

ORIGINAL ARTICLE

Gender Differences in the Association Between Social Isolation, Resilience, and Depression Among Older Adults During COVID-19 Lockdown

Nor Jannah Nasution Raduan¹, Salina Mohamed², Nurul Azreen Hashim², Suthahar Ariaratnam², Tengku Mohd Saifuddin Tengku Kamarulbahri³, Raudah Mohd Yunus⁴

¹ Black Country Healthcare NHS Foundation, Bushey Fields Hospital, Bushey Fields Road, DY1 2LZ England

² Department of Psychiatry, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh Campus, Selangor Branch, 47000 Jalan Hospital, Sungai Buloh, Selangor, Malaysia

³ Department of Psychiatry, Faculty of Medicine, Universiti Sultan Zainal Abidin, 20400, Kuala Terengganu, Terengganu, Malaysia.

⁴ Department of Public Health Medicine, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh Campus, Selangor Branch, 47000 Jalan Hospital, Sungai Buloh, Selangor, Malaysia

ABSTRACT

Introduction: The impact of COVID-19 lockdown on social isolation (SI) and mental health in older adults remains understudied, particularly the role of resilience in mitigating depression. This study compares social isolation, resilience, and depression between older men and women and examines whether resilience moderates the relationship between social isolation and depression. **Materials and methods:** A cross-sectional study was conducted among 264 older adults attending Universiti Teknologi MARA primary care centre. SI was measured using the Friendship Scale, resilience using the Connor-Davidson Resilience Scale, and depression using the Geriatric Depression Scale. Multiple linear regression assessed associations between SI and depression, and moderation interaction was used to test the moderating effect of resilience. Analyses were conducted separately for men and women. **Results:** No significant differences were found in social isolation or resilience between men and women based on independent samples t-tests. However, women reported significantly higher depression scores than men (6.46 vs 7.06, $p=0.04$). Multiple linear regression showed that both social isolation and resilience were independently associated with depressive symptom scores among women, while only social isolation was associated with depression among men. Moderation was tested by including an interaction term (SI \times Resilience) in the regression model. Among men, resilience significantly moderated the relationship between social isolation and depression ($B = 0.04$, 95% CI: 0.01 to 0.07, $p < 0.01$), although the effect size was small. **Conclusion:** The impact of resilience on depression varies by gender, suggesting the need for tailored mental health interventions for men and women.

Malaysian Journal of Medicine and Health Sciences (2026) 22(SUPP4):32-39 doi:10.47836/mjmhs.22.s4.6

Keywords: Depression, Gender Differences, Older Adults, Resilience, Social Isolation

Corresponding Author:

Nor Jannah Raduan, MMed (Psychiatry)

Email: n.raduan@nhs.net

Tel: +44 1922 607000

INTRODUCTION

Social connectedness is an essential factor that contributes to successful and healthy ageing. However, given the social and environmental changes that accompany the process of ageing, older adults are more vulnerable to experience social isolation (SI) (1). SI can be generally categorised into objective and subjective

isolation. Objective SI is defined as the “lack of contact with others due to situational factors, such as the small size of the social network, infrequent social interaction, or lack of participation in social activity”. At the same time, subjective SI refers to “a perceived shortage in one’s social resources” (2).

There are no global estimates of SI among older adults, but the prevalence was reported at approximately 24% in the US (3), 10%–43% in North America and 20% in India (4, 5). In Malaysia, a nationwide survey found that almost half of the older population were at risk of SI (6). Men are generally reported to be more socially

isolated than women, and they fulfil their emotional needs mainly through their spouses/partners. In contrast, women often fulfil their emotional requirements met through their female friends (7). Nevertheless, women have higher risks of loneliness despite having a more robust social network (8, 9). SI can lead to premature mortality and poor quality of life by increasing the chances of cardiovascular disease and mental health problems such as cognitive impairment, dementia, depression, anxiety and suicidal ideation (10-12).

The COVID-19 pandemic has had a profound impact on the older populations for several reasons; they are considered a high-risk group, requiring intensive health care upon disease contraction, and older adults with COVID-19 have higher death rates (13). In addition, most governments implemented widespread lockdown or varying degrees of movement restrictions to control the spread of COVID-19. These measures led to the prohibition of social activities such as travelling and social gatherings and banned visits for nursing homes and long-term care facilities residents (14). Studies showed that SI during the COVID-19 period had increased the prevalence of anxiety, depression, impaired sleep quality and physical inactivity among older adults (15, 16). A study among nursing home residents in Malaysia found high rates of depression and anxiety when compared to the pre-pandemic period (17). To date, no study specifically addressed SI among Malaysian older adults in the context of COVID-19.

Evidence shows that the resilience field is among the protective factors for SI, other than meaningful relationships and mental health care field accessed (16). Resilience can be defined as an individual's ability to adapt and cope in the face of adversity whilst maintaining a meaningful life. Resilience increases the emotional and psychological capacity to deal with unexpected and challenging life occurrences, adapt to new changes and remain optimistic along the process. The impact of resilience on older adults' mental health and well-being has been extensively documented in the empirical research (18). For instance, resilience has been associated with successful ageing, more significant mental health, longer life spans, and a higher capacity to cope with chronic pain (19, 20). In the context of a global pandemic, resilience affects how individuals – including older adults – cope with adverse events such as loss of loved ones, disease contraction, physical or social isolation due to mobility restrictions, loss of income sources, and many more. Recent studies showed that older adults had high resilience and personal strength levels while going through the life adjustments due to COVID-19, regardless of whether they were directly affected by the disease or not (21, 22).

Gender does not necessarily predict resilience, but evidence suggests higher resilience among women than men, and this trend is consistent in the old age (23, 24).

This was attributed to older women's more remarkable ability to cope with multiple adverse events, build and maintain relationships, and deal with stresses (23, 25). However, not much is known about gender differences in resilience among older adults in the lower and middle-income regions, which could differ from those in western settings due to cultural norms, societal values, and other external factors.

This paper aims to: a) compare SI, resilience and depression between older men and women during the period of movement restrictions; b) determine the association between SI and depression, comparing older men to women, and; c) examine the moderating effect of resilience on the relationship between SI and depression, comparing older men to women.

MATERIALS AND METHODS

Study design and setting

This was a cross-sectional study among older adults (aged 60 or more) who attended the Universiti Teknologi MARA (UiTM) primary health care clinic in Selayang. Selayang is a town within the Gombak district in Selangor and is close to the capital city of Kuala Lumpur. The city has a population of approximately 542,000 people. The UiTM clinic is a public health facility accessible to all and caters to outpatients and those with chronic diseases. Data collection was conducted between January to June 2021.

Sampling strategy

A list of patients aged 60 and older was obtained from the clinic registry with the help of the IT department. The IT department generated a list of patients aged 60 and above from the clinic registry. Using this list, we applied a consecutive sampling method, where eligible patients attending the clinic during the study period were approached and invited to participate until the desired sample size was reached. Individuals who met the selection criteria were identified and invited to participate in the study. Inclusion criteria were: a) Malaysian citizen; b) aged 60 or more. The only exclusion criteria were any history of psychiatric illness. Participants with a history of psychiatric illness were excluded based on self-report and verification through clinic's medical records. No formal psychiatric diagnostic screening tool was used during recruitment.

Variables and tools

The outcome variable in this study was depression, and the primary explanatory variable was SI. Resilience was treated as a potential predictor for depression and a moderator for the relationship between depression and social isolation. Other variables included were age, sex group, marital status, living arrangement, ethnic background, education level and household income.

Depression was measured using the 15-item Geriatric

Depression Scale (GDS). Scores of 0-4 were categorised as normal, 5-8 as mild depression, 9-11 as moderate depression, and 12-15 as severe depression. Depression was treated as a categorical and continuous variables at the analysis stage, depending on the objective. The GDS has been previously validated among older Malaysians (26).

Social isolation was assessed using the Friendship Scale (FS) (27), comprising five items. For each item, respondents are given 5-point Guttman-type responses: almost always, most of the time, about half the time, occasionally, and not at all. To reduce the possibility of response bias, we reversed two of the item stems (Q2 & Q5). Therefore, to score the FS, responses to Q2 and Q5 were reversed to make them consistent with the other items. Simple summation of item responses provided a range of 5-25, with higher scores indicating greater social isolation and lower scores indicating more social connectedness (27).

Resilience was measured using the 10-item Connor-Davidson Resilience Scale (CD-RISC 10), the shorter version of the original CD-RISC 25 (28, 29). Respondents rate the items on a 5-point Likert scale, ranging from 0 (not true at all) to 4 (true nearly all the time). Total scores ranged between 0 and 40, with higher scores reflecting more resilience (29).

Analytical Approach

Descriptive statistics include reporting numerical variables as means and standard deviations and categorical variables as frequencies and percentages. Associations between two numerical variables are tested using Pearson's correlation coefficient, and associations between two or more categorical variables are tested using the Chi-Squared test. Comparison of numerical variables between two groups is conducted using independent t-tests. Missing data were addressed by calling up respondents immediately upon completion of baseline data collection. The remaining missing data was managed by listwise deletion.

Multiple linear regression (MLR) was run for multivariable analyses to determine the association between social isolation and resilience with depression. Separate analyses were run for males and females for comparison. The critical assumptions of MLR were tested before running the analyses: a) linearity of the relationship between the outcome variable and independent variables; b) no multicollinearity; c) normal distribution of residuals, and d) homoscedasticity (the variance of error terms are similar across the values of the independent variables).

We transformed the relevant predictor variables (social isolation and resilience) to test for moderation interaction analysis by focusing on avoiding collinearity. An additional variable comprising interaction between the

two mean-centred variables was constructed through multiplication and added in the MLR model. Statistical significance was set at 0.05.

RESULTS

From 350 older individuals in the clinic registry, 314 fulfilled the selection criteria, and 264 agreed to participate. The response rate was 84.1%. Males comprised 57.9% of the study respondents, and the majority were from the younger age group (below 70 years), with females being significantly younger than males. Males were more likely to be married and have higher household incomes, while females were less likely to have co-morbidities. Table I shows the essential characteristics of our study respondents.

Table I: Basic characteristics of study respondents (n=264)

Variable	All N (%) / Mean (SD)	Male	Female	<i>p</i> -value
Age				
60 - 70	204 (77.3)	109 (70.2)	93 (85.3)	0.01
Older than 70	60 (22.7)	44 (28.8)	16 (14.7)	
Race				
Malay	220 (83.3)	132 (86.3)	87 (79.8)	0.21
Chinese	22 (8.3)	12 (7.8)	9 (8.3)	
Indian	22 (8.3)	9 (5.9)	13 (11.9)	
Marital status				
Married	255 (96.6)	150 (98.0)	103 (94.5)	0.03
Single/divorced/ widowed	7 (2.70)	1 (0.7)	6 (5.5)	
Education level				
Primary	2 (0.8)	1 (0.7)	1(0.9)	0.97
Secondary	125 (47.3)	72 (47.1)	51 (46.8)	
Tertiary	137 (51.9)	80 (52.3)	57 (52.3)	
Household income				
Low (<RM1000)	62 (23.5)	17 (11.1)	44 (40.4)	<0.01
Middle (RM- 1001RM4000)	183 (69.3)	127 (83.0)	55 (50.5)	
High (>RM4000)	19 (7.20)	9 (5.9)	10 (9.2)	
Living arrangement				
With family	256 (97.0)	148 (96.7)	106 (97.2)	0.42
Others	5 (2.0)	4 (2.6)	1 (0.9)	
Co-morbidities				
None	66 (25.0)	31 (20.3)	35 (32.1)	0.03
Yes	198 (75.0)	122 (79.7)	74 (67.9)	

CONTINUE

Table I: Basic characteristics of study respondents (n=264) (Cont.)

Variable	All N (%) / Mean (SD)	Male	Female	p-value
Co-morbidities				
None	66 (25.0)	31 (20.3)	35 (32.1)	0.03
Yes	198 (75.0)	122 (79.7)	74 (67.9)	
Depression (GDS)				
Mean (SD)	6.69 (2.36)	6.46 (2.32)	7.06 (2.39)	0.04
Normal	37 (14.0)	25 (16.3)	12 (11.0)	0.03
Mild	175 (66.3)	105 (68.6)	68 (62.4)	
Moderate	49 (18.6)	23 (15)	26 (23.9)	
Severe	3 (1.1)	0 (0)	3 (2.8)	
Resilience (CD-RISC)	28.7 (3.69)	28.79 (3.33)	28.62 (4.16)	0.71
Social isolation (FS)	14.3 (2.75)	14.31 (2.53)	14.31 (3.06)	0.98

Overall, 86% of respondents reported some forms of depression, but those with moderate-severe depression were comprised 19.7%. A more significant proportion of females reported moderate and severe depression than their male counterparts. However, there was no significant difference between males and females regarding resilience and levels of social isolation experienced. The depression, resilience and social isolation scores of our study respondents are illustrated in Figure 1.

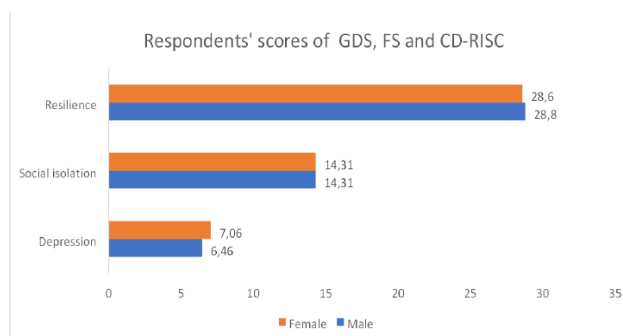


Figure 1: Respondents' score of GDS, FS and CD-RISC

Before running MLR analyses, all key assumptions of MLR were checked. MLR was run using depression as the dependent variable. Social isolation and resilience were treated as the leading independent variables while adjusting for potential confounders, including age, ethnicity, education level, household income, and comorbidity. First, MLR was run without testing for moderation interaction effects of resilience (SI*Res) to

independently determine the associations between SI and resilience with depression. Subsequently, SI*Res was included in the regression model. Table II shows the relationships between these three variables and depression.

Table II: Associations between social isolation, resilience and depression using MLR analyses

Variables/Participants	B	SE	95%CI	p-value
All				
Social isolation (FS)	0.41	0.06	0.24, 0.46	<0.01
Resilience	-0.15	0.04	-0.17, -0.02	0.01
SI*Res	0.07	0.01	-0.01, 0.03	0.28
Men				
Social isolation (FS)	0.32	0.08	0.16, 0.48	<0.01
Resilience	-0.04	0.05	-0.14, 0.07	0.52
SI*Res	0.04	0.02	0.01, 0.07	<0.01
Women				
Social isolation (FS)	0.39	0.08	0.15, 0.46	<0.01
Resilience	-0.22	0.05	-0.23, -0.03	0.01
SI*Res	-0.01	0.01	-0.02, 0.02	0.91

*Analyses were adjusted for age, ethnicity, education level, household income and comorbidity, none of which showed any significant associations with GDS scores.

SI and resilience were independently associated with depression. Older adults who felt socially isolated (or had less social connectedness) were more likely to have depressive symptoms. On the contrary, those who were more resilient were less likely to experience depression. Resilience, however, did not have an impact on the relationship between SI and depression.

Separate MLR analyses for men and women revealed a somewhat different picture. For men, SI was associated with depression, while resilience was not. But resilience moderated the relationship between the two. This meant that SI could predict depression among older men, while resilience did not play a significant role. However, among socially isolated older men, resilience could moderate its effect on depression and act as a buffer against the latter.

Among older women, higher social isolation was significantly associated with increased depressive symptoms, while greater resilience was linked to lower depressive symptoms. However, the interaction term (SI × Resilience) was not statistically significant (B = -0.01, p = 0.91), suggesting that resilience did not moderate

the relationship between social isolation and depression in this group. In other words, regardless of how resilient older women were, the impact of social isolation on depression remained unchanged. This could mean that older women who felt socially isolated were more likely to have depression, just like those with higher resilience were less likely to have depression. However, resilience did not seem to buffer against depression among socially isolated women.

DISCUSSION

We investigated the relationships between SI and depression among older adults during the COVID-19 movement restriction period in Klang Valley. We also examined the effect of resilience on this relationship while comparing older men to older women. Overall, SI and resilience were independently associated with depression. Older adults who felt socially isolated (or had less social connectedness) were more likely to have depressive symptoms. On the contrary, those who were more resilient were less likely to experience depression. Resilience, however, did not have an impact on the relationship between SI and depression.

We found that SI was associated with depression in both groups – older men and women. However, resilience moderated this relationship only among older men, not women. Findings in other countries partially corroborate our findings. Still, they generally showed that the link between SI, depression and resilience is dynamic and complex and can be influenced by other factors. For instance, SI was associated with depression among older men and women in the UK during the COVID-19 lockdown, with no gender differences (30). On the other hand, resilience was found to mediate the relationship between loneliness and depression among older Chinese, but the relationship was more influenced by social support (31). Gender differences in this regard were not reported. However, it is essential to highlight that loneliness and SI are different concepts even though they are related Fields (32).

Our findings showed that higher resilience scores were associated with lower depressive symptom scores overall. Subgroup analyses indicated that this inverse relationship was more pronounced among older women. Prior studies found that women are generally more resilient than men (33). Their resilience is mainly derived from denser social networks and stronger connections with family members, friends and relatives (34-36). This connectedness is, in turn, protective against depression. In lockdown periods where older adults are perhaps more deprived of social connection, the close relationships and emotional connection women had built before the pandemic struck could have played a significant role in contributing to their level of resilience. On the other hand, this pathway might be less relevant to older men.

Nevertheless, when older adults have experienced social isolation for a considerable amount of time, the effect of resilience may play out differently in men and women. For women, the gradual depletion of social connection and social support could outweigh the potential impact of resilience on mental health. In other words, depression in older women is more buffered by how socially connected they are compared to their levels of resilience – partly because the source of resilience comes from social relationships. On the contrary, for men who have been in SI long enough to affect their mental health, resilience can reduce or protect against depression. This could mean that resilience is an equally important factor as SI in causing depression – and that it can be derived from sources other than social relationships and connectedness(37, 38). Existing studies corroborate men's different experiences of social connection and resilience compared to women (39-41), with evidence showing their tendency to rely on other resources for social support and social capital, such as economic opportunities and involvement in formal organisations (42, 43).

Familial norms in Malaysia are in line with these findings. In a typical Malaysian family, older parents are generally dependant – partially or fully – on their children for financial and social (physical and emotional) support. However, while children support both parents, mothers (older women) tend to get more attention and loving gestures than fathers. This is mainly due to the closer and more intimate relationships between older women and their children, nieces, nephews and siblings that have begun earlier in their lives (44). For older women, thus, coping strategies in times of stress are more dependent on, and perceived through, the lens of social relationships and networks (45, 46). On the other hand, older men are generally less tied to the familial kinship (compared to their wives), and they tend to be more involved with neighbourhood acquaintances and former colleagues through community-based institutes such as the local mosque or Rukun Tetangga (community hall/council) (47). Local evidence shows stark differences in income and access to economic resources between older men and women, despite the financial support from children (48).

Our study has several limitations. First, its cross-sectional design did not allow us to establish cause-and-effect links between SI and depression or between resilience and depression. As the direction of the relationship could go both ways, it was possible that the depressive symptoms reported among our respondents were not caused by SI. Instead, depression could have driven older adults to distance themselves from family members, or that depression resulted from family conflicts that caused older adults to withdraw themselves. Second, we assumed that SI and depression in this study were related to COVID-19 countermeasures (e.g., lockdown). However, this could not be ascertained as the isolation

experience could have started before the COVID-19 outbreak for some individuals and not necessarily due to the pandemic. Third, we did not measure other variables (factors) contributing to depression. Similarly, other factors could affect the relationship between SI and depression – other than resilience – which was not captured. For instance, a recent empirical study conducted during the first wave of COVID-19 found that besides resilience, older adults' emotional state and well-being were affected by gratitude and experiential avoidance [21].

This study has several limitations. First, it relied solely on quantitative data and lacked qualitative insights that could have provided deeper context to the experiences of social isolation, resilience, and depression among older adults. Second, the use of a clinic-based sample limits the generalizability of the findings to the broader population of older adults, especially those not engaged with healthcare services. Third, due to the cross-sectional design, the direction of causality cannot be established. For example, it is possible that depression may lead to increased social withdrawal and isolation, rather than social isolation being the cause of depressive symptoms. Longitudinal and mixed-methods studies are needed to further explore these relationships.

CONCLUSION

Our study findings point to the need to be cognizant of the different levels and effects of resilience among older men and women, especially when individuals are at risk of SI. Health practitioners can utilise this insight while deciding which approach is best for their clients/patients who experience depression related to a lack of social connectedness.

Of equal importance is developing policies and interventions to promote older people's strength and resilience. Ideally, these interventions should target the pre-adversity phase. Policies designed to enhance resilience should help maintain their existing enjoyed and valued social relations and activities. For instance, part-time paid employment schemes for older adults can be introduced or expanded to preserve regular contact and interactions with colleagues. Additionally, programs can include specific support groups in the community to facilitate connectedness, thereby promoting resilience and alleviating the effects of depression.

Our findings further emphasize gender-specific implications. Resilience was found to buffer the impact of social isolation on depression among older men, but not among women. This indicates the need for gender-sensitive mental health strategies: older women may benefit from peer-based social programs and emotional bonding interventions, while men may require structured resilience-building strategies that support self-efficacy and coping.

To ensure accessibility and scalability, interventions should also leverage telehealth services, community-based outreach, and targeted psychoeducation. These strategies are particularly critical during times of crisis such as pandemics. Finally, we advocate for these mental health and social well-being interventions to be embedded in national aging policy frameworks for sustainable impact.

For future researchers, we recommend studies that explore the deeper meaning of SI, resilience and coping mechanisms among older adults during and after the pandemic. Likewise, a longitudinal study design would be helpful to see trends and patterns in SI, resilience and mental health among older adults while having the ability to establish causal relationships among the variables. On the other hand, a qualitative approach would provide richer, in-depth data that can complement quantitative findings and reflect older adults' lived experiences and inner thoughts more accurately.

ACKNOWLEDGEMENT

The authors declare that this study did not receive any financial support. The authors would like to thank all the staff members of Department of Psychiatry, and Department of Public Health Medicine, Faculty of Medicine Universiti Teknologi MARA (UiTM) for their administrative support throughout the study period. This study received approval from the Medical Research and Ethics Committee of the Ministry of Health Malaysia (NMRR-20-2169-55538) and the UiTM Ethics Research Committee (REC/09/2020 – MR/277).

REFERENCE

1. Organization WH. Social isolation and loneliness among older people: advocacy brief. 2021. doi: 10.665/343206
2. Cornwell EY, Waite LJ. Social disconnectedness, perceived isolation, and health among older adults. *Journal of health and social behavior*. 2009;50(1):31-48. doi: 10.1177/002214650905000103
3. Cudjoe TK, Roth DL, Szanton SL, Wolff JL, Boyd CM, Thorpe Jr RJ. The epidemiology of social isolation: National health and aging trends study. *The Journals of Gerontology: Series B*. 2020;75(1):107-13. doi: 10.1093/geronb/gby037
4. Nicholson NR. A review of social isolation: an important but underassessed condition in older adults. *The journal of primary prevention*. 2012;33:137-52. doi: 10.1007/s10935-012-0271-2
5. Kotian DB, Mathews M, Parsekar SS, Nair S, Binu V, Subba SH. Factors associated with social isolation among the older people in India. *Journal of geriatric psychiatry and neurology*. 2018;31(5):271-8. doi: 10.1177/0891988718796338
6. Ibrahim R, Abolfathi Momtaz Y, Hamid TA. Social

- isolation in older Malaysians: prevalence and risk factors. *Psychogeriatrics*. 2013;13(2):71-9. doi: 10.1111/psyg.12000
7. Vandervoort D. Social isolation and gender. *Current psychology*. 2000;19:229-36.
 8. Beal C. Loneliness in older women: a review of the literature. *Issues in mental health nursing*. 2006;27(7):795-813. doi: 10.1007/s12144-000-1017-5
 9. Chatters LM, Taylor HO, Nicklett EJ, Taylor RJ, editors. Correlates of objective social isolation from family and friends among older adults. *Healthcare*; 2018: MDPI. doi: 10.3390/healthcare6010024
 10. Ны́р G, Drewelies J, Eibich P, Дь́зел S, Demuth I, Ghisletta P, et al. Cohort differences in psychosocial function over 20 years: Current older adults feel less lonely and less dependent on external circumstances. *Gerontology*. 2016;62(3):354-61. doi: 10.1159/000438991
 11. Evans IE, Martyr A, Collins R, Brayne C, Clare L. Social isolation and cognitive function in later life: a systematic review and meta-analysis. *Journal of Alzheimer's disease*. 2019;70(s1):S119-S44. doi: 10.3233/JAD-180501
 12. Sciences NAO, Behavioral Do, Sciences S, Division M, Behavioral Bo, Sciences S, et al. Social isolation and loneliness in older adults: Opportunities for the health care system: National Academies Press; 2020. doi: 10.17226/25663.
 13. Brief P. The impact of COVID-19 on older persons. United Nations. 2020:2020-05.
 14. Wu B. Social isolation and loneliness among older adults in the context of COVID-19: a global challenge. *Global health research and policy*. 2020;5(1):27. doi: 10.1186/s41256-020-00154-3
 15. Серьведa-Loyola W, Rodrнгуез-Sбнchez I, Пйрез-Rodrнгуез P, Ganz F, Torralba R, Oliveira D, et al. Impact of social isolation due to COVID-19 on health in older people: mental and physical effects and recommendations. *The journal of nutrition, health and aging*. 2020;24(9):938-47. doi: 10.1007/s12603-020-1500-7
 16. Vahia IV, Jeste DV, Reynolds III CF. Older adults and the mental health effects of COVID-19. *Jama*. 2020;324(22):2253-4. doi: 10.1001/jama.2020.21753
 17. Nair P, Gill JS, Sulaiman AH, Koh OH, Francis B. Mental health correlates among older persons residing in Malaysian nursing homes during the COVID-19 pandemic. *Asia Pacific Journal of Public Health*. 2021;33(8):940-4. doi: 10.1177/10105395211032094
 18. Angevaere MJ, Roberts J, van Hout HP, Joling KJ, Smalbrugge M, Schoonmade LJ, et al. Resilience in older persons: A systematic review of the conceptual literature. *Ageing Research Reviews*. 2020;63:101144. doi: 10.1016/j.arr.2020.101144
 19. Färber F, Rosendahl J. Trait resilience and mental health in older adults: A meta-analytic review. *Personality and Mental Health*. 2020;14(4):361-75. doi: 10.1002/pmh.1490
 20. Musich S, Wang SS, Slindee L, Kraemer S, Yeh CS. Association of resilience and social networks with pain outcomes among older adults. *Population health management*. 2019;22(6):511-21. doi: 10.1089/pop.2018.0199
 21. Пйрез Rojo G, Lypez J, Noriega C, Velasco C, Carretero I, Lypez Frutos P, et al. Older people's personal strengths during the first wave of the COVID-19 pandemic. 2021. doi: 10.7334/psicothema2020.453
 22. Rutland-Lawes J, Wallinheimo A-S, Evans SL. Risk factors for depression during the COVID-19 pandemic: a longitudinal study in middle-aged and older adults. *BJPsych Open*. 2021;7(5):e161. doi: 10.1192/bjo.2021.997
 23. MacLeod S, Musich S, Hawkins K, Alsgaard K, Wicker ER. The impact of resilience among older adults. *Geriatric Nursing*. 2016;37(4):266-72. doi: 10.1016/j.gerinurse.2016.02.014
 24. Gordon EH, Hubbard RE. Differences in frailty in older men and women. *Medical Journal of Australia*. 2020;212(4). doi: 10.5694/mja2.50466
 25. Yalcin-Siedentopf N, Pichler T, Welte A-S, Hoertnagl CM, Klasen CC, Kemmler G, et al. Sex matters: stress perception and the relevance of resilience and perceived social support in emerging adults. *Archives of Women's Mental Health*. 2021;24:403-11. doi: 10.1007/s00737-020-01076-2
 26. Ewe E, Che Ismail H. Validation of Malay version of Geriatric Depression Scale among elderly inpatients. *Age*. 2004;17:65.
 27. Hawthorne G. Measuring social isolation in older adults: development and initial validation of the friendship scale. *Social indicators research*. 2006;77:521-48. doi: 10.1007/s11205-005-7746-y
 28. Connor KM, Davidson JR. Development of a new resilience scale: The Connor - Davidson resilience scale (CD - RISC). *Depression and anxiety*. 2003;18(2):76-82. doi: 10.1002/DA.10113
 29. Campbell - Sills L, Stein MB. Psychometric analysis and refinement of the connor-davidson resilience scale (CD - RISC): Validation of a 10 - item measure of resilience. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*. 2007;20(6):1019-28. doi: 10.1002/jts.20271
 30. Robb CE, De Jager CA, Ahmadi-Abhari S, Giannakopoulou P, Udeh-Momoh C, McKeand J, et al. Associations of social isolation with anxiety and depression during the early COVID-19 pandemic: a survey of older adults in London, UK. *Frontiers in psychiatry*. 2020;11:591120. doi: 10.3389/fpsyt.2020.591120
 31. Zhao X, Zhang D, Wu M, Yang Y, Xie H, Li Y, et al. Loneliness and depression symptoms among the

- elderly in nursing homes: A moderated mediation model of resilience and social support. *Psychiatry research*. 2018;268:143-51. doi: 10.1016/j.psychres.2018.07.011
32. Newall NE, Menec VH. Loneliness and social isolation of older adults: Why it is important to examine these social aspects together. *Journal of Social and Personal Relationships*. 2019;36(3):925-39. doi: 10.1177/0265407517749045
 33. Netuveli G, Wiggins RD, Montgomery SM, Hildon Z, Blane D. Mental health and resilience at older ages: Bouncing back after adversity in the British Household Panel Survey. *Journal of Epidemiology & Community Health*. 2008;62(11):987-91. doi: 10.1136/jech.2007.069138
 34. Cornwell B, Laumann EO, Schumm LP. The social connectedness of older adults: A national profile. *American sociological review*. 2008;73(2):185-203. doi: 10.1177/000312240807300201
 35. McLaughlin D, Vagenas D, Pachana NA, Begum N, Dobson A. Gender differences in social network size and satisfaction in adults in their 70s. *Journal of health psychology*. 2010;15(5):671-9. doi: 10.1177/1359105310368177
 36. MacDonald M. Social support for centenarians' health, psychological well-being, and longevity. *Annual review of gerontology and geriatrics*. 2007;27(1):107-27.
 37. Timalsina R, Songwathana P. Factors enhancing resilience among older adults experiencing disaster: A systematic review. *Australasian emergency care*. 2020;23(1):11-22. doi: 10.1016/j.auec.2019.12.007
 38. Hassani P, Izadi-Avanji F-S, Rakhshan M, Majd HA. A phenomenological study on resilience of the elderly suffering from chronic disease: a qualitative study. *Psychology research and behavior management*. 2017:59-67. doi: 10.2147/PRBM.S121336
 39. Walter-Ginzburg A, Shmotkin D, Blumstein T, Shorek A. A gender-based dynamic multidimensional longitudinal analysis of resilience and mortality in the old-old in Israel: the cross-sectional and longitudinal aging study (CALAS). *Social science & medicine*. 2005;60(8):1705-15. doi: 10.1016/j.socscimed.2004.08.023
 40. Morano C. Resilience and coping with trauma: Does gender make a difference? *Studies of the Holocaust*: Routledge; 2013. p. 143-57. doi: 10.1080/10911350903275358
 41. Caetano SC, Silva CM, Vettore MV. Gender differences in the association of perceived social support and social network with self-rated health status among older adults: a population-based study in Brazil. *BMC geriatrics*. 2013;13:1-14. doi: 10.1186/1471-2318-13-122
 42. Chemaitelly H, Kanaan C, Beydoun H, Chaaya M, Kanaan M, Sibai AM. The role of gender in the association of social capital, social support, and economic security with self-rated health among older adults in deprived communities in Beirut. *Quality of Life Research*. 2013;22:1371-9. doi: 10.1007/s11136-012-0273-9
 43. Norris P, Inglehart R. *Gendering social capital. Gender and social capital*: Routledge; 2013. p. 73-98.
 44. Hossain Z, Roopnarine JL, Masud J, Muhamed AAH, Baharudin R, Abdullah R, et al. Mothers' and fathers' childcare involvement with young children in rural families in Malaysia. *International Journal of Psychology*. 2005;40(6):385-94. doi: 10.1080/00207590444000294
 45. Ashley NR, Kleinpeter CH. Gender differences in coping strategies of spousal dementia caregivers. *Journal of human behavior in the social environment*. 2002;6(2):29-46. doi: 10.1300/J137v06n02_03
 46. Greenglass ER, Burke RJ, Konarski R. Components of Burnout, Resources, and Gender -Related Differences 1. *Journal of Applied Social Psychology*. 1998;28(12):1088-106. doi: 10.1111/j.1559-1816.1998.tb01669.x
 47. Hashim H, Royal GPP, editors. *Harmonious community living in urban neighbourhoods: A case of central Shah Alam*. 8th International Conference of the Asian Planning Schools Association (APSA), Grand Plaza Park Royal, Penang, Malaysia; 2005.
 48. Masud J, Haron SA, Gikonyo LW. Gender differences in income sources of the elderly in Peninsular Malaysia. *Journal of Family and Economic Issues*. 2008;29:623-33. doi: 10.1007/s10834-008-9125-8