

Article

Social Participation as a Predictor of Morbid Thoughts and Suicidal Ideation among the Elderly Population: A Cross-Sectional Study on Four Low-Middle-Income Countries

Bishwajit Ghose ^{1,2,*} , Rui Huang ¹, Josephine Etowa ² and Shangfeng Tang ³ 

¹ School of Pharmacy, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China; hys19810612@163.com

² Faculty of Health Sciences, School of Nursing, University of Ottawa, Ottawa, ON K1N 6N5, Canada; josephine.etowa@uottawa.ca

³ School of Medicine and Health Management, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China; sftang@hust.edu.cn

* Correspondence: brammaputram@gmail.com

Abstract: Social wellbeing constitutes a critical aspect of one's health, quality of life, and overall psychosocial wellbeing. Social isolation and perceived loneliness are growing public health concerns as they are considered to be important risk factor for poor physical and mental health outcomes. Not much is known about how the level of one's social participation is associated with morbid thought and suicidal ideation. In the present study, we aimed to investigate whether social participation shows any significant correlation with morbid thought and suicidal ideation among the elderly population.

Methods: Cross-sectional data were collected from Wave 1 of the Study of Global AGEing and Adult Health (SAGE). The sample population consisted 2018 men and women aged 65 years and above from the following countries: China (n = 787), Ghana (n = 278), India (n = 560), and Russia (n = 396). Outcome variables of self-reported occurrence of morbid thoughts and suicide ideation during the past 12 months were reported. **Results:** A great majority of the participants reported not participating in activities such as public meetings (84.6%), club meeting (49.6%), neighborhood activities (46%), and religious activities (57.2%). Those who reported attending public meetings several times a year had a higher likelihood of reporting having morbid thoughts (predicted probability = 1.24, 95% CI = 1.02, 1.52). However, the association was no longer significant after stratifying by sex. Attending clubs (marginal effect = 0.61, 95% CI = 0.49, 0.76) and neighborhood activities (predicted probability = 0.71, 95% CI = 0.58, 0.88) several times a year showed protective effects against morbid thoughts. Being visited by friends several times a month (predicted probability = 0.52, 95% CI = 0.40, 0.67) and visiting friends (predicted probability = 0.61, 95% CI = 0.50, 0.75) several times a year also showed lower likelihood of morbid thoughts. Similar effects were observed for attending social gatherings with colleagues and social events as well. **Conclusions:** The present findings suggest that there exist significantly positive associations between participation in social activities and morbid thoughts and suicidal ideation among the elderly population in the sample countries. More in-depth studies are necessary to investigate the barriers to participation in social activities as well as the role of the quality of social relationships with experiencing suicidal thoughts.

Keywords: elderly health; morbid thought; suicidal ideation; social participation



Citation: Ghose, B.; Huang, R.; Etowa, J.; Tang, S. Social Participation as a Predictor of Morbid Thoughts and Suicidal Ideation among the Elderly Population: A Cross-Sectional Study on Four Low-Middle-Income Countries. *Psychiatry Int.* **2021**, *2*, 169–179. <https://doi.org/10.3390/psychiatryint2020013>

Academic Editor: Motohiro Okadao

Received: 22 February 2021

Accepted: 23 April 2021

Published: 5 May 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Social wellbeing is considered an integral part of one's overall health and wellbeing [1–3]. The social aspects of health are widely recognized among researchers and practitioners and is reflected in the definition of health by the World Health Organization (WHO) “state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity” [4]. The Mental health action plan for 2013–2020 by WHO places a strong emphasis on the promotion

of mental health and social wellbeing especially among the elderly population [5]. Social conditions are strongly correlated with behavioral and health-related outcomes, and socially active life is an important contributor to successful aging. The concept of social health (refers to the ability to interact and form meaningful relationships with others) has been gaining increasing prominence in health and demographic research. Maintaining healthy social connections exert a strong influence on our ability to cope with daily life and social situations, which in turn can boost mental and physical health and influence the risk of morbidity and mortality [6]. Despite the growing research evidence, loneliness and social isolation are becoming significant challenges for the healthcare sector due to their worsening effect on psychological morbidities such as major depressive disorder, self-harm, and suicidal ideation. Although suicidal behavior affects adults of all ages, it is particularly challenging among the elderly due to added age-related risk factors that contribute to deteriorating mental and cognitive health [7–9]. Not being able to maintain a satisfactory level of social interaction can affect one's perception of support, undermine core values of life, and lead to emotional dysregulation, which enhances the risk of suicidal ideation [10].

Morbid thoughts and suicidal ideations occur more frequently among people of advanced ages [11] with the rate ranging from 10% to 20% in European countries [12]. The risk factors are likely to vary considerably across different demographic and sociocultural context, but there are some commonly documented factors that are strongly associated with such thoughts such as accumulating experience of deaths of family members, friends, and other social relationships, traumatic life events, and debilitating physical conditions linked to aging that aggravate psychological morbidity. Despite being more dependent on physical and emotional care, older people are less likely to be able to maintain an active social life and more likely to have to live alone (perceived lack of social support) or far from their loved ones and not having intimate relationships to communicate and relive depressing moments. Prolonged stressful living conditions can exacerbate health, weaken self-control, drain mental energy, and give rise to situations that an individual may find unbearable. The situation gets worse among individuals with difficulties in performing the activities of daily living (ADL) and mobility issues [13,14] that prevent them from taking health promoting actions such as maintaining a healthy diet, taking routine physical exercise, participating in social events, and voluntary activities [15,16] that improve their sense of belonging and social connectedness and give of feeling of being an important part of the community. Current literature is inconsistent about the link between social connectedness and suicidal behavior. There is also a huge data gap in the areas of mental health in LMICs. In this regard, the present study aimed to address this research gap by analyzing open access data in four LMICs including China, India, Ghana, and Russia. The data were obtained from Study of Global AGEing and Adult Health (SAGE) conducted by WHO between 2007 and 2010.

2. Methods

2.1. Data Source

All data used in the current analysis were secondary and were collected from the first wave of the Study on Global Ageing and Adult Health (SAGE) conducted by World Health Organization. These were cross-sectional surveys that collected data on various aspects of health and wellbeing among men and women, and were conducted between 2007 and 2009. The countries included in the study were China, Ghana, India, and Russia. The inclusion criteria were being aged 65 years and above, and reporting experiences about morbid thoughts and suicidal ideation. Exclusion criteria were reporting having any cognitive limitations (memory and learning difficulties). As data are secondary and have been used in prior publications, survey design related information were not repeated since they were reported in the published papers [17].

2.2. Description of Variables

The outcome variables were having morbid thoughts and suicidal ideation during the last 12 months. Morbid thoughts was assessed by the question: During the last 12 months, have you thought of death, or wish you were dead? and suicide ideation by: During this period, have you ever tried to end your life? The self-reported measures of these two variables were reported in previous studies [18,19]. Both of these variables were coded as “Yes” (e.g., had morbid thought) and No (e.g., no morbid thought). The main explanatory variables were indicators of social participation [20–23], and the following variables were used as a proxy indicator: Attends (1) public meeting, (2) Club, organizational meeting, (3) Neighborhood engagement, (4) Visited by friends, (5) Visits friends, (6) Social gathering with coworkers, (7) Religious services, (8) Social meetings, activities, events, and (9) whether or not the participant wants to get out more. Variables 1 to 8 were answered as 1/2 times per year; 1/2 times per month; 1/2 times per week; and Daily. These were recoded as Never; Several times/year; and Several times/month. The last variable was answered as Yes, wants to go out more; Satisfied; and Want less. The control variables were selected based on theoretical association with the outcome variables in light of the existing studies: Age (65 and above), Sex (Male/Female); Residence (Urban/Rural); Currently married (No/Yes); Education (No formal education/>primary school/Primary completed/Secondary completed/Higher); Has employment (Yes/No); has enough money to meet needs (Completely/Mostly/Moderately/A little/Not at all).

2.3. Analytical Procedure

Data were analyzed with Stata (College Station, TX, USA) version 16.1. Prevalence rates of the explanatory and outcome variables were presented as percentages in the form of bar charts. The association between the social participation and having morbid thoughts and suicide ideation was analyzed using binary regression analysis. The results were presented as marginal effects (with 95% confidence intervals) which are also known as predicted probabilities. Owing to known difference in suicidal behavior between men and women, results from regression analyses (Odds Ratios) were stratified by sex and calculated separately [17]. Statistical significance was set at $p < 0.05$.

2.4. Ethics Statement

This research was a secondary analysis of open-access data, and therefore additional ethical approval was not necessary. The study was approved by the World Health Organization Ethics Committee and all participants gave informed consent to take part in the study.

3. Results

Figure 1 shows that the percentage of having morbid thoughts and suicidal ideation was highest in Ghana and lowest in China.

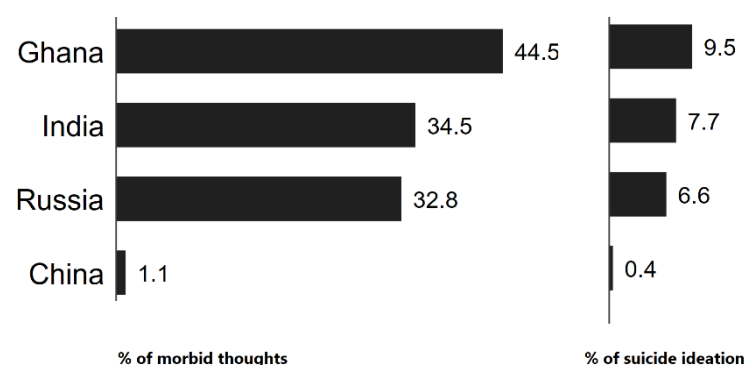


Figure 1. Percentage of having morbid thoughts and suicidal ideation in the sample population.

As illustrated by Figure 2, a great majority of the participants reported not participating in activities such as public meeting (84.6%, $n = 1707$), club meeting (49.6%, $n = 1001$), neighborhood activities (46%, $n = 928$), religious activities (57.2%, $n = 1154$). Visiting friends was the most reported daily activity (38.7%, $n = 781$) followed by being visited by friends (10.6%, $n = 214$) and taking part in social gatherings with colleagues (2.3%, $n = 46$). Almost a quarter of the participants reported that they would like to go out more (23.4%, $n = 472$) while 34.9% ($n = 704$) were satisfied with their current level of outing.

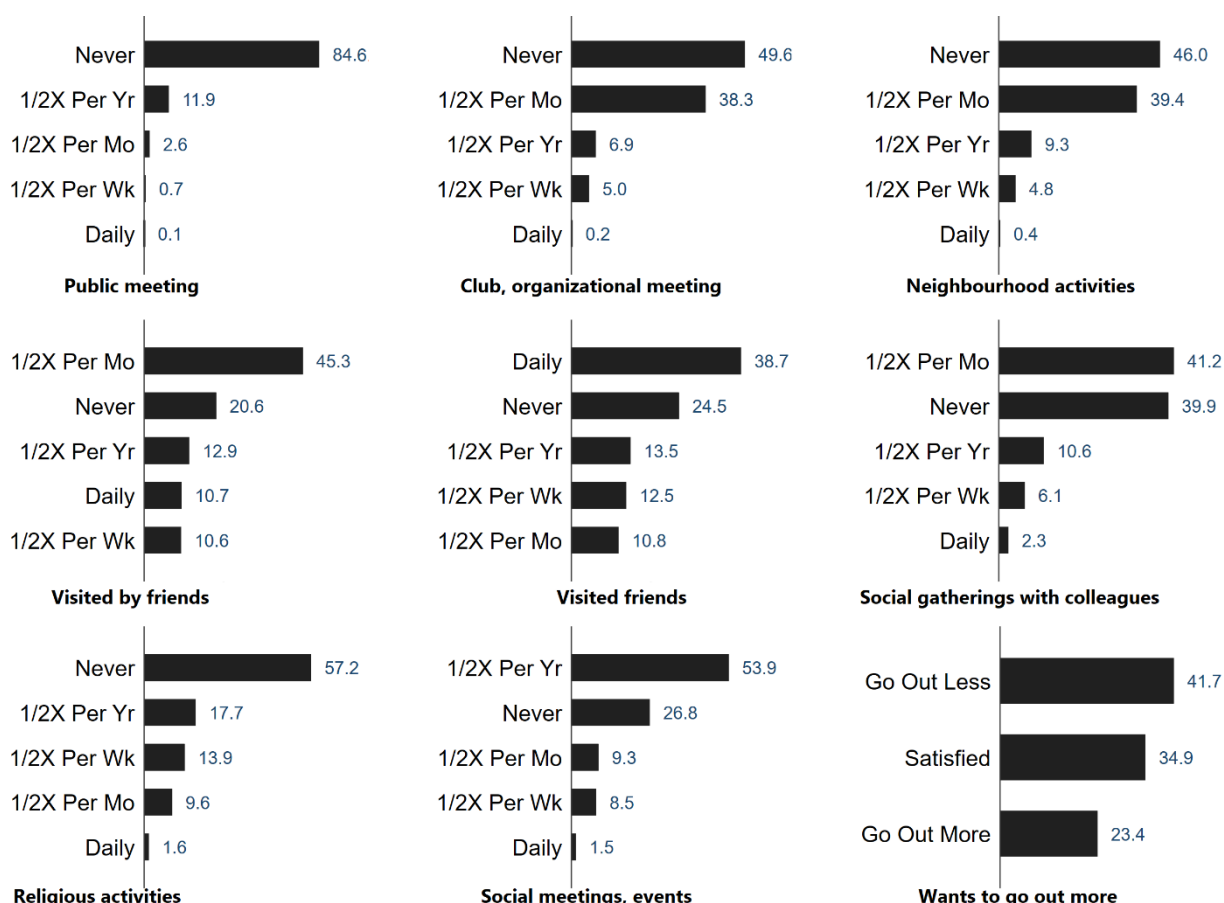


Figure 2. Percentage of attending social activities by type.

Selected sociodemographic characteristics of the sample population are presented in the Appendix A (Table A1). Table 1 shows that results of the multivariate regression analysis on the association between the social participation and having morbid thoughts and suicide ideation. Those who reported attending public meetings several times a year had higher likelihood of reporting having morbid thoughts (predicted probability = 1.24, 95% CI = 1.02, 1.52). However, the association was no longer significant after stratifying by sex. Attending clubs (predicted probability = 0.61, 95% CI = 0.49, 0.76) and neighborhood activities (predicted probability = 0.71, 95% CI = 0.58, 0.88) several times a year showed protective effects against morbid thoughts. Being visited by friends several times a month (predicted probability = 0.52, 95% CI = 0.40, 0.67) and visiting friends (predicted probability = 0.61, 95% CI = 0.50, 0.75) several times a year also shows lower likelihood of morbid thoughts. Similar effects were observed for attending social gatherings with colleagues and social events as well. Those who were satisfied with their outdoor activities (predicted probability = 0.73, 95% CI = 0.61, 0.88) and those who would like to go out less (predicted probability = 0.62, 95% CI = 0.49, 0.79) also had lower likelihood of having morbid.

Table 1. Association between social participation and morbid thoughts.

	Overall	Men	Women
Public Meeting (Never)			
Several times/year	1.24 * [1.02,1.52]	0.90 [0.63,1.29]	1.02 [0.21,4.97]
Several times/month	0.65 [0.31,1.36]	0.37 [0.10,1.40]	0.47 [0.07,3.00]
Club (Never)			
Several times/year	0.61 *** [0.49,0.76]	0.90 [0.62,1.32]	1.60 [0.17,15.07]
Several times/month	0.62 * [0.42,0.91]	0.68 [0.35,1.32]	0.97 [0.19,5.01]
Neighborhood Activities (Never)			
Several times/year	0.71 ** [0.58,0.88]	0.78 [0.56,1.10]	0.12 [0.01,1.26]
Several times/month	1.11 [0.80,1.54]	0.78 [0.43,1.41]	0.74 [0.13,4.21]
Visited by Friends (Never)			
Several times/year	0.71 ** [0.57,0.89]	0.68 [0.43,1.09]	0.71 [0.07,7.04]
Several times/month	1.21 [0.94,1.56]	0.68 [0.40,1.17]	0.91 [0.13,6.16]
Visited Friends (Never)			
Several times/year	1.04 [0.84,1.30]	1.03 [0.67,1.60]	1.14 [0.48,2.70]
Several times/month	0.52 *** [0.40,0.67]	0.86 [0.51,1.45]	0.40 [0.12,1.33]
Gathering with Colleagues (Never)			
Several times/year	0.61 *** [0.50,0.75]	0.74 [0.51,1.06]	1.59 [0.77,3.26]
Several times/month	1.14 [0.91,1.44]	1.63 * [1.07,2.49]	0.92 [0.41,2.09]
Religious Programs (Never)			
Several times/year	1.35 [0.87,1.64]	1.29 [0.88,1.89]	0.52 [0.22,1.21]
Several times/month	1.48 [0.94,1.93]	2.36 ** [1.41,3.94]	0.35 [0.11,1.09]
Social Meetings/Programs (Never)			
Several times/year	0.80 * [0.65,0.98]	1.09 [0.73,1.64]	0.53 * [0.32,0.88]
Several times/month	0.97 [0.71,1.32]	1.01 [0.57,1.79]	0.31 * [0.13,0.77]
Want to Go out More (yes, More)			
Satisfied	0.73 *** [0.61,0.88]	0.61 ** [0.44,0.86]	0.48 [0.21,1.10]
Go out less	0.62 *** [0.49,0.79]	0.83 [0.51,1.33]	0.22 * [0.06,0.81]

N.B. Marginal effects; Exponentiated coefficients; 95% confidence intervals in [] brackets. All models are adjusted for Age, sex, residency, country, education, employment, financial situation, and self-rated health. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

As shown in Table 2, the inverse association with suicidal ideation was observed for attending social meetings only, and the association was significant for both men (predicted probability = 0.30, 95% CI = 0.19, 0.47) and women (predicted probability = 0.53, 95% CI = 0.32, 0.88). Women who would like to go out less often were less likely to report suicidal ideation (predicted probability = 0.22, 95% CI = 0.06, 0.81).

Table 2. Association between social participation and suicidal ideation.

	Overall	Men	Women
Public Meeting (Never)			
Several times/year	0.99 [0.68,1.42]	1.12 [0.68,1.84]	0.90 [0.25,3.30]
Several times/month	0.50 [0.12,2.16]	0.32 [0.03,3.82]	0.81 [0.09,7.50]
Club (Never)			
Several times/year	0.76 [0.51,1.13]	0.56 * [0.31,0.99]	0.74 [0.13,4.21]
Several times/month	0.67 [0.35,1.31]	0.42 [0.15,1.15]	0.71 [0.07,7.04]
Neighborhood Activities (Never)			
Several times/year	1.20 [0.83,1.73]	1.36 [0.82,2.26]	0.53 [0.23,1.19]
Several times/month	2.02 ** [1.19,3.45]	2.10 * [1.08,4.10]	0.58 [0.25,1.38]
Visited by Friends (Never)			
Several times/year	0.83 [0.55,1.24]	1.29 [0.75,2.21]	0.78 [0.36,1.71]
Several times/month	0.84 [0.53,1.33]	1.58 [0.88,2.86]	0.40 [0.12,1.33]
Visited Friends (Never)			
Several times/year	1.11 [0.74,1.64]	0.79 [0.48,1.32]	1.59 [0.77,3.26]
Several times/month	0.69 [0.42,1.11]	0.55 * [0.31,0.98]	0.92 [0.41,2.09]
Gathering with Colleagues (Never)			
Several times/year	1.06 [0.73,1.56]	0.98 [0.59,1.63]	0.56 [0.29,1.07]
Several times/month	1.93 ** [1.29,2.90]	1.86 * [1.11,3.13]	0.52 [0.22,1.21]
Religious Programs (Never)			
Several times/year	1.36 [0.95,1.95]	1.89 ** [1.17,3.04]	0.35 [0.11,1.09]
Several times/month	1.95 ** [1.23,3.07]	2.59 ** [1.31,5.11]	0.79 [0.19,3.37]
Social Meetings/Programs (Never)			
Several times/year	0.49 *** [0.34,0.70]	0.30 *** [0.19,0.47]	0.53 * [0.32,0.88]
Several times/month	0.67 [0.39,1.14]	0.50 [0.24,1.02]	0.31 * [0.13,0.77]
Want to Go out More (Yes, More)			
Satisfied	0.87 [0.62,1.21]	0.93 [0.58,1.49]	0.48 [0.21,1.10]
Go out less	0.65 [0.41,1.02]	0.80 [0.45,1.41]	0.22 * [0.06,0.81]

N.B. Marginal effects; Exponentiated coefficients; 95% confidence intervals in [] brackets. All models are adjusted for Age, sex, residency, country, education, employment, financial situation, and self-rated health. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

4. Discussion

Based on data from the Study of Global Ageing and Adult Health (SAGE), the present study aimed was to assess whether social participation shows any significant correlation with morbid thought and suicidal ideation among the elderly population in four developing countries including China, Ghana, India, and Russia. Findings indicated that a great majority of the participants reported never participating in activities such as public meeting, club meeting, neighborhood activities, and religious activities. Further analysis revealed a significant association between 'social participation' indicators with morbid thought and suicidal ideation. Regarding the reporting of morbid thoughts and suicidal ideation, the

percentage was lowest among Chinese participants followed by those from Russia and India, while participants from Ghana had the highest percentage for both. Prior studies on depression among the Chinese supports the hypothesis that the Chinese tend to deny depression or express it somatically [24], which could explain the noticeably lower levels of expressed morbid or suicidal thoughts. Although we did not investigate the barriers to participating in the given set of social activities, it is presumed that elderly individuals in developing countries enjoy relatively lower community engagement programs or facilities. Lack of age-friendly transportation and urban infrastructure could be other potential explanations behind this considerably lower social participation rate [25,26]. As expected, visiting friends was the most commonly mentioned daily activity followed by being visited by friends and taking part in social gatherings with colleagues. We also found that close to a quarter of the participants reported that they would like to go out more frequently, while about thirty percent were satisfied with their current level of outing. This finding indicates that the level of satisfaction with the current frequency of outdoor activities is suboptimal and that the level of socialization could be improved by addressing the potential barriers. Exploring the barriers was not aimed at the current analysis, and therefore remains open for further research.

Results of regression analysis revealed a generally protective effect of social activities in both morbid thoughts and suicide ideation. For instance, participants who reported attending public meetings several times a year had higher likelihood of reporting having morbid thoughts. It is to be noted that this association was not found to be significant after stratifying the analysis by sex. Attending clubs and neighborhood activities several times a year showed protective effects against morbid thoughts. Being visited by friends several times a month and visiting friends several times a year also shows a lower likelihood of morbid thoughts. Similar effects were observed for attending social gatherings with colleagues and social events as well. Those who were satisfied with their outdoor activities and those who would like to go out less also had lower likelihood of having morbid thoughts. Regarding suicidal ideation, the association was significantly negative only with attendance of social meetings/programs. An interesting aspect of these analyses is that in most cases the associations lost their statistical significance when reported separately by sex. This might be due to the differences in the ways men and women feel the need of socialization and engage in social activities. From previous findings, women tend to participate more in community activities compared with men who are more likely to engage in physical activities [27]. In addition, some of the associations were counterintuitive, especially the higher likelihood of attending religious programs with morbid thoughts and suicidal ideation. Of note, this association was true only among men. These nuanced differences might be rooted in the country-specific cultural and environmental contexts that could be better explored by qualitative studies.

Our study has important practical and theoretical implications. The survey measured suicidal ideation during the last 12 months. We know that suicidal ideations tend to be fleeting and the majority of those with suicidal thoughts do not go on to make a suicide plan or commit suicide [28]. The relationship is nuanced, although we certainly hope that increasing social participation would prevent not only suicidal thoughts but also suicides. Several studies have explored the social and environmental aspects of suicidal behavior among the adult population and posited that stress factors embedded in the social, cultural, and political environment can lead to psychological degradation which in turn triggers suicide and depression. Population-based studies have been highly insightful in terms of exploring these diverse factors occurring at an individual and social level, mostly from high-income settings. The present study makes an important contribution to the current literature by investigating these factors using cross-sectional data on five low-middle income countries. Another important aspect was the homogeneity of the instruments used in the surveys that made the cross-cultural comparison of the risk factors easier. Although the surveys are cross-sectional, the findings open an avenue for further research and policy development in the low-middle income settings that are experiencing a rising proportion

of an aging population. The Mental health action plan for 2013–2020 by the WHO places strong emphasis on the promotion of mental health and has set an ambitious target of a 10% reduction in suicide rates in all countries [5]. Suicide is a growing phenomenon in the developing countries, and therefore, the policy actors need to pay urgent attention to the risk factors such as social participation and wellbeing as a preventive measure.

The importance of social participation in healthcare research came to the limelight with the 1978 Alma Ata declaration that regarded community as central to the primary healthcare planning [23] as maintained by Debra et al. Social relationships—both quantity and quality—affect mental health, health behavior, physical health, and mortality risk [20]. The ongoing demographic and epidemiological transition marking a global rise in NCDs, especially in the LMICs, has also resulted in a greater focus on the role of maintaining a socially and physically active life [29–31]. Given the aging population structure and greater demand for long-term care and self-management, the potential of social participation to promote healthy lifestyle behavior and physical and mental health is emerging as a public health priority. In the context of developing countries, where the disease profile is generally characterized by a higher burden of acute infectious diseases, the growing prevalence of NCDs and multi-morbidity is posing significant challenges for the healthcare systems [32]. Application of people-centric and social determinants of health-based approach may prove beneficial in tackling the mounting social and healthcare challenge of population aging, e.g., burden of mental health disorders including self-harm behavior. It is expected that the LMICs will account for most of the population growth in the coming decades, and therefore, countries in the Global South will need to develop innovative social policies to foster community participation with the broader objectives of promoting physical and psychosocial wellbeing for the increasingly wealthy and aging population. In order to achieve that, further studies will be necessary to understand the factors that encourage or prevent adequate social participation, e.g., quality of built environment, neighborhood security, and transportation facilities [33–35].

This study has several limitations to report. Firstly, the data were secondary and we have no choice over the selection of the variables to include in the analysis. There are several important factors that were not available such as environmental, medication use, and stressful events which are strong determinants of mental health and wellbeing. The data were collected several years ago, and therefore, the prevalence of the individual factors may not be representative of the current situation. Another important limitation was the self-reported nature of the measurements of both exposure and outcome variables. Reporting bias is a common challenge in population-based surveys, especially when involving issues as sensitive mental health and social connectedness. Furthermore, we assessed the level of social participation only quantitatively which fails to capture the qualitative aspects of these indicators. Someone may or may not feel encouraged to attend the community programs depending on the perceived quality of the relationships within a particular group. It is possible that elderly individuals experiencing stressful relationships can be more vulnerable to social isolation and having suicidal thoughts. Future studies should aim to address these limitations and make more in-depth investigations by including the quality of the social relationships which will help understand the relative importance of number and satisfaction with the relationships. Lastly, the data were cross-sectional, and therefore, the associations may not be indicative of any causal relationships.

5. Conclusions

Self-harm behavior such as morbid thought and suicide ideation is a growing public health issue and requires strong research and policy attention. Based on our analysis of SAGE data collected by the WHO, the present findings suggest that there exist significantly positive associations between participation in social activities and morbid thoughts and suicidal ideation among the elderly population in the sample countries. The findings should be interpreted in light of the fact that the data were cross-sectional and therefore no directionality of the findings and causal inference can be assumed. Based on the

findings, we recommend that further studies are necessary to investigate the barriers to participation in social activities as well as the role of the quality of social relationships with self-harm behavior.

Author Contributions: Conceptualization, B.G.; data curation, B.G.; formal analysis, R.H., J.E. and S.T.; investigation, B.G., R.H., J.E. and S.T.; methodology, B.G. and R.H.; project administration, B.G., R.H., and J.E.; software, B.G. and J.E.; supervision, R.H.; visualization, J.E. resources, S.T.; Writing—original draft, S.T.; All authors have read and agreed to the published version of the manuscript.

Funding: None to report.

Institutional Review Board Statement: Ethical review and approval were waived for this study as the data were obtained from public domain in anonymized form.

Informed Consent Statement: Not applicable.

Data Availability Statement: All data are available through the official website of WHO: <https://www.who.int/healthinfo/sage/en/> (accessed on 4 July 2019).

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Sample profile.

Variables				
Age (Mean/SD = 69.81/6.56) (Min/Max = 65/106)				
Sex	Freq.	Percent	Cum.	
Male	422	25.09	25.09	
Female	1260	74.91	100	
Residence	Freq.	Percent	Cum.	
Urban	1326	65.64	65.64	
Rural	694	34.36	100	
Currently married	Freq.	Percent	Cum.	
No	701	34.70	34.70	
Yes	1319	65.3	67.38	
Education	Freq.	Percent	Cum.	
No formal education	534	31.75	31.75	
>primary school	134	7.97	39.71	
Primary completed	107	6.36	46.08	
Secondary completed	762	45.3	91.38	
Higher	145	8.62	100	
Has employment	Freq.	Percent	Cum.	
Yes	1003	58.48	58.48	
No	712	41.52	100	
Enough money to meet needs	Freq.	Percent	Cum.	
Completely	46	2.28	2.28	
Mostly	111	5.5	7.78	
Moderately	420	20.8	28.58	
A little	1120	55.47	84.05	
Not at all	322	15.86	100	

References

1. Waite, L.J. *Social Well-Being and Health in the Older Population: Moving beyond Social Relationships*; National Academies Press (US): Washington, DC, USA, 2018.
2. Tough, H.; Siegrist, J.; Fekete, C. Social relationships, mental health and wellbeing in physical disability: A systematic review. *BMC Public Health* **2017**, *17*, 414. [[CrossRef](#)]
3. Linton, M.-J.; Dieppe, P.; Medina-Lara, A. Review of 99 self-report measures for assessing well-being in adults: Exploring dimensions of well-being and developments over time. *BMJ Open* **2016**, *6*, e010641. [[CrossRef](#)]
4. Sartorius, N. The Meanings of Health and its Promotion. *Croat. Med. J.* **2006**, *47*, 662–664. [[PubMed](#)]

5. Mental Health Action Plan 2013–2020. Available online: <https://www.who.int/publications-detail-redirect/9789241506021> (accessed on 31 March 2021).
6. Australia, H.I.F. What Is Social Health? Definitions, Examples and Tips on Improving Your Social Wellness. Available online: <http://blog.hif.com.au/mental-health/what-is-social-health-definitions-examples-and-tips-on-improving-your-social-wellness> (accessed on 29 October 2020).
7. Conejero, I.; Olié, E.; Courtet, P.; Calati, R. Suicide in older adults: Current perspectives. *Clin. Interv. Aging* **2018**, *13*, 691–699. [\[CrossRef\]](#)
8. Carlo, C.; Vittoria, M.; Natalia, C.; Maria, L.S.; Rossana, C. Suicide in the elderly: A 37-years retrospective study. *Acta Biomed.* **2019**, *90*, 68–76. [\[CrossRef\]](#)
9. Van Orden, K.A.; Conwell, Y. Issues in Research on Aging and Suicide. *Aging Ment. Health* **2016**, *20*, 240–251. [\[CrossRef\]](#) [\[PubMed\]](#)
10. Law, K.C.; Khazem, L.R.; Anestis, M.D. The role of emotion dysregulation in suicide as considered through the ideation to action framework. *Curr. Opin. Psychol.* **2015**, *3*, 30–35. [\[CrossRef\]](#)
11. Rurup, M.L.; Deeg, D.J.H.; Poppelaars, J.L.; Kerkhof, A.J.F.M.; Onwuteaka-Philipsen, B.D. Wishes to die in older people: A quantitative study of prevalence and associated factors. *Crisis* **2011**, *32*, 194–203. [\[CrossRef\]](#) [\[PubMed\]](#)
12. Rurup, M.L.; Pasman, H.R.W.; Goedhart, J.; Deeg, D.J.H.; Kerkhof, A.J.F.M.; Onwuteaka-Philipsen, B.D. Understanding why older people develop a wish to die: A qualitative interview study. *Crisis* **2011**, *32*, 204–216. [\[CrossRef\]](#)
13. Henry-Sánchez, J.T.; Kurichi, J.E.; Xie, D.; Pan, Q.; Stineman, M.G. Do Elderly People at More Severe Activity of Daily Living Limitation Stages Fall More? *Am. J. Phys. Med. Rehabil.* **2012**, *91*, 601–610. [\[CrossRef\]](#) [\[PubMed\]](#)
14. Guo, H.J.; Sapra, A. Instrumental Activity of Daily Living. In *StatPearls*; StatPearls Publishing: Treasure Island, FL, USA, 2020.
15. Roberts, C.E.; Phillips, L.H.; Cooper, C.L.; Gray, S.; Allan, J.L. Effect of Different Types of Physical Activity on Activities of Daily Living in Older Adults: Systematic Review and Meta-Analysis. *J. Aging Phys. Act.* **2017**, *25*, 653–670. [\[CrossRef\]](#) [\[PubMed\]](#)
16. Chou, C.-H.; Hwang, C.-L.; Wu, Y.-T. Effect of Exercise on Physical Function, Daily Living Activities, and Quality of Life in the Frail Older Adults: A Meta-Analysis. *Arch. Phys. Med. Rehabil.* **2012**, *93*, 237–244. [\[CrossRef\]](#) [\[PubMed\]](#)
17. Ghose, B.; Wang, R.; Tang, S.; Yaya, S. Engagement in physical activity, suicidal thoughts and suicide attempts among older people in five developing countries. *PeerJ* **2019**, *7*, e7108. [\[CrossRef\]](#) [\[PubMed\]](#)
18. Kline, A.; Weiner, M.D.; Interian, A.; Shcherbakov, A.; St Hill, L. Morbid Thoughts and Suicidal Ideation in Iraq War Veterans: The Role of Direct and Indirect Killing in Combat. *Depress Anxiety* **2016**, *33*, 473–482. [\[CrossRef\]](#)
19. Schmaal, L.; van Harmelen, A.-L.; Chatzi, V.; Lippard, E.T.C.; Toenders, Y.J.; Averill, L.A.; Mazure, C.M.; Blumberg, H.P. Imaging suicidal thoughts and behaviors: A comprehensive review of 2 decades of neuroimaging studies. *Mol. Psychiatry* **2020**, *25*, 408–427. [\[CrossRef\]](#)
20. Umberson, D.; Montez, J.K. Social Relationships and Health: A Flashpoint for Health Policy. *J. Health Soc. Behav.* **2010**, *51*, S54–S66. [\[CrossRef\]](#)
21. Goll, J.C.; Charlesworth, G.; Scior, K.; Stott, J. Barriers to Social Participation among Lonely Older Adults: The Influence of Social Fears and Identity. *PLoS ONE* **2015**, *10*, e0116664. [\[CrossRef\]](#)
22. Jin, S.; Trope, G.E.; Buys, Y.M.; Badley, E.M.; Thavorn, K.; Yan, P.; Nithianandan, H.; Jin, Y.-P. Reduced social participation among seniors with self-reported visual impairment and glaucoma. *PLoS ONE* **2019**, *14*, e0218540. [\[CrossRef\]](#)
23. Haldane, V.; Chuah, F.L.H.; Srivastava, A.; Singh, S.R.; Koh, G.C.H.; Seng, C.K.; Legido-Quigley, H. Community participation in health services development, implementation, and evaluation: A systematic review of empowerment, health, community, and process outcomes. *PLoS ONE* **2019**, *14*, e0216112. [\[CrossRef\]](#)
24. Parker, G.; Gladstone, G.; Chee, K.T. Depression in the planet's largest ethnic group: The Chinese. *Am. J. Psychiatry* **2001**, *158*, 857–864. [\[CrossRef\]](#)
25. Levasseur, M.; Dubois, M.-F.; Gagnéux, M.; Menec, V.; Raina, P.; Roy, M.; Gabaude, C.; Couturier, Y.; St-Pierre, C. Capturing how age-friendly communities foster positive health, social participation and health equity: A study protocol of key components and processes that promote population health in aging Canadians. *BMC Public Health* **2017**, *17*, 502. [\[CrossRef\]](#)
26. Klicnik, I.; Dogra, S. Perspectives on Active Transportation in a Mid-Sized Age-Friendly City: “You Stay Home.” *Int. J. Environ. Res Public Health* **2019**, *16*, 4916. [\[CrossRef\]](#)
27. Naud, D.; Gagnéux, M.; Bruneau, J.-F.; Alauzet, A.; Levasseur, M. Social participation in older women and men: Differences in community activities and barriers according to region and population size in Canada. *BMC Public Health* **2019**, *19*, 1124. [\[CrossRef\]](#) [\[PubMed\]](#)
28. Ng, Q.X.; Yong, B.Z.J.; Ho, C.Y.X.; Lim, D.Y.; Yeo, W.-S. Early life sexual abuse is associated with increased suicide attempts: An update meta-analysis. *J. Psychiatr. Res.* **2018**, *99*, 129–141. [\[CrossRef\]](#) [\[PubMed\]](#)
29. Gaskin, C.J.; Orellana, L. Factors Associated with Physical Activity and Sedentary Behavior in Older Adults from Six Low- and Middle-Income Countries. *Int. J. Environ. Res. Public Health* **2018**, *15*, 908. [\[CrossRef\]](#)
30. Ranasinghe, P.D.; Pokhrel, S.; Anokye, N.K. The economics of physical activity in low-income and middle-income countries: Protocol for a systematic review. *BMJ Open* **2019**, *9*, e022686. [\[CrossRef\]](#) [\[PubMed\]](#)
31. Elshahat, S.; O'Rourke, M.; Adlakha, D. Built environment correlates of physical activity in low- and middle-income countries: A systematic review. *PLoS ONE* **2020**, *15*, e0230454. [\[CrossRef\]](#)
32. Eyowas, F.A.; Schneider, M.; Yirdaw, B.A.; Getahun, F.A. Multimorbidity of chronic non-communicable diseases and its models of care in low- and middle-income countries: A scoping review protocol. *BMJ Open* **2019**, *9*, e033320. [\[CrossRef\]](#) [\[PubMed\]](#)

-
33. Foley, E.L.; Nicholas, M.L.; Baum, C.M.; Connor, L.T. Influence of Environmental Factors on Social Participation Post-Stroke. *Behav. Neurol.* **2019**, *2019*, 2606039. [[CrossRef](#)]
 34. Garin, N.; Olaya, B.; Miret, M.; Ayuso-Mateos, J.L.; Power, M.; Bucciarelli, P.; Haro, J.M. Built Environment and Elderly Population Health: A Comprehensive Literature Review. *Clin. Pract. Epidemiol. Ment. Health* **2014**, *10*, 103–115. [[CrossRef](#)] [[PubMed](#)]
 35. De Wet, N.; Somefun, O.; Rambau, N. Perceptions of community safety and social activity participation among youth in South Africa. *PLoS ONE* **2018**, *13*, e0197549. [[CrossRef](#)] [[PubMed](#)]