Protocol for a scoping review of the early detection of skin conditions and skin cancer in the community

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Abstract

Objective: To summarise the existing literature surrounding the knowledge, education and identification of skin conditions and skin cancer in the community.

Introduction: Skin diseases are commonly suffered, with their prevalence and overall burden increasing globally. Certain allied health professionals and professionals outside the medical environment are in a position to contribute to the early identification of these skin conditions if they are provided with appropriate training. This education could be crucial to improving the rates of early detection of various skin conditions and potentially improve overall patient prognosis.

Inclusion criteria: Papers involving hairdressers, barbers, nail technicians, massage therapists, wax therapists, aestheticians, beauticians, tattoo artists, makeup artists, trichologists, podiatrists, chiropractors, chiropodists, and physiotherapists will be included. Papers concerning education, training, identification and early detection of skin diseases will also be included. These papers must discuss these professionals and concepts within a community setting.

Methods: A systematic search of electronic databases (MEDLINE, Embase and PubMed) will be carried out. The articles will be initially screened by their title and abstract against the inclusion criteria by two independent reviewers. Selected papers will be read fully with dual data extraction planned. Findings will be synthesised thematically via NVivo 15; a narrative description of findings will be provided alongside. There will be no quantitative analysis of results.

Keywords: Dermatology, skin diseases, early diagnosis, skin cancer, early detection

Introduction

Skin conditions are among the most common diseases suffered worldwide, ranking fourth amongst the causes of non-fatal disease burden (1). Within the United Kingdom, an estimated 60% of the population has experienced a skin disease at some point in their lives (2), with this number predicted to rise over the next few years (3). These conditions can have a significant long-term impact on both the patient and the health service overall. This can be seen across various aspects of the patient's life, impacting not just their physical health, but their mental health and overall quality of life (QoL) too (4). Moreover, delayed diagnosis remains a frequent issue within dermatological care, often to the detriment of patient outcomes and QoL (5). Therefore, given the considerable burden outlined, it is increasingly pressing to ensure that these diseases are detected early and managed promptly.

Skin diseases are typically identified within a medical setting. For example, in the case of skin cancer, primary care clinicians play a vital role in early detection and referral to specialist attention (6). However, there is increasing recognition of professionals working outside the traditional healthcare setting who could contribute to the crucial step of early detection if appropriately trained. This includes the likes of certain allied health professionals (AHPs) such as physiotherapists, podiatrists and osteopaths, whose primary role does not require training surrounding skin diseases, and professionals completely removed from the healthcare environment such as massage therapists and hairdressers. These professionals are exposed to their clients' skin on a daily basis, sometimes observing areas of skin the client may find hard to self-examine (the sole of the foot or the scalp for example), and would be well positioned to notice changes or abnormalities in their clients' skin. Therefore, research into the extent of these professionals' knowledge, education, confidence and experiences with identifying skin changes will help to evaluate how to best inform strategies to increase chances of early detection of skin conditions and skin cancer within the community.

A preliminary search of MEDLINE, Embase and PubMed was conducted to screen for pre-existing scoping reviews related to the title and the only result was a scoping review exploring creating an effective curriculum for cosmetology students to further early detection of melanoma in salons and barber shops (7). Marsh, however, focuses on the detection of head and neck melanoma by the hairdressing profession within the salon setting specifically. This scoping review differs from this as it looks to explore the literature surrounding the early detection of a scope of skin disease beyond just head

and neck melanoma, and at a broader range of professions. This review will, therefore, aim to provide a wider perspective of early skin disease detection within the community.

The objective of this scoping review is to assess existing literature for evidence of knowledge and identification of skin conditions and skin cancer by non-health professionals and certain AHPs. The review will also summarise literature concerning the interventions that are currently in place to educate these professionals on skin disease identification; attitudes and reception to these will also be reviewed. This summary will help identify potential gaps in research surrounding the topic of early detection of skin diseases within the community by these professionals. Subsequent analysis of these findings will help give clarified direction towards areas where more research is needed about certain non-health professional and AHPs' awareness and skillset surrounding skin condition detection, and settings where further education could increase the opportunities for earlier detection of skin conditions and potentially improve prognosis from such diagnoses.

Review question

The following research questions will be addressed by the scoping review:

In the existing literature, what is the evidence for knowledge, education and detection of skin conditions and skin cancers, of non-health professionals?

In the existing literature, what is the evidence for knowledge, education and detection of skin conditions and skin cancers, of the following community AHPs: podiatrists, physiotherapists and osteopaths?

Inclusion criteria

Sample

Papers involving the following professions: aestheticians, beauticians, nail technicians, trichologist, chiropodist, physiotherapists, sports therapists, chiropractors, osteopaths, podiatrists, massage therapists, wax therapists, hairdressers and barbers. These professionals are in a prime position to detect a variety of skin conditions within the community. Certain AHPs have been included in this list (physiotherapists, podiatrists and osteopaths) as their primary role does not focus on skin disease knowledge and

detection, and exploration of existing literature surrounding this area could highlight potential for further utilisation of these professionals and widen the scope for skin disease detection.

Concept

Studies outlining identification, early detection, education or training concerning skin conditions and skin cancer.

Context

Included papers will outline the sample and concept within a community setting. This could be a salon, barbershop or community clinic environment. Papers discussing the sample and concept in a healthcare setting (e.g GP practice or hospital) will be excluded as this is not within a community environment.

Research type

Any study type will be included.

Time frame

Papers published from 2015 onwards.

Types of sources

This scoping review will look to include full length, peer reviewed papers written in English and published from 2015 onwards. Older literature written before 2015 may not be as pertinent to the current climate of skin disease identification and related education programmes for these professionals. Translation of non-English papers is not possible within the resources available for this project. There will be no study design or methodology restrictions.

Exclusion criteria

The following criteria will be used to exclude papers:

- Sample not from one of the job roles in the inclusion criteria
- Full text unavailable
- Published before 2015
- Involves a healthcare setting
- Non-English language

Methods

The proposed scoping review will be conducted in accordance with Chapter 10 of the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis (8). Figure 1 outlines the predicted timeline for the planned research.

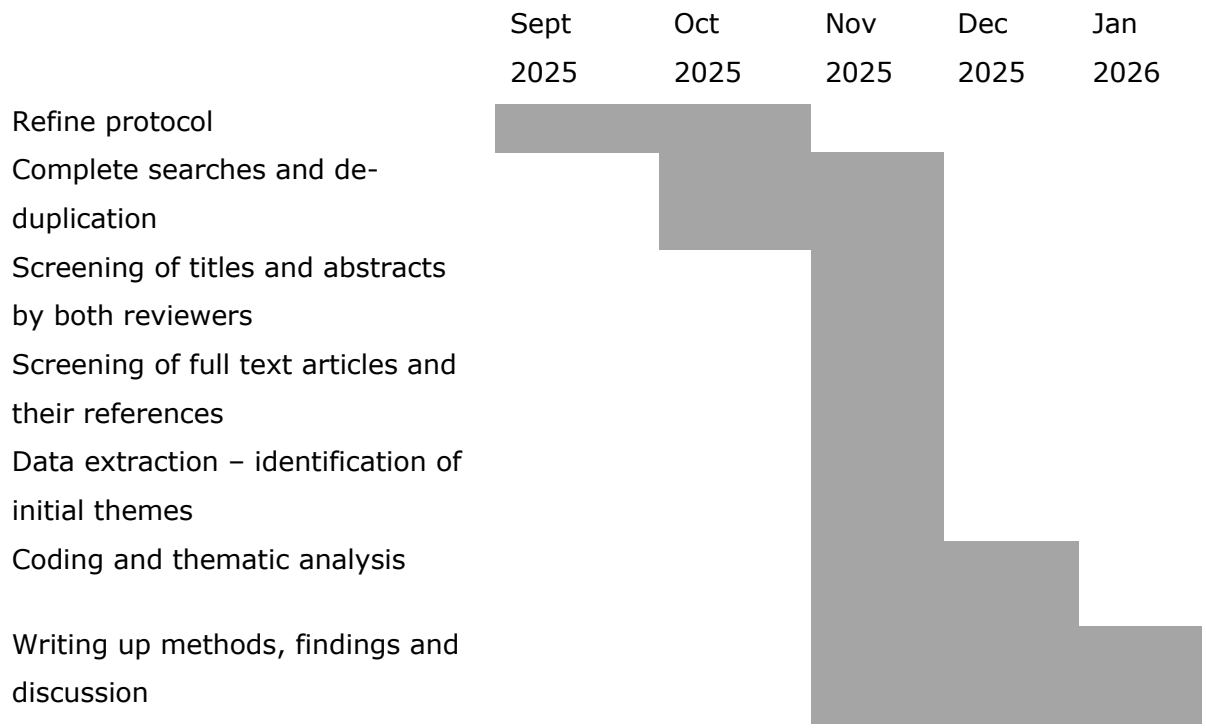

Figure 1: GANTT chart outlining the planned timeline for research.

Search strategy

A search strategy will be developed to locate published and unpublished papers for this review. A three-step search strategy will be used to this review.

- An initial search will be carried out on MEDLINE, Embase and PubMed to identify articles on the topic.

- Key words will be identified from the titles and abstract of these articles, as well as their index lists, which can then be used to inform the key words for the full search strategy (see Appendix I).
- The search strategy, including all identified keywords and index terms, will be adapted for each included database. The reference list of all included sources of evidence will then be screened manually for further studies which could be included in the review.

The search strategy will be peer reviewed by an information specialist prior to the review. Papers will be sourced from the following databases:

- Embase
- PubMed
- MEDLINE

Study/Source of evidence selection

Following the search, all identified citations will be collated and uploaded onto EndNote 21 and Rayyan and duplicates removed. A pilot test will be carried out with a random sample of 25 titles and abstracts. These will be screened separately by two independent reviewers against the eligibility criteria, who will subsequently meet to discuss discrepancies and any necessary changes to the eligibility criteria. The screening process will commence once ≥75% agreement is reached. Titles and abstracts will then be screened by two reviewers for assessment against the inclusion criteria for the review. The full text of selected citations will be assessed in detail against the inclusion criteria by two independent reviewers. Reasons for exclusion of sources of evidence at full text that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion, or with an additional reviewer. The results of the search and the study inclusion process will be fully reported in full in the final scoping review and presented in a PRISMA flow diagram (9). A narrative description of this process will be provided alongside this flowchart.

Data extraction

Dual extraction by two independent reviewers will be planned. Initially, papers pulled from the search will be exported into Excel, noting the reasons for inclusion and

exclusion. Data will be extracted from the included papers and will undergo subsequent coding and thematic analysis via NVivo 15 (10). Data extracted will include:

- Author(s)
- Title
- Year of publication
- Study type
- Sample: Profession, demographics (age, sex), sample size
- Concept: education, training, knowledge, detection etc.
- Context: Geographic location of the study, setting discussed (salon, clinic etc.)
- Key findings relevant to the review questions

The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included evidence source, and any modifications will be detailed in the scoping review. Any disagreements that arise between the reviewers will be resolved through discussion, or with an additional reviewer. If appropriate, authors of papers will be contacted to request missing or additional data, where required.

Data analysis and presentation

Findings will be analysed thematically using NVivo 15, with data presented in tabular form. A narrative summary will accompany the tabulated results and will describe how the results relate to the review's objective and questions. Due to the baseline clinical background of these professions, though not specifically dermatology related, in comparison to the other professions included in this study such as hairdressers, the analysis and discussion of findings surrounding the AHPs will be separate to that of the remaining included professionals in the review.

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Conflicts of interest

There is no conflict of interest in this project.

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Appendices

Appendix I: Search strategy

The following search strategy is proposed for Embase (via Ovid). The search is limited to English language and publishing date of 2015 onwards.

((“Nail Technician.mp” OR “Nail Technicians.mp” OR “Manicurist.mp” OR “Manicurists”) OR (“Massage Therapist.mp” OR “Massage therapists.mp” OR “Masseuse.mp” OR “Masseuses.mp” OR “Masseur.mp” OR “Masseurs.mp” OR “Massotherapist.mp” OR “Massotherapists.mp” OR “Massagist.mp” OR “Massagists.mp”) OR (“Waxer.mp” OR “Waxers.mp” OR “Wax therapist.mp” OR “Wax therapists.mp”) OR (“Beautician/” OR “Beautician.mp” OR “Beauticians.mp” OR “Aesthetician.mp” OR “Aestheticians.mp” OR “Esthetician.mp” OR “Estheticians.mp” OR “Cosmetologist” OR “Cosmetologists” OR “Cosmetician.mp” OR “Cosmeticians.mp” OR “Skincare professional.mp” OR “Skincare professionals.mp”) OR (“Hairdresser/” OR “Hairdresser.mp” OR “Hairdressers.mp” “Barber.mp” OR “Barbers.mp” OR “Barbering” OR “Barbershop.mp” OR “Barbershops.mp” OR “Salon.mp” OR “Salons.mp” OR “Hairstylist.mp” OR “Hairstylists.mp” OR “Hair stylist.mp” OR “Hair stylists.mp” OR “Hair dresser.mp” OR “Hair dressers.mp” “Hair professional.mp” OR “Hair professionals.mp”) OR (“Tattoo Artist.mp” OR “Tattoo Artists.mp”) OR (“Makeup Artist.mp” OR “Makeup artists.mp”) OR (“Chiropractic” OR “Chiropractic/” OR “Chiropractor.mp” OR “Chiropractors.mp”) OR (“Manual therapist/” OR “Manual therapist.mp” OR “Manual therapists.mp” OR “Manipulative therapist.mp” OR “Manipulative therapists.mp” OR “Manipulative physical therapist.mp” OR “Manipulative physical therapists.mp” OR “Manual physical therapist.mp” OR “Manual physical therapists.mp”) OR (“Osteopathic physician/” OR “Osteopath.mp” OR “Osteopaths.mp”) OR (“Podiatrist/” OR “Podiatrist.mp” OR “Podiatrists.mp” “Chiropodist.mp” OR “Chiropodists.mp”) OR (“Trichologist.mp” OR “Trichologists.mp”) OR (“Physiotherapist/” OR “Physiotherapist.mp” OR “Physiotherapists.mp”))

AND

((“early diagnosis/” OR “early diagnosis.mp” OR “early diagnoses.mp”) OR (“diagnosis/” OR “early cancer diagnosis/” OR “diagnosis.mp”) OR (“curriculum.mp” OR “curriculum/”) OR (“education/” OR “education.mp”) OR (“training/” OR “training.mp” OR “training course.mp” OR “training courses.mp” OR “training program.mp” OR “training programme.mp”) OR (“knowledge.mp” OR “knowledge/”) OR (“awareness/” OR “awareness.mp”) OR (“intervention.mp” OR “interventions.mp”) OR (“education program/” OR “program.mp” OR “programme.mp”) OR (“identification.mp” OR “early identification.mp”) OR “detection.mp” OR “early detection.mp”)

AND

((“skin conditio*.mp” OR “inflammatory skin conditio*.mp” OR “inflammatory skin diseas*.mp” OR “inflammatory dermatos*.mp” OR “skin lesio*.mp” OR “skin cance*.mp” OR “skin disease/” OR “skin disease.mp” OR “skin diseas*.mp” OR “cutaneous diseas*.mp” OR “skin chang*.mp”) OR (“melanoma.mp” OR “melanomas.mp” OR “melanoma/”) OR (“skin tumor/” OR “skin neoplasm.mp” OR “skin tumou*.mp” OR “skin tumo*.mp” OR “skin cancer/” OR “skin malignancy.mp” OR “skin malignancies.mp”) OR ((("basal cell" OR keratinocyte OR nonmelanoma OR "non-melanoma") AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)) OR (("Carcinoma, Squamous Cell"[MH] OR "squamous cell" OR SCC) AND (skin OR cutaneous OR dermatology OR dermatological OR “in situ” OR intraepidermal OR "intra-epidermal") AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)) OR "Carcinoma, Basal Cell"[MH] OR BCC OR NMSC OR "bowen's disease" OR "bowen disease") OR (“lichen sclerosus et atrophicus/” OR “lichen sclerosus.mp” OR “vulvar kraurosis/” OR “lichen sclerosis.mp”) OR (“atopic dermatitis/” OR “atopic dermatitis.mp” OR “atopic eczema.mp” OR “eczema/” OR “eczema.mp” OR “eczematous skin disease.mp” OR “neurodermatitis/” OR “neurodermatitis.mp”) OR (“psoriasis/” OR “psoria*.mp” OR “antipsoriatic*.mp”) OR “dermatitis.mp” OR (“suppurative hidradenitis/” OR “acne inversa.mp” OR “hidradenitis suppurative.mp”) OR (“acne.mp” OR “acne vulgaris/” OR “acne/” OR “acneiform.mp”) OR (“cutaneous lupus erythematosus.mp” OR “skin lupus erythematosus.mp” OR “skin lupus erythematosus/”) OR (“scabies.mp” OR “scabies/”) OR (("basal cell" AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)) OR "Carcinoma, Basal Cell/” OR BCC) OR (("Carcinoma, Squamous Cell/” OR "squamous cell" OR SCC) AND (skin OR cutaneous OR dermatology OR dermatological OR "in situ" OR intraepidermal OR "intra-epidermal") AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)) OR (“impetigo.mp” OR “impetigo/”) OR (“lichen planus.mp” OR “lichen planus/”) OR (“pemphigus.mp” OR “pemphigus/”) OR (“pemphigoid.mp” OR “pemphigoid/” OR “bullous pemphigoid/” or “mucus membrane pemphigoid/”) OR (“genital herpes.mp” OR “genital herpes/”) OR (“nodular prurigo.mp” OR “prurigo nodularis/”) OR (“rosacea.mp” OR “rosacea/”) OR (“vitiligo.mp” OR “vitiligo/” OR “leukoderma/” OR “leukoderma.mp” OR “leukoderma.mp”))

Search conducted on 26/10/2025. 622 records retrieved by this search.

((((((((((((((((((((((((((((((((((skin condition*) OR (inflammatory skin condition*)) OR (inflammatory skin disease*)) OR (inflammatory dermatos*)) OR (skin lesion*)) OR

(skin cancer*)) OR (skin disease*))) OR (cutaneous disease*)) OR (skin change*)) OR (("melanoma"[MH] OR melanoma OR melanomas))) OR (skin tumo*)) OR (skin neoplasm*)) OR (skin malignancy)) OR (skin malignancies)) OR ((("basal cell" OR keratinocyte OR nonmelanoma OR "non-melanoma") AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)) OR (("Carcinoma, Squamous Cell"[MH] OR "squamous cell" OR SCC) AND (skin OR cutaneous OR dermatology OR dermatological OR "in situ" OR intraepidermal OR "intra-epidermal") AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)) OR "Carcinoma, Basal Cell"[MH] OR BCC OR NMSC OR "bowen's disease" OR "bowen disease")) OR (("lichen sclerosus et atrophicus"[MH] OR "vulvar lichen sclerosus"[MH] OR "lichen sclerosus" OR "lichen sclerosis"))) OR (("dermatitis, atopic"[MH] OR "eczema"[MH] OR eczema OR "atopic dermatitis" OR neurodermatitis))) OR ((psoriasis[mh] OR psoria* OR antipsoriatic*))) OR (dermatitis)) OR (("hidradenitis suppurativa"[MH] OR hidradenitis OR suppurativa OR "acne inversa"))) OR (("acne vulgaris"[MH] OR acne))) OR ("cutaneous lupus erythematosus"))) OR (skin lupus erythematosus)) OR (scabies)) OR (("basal cell" AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)) OR "Carcinoma, Basal Cell"[MH] OR BCC)) OR ((("Carcinoma, Squamous Cell"[MH] OR "squamous cell" OR SCC) AND (skin OR cutaneous OR dermatology OR dermatological OR "in situ" OR intraepidermal OR "intra-epidermal") AND (cancer OR cancers OR carcinoma OR carcinomas OR neoplasia OR neoplasias OR neoplasm OR neoplasms)))) OR (impetigo)) OR (("lichen planus"[MH] OR "lichen planus"))) OR (("pemphigus"[MH] OR pemphigus))) OR (("pemphigoid, bullous"[MH] OR "pemphigoid, benign mucous membrane"[MH] OR pemphigoid))) OR (("rosacea"[MH] OR rosacea))) OR (("vitiligo"[MH] OR vitiligo OR leukoderma OR leucoderma))) OR (genital herpes)) OR (nodular prurigo)) OR (prurigo nodularis)) AND ((nail technician) OR (nail technicians)) OR (manicurist)) OR (manicurists)) OR (massage therapist)) OR (massage therapists)) OR (masseuse)) OR (masseuses)) OR (masseur)) OR (masseurs)) OR (massotherapist)) OR (massotherapists)) OR (massagist)) OR (massagists)) OR (waxer)) OR (waxers)) OR (wax therapist)) OR (wax therapists)) OR (beautician)) OR (beauticians)) OR (aesthetician)) OR (aestheticians)) OR (esthetician))

OR (estheticians)) OR (cosmetologist)) OR (cosmetologists)) OR (cosmetician)) OR (cosmeticians)) OR (skincare professional)) OR (skincare professionals)) OR (hairdresser)) OR (hairdressers)) OR (barber)) OR (barbers)) OR (salon)) OR (salons)) OR (barbershop)) OR (barbershops)) OR (hairstylist)) OR (hairstylists)) OR (hair dresser)) OR (hair dressers)) OR (hair stylist)) OR (hair stylists)) OR (hair professional)) OR (hair professionals)) OR (tatto artist)) OR (tattoo artists)) OR (makeup artist)) OR (makeup artists)) OR (chiropractor)) OR (chiropractors)) OR (chiropractic)) OR (manual therapist)) OR (manual therapists)) OR (manipulative therapist)) OR (manipulative therapists)) OR (manipulative physical therapist)) OR (manipulative physical therapists)) OR (manual physical therapist)) OR (manual physical therapists)) OR (osteopath)) OR (osteopaths)) OR (podiatrist)) OR (podiatrists)) OR (chiropodist)) OR (chiropodists)) OR (trichologist)) OR (trichologists)) OR (physiotherapist)) OR (physiotherapists))) AND ((((((((((((((((((((((early diagnosis) OR (early diagnoses)) OR (diagnosis)) OR (diagnoses)) OR (curriculum)) OR (education)) OR (training)) OR (training course)) OR (training courses)) OR (training program))) OR (training programme)) OR (knowledge)) OR (awareness)) OR (intervention)) OR (interventions)) OR (education program)) OR (education programme)) OR (program)) OR (programme)) OR (identification)) OR (early identification)) OR (detection)) OR (early detection)) Filters: **English, from 2015 - 2026**