Plasticity of social networks among older cancer patients - A scoping review of quantitative and qualitative evidence

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Background

General background:

The diagnosis of cancer in older age may affect people of divergent functional status, comorbidities and psycho-social situation. Coping with cancer in individually varying circumstances proves a huge challenge for the patients, their spouses, families and friends. Aiming for a comprehensive approach to support these patients throughout the disease trajectory, their social relations and social support should be taken into account (Vigano, Morais 2015). To reach this aim, profound knowledge about possibly influencing factors on the plasticity and the development of social relations or ties is needed.

Theoretical framework

Individuals are invariably embedded in relationships with other people who constitute the social contexts in which most human behavior takes place. The major task of network research is to map interpersonal "webs" of social relationships, or ties, and to determine their structural characteristics such as size, density, and homogeneity (Ertel et al. 2009, p. 74); in this social networks perspective, networks are viewed as entities on the supra-individual (i.e., aggregate) level (Smith, Christakis 2008, p. 407). In contrast, the social support that individuals give and receive can be considered as reflecting network effects on the individual level. Social support is thus often considered as a *function* of social networks (Ertel et al. 2009, p. 74). In a similar vein, social capital comprises any (tangible or intangible) resource that can be accessed only via social ties (Vonneilich, von dem Knesebeck 2016). Network ties may either be close to or marginal to individuals, hence providing mainly emotional or instrumental support to them, respectively (Berkman 2008, p. 6); a third type of support provided by any type of ties is informational support (Smith, Christakis 2008, p. 407). It is important to note, however, that there may also be a downside to social ties, with their potential for creating social conflict and stress (Umberson et al. 2010). Both social support and health may partly depend on personal characteristics such as personality traits. As Umberson and colleagues (2010, p. 150) point out, personality may affect health by shaping health behaviors and by influencing the number and quality of social ties. Moreover, certain adverse personality traits (e.g., hostility) may diminish the beneficial effects of social ties on health (Umberson et al. 2010).

Obviously, social networks are dynamic phenomena, constantly evolving and changing throughout the life course. The ability of networks to adapt to external and personal demands has been termed plasticity of social networks (Ertel et al. 2009, p. 74). We thus adopt the term social plasticity in the present contribution. Scholars have pointed out that although, generally, both network structure and social support are relatively stable over time (Ertel et al. 2009, p. 74), certain life events play a key role in initiating shifts in network structures throughout the life course (Wrzus et al. 2013). While with advancing age the network size may decrease, aging may also be positively related to activities with friends and neighbors and voluntary work (Cornwell et al. 2008). It has been shown, that age and aging

do not have a negative influence on social relations as a whole. Factors influencing transitions in the life course may lead to either negative or positive consequences including the loss of ties or the cultivation of new social ties. New ties and respective activities are positively connected with functional health, self-rated and psychological health, increased physical activity and self-esteem (Cornwell, Laumann 2015). In addition, the role of the social network for elderly people has been examined regarding loneliness and depression (Domenech-Abella et al. 2017) and cognitive function (Fankhauser et al. 2017). Regarding cancer patients, a recent paper by Rice and Halbert on the role of social networks across common cancer types describes possible links of social ties with cancer mortality and lower survival rates, screening behavior and quality of life, whereas functional aspects of social networks can be linked with disease development. The role of social networks in providing information for patients and treatment decisions has also been examined (Rice, Halbert 2017).

In summary, the associations between social status, social context and health have been in the focus of numerous studies. Possible associations of social relations with different aspects of health behavior, disease development, mortality and survival have been examined and the importance of social networks and social support in connection with health-related quality of life (HRQOL) has been shown (Colloca, Colloca 2016). However, there are few studies focusing on older cancer patients and it still remains unclear which factors might influence the development and potential plasticity of social networks for older cancer patients. A scoping review on the role and potential social plasticity of older cancer patients might help to fill these gaps.

Therefore, the aim of this review is to explore and map the body of literature regarding the role and potential plasticity of social networks for elderly cancer patients (Peters et al. 2015).

Method

Objectives of this scoping review are to map the body of literature and the evidence, to examine key concepts and to clarify the extent of research and methods used with respect to the role and potential plasticity of social networks for older cancer patients.

Methodological framework

The Joanna Briggs Institute Reviewers' Manual 2015 guides the conduction of this scoping review (The Joanna Briggs Institute 2015).

Objectives, inclusion criteria and methods for this review were specified in advance and documented in this protocol. This scoping review is conducted in five steps: 1st development of search strategy, 2nd search for relevant studies, 3rd selection of studies, 4th charting of data, 5th consolidation and reporting of the results.

Information sources

The search was conducted in five major databases MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubPsych, Web of Science and the Cochrane library.

Date last searched: November 13th 2017

Development of the search strategy

The first step was a search in MEDLINE and the Cochrane library to identify any systematic or scoping reviews on the topic.

To develop the search strategy an initial limited search was conducted in MEDLINE and the Cochrane library. Search terms and keywords of the resulting 62 references were analyzed to build the search strategy for the following broad search in all chosen databases. Inclusion criteria for the search and the search strategy were defined accordingly comprising quantitative and qualitative studies in English language focusing older cancer patients. The years considered were not limited.

Inclusion criteria

Study types: all types including systematic reviews, randomized controlled trials, controlled studies, observational studies and qualitative studies investigating social network or social relations of older cancer patients. Publications in English or German language, without limited time frame.

Exclusion criteria:

Studies relating exclusively to settings of palliative or end-of-life care and nursing homes, adolescents and young adults (AYAs) and children, working conditions, participation in screening, interventions related to nutrition, exercise, physical function, physician - patient communication and decision making.

Search terms

Concept/complex	Search terms		MeSH Terms (PubMed)
older people	geriatrics OR geriatric* elder OR elderly OR old OR older OR oldest OR aged OR "AGED, 80 AND OVER"	**OR**	geriatrics OR "AGED, 80 AND OVER" OR aged
AND			
diagnosis: cancer	neoplasms OR neoplasm* OR cancer OR oncology OR tumor	**OR**	neoplasms
AND			
social support and network	"social networking" OR "social network" OR "social networks" OR "social support" OR "social integration" OR "interpersonal relation" OR "interpersonal relations" OR "social isolation"	**OR**	"social networking" OR "social support" OR "interpersonal relations" OR "social isolation"

An example of the search strategy for MEDLINE is given below.

(geriatrics[MeSH] OR geriatrics[Title/Abstract] OR "AGED, 80 AND OVER"[MeSH] OR aged[MeSH] OR elder[Title/Abstract] OR elderly[Title/Abstract] OR old[Title/Abstract] OR older[Title/Abstract] OR oldest[Title/Abstract])
AND
(neoplasms[MeSH] OR neoplasms[Title/Abstract] OR cancer[Title/Abstract] OR oncology[Title/Abstract] OR tumor[Title/Abstract])
AND
("social networking"[MeSH] OR "social networking"[Title/Abstract] OR "social network"[Title/Abstract] OR "social networks"[Title/Abstract] OR "social support"[MeSH] OR "social support"[Title/Abstract] OR "social integration"[Title/Abstract] OR "interpersonal relations"[MeSH] OR "interpersonal relations"[Title/Abstract] OR "interpersonal relation"[Title/Abstract] OR "social isolation"[MeSH] OR "social isolation"[Title/Abstract])
(screening)

Data management, selection process and data extraction process

Search for relevant studies

Screening of titles and abstracts

References with bibliographic data were entered into CITAVI bibliographic software. Duplicates were deleted. The references were than conferred into Rayyan software.

Three reviewers screen titles and abstracts for possible inclusion in the later full-text analysis. Discrepancies are solved by discussion with other members of the team. To achieve maximum sensitivity any studies are included for later full-text analysis, reporting on social support and cancer, if the study population might comprise a subgroup of older patients.

Selection of studies

Exclusion criteria for full-text analysis:

Studies focusing on associations between social support and the utilization of screening measures and social support in the connection with end of life care are excluded.

Inclusion criteria for full-text analysis:

Eligible for full-text analysis are all studies on social support and cancer providing information on a subgroup of older patients (>60 years of age). Also included are studies reporting findings about patients with a mean age > 60 years. Studies meeting this precondition are subject to data extraction and charting of the results.

Two researchers will independently assess the full-texts with respect to the inclusion criteria.

If studies are reported in multiple publications, these publications will be grouped using the most informative publication as major reference and the others as associated publications.

Reviews will be searched regarding relevant included studies, which will be included.

The reference lists of key studies will be checked to identify further studies appropriate for inclusion and a forward search of key studies in google scholar will be conducted. Conference abstracts will be checked for subsequent publication.

The data extraction process will be pilot-tested by the researchers and modified if necessary.

For the charting of results a data extraction table was developed.

Risk of bias in included studies

A critical appraisal of the risk of bias is not suggested by the Joanna Briggs manual and is not systematically carried out in this review (The Joanna Briggs Institute 2015). However to judge the quality and extent of the included studies aiming to identify possible gaps and future research fields, the methodology and quality of reporting will be considered.

Topics of the included studies will be grouped according to the research questions regarding associations between A) social support and survival, B) social support and health-related quality of life, C) social support and coping with cancer incl. adjustment, D) social support and individual characteristics e.g. gender, marital status, personality traits (attachment and communication style, network orientation), religious orientation and E) interventions regarding social support

Data synthesis

Aiming to increase the consistency of the scoping review, the process of data synthesis will include three steps: 1) analysis of data, 2) summarizing of results, and 3) interpretation of the results. The first step will comprise a descriptive numerical summary and a narrative description of the identified results with respect to the research question. Finally, the results will be interpreted with respect to implications for research, policy, and practice.

Publication bibliography

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