**Rural influences on the social network dynamics of district nursing services: A qualitative meta-synthesis**

**Abstract**

Background and aims: As demands on healthcare services grow, fiscal restrictions place increased emphasis on services outside of traditional healthcare settings. Previous research into long-term-conditions suggests that social network members (including weaker ties such as acquaintances, community groups, and healthcare professionals) play a key role in illness management. There is limited knowledge about the engagement of social networks in supporting people who are receiving medical interventions at home. This qualitative metasynthesis explores the work and the interactions between district nurses (DN) and informal network members supporting people who are receiving medical interventions at home and living in rural areas.

Methods: A search was undertaken on CINAHL, Medline and PsychINFO for qualitative research articles from 2009-2019. Studies that examined DN in rural locations and/or social network support in rural locations were eligible. 14 articles were selected.

Results: Thematic analysis of results and discussion data from the studies resulted in four themes being developed: The development of both transactional and friend-like nurse-patient ties in rural localities; Engagement of the wider network in the delivery of good care; Blurring of professional boundaries in close community relationships; Issues accessing and navigating formal and informal support in the context of diminishing resources in rural areas

These findings suggest that DNs in rural localities work beyond professional specialties and experience to provide emotional support, help with daily tasks, and build links to communities. There was also evidence that nurses embedded within rural localities developed friend-like relationships with patients, and negotiated with existing support networks and communities to find support for the patient.

Conclusions: Findings indicated that developing strong links with patients and members of their networks does not automatically translate into positive outcomes for patients, and can be unsustainable, burdensome, and disruptive. DNs developing weak ties with patients and building awareness of the structure of individual networks and local sources of support offers avenues for sustainable and tailored community-based nursing support.

KEYWORDS: nursing, district nurse, community nurse, rural, rurality, social networks, social support.

**Introduction**

Aging populations, driven by falling infant death rates, longer life expectancies, and increased availability of medical and pharmaceutical interventions (Taylor and Bury, 2007) - coupled with uncertain financial climates, rising populations and increased co-morbidities has led to escalating costs, a high demand on hospital beds (NHS England, 2019) and profound changes in how healthcare is delivered (Taylor and Bury, 2007). Rising healthcare need and a slowdown in funding has led to NHS debt rising to £13.4billion in 2020 (Anandaciva, 2020).

As a way of addressing this gap in funding more patients are being treated in community settings for increasingly complex conditions to reduce the costs associated with inpatient admission (Kennedy et al., 2015, Barrett et al., 2016). Understanding the consequences of this shift in healthcare delivery style is set to increase in pertinence as wider policy moves health and social care closer to home and community settings (Pearson et al., 2013). For example, the implementation of the ‘Long Term Plan’ in the NHS in the UK (2019) emphasises community healthcare by stating an annual primary care budget increase of £4.5bn. These policies aim to increase service capacity and establish new provisions (such as ‘hospital at home’ [HAH]) services, online consultation services, increased GP training, and ‘same day emergency care’ units) that overcome barriers currently preventing some health conditions being treated at home by, for example, guaranteeing online tele-health consultations, and direct referrals to community services that means unnecessary visits to hospital can be avoided (NHS England, 2019).

Social networks and self-management

The role of social networks in supporting self-management has most extensively been researched in the context of long-term condition management (Vassilev et al., 2011, Kennedy et al., 2007). This research has focused on how the structure of people’s networks and the types and range of relationships shape the way in which people access different types of support with their health, practical and emotional needs (Vassilev et al., 2013b). Such studies have found that people who have access to diverse types of relationships, including both ‘strong’, intimate ties (e.g. family members, close friends) and ‘weak’, more distant ties (e.g. HCPs, acquaintances and community group members) are most successful in managing their long term conditions (LTC) and receiving acceptable health, emotional and practical support (Vassilev et al., 2014, Reeves et al., 2014, Walker et al., 2018). This might be in part due to such networks being able to share the burden of illness work, sustain valued relationships and have better access to relevant knowledge, skills and experience (Rogers et al., 2014a). Consequently, access to social network support that is acceptable to people may facilitate improved use of medications, healthier lifestyles (e.g. smoking cessation or healthy eating practices) (Christakis and Fowler, 2007, Christakis and Fowler, 2009), improved experiences of poor health (e.g. by managing adjustment; sharing the burden of health, emotional and practical work; and advocating/liaising with HCPs) (Pescosolido, 2006), and improved physical and mental wellbeing (Reeves et al., 2014).

The increased focus on the community provision of healthcare is likely to result in a widening of the types of conditions and issues that require patients to self-manage. Beyond LTCs, this is likely to include potentially complex and acute conditions, both of which will require further research into the specific roles of social networks in these different contexts.

The healthcare professional’s role in self-management support

Previous research has suggested that in a community context, HCPs may facilitate self-management by offering not only health work, but emotional and practical work too (Rogers et al., 2014b, Vassilev et al., 2013a). However, the quality and acceptability of such support is often studied in isolation without considering how HCPs interact with the wider network members and the support they provide. Although there are a range of HCPs that are involved in providing good care for patients at home, it is most frequently the district nurse caring and treating that person (Aldridge-Bent, 2014). Therefore, exploring the relationship dynamics between patients and district nurses may be beneficial when taking a social network approach to exploring healthcare at home. This may include how patients engage with network support when interacting with district nurses; the role of different ties and how network engagement might be in tension or complement district nursing support; how such processes and relationships co-shape the provision of community services; and how dynamics might differ from what is already known about LTC self-management support when self-managing increasingly complex health conditions at home.

Furthermore, primary services like district nursing and other community nursing services such as HAH are more likely to occur in rural contexts where adapting to financial challenges has resulted in the scaling back of smaller, more remote hospitals (Rechel et al., 2016); and as such, these localities must also be considered when exploring the role of district nurses in patient social networks. The definition of ‘rural’ varies globally with, for example, the UK describing it as areas that fall outside of settlements with more than 10,000 residents (Department for Environment, 2017); and in Australia, as all areas outside of major cities (Australian Institute For Health And Welfare, 2019). Similarly, there is no standard definition of ‘rural’ within healthcare (Hunsberger et al., 2009) but there is a consensus that the pressures and complexities of district nursing are exacerbated by rurality. This is in part because HCPs need to become generalists, healthcare services appear underfunded, operating in a context of poor infrastructure and services provided over long distances (Roberts et al., 2014, Robinson et al., 2009). Furthermore, the lack of peer support paired with the diverse patient group that district nurses treat can cause stress and poor staff retention among the workforce (Robinson et al., 2009, Daniels et al., 2007), all of which could impact on district nurses’ ability to provide self-management support in rural areas. There is some evidence to suggest that district nurses often live within, or near, the communities they serve (Barrett et al., 2016) which may offer an opportunity for drawing on existing relationships, shared values and local embeddedness to provide a motivation to overcome rural challenges. Whether this affects the way social network support is provided or whether it is qualitatively different from other urban settings, requires further exploration.

These factors contribute to the growing demands and complexity of healthcare and self-management support in rural areas and the growing pressures on healthcare professionals, individuals and other members of their personal communities. The pressure on community based services in particular is likely to increase because of the overwhelming demands on inpatient care, and current strategies and policies outlined in the NHS Long Term Plan (NHS England, 2019) which encourage community based public health interventions for increasingly complex and acute needs. These require patients and their social network to take greater responsibility for the management of their health conditions, which previous research has shown is a challenging prospect for patients when confounded by reduced function caused by poor health (Vassilev et al., 2014). This qualitative metasynthesis will explore the role that district nurses can play within the wider networks of people who are currently receiving professional medical care at home, for a diverse range of conditions, whilst living in rural areas. It will aim to identify the formal and informal processes that shape the involvement of HCPs with the self-management support of patients and the engagement with members of their social networks.

**Aims**

The review will synthesise the available evidence on the use of district nursing services to explore:

1.    The way in which district nurses develop relationships with service users to mobilise and/or become part of their personal network and what impact this has on the ability to deliver good care.

2.    How rurality affects professional-patient interactions, social network dynamics and the ability to fulfil social, emotional and practical needs.

**Methods**

Metasynthesis offers a rigorous and systematic approach to reviewing and analysing the literature that allows the development of novel interpretations while ensuring that the findings are reliable and transferable (Lachal et al., 2017),

*Search strategy*

The literature search was undertaken by JG in CINAHL, Medline and PsychINFO using terms related to social networks, rurality and community nursing, as guided by an abbreviated version of the PICO (Population, Intervention, Context/Comparison, Outcome) framework (see Table 1 for search terms). The search was completed on 25/07/2019 using the article title and abstracts only. Initial scoping searches identified limited articles contained all three themes (i.e. social networks, rurality and community nursing) therefore, the decision was made to undertake two separate searches: the first combining ‘social networks’ and ‘district nursing’, and the second searching for articles related to ‘rurality’ and ‘district nursing’. A systematic hand search was conducted on the reference lists of existing literature reviews within the search results to find any other relevant articles that may have been missed by the search strategy or poorly indexed (Noblit and Hare, 1988).

[INSERT TABLE 1 HERE]

[INSERT TABLE 2 HERE)

*Article selection*

To be eligible for inclusion, studies had to originate from the United Kingdom (UK), Europe, United States of America (USA), Canada, Australia and New Zealand and be published from 1st January 2009 to 1st May 2019. This was to ensure cultural consistency between the data and to ensure the synthesis was relevant to current practice. Only qualitative or mixed methods studies that were written in English were included (see table 2). Articles reporting mixed methods were included (n=1 (Reed et al., 2018)) but only the qualitative data (quotations from district nurses’ reflective accounts through semi-structured interviews; and the interpretations made by the original authors) was extracted when reading the full texts. Social networks were defined as personal communities of individuals that provide emotional, practical or health support, therefore any articles relating to online networks (such as social media, often referred to as ‘social networks’) or telehealth approaches were excluded. Rurality was included regardless of the defining characteristic chosen by the authors of the original research (e.g. population, distance to urban centres) and acknowledged during analysis. Figure 1 outlines the number of studies included and excluded at each stage of the identification and screening process. JG screened the full 354 articles found from the search at abstract level and at full text level if uncertainty remained. To ensure quality control, IV and RB each reviewed a separate 25% of the search results and the included/excluded studies were discussed until consensus was reached. Studies were excluded (n=343) for not including relevant themes (n=179), from outside the aforementioned westernised countries (n=66), not including research data (e.g. scoping searches or opinion) (n=45), on paediatric care or midwifery (n=38) or if it was an existing literature review (n=16). 13 articles met the criteria for inclusion. A further article was included after hand-searching from existing literature reviews: a total of 14 studies were therefore included in the final review. The articles were assessed for quality using the recognised *‘Criteria for the evaluation of qualitative research’* tool for sociological research (Blaxter, 1996) (see table 3 for acknowledged limitations related to quality criteria of each study). Five articles focused primarily on the community healthcare professional’s role, five on rurality’s impact on healthcare and three articles addressed both themes (see Table 3 for an overview of included studies).

[INSERT FIGURE 1 HERE]

*Data extraction and translation*

Two data types were extracted from the articles and organised in a table that also enabled the key information of each study, such as authors, publication dates, methodology and country of study to be easily managed (table 3). Of the two types of data, in the first order, data included direct quotes from participants and verbatim extracts from the results chapters of each paper. Second order constructs (the theories developed by the researchers of the original studies) were extracted from the discussions and analyses chapters of the original articles. As is best practice when conducting a metasynthesis, in order to assess reliability, 30% of articles from each search were data extracted by members of the study team; IV and RB (Lachal et al., 2017). The findings were discussed and consensus reached on the data that should be included, and any areas of contention throughout data extraction was discussed between the research team. From the 14 included papers, 220 first order quotations relevant to personal relationships, support and relationships provided by district nurses or rural factors were included to answer the aims of this literature review. A further 83 second order constructs by the original authors were extracted.

[INSERT TABLE 3 HERE]

Translation and reconfiguration of the data is arguably the most subjective stage of the synthesis process (Lachal et al., 2017) and therefore, as with the other stages of this metasynthesis, findings and interpretations were discussed, revised and elaborated within the study team (Barry et al., 1999). In this synthesis, in order to translate the findings into one another and develop new meaning and understanding from the included themes, a line of argument synthesis was applied. This approach allowed data from primary studies that had different contexts, and theoretical and methodological approaches to be combined (Atkins et al., 2008). In doing so, new theories about the phenomena, the *third order* constructs, were developed (Atkins et al., 2008, Lachal et al., 2017). This was an iterative process of repeated reading that identified recurring and juxtaposing results that could be translated into one another and identify the novel themes (Noblit and Hare, 1988). Through this process the novel themes developed by the review team were; *Blurred boundaries between the types of work nurses in rural areas; Transactional and friend-like nurse-patient ties in rural localities; Negotiating professional responsibilities and network engagement;* and *Local embeddedness and shaping relations within local communities.* Table 4 provides an overview of the synthesis process.

**Findings**

The development of both transactional and friend-like nurse-patient ties in rural localities

Rural settings impact on the relationships between nurses and patients in several ways, and result in two key types of relationship styles with service users. The first are those that are transactional in nature, and develop as the result of relatively infrequent, discontinuous, and unreliable interactions between nurses and patients in community contexts (Devik et al., 2015). This is often due to nurses serving patients in isolated areas with poorly developed infrastructures and phone networks, long distances and travel times between patients, and high levels of staff turnover and rotation (especially where long distances need to be shared) (Kaasalainen et al., 2014, Terry et al., 2015, Roden et al., 2016). Within such contexts, patients have to *“take whoever, whether you like them or not”* (Findlay et al., 2017) meaning the building of trusting and therapeutic relationships between patients and nurses might become difficult (Terry et al., 2015, Grundberg et al., 2016). Patients cite that they “*never feel like discussing things with them [district nurses they see less frequently] in the same way*” (Findlay et al., 2017) which contributes to relations in rural areas which feel transactional, fleeting, and impersonal, although not necessarily ineffective (Wang et al., 2012).

However, the 1-to-1 contact in community settings and the interactional confidence that patients have due to being in their own homes where they “*know what is what” (Devik et al., 2015)*, also opens possibilities for development of close, highly personalised relationships between patients and nurses, which are valued by the patient (Findlay et al., 2017, Reed et al., 2016):

“*We have a good connection. It means a lot to me. She is more than a nurse…she is a person”* (Devik et al., 2015).

Being open to the development of such *“comfortable” (Reed et al., 2016)* relations with patients fits with the perceptions of nurses of their professional role and they see it as an achievable aim and an effective way of supporting patients (Reed et al., 2018, Hunsberger et al., 2009). To accomplish this nurses may adopt certain interactional styles. For example, a *“relaxed conversation style”* (Griffiths et al., 2013) and make themselves personally accessible to the patient (Hunsberger et al., 2009) by, for example, giving out their personal number;

*“your number is in the book, or you give them your personal*

*number”* (Reed et al., 2018).

Engagement of the wider network in the delivery of good care

Where nurses develop close relationships with the patient, there is evidence to suggest that the nurse may be (or become) part of the social network, as well as interact with other individuals within the wider social network. In this way, they often utilise interactions with patients as an opportunity to identify emotional and practical needs being unmet by the rest of the patient’s social network (Farmer and Kilpatrick, 2009, Roden et al., 2016, Reed et al., 2018, Reed et al., 2016, Gossett Zakrajsek et al., 2013, Wang et al., 2012), and commonly feeling obliged to offer support in these areas (Farmer and Kilpatrick, 2009, Gossett Zakrajsek et al., 2013). This support may include practical tasks such as stoking the fire, “Training the dog” (Reed et al., 2018), organising or providing transport (Farmer and Kilpatrick, 2009), organising financial support in the form of “getting benefits” (Griffiths et al., 2013, Farmer and Kilpatrick, 2009) and providing emotional support by spending time talking and discussing personal concerns (Griffiths et al., 2013, Grundberg et al., 2016a). The rationale for undertaking practical roles might be in order to reduce negative events such as falls when less able patients attempt to do practical work independently; or even prevent self-neglect if patients cannot cook and wash clothing (Reed et al., 2016, Hunsberger et al., 2009). The emotional work undertaken by nurses during health visits may be used as a *“lever”* for further assessment (Griffiths et al., 2013) which not only reduces negative effects associated with loneliness, isolation and poor mental health, but also acts as a technique for identifying health needs (Griffiths et al., 2013, Grundberg et al., 2016). For example, district nurses would “*just, you know, chat about things in general…like a social visit…and sometimes by just doing that, little problems will come out”* (Griffiths et al., 2013).

When district nurses live and work in the same rural locality, there are often pre-existing relationships with the patient and/or other social network members (Findlay et al., 2017, Reed et al., 2018). For example one nurse said she was able to help a man to “*die at home with his three teenage sons – one of which I employed locally”* (Reed et al., 2018). This is beneficial as it helps to create an egalitarian relationship that is based on shared norms and values (Reed et al., 2018, Hunsberger et al., 2009). Moreover, the nurse may be well placed not only to successfully identify potential social networks of support (Kaasalainen et al., 2014) but also have the increased social capital within the community to enable its successful mobilisation (Farmer and Kilpatrick, 2009, Reed et al., 2016, Reed et al., 2018). The quote that *“People don’t say no to a health care professional as readily”* (Farmer and Kilpatrick, 2009) epitomises this increased social capital and nurses are seen as the *“quarterback”* of the community (Kaasalainen et al., 2014); mobilising other professionals and healthcare services (Grundberg et al., 2016, Griffiths et al., 2013, Farmer and Kilpatrick, 2009, Wang et al., 2012, Crotty et al., 2015). Nurses “*Bridge or bond [patients to others]*” (Farmer and Kilpatrick, 2009) such as churches, clubs or charities (Grundberg et al., 2016, Farmer and Kilpatrick, 2009) but also, in some cases, proactively create new social networks of support by establishing their own clubs, community projects or shops that offer an opportunity for interaction with others in the community (Farmer and Kilpatrick, 2009).

Blurring of professional boundaries in close community relationships

However, the development of complex nurse-patient relationships may result in some degree of crossing the boundary of one’s professional role in order to fulfil key nursing responsibilities, especially in rural areas (Reed et al., 2016, Terry et al., 2015, Griffiths et al., 2013, Grundberg et al., 2016, Findlay et al., 2017, Wang et al., 2012, Reed et al., 2018):

*“individuals that carry out a formal service begin to undertake informal support roles” (Crotty et al., 2015).*

Nurses reported experiencing experience the pressure of expectations from patients to act as a substitute for the absent support from family, friends and peers; (Findlay et al., 2017) stating they “*get calls at home – A lot of calls!”* (Kaasalainen et al., 2014). Similarly, researchers highlighted that the familiarity patients had with nurses meant they found their *“privacy was invaded”* (Kaasalainen et al., 2014)when they were *“consulted about health issues in grocery stores or at sports events”* (Hunsberger et al., 2009). Such patient expectations are likely to be unrealistic given that rural factors outlined above restrict the time available to nurses to offer substantial emotional and practical support (Reed et al., 2016, Terry et al., 2015, Kaasalainen et al., 2014). This may leave nurses with difficult choices to make between disappointing raised patient expectations, fulfilling responsibilities to other patients, and the need to prioritise illness over all other types of work, such as domestic tasks or food shopping (Roden et al., 2016). Thus, close relationships between nurses and patients may be difficult to negotiate and manage (Hunsberger et al., 2009), adding substantial amount of relational work to the nurse workload, and raising issues of overburden or ’burnout’, confidentiality, and meeting professional and legal responsibilities and standards (Reed et al., 2018, Devik et al., 2015).

Moreover, in rural community settings where social isolation can be common (Kaasalainen et al., 2014, Terry et al., 2015) some patients may act proactively use nurse visits as an opportunity for social contact (Grundberg et al., 2016), and in the absence of network support, patients may actively seek district nurses to provide emotional and other types of support (Crotty et al., 2015, Devik et al., 2015):

*“I see her if I come in here to say hello…I’m not actually allowed to consult with her because I’m not classed as homeless” (Crotty et al., 2015).*

However, when district nurses practice “*generosity exceeding what can be expected*” (Devik et al., 2015) relationships with patients strengthen and district nurses become more forthcoming with offering additional support and may come to be “*perceived by patients as a friend”* (Reed et al., 2016). It may also lead to reshaping existing relations between patients and members of their wider network. Relying on professionals for emotional and practical support can cause any available, existing support to dissipate leaving the patient vulnerable if formal support is discontinued (Findlay et al., 2017), while also putting additional pressure on nurses to further extending the depth and range of support they provide.

Issues accessing and navigating formal and informal support in the context of diminishing resources in rural areas

While building close nurse-patient relationships may sometimes be associated with higher personal job satisfaction (Reed et al., 2016, Hunsberger et al., 2009), the need to deal with complexity that such relations introduces associated negative experiences (Reed et al., 2018) maybe less acceptable to newly qualified nurses who *“may not be comfortable with all the different things [emotional and practical support] they had to do”*, according to their more experienced peers (Hunsberger et al., 2009). As with the community as a whole, smaller rural district nursing teams experience an increased sense of shared values and team spirit amongst themselves (Reed et al., 2016) and are able to create an *“extended family environment”* (Hunsberger et al., 2009) but there is a relative lack of specialist support available; which not only means nurses practice as generalists but also, that it restricts the services available that can be mobilised to support the patient (Reed et al., 2018, Reed et al., 2016, Roden et al., 2016, Kaasalainen et al., 2014, Hunsberger et al., 2009). Furthermore, the aging workforce in rural areas means that recruitment from outside the local area is increasingly common. This reduces the embeddedness and shared values of the nurse in “*both a geographical and social sense”* (Devik et al., 2015), limits the knowledge the nurse has of the community and therefore the influence they have to mobilise other forms of support (Hunsberger et al., 2009). Consequently, despite aiming to increase the social network of support through advocacy and mobilisation of others, in an attempt to improve efficiency or through an unawareness of the local community dynamics, district nurses unintentionally limit the patient’s social capital if they are unable to participate in their usual social network interactions because of time-conflicting health interventions; arranged at a time to suit the professional (Findlay et al., 2017, Devik et al., 2015). For example, patients feel *“your life’s not your own”* (Findlay et al., 2017)and that *“much time is spent waiting…there might be other things you would rather like to do”* (Devik et al., 2015). Patients with long term conditions and poor mental health have a more frequent use of paid and formal care use, and are therefore particularly vulnerable to this (Crotty et al., 2015).

[INSERT TABLE 4 HERE]

**Discussion**

This qualitative metasynthesis found that HCPs who work in rural areas are involved in wide ranging support for patients. This work goes beyond their professional specialty and experience and may include providing social and emotional support, help with daily tasks, and building links to local communities. Our findings indicate that taking on such a complex role is needed in order to provide effective and safe care for people living in rural areas. This review has found two dominant models in terms of how this is currently done in terms of developing relationships with patients and engaging with their wider networks of support: one model where nurse-patient relations are kept at an arms-length and another where nurses develop close relations with patients, which resemble friendships, with links extending to their wider networks including families, friends, and the localities where they live. These findings indicate that neither of these models is optimal for delivering patient-centred care in the community. In the case of the former, this is in part due to lack of understanding of the patient context, resources, and structure of support, with minimal or no knowledge and engagement of the wider social network members, and thus with likely negative implications for patient care and support tailored to individual needs. In the case of the latter, this is due to building expectations among patients and their network members that nurses might be able to address multiple gaps in the provision of health and social support arising from structural inequalities and the structure of people’s networks. However, such relations are unrealistic and unsustainable over the longer term due to the risk of nurses becoming overburdened and because changes to healthcare service staff and provisions might make the nurse unreliable to patients; especially considering the uncertain finance, probable increase of complex community care and policy changes affecting healthcare, all of which reduces how effectively the nurse can deliver additional support.

Furthermore, as with other studies, this qualitative metasynthesis suggests that nurses developing an understanding of, and involvement with, patient’s social networks does not automatically translate into positive outcomes for patients (Lucas, 2013, Rogers et al., 2014). For example, such close ties can have negative impact on the wider network of support by restricting engagement with existing network members and the building of new links. Therefore, our findings have suggested that nurse-patient relations in rural areas work best where nurses are seen as trusted acquaintances with a broad understanding of the social and emotional needs of patients and the financial and relational resources accessible to them. Such relationships are currently ad hoc, but they might develop, and become most effective in localities that nurses are familiar with and have greater social capital within the community because they live in the area or because they have been professionally involved with it over a long period. This may be because in such circumstances nurses are more likely to be familiar to patients, their family members and the wider local community either directly or indirectly through personal and professional reputation and support. These weak ties with patients paired with an understanding of local and individual structures of support, can allow nurses to help patients find, access and mobilise other network members in a way that is acceptable to them (Band et al., 2019, Vassilev et al., 2019) but also make them aware of new relationships and support that might be available, thus increasing the diversity of support and information (Pescosolido, 2006, Vassilev et al., 2014). Such relations with patients are likely to be sustainable over the longer term as, they are contextually sensitive, but also compared to strong ties, require lower levels of relational work (e.g. in negotiating acceptable engagement with other network members) and thus reduce the risk of burnout of nurses. Adapting the role of DN would allow them to improve collaborative work with people’s informal network members while also delivering care that is better tailored to patient needs and context.

**Implications for practice**

Engagement with patient’s social networks is likely to add value for patients living in rural areas and for community-based nursing teams. However, expectations for developing close relations with patients as a part of the nursing role should be seen as unrealistic considering the tensions between the growing complexity, demand and availability of services; but also due to additional tensions that such relations, and relational work (the interpersonal efforts that district nurses will invest in order to develop relationships between themselves and the patient (Locher and Watts, 2008)), are likely to create. Developing weak ties of trustworthiness and familiarity with patients is consistent with the nursing role and is likely to help with providing effective patient care. In developing such relations district nurses could focus on using health interactions to engage in conversations about family, friends and peers; and what they do or do not do to support the patient. Such knowledge, together with awareness of local resources and informal support, can allow nurses to help patients shape relations with their network members, access and negotiate relations within the community and healthcare services, mobilising other sources of support that can diversify the patient’s existing network. This will add sustainability to the support; improve patient outcomes associated with improved health, practical and emotional support; and reduce the potential burden of responsibility on the healthcare service and professional. However, such relations between patient and nurses are currently only developed ad hoc. Making them sustainable in the context of increasing acuity and demand is likely to require putting in place support for professional development, and building resources and infrastructure enabling links between relevant professional and community resources and support (e.g. health trainers, social prescribers, befriending services).

**Conclusions**

This review used the systematic approach of a qualitative metasynthesis in order to gain insights into the effect of rurality on district nurse-patient relationships, where existing data had previously focused on the two themes in isolation. The focus of this review was to combine and address how the two factors influence, compliment or conflict with one another; and develop further understanding of what approaches patients and professionals should adopt in these contexts. Findings demonstrated that HCPs in rural areas cross boundaries, firstly, with the work they carry out, and secondly, from a professional relationships one similar to friendship. There was also evidence of local embeddedness and nurses negotiating with the community in order to find support on the patient’s behalf. The discussion demonstrated that nurse-patient-social network relationships can be unsustainable if they are burdensome or disruptive to existing social networks. Developing weak ties of familiarity with patients and building awareness of, and connection to, local structures of support is likely to offer a promising avenue for developing community based nursing support that is sustainable and tailored to patient needs. In this regard, this review contributes to the understanding of the key role that weak ties play in people’s networks by exploring such ties in a different context and focused on healthcare professionals, but further research is needed, across varying community nursing services, in order to develop a clear understanding of the dynamics of such a role and relationships and the necessary conditions and resources that might be needed for their embeddedness into practice.

**Limitations**

This review included only qualitative studies. Although this method fills gaps in understanding and underlying mechanisms left by quantitative studies, qualitative synthesises cannot include the number of studies of a quantitative synthesis. Furthermore, as a review of a previously unexplored areas of rural healthcare paper, the outcomes identified are theoretical and may require empirical investigation to confirm.

**Ethical statement**

This is a qualitative metasynthesis of existing papers all of which had ethical approval.

**Additional information**

*Conflicting interests*

The authors declare that they have no conflicting interests.

*Author contributions*

JG designed the study under the guidance of IV and RB. JG carried out the literature searches and article selection which was reviewed by IV and RB until consensus was reached. JG wrote drafts of the manuscript of which each was reviewed by IV and RB. All authors read and approved the final manuscript, had full access to all of the data in this study and takes complete responsibility for the integrity of the data and the accuracy of the data analysis.

*Data availability*

The authors confirm that the data supporting the findings of this study are available within the article and its supplementary materials.

*Acknowledgments*

We would like to acknowledge the University of Southampton and the Dorset County Hospital Foundation Trust for the joint funding and resources for the PhD programme of the author JG. Without this, the author would not be able to dedicate the time required to complete this work. The views expressed are those of the authors and not necessarily those of the university or the NHS trust who took no part in designing the study or collection, analysis, and interpretation of data, writing of the report or the decision to submit the report for publication.

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**References**

ANANDACIVA, S. 2020. *financial debt and Loans in the NHS,* London, The Kings Fund.

ATKINS, S., LEWIN, S., SMITH, H., ENGEL, M., FRETHEIM, A. & VOLMINK, J. 2008. Conducting a meta-ethnography of qualitative literature: Lessons learnt. *BMC Medical Research Methodology,* 8, 21.

AUSTRALIAN INSTITUTE FOR HEALTH AND WELFARE 2019. *Rural and Remote Australians,* New South wales, Australian Institute For Health And Welfare.

BAND, R., JAMES, E., CULLIFORD, D., DIMITROV, B., KENNEDY, A., ROGERS, A. & VASSILEV, I. 2019. Development of a measure of collective efficacy within personal networks: A complement to self-efficacy in self-management support? *Patient Education and Counseling,* 102, 1389-1396.

BARRETT, A., TERRY, D. R., LÊ, Q. & HOANG, H. 2016. Factors influencing community nursing roles and health service provision in rural areas: a review of literature. *Contemporary Nurse,* 52, 119-135.

BARRY, C. A., BRITTEN, N., BARBER, N., BRADLEY, C. & STEVENSON, F. 1999. Using reflexivity to optimize teamwork in qualitative research. *Qualitative health research,* 9, 26-44.

BLAXTER, M. 1996. Criteria for the evaluation of qualitative research papers. *Med Soc News,* 22.

CHRISTAKIS, N. & FOWLER, J. 2007. The spread of obesity in a large social network over 32 years. *N Engl J Med,* 357.

CHRISTAKIS, N. & FOWLER, J. 2009. *Connected,* London, Haper press.

CROTTY, M. M., HENDERSON, J., WARD, P. R., FULLER, J., ROGERS, A., KRALIK, D. & GREGORY, S. 2015. Analysis of social networks supporting the self-management of type 2 diabetes for people with mental illness. *BMC Health Services Research,* 15, 257-257.

DANIELS, Z. M., VANLEIT, B. J., SKIPPER, B. J., SANDERS, M. L. & RHYNE, R. L. 2007. Factors in Recruiting and Retaining Health Professionals for Rural Practice. *The Journal of Rural Health,* 23, 62-71.

DEPARTMENT FOR ENVIRONMENT, F. A. R. A. 2017. *Defining rural areas using the rural urban classification,* London, Crown copyright.

DEVIK, S. A., HELLZEN, O. & ENMARKER, I. 2015. “Picking up the pieces”—Meanings of receiving home nursing care when being old and living with advanced cancer in a rural area. *International Journal of Qualitative Studies on Health and Well-Being,* 10.

FARMER, J. & KILPATRICK, S. 2009. Are rural health professionals also social entrepreneurs? *Social Science & Medicine,* 69, 1651-1658.

FINDLAY, C., LLOYD, A. & FINUCANE, A. M. 2017. Experience of emotion in frail older people towards the end of life: A secondary data analysis. *British Journal of Community Nursing,* 22, 586-592.

GOSSETT ZAKRAJSEK, A., SCHUSTER, E., GUENTHER, D. & LORENZ, K. 2013. Exploring older adult care transitions from hospital to home: A participatory action research project. *Physical and Occupational Therapy in Geriatrics,* 31, 328-44.

GRIFFITHS, J., EWING, G. & ROGERS, M. 2013. Early support visits by district nurses to cancer patients at home: A multi-perspective qualitative study. *Palliative Medicine,* 27, 349-357.

GRUNDBERG, Å., HANSSON, A., HILLERÅS, P. & RELIGA, D. 2016. District nurses' perspectives on detecting mental health problems and promoting mental health among community‐dwelling seniors with multimorbidity. *Journal of Clinical Nursing,* 25, 2590-2599.

HUNSBERGER, M., BAUMANN, A., BLYTHE, J. & CREA, M. 2009. Sustaining the Rural Workforce: Nursing Perspectives on Worklife Challenges. *The Journal of Rural Health,* 25, 17-25.

KAASALAINEN, S., BRAZIL, K., WILLIAMS, A., WILSON, D., WILLISON, K., MARSHALL, D., TANIGUCHI, A. & PHILLIPS, C. 2014. Nurses' experiences providing palliative care to individuals living in rural communities: aspects of the physical residential setting. *Rural & Remote Health,* 14, 1-13.

KENNEDY, A., REEVES, D., BOWER, P., LEE, V., MIDDLETON, E., RICHARDSON, G., GARDNER, C., GATELY, C. & ROGERS, A. 2007. The effectiveness and cost effectiveness of a national lay-led self care support programme for patients with long-term conditions: a pragmatic randomised controlled trial. *Journal of epidemiology and community health,* 61, 254-261.

KENNEDY, A., VASSILEV, I., JAMES, E. & ROGERS, A. 2015. Implementing a social network intervention designed to enhance and diversify support for people with long-term conditions. A qualitative study. *Implementation Science,* 11, 1-15.

LACHAL, J., REVAH-LEVY, A., ORRI, M. & MORO, M. R. 2017. Metasynthesis: An Original Method to Synthesize Qualitative Literature in Psychiatry. *Frontiers in Psychiatry,* 8.

LOCHER, M. A. & WATTS, R. J. 2008. *Relational work and impoliteness: Negotiating norms of linguistic behaviour*, Mouton de Gruyter.

LUCAS, S. 2013. The missing link: district nurses as social connection for older people with type 2 diabetes mellitus. *British journal of community nursing,* 18, 388-397.

NHS ENGLAND. 2019. *NHS Long Term Plan* [Online]. Available: <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf> [Accessed 20/11/2019].

NOBLIT, G. W. & HARE, R. D. 1988. *Meta-Ethnography: Synthesizing Qualitative Studies,* London, Sage.

PEARSON, M., HUNT, H., COOPER, SHEPPERD, PAWSON & ANDERSON, R. 2013. The effective and cost-effective use of intermediate, step-down, hospital at home and other forms of community care as an alternative to acute inpatient care: a realist review. *NIHR Health Services and Delivery Research Programme,* NIHR Health Services and Delivery Research Programme.

PESCOSOLIDO, B. A. 2006. Of Pride and Prejudice: The Role of Sociology and Social Networks in Integrating the Health Sciences. *Journal of Health and Social Behavior,* 47, 189-208.

RECHEL, B., DŽAKULA, A., DURAN, A., FATTORE, G., EDWARDS, N., GRIGNON, M., HAAS, M., HABICHT, T., MARCHILDON, G. P., MORENO, A., RICCIARDI, W., VAUGHAN, L. & SMITH, T. A. 2016. Hospitals in rural or remote areas: An exploratory review of policies in 8 high-income countries. *Health Policy,* 120, 758-769.

REED, F., FITZGERALD, L. & BISH, M. R. 2018. Advocating for end-of-life choice at home: a survey of rural Australian nurses. *Rural And Remote Health,* 18, 4322-4322.

REED, F. M., FITZGERALD, L. & BISH, M. R. 2016. Rural District Nursing Experiences of Successful Advocacy for Person-Centered End-of-Life Choice. *Journal Of Holistic Nursing: Official Journal Of The American Holistic Nurses' Association*.

REEVES, D., BLICKEM, C., VASSILEV, I., BROOKS, H., KENNEDY, A., RICHARDSON, G. & ROGERS, A. 2014. The Contribution of Social Networks to the Health and Self-Management of Patients with Long-Term Conditions: A Longitudinal Study. *PLOS ONE,* 9, e98340.

ROBERTS, D., HIBBERD, P., LEWIS, C. A. & TURLEY, J. 2014. The unique contribution of community clinical nurse specialists in rural Wales. *British Journal of Community Nursing,* 19, 601-607.

ROBINSON, C., PESUT, B., BOTTORFF, J., MOWRY, A., BROUGHTON, S. & FYLES, G. 2009. Rural Palliative Care: A Comprehensive Review. *Journal of Palliative Medicine,* 12, 253-258.

RODEN, J., JARVIS, L., CAMPBELL-CROFTS, S. & WHITEHEAD, D. 2016. Australian rural, remote and urban community nurses' health promotion role and function. *Health Promotion International,* 31, 704-714.

ROGERS, A., VASSILEV, I., KENNEDY, A., BLICKEM, C., REEVES, D. & BROOKS, H. 2014. Why less may be more?: A mixed methods study of the work and relatedness of ‘weak’ ties in supporting long term condition self- management. *Implementation Sci,* 9.

TAYLOR, D. & BURY, M. 2007. Chronic illness, expert patients and care transition. *Sociology of Health & Illness,* 29, 27-45.

TERRY, D., LÊ, Q., NGUYEN, U. & HOANG, H. 2015. Workplace health and safety issues among community nurses: a study regarding the impact on providing care to rural consumers. *BMJ Open,* 5, e008306.

VASSILEV, I., BAND, R., KENNEDY, A., JAMES, E. & ROGERS, A. 2019. The role of collective efficacy in long‐term condition management: A metasynthesis. *Health & social care in the community,* 27, e588-e603.

VASSILEV, I., ROGERS, A., KENNEDY, A. & KOETSENRUIJTER, J. 2014. The influence of social networks on self-management support: a metasynthesis. *BMC Public Health,* 14, 719.

VASSILEV, I., ROGERS, A., SANDERS, C., KENNEDY, A., BLICKEM, C., PROTHEROE, J., BOWER, P., KIRK, S., CHEW-GRAHAM, C. & MORRIS, R. 2011. Social networks, social capital and chronic illness self-management: a realist review. *Chronic Illness,* 7.

WANG, Y., HAUGEN, T., STEIHAUG, S. & WERNER, A. 2012. Patients with acute exacerbation of chronic obstructive pulmonary disease feel safe when treated at home: a qualitative study. *BMC pulmonary medicine,* 12, 45-45.