Skin health concerns in community-dwelling older persons: the nursing role in primary care

Abstract

By 2050, the world population of people aged ≥65 years is estimated at over 2 billion (World Health Organisation 2018a). This represents a positive change, but is also a substantial socio-economic challenge which brings with it the need to enhance the ways in which nurses support healthy ageing. Skin is the largest organ of the body which, with ageing, undergoes, intrinsic and extrinsic changes which have physical and psychosocial sequeale. The purpose of this article is to review skin changes associated with ageing, synthesise existing knowledge about the experiences of community-dwelling older people of their ageing skin and examine how this may influence health care. The important role of the nurse in promoting maintenance of skin health for this population is explored.

Background

By 2050, the world population of people aged ≥65 years is estimated at over 2 billion (World Health Organisation (WHO), 2018a). Healthy ageing is a policy imperative (Windle 2015). The WHO (2018b) advocates every person having the prospect of living a long and healthy life. Health promotion is core to supporting good population health. Increasing fiscal demands in health and social care means that attention must be paid to low-level interventions to ensure that older people, who wish it, are able to remain self-caring in their own homes for as long as possible (Wrosch et al 2013). Whilst health promotion for older people is now gaining traction (for example Frost et al 2017, Beard and Bloom 2015) promotion of healthy skin ageing is conspicuously absent.

Skin is an important but often forgotten organ (Baranoski et al 2004) which provides an essential protective barrier, and offers thermoregulatory, sensory and vitamin D synthesis functions (Kottner et al 2015). With age, the skin undergoes both intrinsic and extrinsic degenerative changes (Cowdell et al 2014). Such changes impact on function and appearance. Impairment of skin function can significantly increase risk of damage and even breakdown (Voegeli 2008), which can have a detrimental impact on the individual and be costly to healthcare services (Cowdell and Steventon 2015). Skin is the most visible organ of the body and impacts both on how we see ourselves and the impression we make on others (Cowdell and Garrett 2014). Skin appearance influences psychological well-being (Sampogna et al 2016) and age-related changes can be deeply unsettling for some (Clarke 2018). Maintenance and promotion of skin health in the older population has been termed a “grand challenge” in contemporary health care (Blume-Peytavi et al 2016), but at present is often neglected until something goes wrong (Cowdell et al 2014).

In skin health, there is a need to ensure adequate education for health care staff and to embrace a health promotion approach to care (Penzer and Finch 2001, Burr 2007). Although these calls for more health promotion in skin care for older people, made a number of years ago, have great credence, investigation reveals little evidence of them having been enacted in practice.

Subsequent sections of this article offer a review of skin changes associated with ageing; a synthesis of existing knowledge about the experiences of community-dwelling older people with regard to their ageing skin; a summary of best practice and recommendations for how primary care nurses may best support healthy skin ageing in the older population.

Skin changes associated with ageing

Physical changes

With age, skin is subject to intrinsic and extrinsic anatomical, morphological and physical changes. Intrinsic, mainly genetic features are programmed, inevitable biological changes. These changes are summarised in Table 1

- Cell replacement declines
- Barrier function decreases
- Mechanical protection decreases
- Healing is delayed
- Immune responses are delayed
- Thermoregulation is compromised
- Sweat production decreases
- Sebum production decreases
- Keratinocyte proliferation and desquamation decrease
- Barrier recovery is delayed
- Blood vessels are weakened
- Collagen rigidity increases
- Elastic fibres thicken
- There is patchy overproduction of melanin
- Subcutaneous fat diminishes
- Sensory receptors reduce
- Stratum corneum hydration reduces

(After: Chu and Kollias 2011, Cowdell et al 2014, Farage et al 2017, Kottner et al 2013, Lichterfeld-Kottner et al 2018, Tončić et al 2018)

Table 1: Intrinsic skin changes as a part of the ageing process

Extrinsic ageing is influenced by factors such as exposure to the environment and, most often, ultraviolet light (Tončić et al 2018). Other influences on skin ageing include over-washing, particularly with harsh soap based products; difficulties in maintaining personal hygiene (with

resulting accumulation of potential pathogens and increased risk of infection); poor diet; injury; diminished peripheral sensation; reduced mobility; incontinence (urinary and/or faecal); depression and dementia; diabetes and vascular changes; and poly-pharmacy (Cowdell et al 2014).

Cumulatively, there are numerous impacts from skin ageing. It becomes a less effective barrier and is at more risk of penetration of irritants such as the ingredients of skin care products (Lichterfeld-Kottner 2018). Risk of friction (the mechanical force when the skin is pulled across a rough surface such as a bed sheet), shear (the mechanical force exerted when an area of skin is pulled parallel to deeper body structures) (Hess 2004) and moisture (for example incontinence associated dermatitis) damage increases. Such damage takes longer to repair and risk of infection increases. Diminishing sensitivity can increase risk of accidental damage. Appearance changes, with wrinkles and creases developing, bruising is more common and pigmentation may become uneven (Cowdell and Steventon 2015).

Psychosocial changes

Physical skin changes alter the look and feel of skin and, for some people, this can be troublesome. Ong and Ryan (1998) refer to the "look good, feel good" factor in acknowledgment that, if a person is not satisfied with their appearance, they are less likely to feel good in themselves. Skin appearance has a major influence on how other people perceive us (Jaeger et al 2018). Western society values youth highly and, as a result, older people may experience stereotypical attitudes that they are unattractive (Berger 2017). In our youth-dominated society, normal skin ageing can be burdensome and the older person can experience an increasing sense of invisibility (Hilário 2016). Media portrayals of ageing skin are dominated by the promotion of anti-ageing skincare products (Cowdell and Garrett 2014) and little occurs to celebrate this natural process. Maintaining appearance is important to many older people (Lyons et al 2009) and dermatological changes can be a considerable burden at any age (Farage et al 2017).

Experiences of ageing skin

To date, the opinions and experiences of ageing skin for community-dwelling older people themselves have rarely been elicited. Available research has two key foci, the experience of living in an ageing skin and the prevalence of self-reported skin concerns.

A literature search reveals only one qualitative study directly addressing the experience of living with ageing skin. A phenomenological study with community-dwelling older people, examined their experience of living within ageing skin (Cowdell and Galvin 2018). From a series of interviews with

both women and men, the essence of the experience was one of being in a state of “managed inevitability” (Cowdell and Galvin 2018). Participants reported that skin changes led to new sights and sensations and represented change over time and time lived, over which there is limited control. Externally, participants were aware of changed skin, but the person within remains as they were. In practical terms, change brought about choices regarding how to care for their skin and how to essentially ‘face’ themselves and others and their changing place in the world (Cowdell and Galvin 2018). Findings of this study point to why and how nurses can relate to older people as persons by not regarding them as ageing bodies or bodies with aged skin alone, but in moderating this view with deeper existential insights, meeting the older person with a skin care need as a person and not just as a physical being (Cowdell and Galvin 2018).

Four epidemiological studies have examined self-reported skin concerns among well community-dwelling older people (those not presenting with a skin problem). These all have methodological limitations but point to the magnitude of the issue. Of 68 community-dwelling volunteers aged 50 to 91 years, 66% of the whole group reported skin problems, rising to 83% for octogenarians, with the most common complaint being pruritus (itchy skin) (Beauregard and Gilchrest 1987). Likewise, of 204 people aged over 64 years, 70% experienced pruritus and 64% a non-itching condition (Fleischer et al 1996). More recently, a wide-ranging health survey of community-dwelling people aged over 70 years asked “Do you have any concerns about your skin?”. Of all respondents (n=1116), 16.5% (n = 183) answered yes. Of this group, the most frequently reported concerns were dry skin 80.7% (n = 146), itching 56.9% (n = 103) and looking older 56.9% (n=103). Itch, dry skin and inflammation were the most bothersome symptoms. There was a significant association between the dry skin and itch $\chi 2(1) = 6.9$, $p<0.05$ (Cowdell et al 2018). A survey of African-Americans (n= 101) aged 60-91 years noted that the most common skin concerns were dry skin / itching (40.6%) (Caretti et al 2015).

These self-reports concur with practitioner assessed xerosis (skin dryness) in this population, albeit with people receiving nursing care at home. Of people with a median age of 83 years (n=923), 51.7% had dry skin, most often affecting the distal extremities. Dryness was strongly associated with pruritus, which, as a subjective experience, can only ever be self-reported (Lichterfeld-Kottner et al 2018). Clinical experience also supports the evidence above. Xerosis, fissures (cracks), and pruritus are commonly seen in older people (Cowdell et al 2018). Xerosis can lead to superficial cracks which enable the entry of irritants and allergens into the skin (Van Onselen 2011), and pruritus caused by irritants triggers a desire to scratch which then causes further damage to the skin in an escalating itch-scratch cycle (Pereira et al 2018). Dry skin can be bothersome and pruritus is known to be a

significant burden to some people (Karimkhani et al 2017). Both can impair quality of life but frequently go untreated as they are often considered 'minor' by both older people and indeed some healthcare practitioners (Kirkup 2008). Skin health appears to fall into Cornwell's (1984) long-established description of being a health problem, not an illness, and therefore not a legitimate reason to seek healthcare advice. Nurses are well placed to promote healthy skin ageing.

Summary of best practice

Assessment

Nurses invest much time in skin assessment. Most often, this is focused on people at risk of particular conditions such as development pressure ulcers or incontinence associated dermatitis. However, we may miss opportunities to assess skin in "well" older people in primary care. Finch (2003) offers a pragmatic approach to skin care which although dated has stood the test of time (Table 2). This level of assessment is not practical or necessary for every primary care nursing consultation. However, enquiry about skin health can be readily be incorporated into any nursing interaction. For example, any procedure involving direct contact, will reveal skin dryness, moisture, turgor (essentially elasticity) and texture, which can lead to questions about skin care practices and provision of straightforward skin health messages.

Method of assessment	Information to acquire
Listen	Past skin complaints Medical history Current medication Skin care practices Psychosocial state Sense of body image
Look	Accurate measures of skin condition (use illustration or photographs) Assess whole body general skin condition Observe for variations in skin colour, signs of oedema, bruising, inflammation, scratch marks, jaundice, swelling, breaks, sores and lesions
Touch	Evaluate temperature, moisture, turgor and texture
Smell	Assess is the person can wash Assess for continence Assess condition of skin flexures

Table 2: Skin assessment (adapted from Finch 2003)

Day-to-day skin care

Expert opinion and recent research indicates there are simple and inexpensive ways to maintain and improve skin health among older people. For example, by using gentle wash products (such as soap substitutes) and regular emollients (substances to moisturise, soothe or soften the skin) (Cowdell and Steventon 2015, Brooks et al 2017). Existing routine skin care practices tend to be based on habit for older people, and custom and practice for nurses (Cowdell and Steventon 2015); some may be injurious to the skin (Voegeli 2008). However, there is a substantial evidence-base derived from expert consensus, yet limited clinical research. Recommendations for day-to-day skin care have changed little over time and are underpinned mainly by expert opinion as summarised in table 3.

Intervention	**Rationale**
Cleanse regularly, but reduce if skin is dry (Lichterfeld et al 2015)	Keeps skin clean, reduces risk of infection, enhances self-esteem, image, relaxation and sense of wellbeing
Use warm not hot water and limit exposure time (Brooks et al 2017)	Less risk of skin dehydration
Use soap substitutes (Todd 2017)	Reduce alteration of acid mantle and
After bathing dry skin gently by patting (Lichterfeld et al 2015)	Reduces damage by abrasion
Promote the use of emollients (Burr 2018)	Reduces skin dryness and increase comfort
Use products that are acceptable to the person (Moncreiff et al 2018)	Increases concordance and thus effectiveness

Table 3: Expert consensus on skin care practices for the older person

The purpose of skin cleansing is to remove dirt, soil and bacteria from the skin. However, this can lead to weakening of the skin's barrier function. Skin cleansing products used in combination with water are widely available. There is evidence of the benefit of using low-irritant cleansing products. (Hornby et al 2016). Skin cleansers are available in various forms, including as bars, liquids, gels, and creams, to be used in combination with water. The type of surfactant, the key cleansing ingredient used, has an effect on the mildness or otherwise of the product. The major groups of surfactant are natural and synthetic (Khosrowpour et al 2018). Natural surfactants (soaps) are the most common cleansing agents, for example, sodium lauryl sulfate (SLS). Surfactants may lead to after-wash skin tightness, dryness and barrier damage, erythema and irritation, which is a concern in older people who will have dry and fragile skin (Cowdell et al 2014). Some products, for example, superfatted soaps, transparent soaps, and combination bars, have components to reduce irritancy (Reis and Reis-Filho 2017). Alternatives to soap-based cleansers include synthetic surfactant-based syndet (synthetic detergent) products and emollient-rich bath additives and shower preparations (Zaidi et al 2019). The choice of low-irritant products can be guided by personal preference, as the evidence of superiority of specific products is lacking. After washing, skin may be dried by rubbing or patting with a towel, which increases the risk of direct mechanical damage to the skin. However, if the skin is not

dried thoroughly, there is a risk of over-hydration and maceration (Lawton 2018). Therefore gentle drying is advised.

Regular use of emollients can help to prevent and relieve dry skin. The best emollient is the one that the person actually uses as this will inevitably be most effective. Formulations include ointment, creams and lotions. Ointments are the greasiest preparations and are generally most effective. However, they are not always well tolerated as they can leave the skin feeling sticky and mark clothes and bed linen. Creams are less greasy than ointments and generally are more effective than lotions (Lawton 2018). There is no evidence from clinical studies to support the use of one emollient over another, and the choice should not be based solely on cost. Selection should be based on acceptability to the individual, properties and type of product (ointment, cream, lotion) dryness and skin area being treated and availability (Moncrieff et al 2013, van Zuuren et al 2017). Personal preference, cosmetic acceptability and previous experience of side-effects, such as stinging, should be taken into account (Oakley and Lawton 2016). Lifestyle factors and time of year may also influence choice and product use (Lawton 2018), for example some people find that their skin is more dry in the winter months. Emollients containing humectants such as propylene glycol, lactic acid, urea and glycerol have most benefit (Lichterfeld et al 2015, Lichterfeld et al 2016, Loden 2016), as they attract and hold water in the stratum corneum (Lawton 2018).

A recent systematic literature review underpinned the development of a basic skin care algorithm. Lichterfeld et al 2015). Although directed towards people receiving care in residential and hospital settings, the principles are equally applicable for community-dwelling individuals. From the 41 articles included in the review the authors offer advice on general basic skin care, including the prevention of skin dryness as summarised in table 4 and are comparable with other evidence sources.

General advice
- Do not use traditional soaps
- Skin cleansing
- Frequency: once daily or according to individual preferences
- Type: shower, bath or wash
- Products: mild syndet soaps with pH 4 to 5

Skin care
- Frequency: individual preferences
- Products: cream, ointment, lotion, products according to individual preferences

Face care
- Frequency: individual preferences
- Type: cleansing with luke warm water, no cleansing products

Table 4: Summary of general basic skin care (Lichterfeld et al 2015)

The role of nurses in primary care

Whilst it can be argued that the search for the "holy grail" of skin care regimens for older people is important, consideration also needs to be given to how nurses may best use their interactions with community-dwelling older people to influence approaches to maintaining and improving skin health. Dry skin can be treated by providing effective support and advice and nurses are central in educating older people to care for their skin (Kottner and Surber 2016). (WHAT IS THE ADVICE?)

All nurses have a duty to pay special attention to promoting wellbeing, preventing ill health and meeting the changing health and care needs of people during all life stages (Nursing and Midwifery Council 2018). Practice and community nurses are particularly well placed to provide health promotion, lifestyle education (Beighton et al 2015) and health behaviour change interventions (National Institute for Health Research 2007, 2014). As the population ages these skills now need to be more systematically applied to the older person to promote healthy ageing to maintain function and personal quality of life (Beard and Bloom 2015). Care for the older person is often reactive and their concerns may be overlooked (Beard and Bloom 2015).

A key role of primary care nurses is to support health promotion and health behaviour change. Older people are the major users of primary care services (Hobbs et al 2016). Practice nurses in particular see many older people during routine consultations, for example in 2015-2016, 71% of people aged ≥ 65 years received a seasonal influenza vaccination and the majority of these will have been administered by a practice nurse. Whilst recognising the time pressures of nurses in primary care, there is a need to make the best use of every interaction, in every location, to promote health and prevent illness (Royal College of Nursing 2012). There is evidence that even very-brief (minimum 30 second) interventions can change habits. Even if only a small proportion of each nurse's caseload benefits, the cumulative effect could be significant for individuals and at population level (Barley and Lawson 2016).

This notion is embodied in "Making Every Contact Count" (MECC) (Health Education England 2016). MECC capitalises on the millions of interactions between healthcare practitioners and patients each day. It supports the use of making the most of every opportunity to deliver consistent and straightforward health messages. MECC uses brief or very brief interactions to impart simple health advice. Interactions are intended to last a matter of minutes, complement existing consultations and not disrupt already busy workloads. Very brief interventions are being used in practice, for example to promote physical activity (Webb et al 2016, Pears et al 2015) and encourage reduction in alcohol consumption (Alvarez-Bueno et al 2015). They could equally be applied to simple messages needed

to promote healthy skin ageing; at the most fundamental level use gentle wash products and regular moisturisers. Adoption could have a significant impact on population health and wellbeing.

Conclusion

Skin ageing cannot be prevented. Changes often lead to dryness and itching and even skin breakdown which can have a detrimental impact on health and wellbeing. Risk of skin damage increases, such damage can be costly to the individual and society. Older people often do not report skin discomfort as they may not consider it worth mentioning. As our population ages it is contingent on primary care nurses to raise awareness in the "well" older population of the risks and impacts associated with skin ageing. The routine provision of short, simple messages whenever a consultation allows, is a legitimate nursing activity which has considerable potential to improve skin health and comfort and reduce age associated skin problems.

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