Using technology to support the social and emotional wellbeing of nurses: A scoping review protocol

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ABSTRACT

Aims. (1) To review the published literature on the use of technology to provide social or emotional support to nurses, (2) to evaluate and identify gaps in the research, (3) to assess whether a systematic review would be valuable, (4) to make recommendations for future developments.

Design. The protocol for the scoping review has been developed in accordance with recommendations from several methodological frameworks, as no standardised protocol currently exists for this purpose.

Methods. Our protocol incorporates information about the aims and objectives of the scoping review, inclusion criteria, search strategy, data extraction, quality appraisal, data synthesis and plans for dissemination. Funding for this project was approved by Burdett Trust for Nursing in December 2016.

Discussion. Technology to support patient emotional and social wellbeing has seen a rapid growth in recent years and is offered in a variety of formats. However, similar support for nursing staff remains under-researched with no literature review undertaken on this topic to date. This is despite nurses working in emotionally demanding environments which can be socially isolating. The scoping review will map current evidence on the use of technology to

support nursing staff and explore the range, extent and nature of this activity. It will also provide a basis for deciding if a full systematic review would be desirable.

Impact: It is important that the psychological wellbeing of nurses is seriously addressed as more nurses are now leaving than joining the profession. This is an international concern. High staff turnover has an interpersonal cost and is associated with reduced quality of patient care. Financial implications are also important to consider as healthcare providers employ costly agency staff to address the workforce deficit. Online technology may offer a sustainable and accessible means of providing support for nurses who find it difficult to communicate in person due to time pressures at work.

Keywords: nurses, nursing, midwifery, technology, online, smartphone, emotional and social support, app, protocol, scoping review.

INTRODUCTION

The use of online technology to facilitate emotional and social support for various populations has seen a rapid growth in recent years and has been made accessible in a variety of mediums (Marin et al., 2016; O' Connor & Andrews, 2016). Previous studies have investigated the provision of online peer support for individuals with eating disorders (Basterfield, Dimitropoulos, Bills, Cullen & Freeman, 2018), people living with HIV/AIDS (Flickinger et al., 2017), university students with depressive symptoms (Horgan, McCarthy & Sweeney, 2013), prostate cancer patients (Huber at al., 2018) and fathers of children diagnosed with brain tumours (Nicholas et al., 2012). Across these diverse demographics, online peer support has been identified as a useful and accessible means of giving and receiving support, sharing information and reducing stigma around certain health conditions. Online communities can be a place where the stressors of daily living are discussed, a space to exchange ideas and express emotions (Nicholas et al., 2012). The evidence base for the use of technology in the

field of nursing is increasing rapidly worldwide as its potential for enhancing and facilitating care is realised (Doswell, Braxter, DeVito Dabbs, Nilsen & Klem, 2013; Ganasegeran, Renganathan, Rashid, & Al-Dubai, S.A.R., 2017; Kingod, Cleal, Wahlberg, & Husted, 2017).

Despite evidence suggesting that technology can be used internationally as an effective and affordable means of increasing wellbeing for a variety of groups, the provision of such support for nurses remains an under-researched area. Although previous work has systematically synthesised evidence on the use of technology to support nurses from educational and learning based perspectives (O'Connor et al., 2017), no literature review has yet been published on the use of technology to provide emotional and social support. Nurses often work in psychologically and physically demanding environments where they are frequently socially isolated from their peers (NHS Health Education England, 2014; Rudman & Gustavsson, 2011). Qualified staff may fear stigmatisation if they are perceived as lacking in knowledge or being in need of emotional support. As a result, nurses may resort to unhelpful coping strategies to manage significant workplace stressors; such a maladaptive process has been highlighted in a previous study with oncology nurses in Italy (Villani et al., 2013).

Occupational stress is also a contributory factor to job dissatisfaction, burnout and intention to leave the nursing workforce (Currie & Carr Hill, 2012). With retention acknowledged as an international concern (Kinghorn, Halcomb, Froggatt, & Thomas, 2017; NHS Digital, 2018), it is vital that accessible, effective and sustainable models of support for nursing staff are developed. Healthcare organisations are still cautious about the use of social media in nursing (Bassell, 2010; Duke et al., 2017) and it is important that further research is undertaken in this area to contribute to the evidence base and promote best practices for communicating professionally online.

BACKGROUND

This protocol sets out to document the objectives, inclusion criteria and methodology of a scoping review on the use of technology to support the emotional and social wellbeing of nurses. It has been developed as an a-priori step to pre-define the structure and scope of the review, with the anticipation that this will enhance rigour and reduce reporting bias. In the process of developing this protocol, several methodological frameworks were consulted and synthesised (Arksey & O'Malley, 2005; Daudt, van Mossel, & Scott, 2013; Joanna Briggs Institute, 2015; Levac, Colquhoun & O'Brien, 2010; Peters et al., 2015). These frameworks offer guidance on how scoping reviews should be conducted. This is especially pertinent, as currently, the reporting of scoping reviews has not been standardised; this has been identified as a guideline in need of development (PRISMA, 2018).

Our scoping review aims to provide a broad overview of how technology has been used to support nurses' emotional and social wellbeing in a work environment that is recognised as being frequently stressful and psychologically demanding, especially for newly qualified nurses (NHS Health Education England, 2014; Rudman & Gustavsson, 2011). Such stress, if not addressed, has been highlighted as a contributory factor to job dissatisfaction, burnout and intention to leave the nursing workforce (Currie & Carr Hill, 2012). With nursing retention acknowledged as a worldwide concern (Kinghorn, Halcomb, Froggatt, & Thomas, 2017; NHS Digital, 2018), it is vital to develop and implement accessible, sustainable and effective models of support for nursing staff. Technology has successfully been used to support patient care and wellbeing in a variety of contexts (Marin et al., 2016; O' Connor & Andrew, 2016) and the evidence base for using technology in the field of healthcare is increasing rapidly as its potential for enhancing and supporting patient care is realised (Doswell, Braxter, DeVito Dabbs, Nilsen & Klem, 2013; Ganasegeran, Renganathan, Rashid, & Al-Dubai, S.A.R., 2017; Kingod, Cleal, Wahlberg, & Husted, 2017).

Previous systematic literature reviews have synthesised evidence on the use of technology to support nurses in educational contexts (O'Connor et al., 2017), but so far there exists no published scoping or systematic review on the use of technology to support nurses from emotional and social perspectives. Recent studies have demonstrated that peer and social support are successful ways of supporting nursing staff (Noguchi-Watanabe, Yamamoto-Mitani & Takai, 2016; Tower, Blacklock, Watson, Heffernan & Tronoff, 2015; Palson, Casile & Jones, 2015) but healthcare organisations are still cautious about the use of social media in nursing (Bassell, 2010; Duke et al., 2017). A scoping review will provide a form of evidence reconnaissance (Joanna Briggs Institute, 2015) and map the research on how technology may be used to improve the wellbeing of nursing and midwifery staff. This will have implications for both research and practice as the findings of the review can be used to inform best practice on the use of technology in nursing and develop social networking tools for nursing staff which are safe, supportive whilst adhering to ethical boundaries and professional codes of conduct.

Why a scoping review?

Technology as a concept is broad and heterogeneous and can incorporate internet mediated formats such as online forums and social media but also involve mobile phone accessible applications such as live chat and text messaging. It is a domain that is relatively new and also rapidly developing, with notable advancements in recent years in the context of social networking. Scoping reviews have been recommended as a means of investigating the 'extent, range and nature of research activity' (Arksey & O'Malley, 2005) and can also be used to determine if a systematic review would be valuable. It seems then, appropriate to undertake a scoping review as such a mapping of evidence on the use of technology to support nurses from an emotional and social perspective is something that has not yet been undertaken.

AIMS

The aim of the review is to map the evidence on how technology can be used to support nursing and midwifery staff from emotional and social perspectives.

The main objectives are:

- To identify research on the use of technology in nursing - specifically as a means of supporting emotional and social wellbeing

- To document, evaluate and identify gaps in the research

- To assess whether a systematic review of this subject area would be valuable

- To make suggestions for future research and practice in terms of how technology can best support nursing staff

METHODOLOGY

Research question

The question "what research exists on online and mobile technology to support nurses' emotional and social wellbeing?" will be used as a basis to generate search terms. This question is congruent with the review title, gives important information about the focus of the review and addresses the specific elements of the Population, Concept and Context (PCC) framework as recommended by the Joanna Briggs Institute (2015). Our population is nurses and midwives working in healthcare worldwide. The concept is how technology can be used as an intervention to support the nursing staff, whilst improving nurses' emotional and social wellbeing is the context of the review.

Study Design

The framework provided by Arksey and O'Malley (2005), subsequently refined by Levac, Colquhoun and O'Brien (2010) will be used as a basis for the scoping review design. This

framework is a recommendation from the Joanna Briggs Institute (2015) as it is seen as enhancing both clarity and rigour of the review process. It is a 6-step method comprised of the following stages: (1) identify the research question and clarify purpose; (2) search for relevant studies, balancing feasibility of the search with comprehensiveness; (3) use an iterative approach to selecting studies and extracting data; (4) chart data using quantitative summaries and qualitative thematic analysis; (5) report and summarise results and identify implications for policy and practice; and (6) hold a consultation with stakeholders to discuss findings.

Data sources

5 databases will be searched from the past 8 years (2010-2018). This timespan has been chosen to reflect the current use of technology to support nurses and exclude studies that may involve now obsolete formats. The following databases will be included:

- Allied and Contemporary Medicine Database (AMED)

- Cumulative Index to Nursing and Allied Health Literature (CINAHL Plus)

- MEDLINE

- PsycARTICLES

- PsycINFO

These databases have been identified as relevant due to being related to nursing, psychology, health and social care.

Inclusion criteria

The inclusion criteria have been formulated using the Population, Concept and Context (PCC) framework (Joanna Briggs Institute, 2015). Studies will be included if they are: (1) published between 2010 and 2018; (2) investigate the use of technology in supporting nurses' emotional and social wellbeing; and (3) are written in English (due to this being the native

language of the research team). The review will include a search of peer reviewed papers and a grey literature search.

Search Terms

As the field of technology is broad, heterogeneous and encompasses a variety of formats, the search strategy will involve three separate searches. It is hoped that this will yield as many relevant results as possible. Search 1 will combine the terms nurs*, midwiv* or midwife* with online *or* internet *or* web *or* social media. Search 2 will use the terms nurs*, midwiv* or midwife* alongside the terms text* *or* SMS *or* messag* *or* app. The last search will use the terms nurs*, midwiv* or midwife* in conjunction with the terms smartphone *or* mobile phone *or* technology.

Search Strategy

After consultation with a specialist librarian, it is anticipated that there will be a large search retrieval due to the search terms being ubiquitous in the nursing literature. It is expected that the research team will have to exclude many articles which relate to the use of technology to support patients as opposed to supporting nurses. For this reason, the searches will be run using a title search to maintain the feasibility of the scoping review using a manageable search strategy. Records will firstly be assessed for suitability based on the article title; several records will be rejected at this point due to not meeting inclusion criteria. Abstracts will be then read for remaining articles with the anticipation that this will result in a further exclusion of records. Reasons for exclusion will be documented at this point. Full texts will be read in cases where it is unclear if papers meet inclusion criteria and a consensus agreed on between three members of the research team where uncertainty exists. A three step search strategy, (Joanna Briggs Institute, 2015) will be used. An initial search will be carried out limited to two databases; MEDLINE and PsychARTICLES. The research team will check the keywords and Medical

Subject Headings (MeSH) that appear in results from this initial search to ensure no synonyms have been omitted from the search strategy. Secondly, any additional keywords will be added as synonym terms to the search strategy above, making this an iterative process. Thirdly, reference lists from included records will be searched for additional studies. Further information or full texts will be sourced from the authors of primary studies if this is necessary. Two different researchers will complete the same search on each of the databases and will compare and review records for inclusion with the aid of Mendeley reference management software.

Reference lists of included studies will be hand searched for suitable articles, followed by a grey literature search using Google. This will be limited to the first 100 hits as recommended by Pham et al. (2014), with the premise that relevance of retrieved articles will decrease after this point. Using such a limit also recognises the recommendation by Levac et al. (2010) that scoping reviews should aim to balance comprehensiveness with feasibility. Citations will be imported into the reference manager software Mendeley which will facilitate easy removal of duplicate citations and subsequent full text screening of articles. Remaining studies will be reviewed against the inclusion criteria and screened for relevance.

Data Extraction

A search strategy results table will be used to document the number of retrieved articles from each database, from reference lists and from grey literature. This will be completed by two researchers who will independently screen each record for eligibility against the inclusion criteria. Following this, a data extraction form will be used to chart the details of every study included in the scoping review. This will record key information: author, year and country of publication, aims, population, sample size, methodology, measures and key outcomes that relate to the scoping review.

Quality appraisal

Arksey & O'Malley (2005) originally suggested that quality assessment is not a necessary part of the scoping review process. However, this has been critiqued by subsequent researchers as a methodological limitation, with recommendations that a quality appraisal should be undertaken (Daudt, van Mossel & Scott, 2013; Levac et al., 2010; Prihodova, Guerin & Kernohan, 2015). Our study acknowledges these recommendations and will adopt the critical appraisal framework developed by Caldwell, Henshaw and Taylor (2011). Each paper will be assessed against appraisal criteria as a means of evaluating strengths and weaknesses of included studies. A percentage score will be calculated to identify how well each paper meets quality appraisal standards.

Data synthesis

Data synthesis and analysis will be undertaken by two members of the research team with narrative review used as the method of knowledge synthesis. The narrative approach will enable an exploration of relationships in the data by a discussion of the evidence. Diverse forms of research can be compared using this method of synthesis, including findings from qualitative, quantitative and missed methods studies.

Consultation Phase

The consultation phase will involve discussing the findings of the scoping review with a group of stakeholders who are actively involved with our project. This will make the research process a much deeper and richer experience as the group comprises senior nursing staff from two NHS trusts, a newly qualified nurse, a clinical psychologist and a service user. This process will ensure that the findings are clear, accessible, understandable and relevant. This will also be the first stage of disseminating the findings to a wider community and to identify any potential gaps in the scoping review by consulting with nurse specialists and new nursing staff.

In this way, we aim to provide a multi-faceted perspective to the scoping review as recommended by Daudt et al. (2013). Based on the number and quality of articles retrieved, it will also be decided if it would be beneficial to undertake a full systematic review.

ETHICAL CONSIDERATIONS AND DISSEMINATION

This scoping review will use primary research that has already been published to investigate and map the evidence on how technology can be used to support the emotional and social wellbeing of nursing and midwifery staff. There will be no recruitment of participants; therefore no consent process or formal ethics approvals are necessary. Our plan for dissemination of the scoping review includes publishing the findings in a peer reviewed nursing journal and presenting at relevant conferences on nurse wellbeing and promoting retention.

VALIDITY AND RELIABILITY/RIGOUR

Our scoping review will use methodology outlined by Arskey and O'Malley (2005), combined with recent guidance addressing the limitations of this original framework (Daudt et al., 2013; Joanna Briggs Institute, 2015; Levac et al., 2010; Peters et al., 2015). The inclusion of more than one rater to search for and select papers will add to reliability; consultation with a librarian will add to credibility; adhering to this protocol will reduce bias; and the consultation with stakeholders will add to accessibility and relevance.

CONCLUSION

Implications for research

There is currently no scoping or systematic review in the published literature on how technology can be used to help support the social and emotional wellbeing of nursing staff. This review aims to address this, to map the available evidence and evaluate if a full systematic review would be valuable. The review will be able to identify any gaps in the knowledge, to

evaluate the effectiveness of technology mediated support and to offer recommendations for future research.

Implications for practice

Nurturing the emotional and social wellbeing of nursing staff is vitally important to ensure employees remain psychologically and physically healthy. There are implications not only for individual wellbeing but for the workforce as a whole; including issues around reducing stress and improving retention. Developing of the use of technology as a form of remote support to nursing staff could be an accessible, sustainable and cost-effective way of offering supervision, mentoring and peer support in the future.

LIMITATIONS

Due to the anticipated large result retrieval based on preliminary searching, the search strategy has been limited to title searching to ensure the review balances feasibility with breadth and comprehensiveness. However, as a result of these limiters, the review may omit relevant studies. Nonetheless, it is hoped the scoping review will be beneficial and relevant, acting as a preliminary mapping exercise and to also determine if a systematic review would be recommended. The field of technology is broad and although care has been taken to include all relevant synonyms in the search strategy, relevant studies may also be omitted as a result of this.

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CONFLICTS OF INTEREST

No conflict of interest has been declared by the authors.

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