

# Social participation as an indicator of successful aging: an overview of concepts and their associations with health

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## Abstract

**Objectives.** Social participation has generated a wealth of research in gerontology, but the concept suffers from a lack of conceptual clarity that renders it difficult to define and measure. This means that research on social participation is difficult to compare directly. The aim of the present study was to draw the literature on social participation in older adults together to inform health services researchers seeking to investigate social participation as an indicator of successful aging.

**Methods.** A narrative review of studies investigating the association between social participation and health in adults aged 65 years and older was conducted.

**Results.** Three concepts of social participation (i.e. social connections, informal social participation and volunteering) were defined, their measurement instruments described and evidence of their associations with health explored. All three concepts have demonstrated associations with an array of health indicators. Prospective studies reveal that social participation at baseline is positively associated with mental and physical health.

**Conclusion.** A model of social participation on health is presented, showing the evidence that all three concepts contribute to the association between social participation and health through their shared mechanisms of social support and social cohesion with the wider community. Using an instrument that can be separated into these three distinct concepts will assist health services researchers to determine the relative effect of each form of participation on the health of older adults.

**What is known about the topic?** Social participation has generated a wealth of research in gerontology. The scope of the literature on social participation is broad and the concepts diverse. For this reason, most previous systematic reviews have been unable to comprehensively assess the effect of all concepts of social participation on health. This means the research on social participation is difficult to compare directly, and indicators of social participation in older adults are difficult for policy makers to select.

**What does this paper add?** This paper overviews the three concepts of social participation, their methods of measurement and their associations with health in older adults. We present a model of social participation that incorporates all three concepts of social participation and their effects on health. We argue that the use of a measure that can be segmented into each of the three forms of social participation will predict more of the variance in health outcomes than any measure on its own.

**What are the implications for practitioners?** Enhancing the social participation of older adults is a key factor in successful aging that many older adults value. However, many service provision organisations tend to focus on meeting the specific physical needs of clients, rather than targeting services that connect older adults with their community. Targeting social participation may present one of the greatest opportunities to improve older adults' general health, and will also generate societal benefits by increasing community contributions from this group. Selecting an indicator of social participation that measures each of the three concepts overviewed in this paper will enable policy makers to identify the areas in which social interventions for older adults will have the most effect.

**Additional keywords:** health status indicators, social participation, social cohesion, social capital.

Received 9 February 2016, accepted 16 August 2016, published online 7 October 2016

## Introduction

Social participation is a key indicator of successful aging and is associated with mortality,<sup>1</sup> morbidity<sup>2</sup> and quality of life.<sup>3</sup> Enhancing social participation is a central component of the World Health Organization's response to concerns about population aging.<sup>4</sup> Older adults value the ability to participate in their communities and feel fulfilled by enhanced participation.<sup>5,6</sup> This participation provides resources into the community through older adults' informal assistance (e.g. to families and friends) and formal community participation efforts (e.g. volunteering) that would otherwise have to be purchased.<sup>7</sup> Social participation has been included in many conceptual models of successful aging<sup>8,9</sup> and is the focus of several research studies in gerontology.<sup>10,11</sup>

Despite the research interest in social participation, the concept suffers from a lack of conceptual clarity. There are multiple concepts that are either used to describe aspects of or used interchangeably with the term 'social participation', including volunteering,<sup>12</sup> civic engagement,<sup>13</sup> community engagement,<sup>14</sup> community participation,<sup>15</sup> formal social participation<sup>16</sup> and social engagement.<sup>10</sup> The lack of consensus on a definition of social participation results in communication difficulties for those using the concept, problems in the development and selection of instruments to measure social participation, difficulties comparing results across studies and potentially ineffective social policy efforts.<sup>10</sup> Clarity around which concepts 'social participation' includes would assist health services researchers to select appropriate indicators for social participation.

The aim of the present study was to draw together the literature on social participation in older adults to inform health services researchers seeking to investigate social participation as an indicator of successful aging. Specifically, the aims of the study were to: (1) explicate the heterogeneous concepts of participation that have been explored; and (2) synthesise evidence of the effect of social participation on the health of older adults. In the following, we review the concepts of social connections, informal social participation and volunteering in turn, including definitions of each concept, common methods used to measure them and evidence of their effects on health. We then present a model of social participation and its effects on health that takes account of all three.

## Methods

### Search strategy

PubMed, PsycINFO, Web of Science and Scopus were searched to identify international literature investigating the social participation and health of older adults. Searches were conducted in October 2015 and were limited to articles published in English. The search terms applied to PubMed are listed in Table 1.

### Inclusion and exclusion criteria

All studies investigating the association between social participation and health in adults aged 65 years and older were included. Both cross-sectional and longitudinal studies were included.

The literature addressed a variety of social participation and health measures in adults aged 65 years and older. Because of this heterogeneity, we present a narrative overview rather than a systematic analysis. We used the systematic review of definitions of social participation by Levasseur *et al.*<sup>10</sup> to define the types of social participation; specifically, these were described as social contact without a specific goal (social connections), social contact towards a common goal (informal social participation) and social activities aimed at helping others (volunteering). Each concept and its association with health is reviewed in turn.

## Results

### Social connections

Social connections have been defined as ties with other people spanning the range from intimate to extended.<sup>17</sup> These ties can be defined by their structure (including the number and geographical proximity of ties) and function (including the frequency and reciprocity of contact). Some research suggests categorising ties according to whether they include relatives, friends or neighbours.<sup>18</sup> Other terms for social connections include social network,<sup>19</sup> social integration,<sup>17</sup> social embeddedness<sup>20</sup> and human companionships.<sup>18</sup> Social connections are typically measured by asking individuals to report the number of people they are connected with, and the number of monthly face-to-face and telephone contacts they have had with each. Some measures include a question asking individuals to indicate the presence of a confidant, a network of children or to indicate which of their self-reported ties they could call on for help.<sup>19</sup> A score is calculated by summing the number of ties reported. Having regular interactions and being involved in diverse types of ties has a positive effect on health.<sup>21,22</sup>

### Social connections and health

The Lubben Social Network Scale (LSNS) is a commonly used tool to assess social connections in geriatric populations.<sup>23</sup> There are three versions of the scale that assess combinations of both the frequency and quality of family, friendship and neighbour ties. Cross-sectional studies using the LSNS have demonstrated associations between more social connections and a lower incidence of major depressive disorder in Chinese<sup>24,25</sup> and Singaporean older adults,<sup>26</sup> less depressive symptoms among older adults in Hong Kong<sup>27</sup> and Macau,<sup>24</sup> increased

**Table 1. Search terms used to identify social participation and its effects on the health of older adults**

Literature	Terms
Health	Health <sup>A</sup>
Aging	Aged <sup>A</sup> OR frail elderly <sup>A</sup> OR aging <sup>A</sup> OR elderly OR older OR older people OR geriatric OR gerontology OR nursing OR old age OR old-age specific OR older adults OR older people OR frail elders OR frail elderly OR older patient
Social participation	Social participation <sup>A</sup> OR social capital <sup>A</sup> OR community involvement OR community participation OR social engagement OR civic engagement

<sup>A</sup>Term searched as both subject heading and free text.

sleep quality in elderly Malaysians living with dementia,<sup>28</sup> increased psychological wellbeing in elderly Malaysians<sup>20</sup> and elderly Thai citizens,<sup>29</sup> less functional impairment in older adults from the US,<sup>30</sup> better self-rated health in Canadian older adults,<sup>31</sup> better health-related quality of life among older Koreans<sup>32</sup> and better nutritional status among older adults from Ireland.<sup>33</sup> In a prospective cohort study of 7240 community-dwelling older women in the US, the odds of experiencing increasing and persistently high depressive symptoms over 20 years were significantly elevated for women who had fewer social connections (odds ratios (OR) 3.24 and 6.75 respectively).<sup>34</sup> A prospective study examining the risk of falls in a group of older Caucasian women in the US identified that more connections with family members protected older women against falls.<sup>35</sup> Compared with women who had family connections in the lowest quartile, the relative risk (RR) of falls associated with family connection scores in the second, third and highest quartiles was 0.90 (95% confidence interval (CI) 0.79–1.03), 0.86 (95% CI 0.74–1.00) and 0.84 (95% CI 0.71–0.99) respectively.<sup>35</sup>

A series of prospective longitudinal studies also demonstrated the effect of social connections on cognitive decline and dementia incidence. In a community-based sample of 354 US adults aged 50 years and over with intact cognitive function at baseline, participation in more social connections was associated with better maintenance of Mini-Mental State Examination (MMSE) scores, and a reduced odds of a decline in MMSE score at follow-up 12 years later.<sup>36</sup> A study of 2513 Japanese–American older men found that older adults (mean age 76.8 years at last follow-up) with the lowest level of late life social connections (none or one tie) had a 125% higher risk of dementia than older men with the highest number of ties (four to five).<sup>37</sup> A prospective study of 2249 women aged 75 years and older in California found that women with larger numbers of social connections at baseline had a lower risk of incident dementia 3 years later (OR 0.74; 95% CI 0.57–0.97).<sup>19</sup> A repeated-measures prospective longitudinal study of 964 community-dwelling adults aged over 65 years in Spain over 7 years found that the probability of cognitive decline was lower for older adults with a high frequency of visual contact with relatives, whereas contact with friends was protective against cognitive decline in women only.<sup>17,38</sup> An Australian study investigating the effect of social connections on memory scores up to 15 years later in 706 participants aged 65 years and over found that the rate of decline in the ability to recall personal life experiences was steeper for those with the smallest friend networks.<sup>39</sup> In other words, older adults in that study with the smallest number of social connections experienced the steepest decline in memory for life events with every passing year.

### *Informal social participation*

Informal social participation includes activities that people engage in with others for personal enjoyment. It has been defined as participation in social activities and socialisation with others.<sup>40</sup> Other definitions emphasise the ability of an individual to take advantage of opportunities for social interaction.<sup>41</sup> This aspect of social participation has also been referred to as social engagement.<sup>40–42</sup> A typical measure of informal social participation will ask individuals to indicate how many social activities they have participated in, or community groups of which they are

members. Other measures include both social connections and informal social participation as a combined measure of social participation.<sup>43</sup> We included these studies in the present analysis only if they reported separate analyses for informal social participation and social connections.

### *Informal social participation and health outcomes*

Cross-sectional studies have demonstrated an association between informal social participation and indices of health. Being involved in a greater number of groups, including being a member of a community club or a church, was associated with a better peak expiratory flow rate in older adults in the US.<sup>22</sup> Among older adults in Japan living in the community, those with low and intermediate levels of group participation had 45% (OR 1.45; 95% CI 1.21–1.73) and 23% (OR 1.23; 95% CI 1.01–1.48) higher odds of having 19 or fewer teeth compared with those with high levels of group participation.<sup>44,45</sup> Life satisfaction in Korean women aged 65 years and older was significantly and positively associated with participation in community-based social activities ( $\beta=0.077$ ;  $P<0.001$ ).<sup>46</sup> In a sample of colorectal cancer survivors aged 65 years and older and at least 5 years after diagnosis, engaging in any form of social participation in the community was associated with better mental health component summary scores from the 36-Item Short Form Health Survey (SF-36). In the same study, weekly hours of social participation were significantly and positively associated with higher physical and mental health scores.<sup>47</sup> A longitudinal cohort study of 1375 adults aged 75 years or older in Sweden found that the adjusted RR of dementia associated with participation versus no participation in social activities was 0.70 (95% CI 0.49–1.01). Dementia incidence decreased with increasing frequency of social participation (less than weekly participation, OR 0.92 (95% CI 0.57–1.47); daily–weekly participation, OR 0.58 (95% CI 0.38–0.91). These associations were independent of the effects of age, sex, education, cognitive functioning, co-morbidity, depressive symptoms and physical functioning.<sup>48</sup>

A subgroup of studies has examined the informal social participation of older adults in assisted living facilities. Assisted living communities provide both housing and personal services for older adults who do not need more traditional nursing home services to address their needs.<sup>49</sup> The majority of these studies were conducted in the US.<sup>40,42,50–55</sup> One study included Taiwanese participants.<sup>56</sup> Only one study reported a longitudinal study design.<sup>55</sup> The effect of informal social participation was positive across all studies. Three of the studies reported that as informal social participation in activities both inside and outside the assisted living facility increased, symptoms of depression decreased.<sup>40,50,56</sup> Findings were similar for measures of life satisfaction, with two studies reporting a significant and positive relationship between informal social participation and life satisfaction.<sup>52,54</sup>

### *Volunteering*

Volunteering includes activities that people engage in for the benefit of others to whom they owe no obligation.<sup>57</sup> It has been defined as an activity in the context of a community organisation with a name and explicit purposes.<sup>16</sup> Such behaviour has also been referred to as civic engagement<sup>13</sup> or formal social

participation.<sup>16</sup> Research typically measures volunteering by asking older adults to indicate how many volunteer organisations they are a member of, or how many hours they devote to volunteer roles over a given time period.<sup>58</sup> These questions are often combined into a composite measure of social participation with the informal social participation activities described above. A potential shortcoming of such research is we are then unable to determine the separate effects of activities engaged in for enjoyment versus those that have the goal of improving some aspect of community life.<sup>16</sup>

#### *Volunteering and health outcomes*

We only included studies here that reported on the effect of volunteering separately from informal social participation. Most studies on older adults and volunteering have been conducted in the US.<sup>12,59</sup> A series of literature reviews has enumerated the benefits to older adults of volunteering.<sup>12,57,59,60</sup> Most studies report on the psychological and social benefits of volunteering,<sup>12</sup> although there is some research that demonstrates associations between volunteering and physical indicators of health. Volunteering has positive associations with perceived health,<sup>61</sup> life satisfaction,<sup>62</sup> positive mood<sup>12</sup> and reduced mortality levels among older adults.<sup>63,64</sup> A meta-analysis of 37 largely cross-sectional studies found that older adult volunteers had higher wellbeing than older non-volunteers.<sup>65</sup> Compared with non-volunteers, volunteers experienced less depressive symptoms and a lower utilisation of healthcare services.<sup>57</sup> Two reviews of longitudinal cohort studies and one randomised controlled trial found that volunteering in old age predicts better self-rated health, physical functioning and physical activity.<sup>59,63</sup> Relatively limited research has focused on the effects of volunteering on cognitive decline, but evidence from an analysis of older adults who were

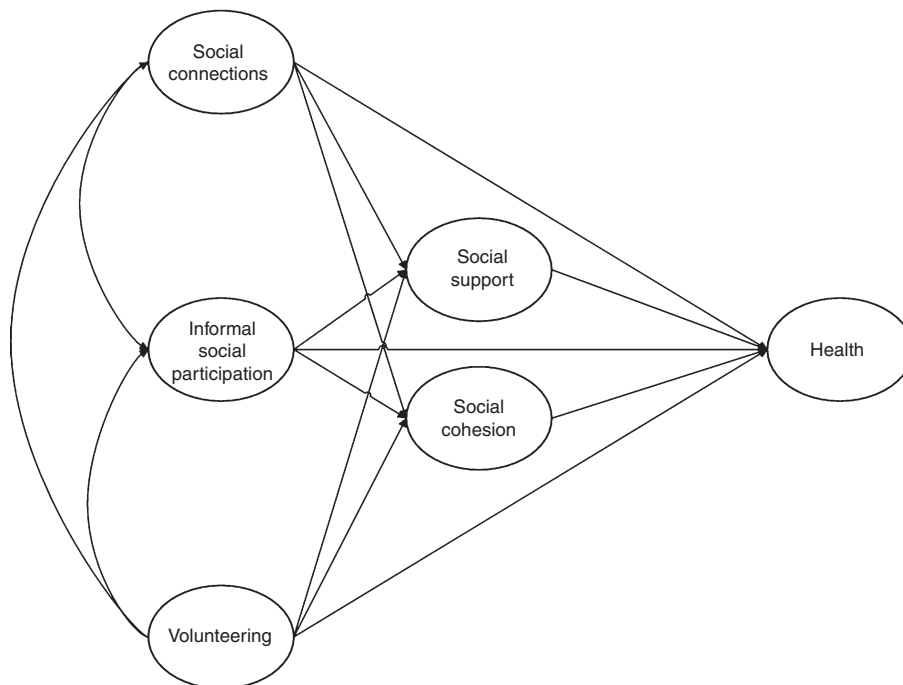
cognitively impaired at baseline demonstrated that older adult volunteers improved their executive function and memory scores relative to cognitively impaired non-volunteers.<sup>66,67</sup> Older adults who volunteered were less likely to be admitted to hospital with a fall-related hip fracture.<sup>68</sup> Emerging evidence also suggests that volunteering at baseline is associated with a decreased risk of hypertension at follow-up.<sup>69,70</sup>

#### **Discussion**

##### *Social participation: bringing three separate concepts together*

A suggested model of the associations between each form of social participation and the connection with health is presented in Fig. 1. We suggest that the effect of social participation on health is mediated by social support and the individual's sense of community social cohesion. According to the social capital theory of health, community participation leads to higher perceived social cohesion and more available social support.<sup>71</sup> That is, the more individuals participate, the more likely they will perceive that people in their community can be trusted and will help them if they need assistance. The development of community participation results in both higher social cohesion and higher social support, both of which theoretically result in better health outcomes.<sup>72</sup> The evidence for this proposition is discussed below.

Berry *et al.*<sup>73</sup> have found that participation in one domain is typically associated with participation in the others. Having more frequent connections with family, friends and neighbours is also associated with higher participation in community groups and an increased likelihood of volunteering. This suggests that all three forms of social participation will be positively associated. In addition, it has been found that the breadth of participation matters



**Fig. 1.** Model of the effect of social participation on health.

for psychological health.<sup>73,74</sup> That is, the more types of participation an individual engages in, the better their psychological health is likely to be. This suggests that all three concepts of social participation will be positively associated with health. Few studies have directly investigated these relationships and none that we are aware of has focused exclusively on older adults.

The mechanisms by which increased participation is suggested to have an effect on health is through the increased availability of social support and increased social cohesion. Social support has been defined as the various types of assistance or help available to individuals when they need it.<sup>75</sup> Social cohesion, in contrast, is the sense of trust and reciprocity that the individual has in the wider community.<sup>71</sup> Both social cohesion and social support are considered proximal indicators of better health according to social capital theory.<sup>76</sup> The evidence suggests that social support and social cohesion can account for the association between social participation and health. The effect of social participation on the psychological well being of a cohort of elderly Thai adults was found to be accounted for by perceived social support.<sup>29</sup> Similarly, an Australian cross-sectional study of midlife and older adults found that social support from friends mediated the association between volunteering and subjective wellbeing.<sup>77</sup> A longitudinal study of 7088 Australian women aged between 70 and 75 years at baseline found that volunteering was associated with higher quality of life and increased social support. The likelihood of a woman being involved in volunteering increased by 11% for every 5-point increase in quality of life, and by 35% for every 1-point increase in perceived social support.<sup>78</sup>

The assisted living facility studies that included measures of social support in addition to informal social participation found a significant negative association between perceived social support and depression.<sup>42,51</sup> A study of 999 adults aged 65 years and over living in Britain found that high levels of social cohesion were associated with individuals indicating better overall and physical health.<sup>79</sup> Evidence from the Household, Income, and Labour Dynamics in Australia survey, although only cross-sectional and not restricted to older adults, found that the effect of three indices of participation were reduced to non-significance by the addition of social cohesion into hierarchical linear regression models.<sup>76</sup> These findings suggest that the association between all types of social participation and health will be accounted for by the social support available to the individual and their positive feelings about the community in which they live.

## Conclusions

Social participation consists of three inter-related concepts most informatively labelled Social Connections, Informal Social Participation, and Volunteering. The literature review indicated that each concept shared a positive relationship with health in older adults, regardless of the measure of health that was used. Longitudinal cohort studies further demonstrated that baseline social participation in any of the three forms is associated with better health outcomes at follow-up on several indices of health, including cognitive function,<sup>39</sup> depression,<sup>34</sup> better self-rated health and physical functioning,<sup>59,63</sup> and even a reduced incidence of falls.<sup>35</sup> We also examined evidence that the three

concepts of social participation were associated, such that an increased number of connections increases the likelihood that the individual will also participate in more organised community activities associated with clubs and volunteer their time. Cross-sectional evidence from a series of Australian studies suggests that more social participation across all three types is also associated with health.<sup>73,74,76,80</sup>

One reason that the distinctive associations of different types of social participation have been overlooked as a cause of health status is that they are typically combined into a composite scale. This procedure is justified if we know that all forms of participation have an equivalent effect on health. However, if one of the three categories has a different association with health than the others, then we may not be clearly identifying the area in which intervention in social participation will provide the most benefit.<sup>16</sup> A recent meta-analysis suggested that taking account of the multi-dimensionality of social participation results in a stronger association between social participation and health.<sup>81</sup> We argue that the use of a measure that can be segmented into each of the three forms of social participation will predict more of the variance in health outcomes than any measure on its own. Furthermore, using a tool that can be separated into these three distinct concepts will also assist health services researchers to determine the relative effect of each form of participation on health for older adults.

Because of the heterogeneity of the literature on social participation and health, we were unable to conduct a systematic or quantitative review. Therefore, the magnitude of the associations between social participation and health are a matter for further research. Although the hypothesised model was developed primarily from the research literature concerning adults aged 65 years and over living in the community, evidence suggests that social participation is just as important for other groups, including older adults with dementia,<sup>82</sup> frail older adults,<sup>83</sup> older adults from different cultural backgrounds<sup>84</sup> and general adult population samples,<sup>72</sup> and is even relevant to children's quality of life.<sup>85</sup> Therefore, the model we propose has wider application to many other groups in need of intervention to improve their health outcomes.

Enhancing the social participation of older adults is a key factor in successful aging that many older adults value.<sup>86</sup> As the world population ages, more attention is being paid to supporting older adults to remain connected to and contributing members of their communities. However, many service provision organisations tend to focus on meeting the specific physical needs of clients, rather than targeting services that connect older adults with their community.<sup>86</sup> Targeting social participation may present one of the greatest opportunities to improve older adults' general health, and will also generate societal benefits by increasing community contributions from this group.<sup>61</sup> A clear understanding of the concepts included in social participation, how they are related and how they combine to produce improved health outcomes enables health services researchers and policy makers to understand how they can intervene to improve the health of an aging population.

## Competing interests

None declared.

## Acknowledgements

This research was funded by an Australian Research Council Linkage Grant (LP120200814).

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