IMPROVING SOCIAL ENGAGEMENT THROUGH A CULTURAL INSTITUTION-BASED ADULT EDUCATION: A CASE STUDY OF THE "KGOTLA"

Akpovire Oduaran, Ph.D.[1]

ABSTRACT: Depressive symptomatology, loneliness and hopelessness are dominant issues among elderly Africans. Yet, it is commonly assumed, and, perhaps, agreed that the elderly African should physically and socially remain active and continue to be the custodian of the people's traditional norms and values reflective of the traditional social transfers for which African culture is known. Exploring ethnographic data from the extant literature, this study attempts to understand the possible relationship between social engagement (based mainly on social activity) and the functional capacity of the Kgotla. Kgotla is a traditional court made up of community council chief and elders who meet at the public square to reach a consensus on public issues. It originates from Botswana. The data reveal that the informal adult learning functional activities that is dominant in the Kgotla, considerably help in social engagement among the elderly Tswana-speaking Africans. It was found that social activity is significantly enhanced by the elderly Africans' participation in kgotla meetings; and, that the degree of satisfaction with the mitigating role of this medium may be differentiated somewhat because elderly males seem to dominate discussions and activities taking place at the Kgotla. However, it was also true that the functionality of the Kgotla tend to lower the degree of loneliness and hopelessness for all the participants. Based on these findings, it was recommended that the African Kgtotla should be further enhanced as acceptable informal adult learning cultural institution for cognitively stimulating and socially integrating social engagement activities that could promote the psycho-social well-being of elderly Africans.

Keywords: Adult learning, cultural institutions, ethnography, hopelessness, informal, loneliness, social engagement, Tswana-speaking Africans

Tswana-speaking South Africans constitute about 8.9 per cent of the entire population based on the 2017 national census figures (Africa: SOUTH AFRICA CIA: The World Factbook). Ordinarily, this could be a minority population, but it is significant because it is expected that the elderly should play very visible and dominant roles in the daily social transfers that should bridge "the unwholesome" generational gap between the younger and older generations of Tswana-speaking South Africans.

The social stability pursuits of the South African nation would demand that, all valuable informal adult learning cultural institutions capable of mediating the process should be well documented and studied. To date, there are very few studies that have ever and specifically examined from a research point of view how well the Kgotla functions as an informal adult learning cultural artefact for improving social engagement, especially as it relates to reducing loneliness, hopelessness, and symptomatic depression. Thus, this study becomes very relevant because quite often the South African national census like others in Africa hardly pay attention to or report on elderly person's physical complaints

---

[1] Community-Based Educational Research (COMBER), Faculty of Education, North-University, Mmabatho, Mafikeng 2735, South Africa. Email address: Akpovire.Oduaran@nwu.ac.za; or

like loss of interest in ordinary social activities and physical engagements indicated among this population. In fact, issues that relate to the expression of anxiety, loneliness, and feelings of emptiness and hopelessness (Kolb, 2010) do not feature in national censuses in South Africa as it is in almost all the other African nations.

What is mostly observable among African elderly persons is the degree of their engagement in local and national politics. Even in this aspect, it is the educated elderly Africans that feature somewhat visibly. The illiterate elderly Africans are simply assumed to be playing purely supportive roles in politics. Yet, the Kgotla, as an exemplary informal adult learning cultural institution among others, is known to have been the traditional medium for stimulating physical (including rudimentary cognitive) and socially integrating propensities of the Tswana-speaking elderly South Africans over the years. The Kgotla might have been playing these valuable roles of reducing the elder persons' feelings of loneliness and hopelessness and promoting their psychological well-being in such ways that have remained shrouded in mystery, or even pure ignorance. This study, therefore, aims to explore the extent to which the informal adult learning functionality of the Kgotla helps in improving social engagement among the elderly Tswana-speaking South Africans.

Background

Social engagement has been defined in several ways as the individual's myriad of activities performed within the context of his or her geographical space (Herzgog, Ofstedal & Wheeler, 2002) and by way of connecting with others through social relationship networks in order to create and produce goods and services of value, whether or not these are paid or not (Rowe & Khan, 1998). However, Zhang, Liu & Tang (2018) have reported Glass, De Leon, Bassuk & Berkman (2006) as having proposed that we should simply define social engagement as the performance of meaningful social roles for leisure and productive activity. In all these conceptualizations, the cultural value of existing cultural institutions such as the one being focused upon in this study has not been taken into consideration. This is one major reason why this study could be critical in the sense that it might extend the pool of research-based knowledge on the enduring value of the Kgotla in traditional Tswana communities to date.

On the other hand, some scholars argue that the term *social engagement* should be used to refer to the maintenance of social connections and participation in social activities (Bassuk, Glass, & Berkman, 1999). Recent research suggests that older people who are more socially engaged tend to have a higher level of cognitive function (Barnes, Mendes de Leon, Wilson, Bienias, & Evans, 2004; Bassuk et al.,1999; Holtzman et al., 2004; Yeh & Liu, 2003; Zunzunegui, Alvarado, del Ser, & Otero, 2003) compared to less engaged persons.

But then, Bassuk, Glass and Berkman (1999) have maintained that our conceptualization would be incomplete unless we add the dimensions of maintaining many social connections and high participation level in social activities (Cheng & Chan, 2004). Consequently, social engagement has been conceptualized and applied in this study as any given individual's active involvement in such meaningful and productive activities as

114

are relevant and lead to social integration and, perhaps, informal learning cognitive stimulation using available social relationship networks, and, in this context, the Kgotla.

In this study, the Kgotla has been singled out as one of the few existing informal adult learning traditional cultural institutions that has been subtly mitigating loneliness, hopelessness and physical mobility and thus enhancing social engagement in ways that have not been closely studied and reported upon over the years. It is argued in this study that social engagement is not just one of the three components of the successful aging paradigm proposed by Rowe and Khan (1998), but it is actually a vital depicting of the quality of life (Mor et al., 1995) that should ideally be made available to any individual in Africa.

Before and after the scramble for and the partition of Africa following the 1884/85 Berlin Conference at which Britain, France, Portugal, and to some extent Spain, agreed on the formulae by which different geo-political spaces could be taken by them, the Kgotla served as a cultural institution that provides avenue for the adjudication of disputes that are capable of causing social tension among Tswana-speaking people in modern day Botswana and South Africa. Up until now, the Kgotla has functioned in such way that it does not only settle disputes. It has become part and parcel of the Setswana culture that promotes social cohesion among the people.

Managed by the traditional chief or the village head, in some instances, the Kgotla brings the elderly heads of different family groups together. They come to discuss issue of common interests to the people.

Research Questions

Based on the introduction and background above, the study sought to find answers to the following questions:

1. What is the nature of the informal adult learning functionality of the Kgotla that might not have been thoroughly studied and reported?
2. What kinds of social engagement actions and possibilities does the Kgotla deal with?
3. What are the possibilities for abuse in the determination of such actions?
4. What legitimate grounds does the person determining the actions hold at any point in time?
5. What cultural procedures exists in determining and implementing the set of actions?
6. What does the Tswana culture prioritize in terms of social engagement?
7. In terms of social engagement in this informal adult learning institution, who has been identified to accept the responsibility and accountability for the relevant social engagement action?

It is hoped that finding answers to these questions would help us in appreciating better the relevance of the Kgotla as an existing informal adult learning cultural institution as

social stabilizing modicum that deserves research and policy attention in terms of the assumed significant role it has been playing to enhance social engagement among elderly Tswana-speaking South Africans. Then, of course, other cultures should be able to strengthen similar existing cultural artefacts that have been neglected in research and social policy development over the years. And the possibility of the emergence of whatever gaps in this present effort brings out should assist other researchers who are engaged in decolonizing social research in Africa in framing their studies, with the possibility of strengthening or expanding the pool of knowledge in this area. This study itself has derived strength and foundation in similar ones that have been conducted elsewhere to enlighten the processes and procedures of social engagement research as depicted in the literature.

Assessment of Social Engagement: Elements and Scales

Social engagement was assessed with measures of social activity frequency, size of social networks, and perceived social support. Frequency of social activity was assessed by asking how often during the past year, have participants engaged in six common types of activities that involve social interaction (a) go to restaurants, sporting events, or teletrack, or play bingo; (b) go on day trips or overnight trips; (c) do unpaid community=volunteer work; (d) visit relatives' or friends' houses; (e) participate in groups, such as senior center, VFW, Knights of Columbus, Rosary Society, or something similar; (f) attend church or religious services (Mendes de Leon, Glass, & Berkman, 2003). Persons rated each activity on a 5-point scale, with 5 indicating participation in the activity every day or nearly every day, 4 indicating participation several times a week, 3 for several times a month, 2 for several times a year, and 1 for once a year or less. Item responses were summed and averaged to yield a total score. In prior research in this cohort, higher scores on this measure have been associated with higher levels of socioeconomic status (Wilson, Scherr, Schneider, Tang, & Bennett, 2007) and psychosocial functioning (Barnes et al., 2007).

I quantified social network size with standard questions (Cornoni-Huntley, Brock, Ostfeld, Taylor, & Wallace, 1986) about the number of children, family, and friends each participant had and how often they had seen them. Social network size was the number of these individuals seen at least once per month, as previously described (Barnes et al., 2004). Social support was assessed with four questions (items 1, 2, 5, 10) from the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). These four items (e.g., ''There is a special person who is around when I am in need'') make up the Significant others subscale of the questionnaire, as established in factor analytic studies (Cheng & Chan, 2004; Zimet, Powell, Farley, Werkman, & Berkoff, 1990). Participants rated agreement with each statement on a 5-point scale, and item scores were averaged so that the total score ranged from 1 to 5, with higher scores denoting more social support.

Assessment of Other Covariates

Depressive symptomatology was assessed with a 10-item version (Kohout, Berkman, Evans, & Cornoni-Huntley, 1993) of the Center Social Engagement and Cognitive

Function 49 for Epidemiologic Studies Depression Scale (Radloff, 1977). Using this 10-item version, persons were asked if they had experienced each of 10 symptoms (e.g., ''I felt sad'') much of the time during the past week. The score was the number of symptoms experienced. Scores on this scale have been shown to correspond well with scores on the original version of the scale (Kohout et al., 1993) and to predict dementia (Wilson, Barnes, et al., 2002; Wilson, Mendes de Leon, Bennett, Bienias, & Evans, 2004) and mortality (Wilson, Bienias, Mendes de Leon, Evans, & Bennett, 2003) in old age. The personality traits of neuroticism, indicative of distress proneness, and extraversion, indicative of sociability, were measured with 6-item versions of the standard 12-item scale of each trait from the NEO Five-Factor Inventory (Costa & McCrae, 1992). Persons rated agreement with each neuroticism item (item numbers 1, 6, 21, 36, 41, 51; e.g., ''I often feel inferior to others'') and each extraversion item (item numbers 2, 7, 17, 27, 37, 52; e.g., ''I like to have a lot of people around me'') on a 5-point scale. Item scores ranged from 0 to 4, with higher scores denoting a higher level of the trait. Item scores were summed and multiplied by two to make the total scores (range: 0 to 48) more comparable to the standard 12-item scales. In a separate group of 932 older persons without dementia from the Rush Religious Orders Study (Wilson, Bienias, Evans, & Bennett, 2004), the 6-item neuroticism measure had a correlation of 0.90 with the standard 12-item scale, and the 6-item extraversion measure had a correlation of 0.91 with the standard 12-item scale, supporting the validity of the brief measures.

Persons rated their current frequency of participation in nine cognitively stimulating activities (e.g., reading a book, visiting a library) on a 5-point scale, with 5 indicating participation in the activity every day or about every day and 1 indicating participation once a year or less. We focused on common activities in which seeking, or processing information was central, and which had minimal social or physical demands. Item scores were averaged to yield a summary measure of cognitive activity that has been shown to have adequate short-term temporal stability and positive associations with education and cognitive ability (Barnes, Wilson, Mendes de Leon, & Bennett, 2006; Wilson, Barnes, & Bennett, 2003; Wilson et al., 2005).

Frequency of physical activity was assessed with questions adapted (McPhillips, Pellettera, Barrett-Connor, Wingard, & Criqui, 1989) from the 1985 Health Interview Survey (1985 Health Interview Survey, 1985). Persons were asked if they had participated in each 50 K. R. Krueger et al. of five activities (e.g., walking for exercise, calisthenics) during the past 2 weeks, and if so, the number of times and mean time per occasion. Minutes in each activity were summed and divided by 120 to yield a summary measure of hours per week of physical activity, as described elsewhere (Wilson, Mendes de Leon, et al., 2002). The presence of seven chronic medical conditions was determined from medical history (i.e., diabetes, hypertension, heart disease, cancer, thyroid disease, head injury) or from history plus examination (i.e., stroke). The number of conditions present was used as a measure of chronic illness, as described elsewhere (Wilson, Mendes de Leon et al., 2002; Wilson, Beckett, Bienias, Evans, & Bennett, 2003).

Disability was assessed with the Katz scale (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963). Participants indicated whether they could independently perform each of six daily living activities: walking, bathing, dressing, eating, getting from bed to chair, and

toileting. The score was the number of activities that the person was unable to perform independently.

Adapted Elements and Measures of Social Engagement

Deriving constructs from the psycho-social measures of social engagement indicated in the existing literature, informal adult education for social engagement has been conceptualized and adapted in this paper to social stability, sociability, frequency of physical activity and the absence of physical disability. Each of these elements has its constituents from the point of view of the researcher.

Social stability was understood and applied as the frequency of social activity, size of social networks, and perceived social support. Sociability was understood and used in this context as a gauge of the absence of depressive symptomatology. However, the researcher is ruling out in this case elements of neuroticism, distress proneness and extraversion, the measurement of which are beyond the competence of this researcher. Frequency of physical activity has to do with the number of times the elderly engages in the physical activities of movement and exertion of some form of energy. Absence of physical disability is understood and used in this discourse to imply expressions of ability by the elderly to walk, bath, and dress up, eat, toilet and get out from bed to sit on the chair.

These measures become even more intricate when it comes to relying essentially on the use of scientific literature review techniques to derive all the information the researcher would need to reach valid conclusions on the viability or otherwise of the role cultural institution-based informal adult education play in promoting social engagement among elderly Tswana-speaking South Africans. Be that as it may, the value of this pioneering efforts cannot be underestimated when it comes to building up scientific pool of information on this subject.

Design and Methodology

Design

The study utilized phenomenological research design to describe experiences at the Kgotla.

Method

The study adopted the phenomenology observation method that is based on the theory of phenomenology. In consonance with this method, the researcher deemed it necessary to construct and narrowly define the relevant research questions to facilitate the timely syntheses of evidence on the improvement of social engagement in a cultural institution – based informal adult education setting.

The specific research question was 'How did the intergenerational exchanges prevailing in the structure and processes of the *kgotla* improve considerably social engagement among the elderly Tswana- speaking South Africans?

The researcher selected the elderly Tswana-speaking South Africans because most existing studies had tended to under-estimate and under-value this area of creating social stability over the ages. In this time of widespread use of technology and social distancing induced by COVID-19, it is probably useful to give due reverence to elderly South Africans whose contributions to social engagement are often under-valued and under reported in the literature on informal adult education in Africa. Using systematic review method which entails interpretative understanding of real-life event in a community and this was limited to the population under study. This was done by formulating the research questions to understand the experiences of people. This is necessary to restrict the scope of the literature review. This method was, thus, used mainly for pragmatic reasons.

To answer the main research question, I decided to follow the search strategy of using only articles published in English (I did not include non-English studies because of time and human resources constraints). I engaged with the literature review between June and November 2019 and stepping back to the year 1884/1885. This was the year that the Berlin Conference, which took place in Berlin (Germany), partitioned Africa into different European language groups classified as Anglophone, Francophone, and Lusophone.

Major citations on databases were searched and outcomes customized to fit the main research question. The search was then truncated to include title and abstract searches for keywords including the *Kgotla, informal adult education, institutions, and social engagement*.

The search results were initially imported from each database into Endnote (See the reference page) and the duplicate citations removed along the lines suggested by Khangura, Konnyu, Cushman, Grimshaw and Moher (2012) and the Center for Reviews and Dissemination (2008).

Following the use of this approach, the titles and abstracts for the articles included were screened for inclusion using the criteria of direct relevance and relatedness to the research questions framed at the beginning. The articles that met these criteria were then subjected to 20% double checking for validity of inclusion/exclusion by three colleagues who were very familiar with the Tswana culture. Ten studies out of a hundred studies met the criteria. The ten studies were expectedly selected based on impact factor (greater than 1.5) and on the results of the databases searches available to us at the time we undertook the systematic review. The full texts of each of the ten studies selected were retrieved for closer examination.

All other studies have been tactically excluded for the main reason of questionable generalizability as it applies to the focus of this paper. Thus, the perception of and use of clear exposition of the studies was the final determinant of the evidence I have relied upon and navigating the scope with the use of deductive and inductive arguments, where necessary.

Apart from following the criterion of clear exposition, we applied the criteria of triangulation, crystallization, respondent validation, scientific data collection and analysis

techniques, the reflexivity of the researcher, attention to negative cases, fair dealing and relevance as consideration for reaching valuable analyses discussions and recommendation. It was the ten articles based on this study that constituted the cohort used in this systematic review.

This systematic review typically followed the PRISMA flow diagram of papers selection recommended by the PRISMA Group led by Moher, Liberati, Tetzlaff and Altma (2009) and which is made available and used subject to the terms of the Creative Commons Attribution (See http://www.prisma-statement.org/usage.htm).

The studies were coded using an inductively developed thematic framework that responds to the main research question. Thus, the themes that were commonly discussed in the literature were developed further relying on coding consistency. The results of the review are herewith presented in line with the framework we had articulated here.

Results and Discussion

The strategies for assessing social engagement implies the need to rely essentially on both deductive and inductive techniques.

Applying the deductive technique enabled me to reach some conclusions by reasoning from general cultural beliefs to particular cases of social engagement. It helped me to determine the implications of specific actions in the social transactions taking place in the Kgotla.

Inductive techniques enabled me to reach conclusions by reasoning from particular facts or examples in order to identify and highlight general assumptions guiding social engagements in a typical Kgotla.

These strategies applied in analysing the data derived from the literature provide the basis for "tentative" positions articulated in this results and discussions section as follows:

The Nature of the Informal Adult Learning Functionality of the Kgotla that Might not Have Been Thoroughly Studied and Reported

Basically, the kgotla performs social stability activities that frequently allow the younger members of the community to participate in the role of observers to a great extent. The adult members of the community are assumed to be the custodians of the culture and traditions of the people from time past. In fact, traditional African worship systems frequently saddle them with the primary responsibility for connecting the younger generations to the ancestors. In this way, the younger adult populations may be allowed in to observe the interactions and decision-making processes. Of course, there are opportunities for asking for explanations as to why certain things are done in a particular way; but, in this case, there is normally not much ambience created for very critical analysis of the systems and processes as any attempt to move in such a direction may be interpreted in a different way.

In a very determinant way, the kind of adult learning that is afforded by the kgotla is largely informal. It is not based on any systematically arranged or planned, implemented, and evaluated curricula as it is often found in the non-formal and formal adult learning formats. But, even at that, it is useful for the valuable reason that helps to bridge the often-yawning gap in social transactions between the older and younger generations of community members.

The Kinds of Social Engagement Actions and Possibilities with which the Kgotla deal

Social engagement that occurs in the kgotla was qualitatively assessed by way of observations of the transactions happening in the immediate neighbourhood where the elders are assembled. Qualitatively, one observed the frequency of social activity taking place in the kgotla. The serious lull, from observations and data reported in the literature, is that the meetings held at the kgotla are not as frequent as one has expected. However, where the kgotla takes on responsibility for allocating lands for development purposes, the meetings may take place almost every four weeks.

The kgotla is very prominent in expanding and sustaining the social networking activities of the elderly. The elderly frequently visit the kgotla to socialize with their peers even when their is no meeting. This kind of engagement ensures that loneliness among the elderly is reduced to the barest minimum.

Perhaps by far the most dominant social engagement manifestation of the kgotla is noticeable in the aspects of the perceived social support. In line with existing literature on this subject, the researcher was interested in the frequency of social activity, which was assessed by asking how often during the past year participants engaged in at least three common types of activities that involve social interaction like adjudication in family disputes, misunderstanding between or among different persons or families in the community. It was frequently indicated that the elderly's engagement outside the kgotla meetings frequently add value to social stability among the people.

The Possibilities for Abuse in the Determination of Such Actions

When the kgotla sits, the circle of elders is poised to watch out for any signs of abuse in the determination and settlement of communal disputes arising from land matters or family squabbles. One way of guaranteeing this protection is to ensure that the most elderly persons presiding over the affairs of the kgotla do not make decisions all by themselves. There is therefore this system of checks and balances on the holders of power and authority in the Kgotla.

The Legitimate Grounds Held by the Person Determining the Actions at any Point in Time

The legitimate authority that the elder presiding over the kgotla business usually comes from the generally accepted lineage structure of the community. In that way, nobody would be expected to question the authority of the elderly person presiding over the transactions at any point in time.

Should there be any stalemate in the transactions of the kgotla, opportunity exists for referring such disputes to the Kgosi who is held in the position of the king. That way, fairness is maintained in the community.

Cultural Procedures that Exist in Determining and Implementing the Set of Actions

Generally, disputes among family members are to be amicably resolved with the most elderly person presiding. When this fails, such disputes can be referred to the kgotla. That way, other elderly persons in the community come together to help resolve such disputes to the satisfaction of everybody.

The kgotla that meets over any specific issue ensures that all the heads of families in the community are brought in the specific sitting of the elderlies. This also creates opportunity for the elderly to be much more regularly involved in social engagements taking place in the community.

Decisions reached are expected to be strictly implemented. The elderly person presiding over the kgotla is free to delegate the supervisory function to another elderly person who is expected to report back at the end of implementing the decision reached at the kgotla meeting.

The Tswana Culture Prioritization of Items in Social Engagement

In the first place, the kgotla plays the role of serving as the custodian of the people's culture. It is easier for the younger people to learn from the collective wisdom of the elders sitting at the kgotla than for one to get all the information needed about the community from one's family head alone. This has become even more daunting in the advent of modernization and tendency for the younger generation to settle outside of one's immediate community for reasons of scouting for means of living and the search for modern education.

Settlement of disputes arising from members of the community comes into the second position in the deliberations of the kgotla. Of course, disputes have the potential of upsetting the social stability of the people. The course of arguing cases relying on the prevailing cultural history and tradition brings the elderly into the procedures of serious engagements for all times, and therefore the people get to understand their common interests and values even more.

The Person Identified to Accept the Responsibility and Accountability for the Relevant Social Engagement Action

Overall, the **Kgosi** of the families making up the community is the designated person responsible and accountable for relevant social engagement actions. However, the Kgosi cannot be everywhere, and very often the headman of the villages making up his kingdom are expected to hold office in situ. In playing this role, the village headman reports frequently all matters over which he presided. Should any need arise for a review of such matters, the Kgosi is expected to seek for the intervention of the other senior

elders in the community. Overall responsibility and accountability should therefore be residing on the Kgosi.

Conclusion

The kgotla is a very critical cultural artefact that features informal adult learning activities that are mainly interactive. Measuring the quantitative impacts of the kgotla in terms of its functionality in social engagement, becomes difficult to a great extent. But even at that the kgotla provides a social stability and sociability caveat that other cultures in Africa may not easily pick on in these days of technology. The kgotla offers profound opportunities for promoting the sociability propensities of the elderly. The researcher had indicated from the very onset that concern was not over the search for the qualitative measures of neuroticism, distress proneness and extraversion, which are obviously outside my competence.

Beyond the indication of social stability and sociability, it was clear to me that the fact that the elderly would have to walk some distance to and from the kgotla meetings surely involves some amount of the frequency of engagement in physical activity.

The fact that the elderly would have to appear frequently in kgotla meetings suggests to me that those who walk such distances are expected to be neatly dressed as well. Getting out of their homes and actively engaging in discussions at the kgotla suggests to me, to some extent, the absence of physical disability.

More critically, in the contexts of this paper, is the fact that the kgotla has survived the onslaught of modernity over the ages. With the emergence of COVID-19 changing the normal way of doing things, the relevance of the kgotla hangs precariously on a social scale that can swing either way. However, the fact that the kgotla had similarly survived globalization and technology over the years, somewhat suggests that this is one cultural artefact that the Tswana culture and Tswana-speaking people would want to sustain by every means, including policy framing to a remarkable extent.

References

Barnes, L. L., Mendes de Leon, C. F., Wilson, R. S., Bienias, J. L., & Evans, D. A. (2004). Social resources and cognitive decline in a population of older African Americans and Whites. *Neurology, 63*, 2322–2326.

Barnes, L. L., Wilson, R. S., Bienias, J. L., Mendes de Leon, C. F., Kim, H. J., Buchman, A. S., & Bennett, D. A. (2007). Correlates of life space in a volunteer cohort of older adults. *Experimental Aging Research, 33,* 77–93.

Barnes, L. L., Wilson, R. S., Mendes de Leon, C. F., & Bennett, D. A. (2006). The relation of lifetime cognitive activity and lifetime access to resources to late-life social engagement and cognitive function: 57 cognitive functions in older African Americans. *Aging Neuropsychology and Cognition*, *13*, 516–528.

Bassuk, S. S., Glass, T. A., & Berkman, L. F. (1999). Social disengagement and incident of cognitive decline in community-dwelling elderly persons. *Annals of Internal Medicine, 131*, 165–173. Google Scholar [Crossref].

Cornoni-Huntley, J., Brock, D. B., Ostfeld, A. M., Taylor, J. O., & Wallace, R. B. (Eds.). (1986). Established populations for epidemiologic studies of the elderly: Resource data book (DHHS Publication No. NIH 86-2443). U.S. Government Printing Office.

Costa, P. T., & McCrae, R. R. (1992). The five-factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders*, 6(4), 343-359. https://doi.org/10.1521/pedi.1992.6.4.343

Cheng, S. T., & Chan, A. C. M. (2004). The multidimensional scale of perceived social support: Dimensionality and age and gender differences in adolescents. *Personality and Individual Differences, 37*, 1359–1369.

Glass, T. A, De Leon, C. F. M., Bassuk, S. S., Berkman, L. E. (2006). Social engagement and depressive symptoms in late life: Longitudinal findings. *Journal of Aging and Health, 18*, 604-628.

Herzog, A. R., Ofstedal, M. B., & Wheeler, L. M. (2002). Social engagement and its relationship to health. *Clinics in Geriatric Medicine 18*, 593-609.

Holtzman, R. E., Rebok, G. W., Saczynski, J. S., Kouzis, A. C., Doyle, K. W., & Eaton, W. W. (2004). Social network characteristics and cognition in middle-aged and older adults. *Journal of Gerontology: Psychological Sciences, 59*B, 278–284.

Katz, S., Ford, A. B., Moskowitz, R. W., Jackson, B. A., & Jaffe, M. W. (1963). Studies of illness in the aged. The index of ADL: A standardized measure of biological and psychosocial function. *Journal of the American Medical Association, 185,* 914–923.

Khangura, S., Konnyu, K., Cushman, R., Grimshaw, J., & Moher, D. (2012). Evidence —summaries: The evolution of a rapid review approach. *Systematic Reviews*, *1*(10), 1-9. doi:10.1186/2046-4053-1-1

Kohout, R., Berman, L., Evans, D., & Cornoni-Huntley, J. (1993). Two shorter forms of the CES-D (Center for Epidemiological Studies Depression) depression symptoms index. *Journal of Aging Health, 5,* 179–193.

Kolb, P. (2010). *Social work practice with ethnically and racially diverse nursing home residents and their families.* Columbia University Press.

McPhillips, J. B., Pellettera, K. M., Barrett-Connor, E., Wingard, D. L., & Criqui, M. H. (1989). Exercise patterns in a population of older adults. *American Journal of Preventive Medicine, 5*(2), 65–72.

Mendes de Leon, C. F., Glass, T. A., & Berkman, L. F. (2003). Social engagement and disability in a community population of older adults: The New Haven EPESE. *American Journal of Epidemiology, 157*, 633–642.

Moher D., Liberati A., Tetzlaff, J, Altman, D.G.; PRISMA Group (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med. 2009;6(7): e1000097. doi: 10.1371/journal.pmed.1000097

Mor, V., Branco, K., Fleishman, J., Hawes, C., Phillips, C., Morris, J., & Fries, B. (1995). The structure of social engagement among nursing home residents. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 50*(1), 1-8. Google Scholar / Crossref/Medline/18/

Radloff, L. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401.

Rowe, J. W., & Khan, R. L. (1998). *Successful aging*. Random House. Google Scholar [Crossref]

Wilson, R.S., Barnes, L.L., Mendes de Leon, C.F., Aggarwal, N.T., Schneider, J.S., Bach, J., Pilat, J., Beckett, L.A., Arnold, S.E., Evans, D.A., & Bennett, D.A. (2002). Depressive symptoms, cognitive decline, and risk of AD in older persons. *Neurology*, 59(3), 364-370.

Wilson, R. S., Mendes de Leon, C. F., Barnes, L. L., Schneider, J. A., Bienias, J. L., Evans, D. A., & Bennett, D. A. (2002). Participation in cognitively stimulating activities and risk of incident Alzheimer disease. *Journal of the American Medical Association, 287*, 742–748.

Wilson, R. S., Beckett, L. A., Bienias, J. L., Evans, D. A., & Bennett, D. A. (2003). Terminal decline in cognitive function. *Neurology, 60*, 1782–1787.

Wilson, R. S., Barnes, L. L., & Bennett, D. A. (2003). Assessment of lifetime participation in cognitively stimulating activities. *Journal of Clinical and Experimental Neuropsychology, 25*, 634–642.

Wilson, R. S., Bienias, J. L., Mendes de Leon, C. F., Evans, D. A., & Bennett, D. A. (2003). Negative affect and mortality in older persons. *American Journal of Epidemiology, 158*, 827–835.

Wilson, R. S., Bienias, J. L., Evans, D. A., & Bennett, D. A. (2004). Religious Orders Study: Overview and change in cognitive and motor speed. *Aging Neuropsychology and Cognition, 11,* 280–303.

Wilson, R. S., Mendes de Leon, C. F., Bennett, D. A., Bienias, J. L., & Evans, D. A. (2004). Depressive symptoms and cognitive decline in a community population of older persons. *Journal of Neurology, Neurosurgery, and Psychiatry, 75*, 126–129.

Wilson, R. S., Barnes, L. L., Krueger, K. R., Hoganson, G., Bienias, J. L., Bennett, D. A. (2005). Early and late life cognitive activity and cognitive systems in old age. *Journal of the International Neuropsychological Society, 11*, 400–407.

Wilson, R. S., Scherr, P. A., Schneider, J. A., Tang, Y., Bennett, D. A. (2007). Relation of cognitive activity to risk of developing Alzheimer's disease. *Neurology, 20*, 1911–1920.

Yeh, S. C. J., & Liu, Y. Y. (2003). Influence of social support on cognitive function in the elderly. *BMC Health Service Research, 3,* 1–9

Zhang, W., Lin, L., & Tang, F. (2018). Social engagement and sense of loneliness and ⸺hopelessness: Findings from the PINE study. *Gerontology and Geriatric Medicine*, *4*, 1-8. https://doi.org/10.1177/2333721418778189.

Zimet, G. D., Dahlem, N.W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*, 30–41.

Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990). Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 55*, 610–617.

Zunzunegui, M. V., Alvarado, B. E., Del Ser, T., & Otero, A. (2003). Social networks, social integration, and social engagement determine cognitive decline in community-dwelling Spanish older adults. *Journal of Gerontology: Social Sciences, 58*B, S93-S100.