-midwife-prescribers.pdf>.
- Odhiambo, J., Williams, C., Tadd, C., Robertson, C., Asher, A., & Isaac. 2009. Global Variations in prevalence of eczema symptoms in children. *Journal of Allergy and Clinical Immunology*. Vol. 124(6), 1251-1258.
- Onselem, J., Pearey, J., Anderson, V., Burchell, L., Franey, S., Holden, N., Husaini, J., Mannix, S., Lachen, F. & Copperwheat, S. 2016. British Dermatology Nursing Group Conference. *Dermatological Nursing*. Vol. 15(3), 58-64.
- Onselen, J. 2011. Dry skin condition: an evidence-based focus on natural oatmeal emollients. *Primary health care*. Vol. 21(2), 31-37.
- Onselen, J. 2018. Dermatology Prescribing update: Skin Infection. Mark Allen group online library. Vol. 16(1). Published online <https://www.magonlinelibrary.com/doi/10.12968/npre.2018.16.1.19>.
- Parfitt, J. 2014. Tailoring job descriptions. *Nursing standard*. Vol. 28(48), 64.
- Phelan, D. & Heneghan, M. 2008. A survey of skin cancer screening practices among dermatology nurses. *Dermatology nursing*. Vol. 20(5), 357-365.
- Santer, M., Burgess, H., Yardley, L., Ersser, S., Lewis-Jones, S., Muller, I., Hugh, C. & Little, P. 2012. Experiences of carers managing childhood eczema and their views on its treatment: a qualitative study. *British journal of general practice*. Vol. 62(597), 261-267.
- Santer, M., Burgess, H., Yardly, L., Ersser, S., Lewis-Jones, S., Muller, I., Hugh, P. & Little, P. 2013. Managing childhood eczema: qualitative study exploring carers' experiences of barriers and facilitators to treatment adherence. *Journal of Advanced Nursing*. Vol. 69(11), 2493-2501.
- Schuttelaar, M., Vermeulen, K., Drukker, N., & Coenraads, P. 2010. A randomised controlled trial children with eczema: nurse practitioner vs dermatologist. *British Journal of Dermatology*. Vol. 162(1), 162-170.

- Simone, S., McComiskey, C. & Andersen, B. 2016. Integrating nurse practitioners into Intensive Care Units. *Critical care nurse*. Vol. 36(6), 59-69.
- Sinikumpu, S., Huilaja, L., Jokelainen, J., Koiranen, M., Auvinen, J., Hägg, P., Wikström, E., Timonen, M. & Tasanen, K. 2014. High prevalence of skin diseases and need for treatment in Middle-Aged population. A Northern Finland birth cohort 1966 Study. Vol. 9(6). Published online <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4049840/>.
- Slegel, V. & Eckardt, P. 2017. A Prospective observational cross-sectional study examining the effect of using human simulation and moulages to assist in skin cancer education of nursing students. *Dermatology nurses' association*. Vol. 9(6), 301-302.
- Smith, M. 2007. Nursing Research: What Is It and How Can Dermatology Nurses Use It? *Dermatology nursing*. Vol. 19(5), 435-437.
- Stenner, K., Carey, N. & Courtenay, M. 2009. Nurse prescribing in dermatology: doctors' and non-prescribing nurses'. *Journal of advanced nursing*. Vol. 65(4), 851-859.
- Thompson, A. 2014. Treatment challenges: getting psychodermatology into the clinic. *Dermatological Nursing*. Vol. 13(4), 26-31.
- Valentine, M. 1999. The Beginnings of dermatology: a brief review. *Dermatology nursing*. Vol. 11(1), 25-33.
- Vassar, M., Atakpo, P. & Kash, M. Manual search approaches used by systematic reviewers in dermatology. 2016. *Journal of Medical library association*. Vol. 104 (4), 302-304.
- Vickers, A. 2009. Evidenced-Based Practice Guidelines for Skin Cancer Screening. *Dermatology Nursing*. Vol. 21 (1), 15-18.
- Wahl, A., Osborne, R., Langeland, E., Wentzel-Larsen, T., Mengshoel, A., Ribu, L., Peersen, K., Elsworth, G. & Nolte, S. 2016. Making Robust Decisions about the impact of Health Education Programs: Psychometric Evaluation of the Health Education Impact Questionnaire(heiQ) in diverse patient groups in Norway. *Patient Education and Counseling*. Vol. 99(10), 1733-1738.
- World Health Organization. 2018. Nursing. Consulted 14.1.2018 <http://www.who.int/topics/nursing/en/>.
- Zaenglein, A., Pathy, A., Schlosser, B., Alikhan, A., Baldwin, H., Berson, D., Bowe, W., Graber, E., Harper, J., Kang, S., Keri, J., Leyden, J., Reynolds, R., Silverberg, N., Stein Gold, L., Tollefson, M., Weiss, J., Dolan, N., Sagan, A., Stern, M., Boyer, K. & Bhushan, R. 2016. Guidelines of care for the management of acne vulgaris. *Journal of the American Academy of Dermatology*. Vol. 74(5), 945-973.
- Zakrewsky, M., Kumar, S., & Mitragotri, S. 2015. Nucleic Acid delivery into Skin for the treatment of skin disease: Proof-of-concept, potential impact, and remaining challenges. *Journal of Control Release*. Vol. 219 (2015), 445-456.

Table 1 Data analysis table

Author, Country, Year	Purpose of the Research	Results	Quality
Carr United Kingdom 2015	This article endeavors to take a more detailed look at why families/patient may find therapies hard to adhere to, and ask: when does 'omission to treat' require safeguarding action?	Empowering families to take a lead in their own care is hard work and can only be achieved with, firstly, an authentic and caring nurse-family relationship and, secondly, good and transparent collaborative work across agencies. The author strongly recommends that links within school should be formed as soon as there is a question surrounding treatments, but also when children are known to have moderate to severe eczema. Without confirmation from the dermatology team involved, the impact of skin condition on the child may be underestimated.	The article aims to highlight the fact that collaborative working with several disciplines is pivotal to overall success and that patient empowerment should be ongoing.
Mullen & Jones United Kingdom 2014	To evaluate a new nurse consultant-led basal cell carcinoma (BCC) service.	The nurse consultant-led basal cell carcinoma clinic provides a coherent, safe, specialist service, encompassing surgical assessment, management and treatment to ensure a streamlined patient-focused pathway. Management of BCC (Basal Cell Carcinoma) requires a patient-centred approach to care and all patients requiring treatment were offered informed choices.	To have a quick access specialized pathway for those patients suspected of basal cell carcinoma.
McCann et al. U.S.A 2016	To provide a brief review of early-stage MF-CTCL and its treatment with mechlorethamine gel.	This article provides the dermatology nurse with a background about early-stage Mycosis Fungoides	To provide a brief review of early-stage MF-CTCL and its treatment with

		Cutaneous T-cell Lymphoma, skin-directed treatment options, questions that a patient may ask about Mycosis Fungoides Cutaneous T-cell Lymphoma and mechlorethamine gel, and patient education tools such as questions dermatology nurses may ask of their patients and a patient handout outlining mechlorethamine gel administration.	mechlorethamine gel.
Cowdell & Ersser United Kingdom 2013	To develop valid tool that enhances patient empowerment approach and that have important potential, individual and service benefits, including improving skin condition and quality of life, reducing waiting times for those who require hospital care.	PeDeSi was valuable in calculating education and support needs, but it was too lengthy for use in everyday practice.	The aim was to develop a valid tool that enables clinicians to complete accurate and systematic assessments of the education and support needs of people with long-term skin conditions.
Heratizadeh Germany 2014	Improvement of self-management strategies to achieve a decrease in severity of skin disease and an increase in quality of life.	The evidence of beneficial effects of educational programs in adult Atopic Dermatitis patients is insufficient. In Germany, health insurance companies pay for therapeutic outpatient education on Atopic Dermatitis in selected cases, but most applications are denied. This is in contrast to the inpatient situation in rehabilitation departments. Further large randomized controlled studies on educational programs are needed, which should be primarily aiming to promote self-disease management capability and improve coping strategies of adult outpatients	The aim of therapeutic patient education in Atopic Dermatitis(AD) should be improvement of self-management strategies to enhance a decrease in disease severity and an increase in quality of life.

		suffering from Atopic Dermatitis.	
Courtenay et al. United Kingdom 2011	To explore the views of dermatology patients about nurse prescribing, and its impact on medicines management and concordance.	Patients believed that nurse prescribing improved access to, and efficiency of, dermatology services. Great value was placed on telephone contact with nurses, and local access. Information exchange and involvement in treatment decisions ensured that treatment plans were appropriate and motivated adherence. Nurses' specialist knowledge, interactive and caring consultation style, and continuity of care improved confidence in the nurse and treatment concordance. Nurse prescribing can increase the efficiency of dermatology services. Patients experienced active involvement in decisions about their treatment which in turn contributed to concordance and adherence to treatment regimes.	Good quality, nursing perspective
Courtenay et al. United Kingdom 2009	Report of a study exploring the content and processes in consultations between nurse prescribers and patients with dermatological conditions.	Evidence that nurses listened to patients during the consultations and offered support and information was provided by the videotaped observations of practice and patient questionnaire. The amount of time that nurses were able to spend with patients with dermatological conditions was rated as very	Good.

		<p>good or excellent by 85.9% of the patients completing questionnaires.</p> <p>Patient questionnaire results showed that the majority (67.7%, n = 107) rated access to nurse services as very good or excellent. Forty-seven (30.1%) patients reported that they were able to see the nurse on the same day and 20 (12.8%) by the next working day, and 59 (37.8%) reported that they were able to book their appointments in advance.</p>	
Edwards United Kingdom 2016	Written for the dermatology nurses who come into contact with patients who develop abnormal scars. The article also focuses on prevention of abnormal scarring and offers some clinical suggestions for how dermatology nurses can manage these scars.	Management of scars is a challenge, as no treatment is highly effective. It is important for the nurse to give a patient realistic expectations and to inform them that no scar can ever be removed completely — all scars are permanent, though they may improve naturally over a period of time. Whatever management plans are put forward, the key to success is patient or carer concordance as the patient or carer will be responsible for carrying out many scar management procedures.	Medium quality, The overview study
Phelan & Heneghan USA 2008	The objective of this study was to survey the current level of participation dermatology nurses have in screening and	Results of this study show that nurses are pivotal in detecting skin cancers. Whether they themselves or someone else is taking	Good. Reviewed the clinical tools and skills of the dermatology

	skin cancer detection.	the photos, instructing patients on how to perform a monthly self-skin examination using a photo book and following patients with atypical moles using digital photography is beneficial. Eighty-three percent (n=89) of nurses surveyed are performing a total-body skin examination (TBSE); 15% (n=16) are confident and 52% (n=56) are very confident with their skills.	nurse in cancer screening.
Aldredge & Young USA 2016	The review reinforces the unique aspects of care that nurse practitioners and physician assistants provide to patients with psoriasis, such as facilitating conversations about managing disease, setting appropriate expectations, and considering treatment options, including when treatment response or tolerability is suboptimal.	NPs and PAs can play an instrumental role in evaluating and managing patients with dermatologic diseases, including psoriasis. They are well positioned to optimize psoriasis care by building strong, long-term relationships with their patients. Patients who have trusting relationships with their providers are more likely to listen and adhere to healthcare advice and are more likely to play an active role in managing their psoriasis. Such engaged patients are likely to have fewer complications with their disease or therapy as well as more realistic expectations about the benefits and risks of their treatment and how their disease and its treatment may change over time.	Medium
Stenner et al. United Kingdom 2009	To explore doctor and nonprescribing nurse views about nurse prescribing in the	Participants were positive about their experiences of nurse prescribing	Good.

	light of their experience in dermatology. Background.	having witnessed benefits from it, but had reservations about nurse prescribing in general. Acceptance was conditional upon the nurses' level of experience, awareness of their own limitations and the context in which they prescribed. Fears that nurses would prescribe beyond their level of competence were expected to reduce as understanding and experience of nurse prescribing increased.	
Afifi et al. USA 2017	This study aims to identify common dietary habits, interventions and perceptions among patients with psoriasis, and to examine patient-reported skin outcomes in response to these interventions.	Compared to age- and sex-matched controls, psoriasis patients consumed significantly less sugar, whole grain fiber, dairy, and calcium ($p < 0.001$), while consuming more fruits, vegetables, and legumes ($p < 0.01$). Eighty-six percent of respondents reported use of a dietary modification. The percentage of patients reporting skin improvement was greatest after reducing alcohol (53.8%), gluten (53.4%), nightshades (52.1%), and after adding fish oil/omega-3 (44.6%), vegetables (42.5%), and oral vitamin D (41%). Specific diets with the most patients reporting a favourable skin response were Pagano (72.2%), vegan (70%), and Paleolithic (68.9%). Additionally, 41.8% of psoriasis respondents reported that a motivation for attempting dietary changes was to improve overall health.	Good. Very recent.

<p>Thompson United Kingdom 2014</p>	<p>To provide suggestions for addressing the challenge of getting psychodermatology into the clinic.</p>	<p>Questionnaires can also be useful in the identification of distress and can provide information to assist in referring patients on when necessary. Although the risk of psychological distress associated with skin conditions is sometimes overestimated (a large proportion of people do successfully adapt and cope), living with a skin condition is undoubtedly stressful and likely to involve some degree of psychological impact. Dermatology clinicians can screen for psychosocial distress by asking about subjective perception of the severity of disease and by using brief questionnaires. Some psychological techniques and therapeutic approaches can be provided easily in the clinic. The provision of training and continuing professional development opportunities that focus on psychosocial aspects of skin conditions are essential.</p>	<p>Medium</p>
<p>Schuttelaar et al. United Kingdom 2010</p>	<p>To compare the level of care by nurse practitioners with that by dermatologists in children with eczema.</p>	<p>The level of care provided by a nurse practitioner in terms of the improvement in the eczema severity and the quality of life outcomes was comparable with that provided by a dermatologist. In</p>	<p>Good.</p>

		addition, the parents were more satisfied with the care that was provided by a nurse practitioner.	
Englert & Hughes United Kingdom 2012	To describe key points in the diagnosis and treatment of and patient education for actinic keratosis.	Actinic keratosis is a common skin lesion seen in primary care that results from exposure to ultraviolet light. Accurate and timely diagnosis is essential to prevent progression to squamous cell carcinoma.	Good. Nurse practitioners can make a positive impact on patients' health by promoting treatment adherence and follow-up in primary care.
Odhiambo et al. Kenya, United Kingdom, New Zealand and Australia 2009	To update the world map of eczema prevalence after 5 to 10 years (ISAAC Phase Three) and include additional data from over 100 new centers.	ISAAC Phase Three provides comprehensive global data on the prevalence of eczema symptoms that is essential for public health planning. New data reveal that eczema is a disease of developing as well as developed countries.	Medium
Santer et al. United Kingdom 2013	To explore parents and carers' experiences of barriers and facilitators to treatment adherence in childhood eczema	Barriers to treatment adherence included carer beliefs around eczema treatment, the time consuming nature of applying topical treatments, and child resistance to treatment. Families employed a range of strategies in an attempt to work around children's resistance to treatment with varying success. Strategies included involving the child in treatment, distracting the child during treatment, or making a game of it, using rewards, applying treatment to a sleeping child or, in a few cases, physically restraining the child. Some carers reduced frequency of applications in an	Good, Identified some reasons for patient' non concordance to treatment.

		attempt to reduce child resistance.	
Onselen 2018	To review nurse prescribers up-to-date evidence-based information on prescribing, how they prevent skin infection recurrence and patient education.	Nurse prescribers frequently treat patients with skin conditions, so need up-to-date evidence-based information on prescribing for bacterial, fungal and viral skin infections. Nurse prescribers should provide advice to patients on general skin care, including using topical treatment effectively. How to prevent skin infection recurrence.	Generally good and study was on nursing perspective.
Ersser & Nicol England 2010	To highlight and examine specific issues that relate to the experience of nurses working in the dermatology field and link them to the issues and strategies underpinning evidence-based practice.	There is a need to develop and practice skills in understanding and appraising verbal presentations and published evidence. Nurses also need to seek support in this process by gaining familiarity with local, national, and international strategies that support the development of these skills, such as assessing and critiquing the content being presented, efficiently accessing information services, and updating guidelines and protocols that need to be based on best evidence.	Medium Important aspect. More like a research round table by Steven Ersser & Noreen Nicol.
Loescher et al. USA 2011	To seek and describe barriers to advanced practice nurses' (APNs') performance of skin examination, APNs' ability to recognize suspicious skin lesions, and APNs' skin cancer detection training activities.	Barriers to skin examination by advanced practice nurses have been infrequently and inconsistently measured. Limited time to conduct skin examination is the most consistent barrier. Advanced practice nurses' ability to recognize and refer suspicious and benign	Medium

		lesions is inconsistent, but shows improvement after training.	
Lucas et al. USA 2016	The purpose of this study was to describe current primary prevention counselling practices directed at adolescents by primary care nurse practitioners practicing within the state of Arizona.	Nurse practitioner knowledge, attitudes, and counselling practices regarding skin cancer prevention are largely understudied. The current study found that participants did not recognize skin cancer prevention as a prominent problem for their adolescent patients and did not increase preventive counselling for adolescents with risks for skin cancer.	Good Recent study Newsworthy
Cowdell et al. England 2012	To validate the Person-Centered Dermatology Self-Care Index (PeDeSI) as a tool for clinical assessment and for potential use in research evaluation.	Cronbach was 0.90, indicating good internal consistency. Eliminating. The PeDeSI is a valid, reliable, and clinically practical tool to systematically assess the education and support needs of patients with long-term dermatological conditions and to promote treatment concordance. The concordance process is supported because optimal use of the tool requires collaboration through discussion of a patient's selfmanagement understanding and capacity.	Good Done in the clinical basis.

<p>Bewley et al. Canada, France, Germany, Italy, Spain, the United Kingdom and USA 2014</p>	<p>To develop statements that could assist the consultation process, identifying the relative importance of factors related to effective management of psoriasis for patients.</p>	<p>Two thematic categories were identified; disappointment with treatments, and confusion regarding psoriasis associated with a lack of direction.</p> <p>Patients felt that topical medications were not helping their psoriasis to a great extent. One reason was that they had been through a long and burdensome process with trial-and-error, and had developed negative attitudes towards topical medications by the time they received more potent options.</p> <p>The psychological impact of psoriasis was characterized by constant worry, a struggle for control and a fear of stress triggering symptoms.</p> <p>Patients reported that a combination of these factors led to avoidance, limitation, hiding and isolation.</p>	<p>Good, A multinational two-stage qualitative and quantitative study</p>
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