



Social Isolation of Women: Beginning and Early Solution A Likert Scale Analysis

Sonia Verma¹
Stanzin Dolker²
Meenu Sharma³
1. MD/Director

Synergetic Green Warriors Foundation.

2. KFC Trainee, Soil Conservation Training School Miran Sahib,
Ladakh Wildlife Protection Services

3. Assistant Professor, Deptt of Geology,
Cluster University Jammu.

Corresponding author: Dr Sonia Verma, Email: greenwarriorsoniaverma@gmail.com

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Abstract

Social isolation—the objective state of having few social roles, relationships, and interactions with others—poses significant threats to women's mental, emotional, and physical health. The World Health Organization has recognized loneliness and social isolation as pressing public health concerns, with estimates suggesting that loneliness contributes to hundreds of thousands of deaths annually. Despite growing awareness, empirical research examining the specific dimensions of social isolation among women and evaluating early intervention solutions remains limited. This study investigates the prevalence, causes, correlates, and perceived effectiveness of early solutions for social isolation among women using a structured Likert-scale survey. A cross-sectional survey design was employed with a sample of 150 women aged 18–65 years. The questionnaire comprised 25 items across five domains: (a) Social Connection and Support, (b) Causes of Isolation, (c) Psychological Effects, (d) Physical Health Impact, and (e) Perceived Effectiveness of Solutions. Responses were collected on a 5-point Likert scale. Data were analyzed using descriptive statistics, reliability analysis (Cronbach's α), Pearson correlation, independent samples t-tests, one-way ANOVA, and multiple linear regression. The overall scale demonstrated excellent internal consistency (Cronbach's $\alpha = 0.89$). Mean scores indicated moderate to high levels of social isolation across the sample ($M = 3.55$, $SD = 0.82$ on a 5-point scale). Caregiving responsibilities ($M = 4.12$, $SD = 0.91$) and life transitions ($M = 3.98$, $SD = 0.87$) emerged as the strongest contributors to isolation. Significant negative correlations were found between social connection and psychological distress ($r = -0.61$, $p < 0.01$). Caregivers reported significantly higher isolation than non-caregivers ($t = 4.56$, $p < 0.001$, Cohen's $d = 0.74$). Community programs ($M = 4.23$, $SD = 0.74$) and mental health support ($M = 4.18$, $SD = 0.79$) were rated as the most effective solutions.

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Keywords: social isolation, women's health, Likert scale, loneliness, intervention strategies, mental health, SGWF.



Introduction

Social isolation is defined as the objective state of having few social roles, relationships, and interactions with others—a condition that can be measured and quantified. The World Health Organization distinguishes social isolation from loneliness, describing loneliness as the painful subjective feeling that arises from a perceived gap between desired and actual social connections. While related, these constructs are distinct: an individual can have frequent social contact yet feel profoundly lonely, or have limited contact yet not experience loneliness.

Social isolation and loneliness harm both physical health—increasing the risk of heart disease, type 2 diabetes, and premature mortality—and mental health, contributing to elevated rates of depression and anxiety. The World Health Organization has declared loneliness a public health emergency, noting that it raises the risk of cardiovascular disease, stroke, and dementia by up to 30%. New WHO estimates indicate that loneliness causes approximately 871,000 deaths each year globally.

While social isolation affects individuals across all demographics, women face unique and compounded vulnerabilities that warrant specific scholarly attention. Systematic reviews and meta-analyses have documented higher prevalence of chronic loneliness among women (21.7%) compared to men (16.3%). Research has also found that among women, social isolation alone is significantly associated with reduced life expectancy, with an estimated 3.11 years lost. Women with both social isolation and loneliness face a substantially lower likelihood of healthy aging.

Women's social isolation is deeply rooted in historical and cultural systems that have constrained their mobility, agency, and participation in public life. From early agricultural societies where gendered division of labor confined women to domestic roles, to patriarchal structures that restricted women's access to education and economic resources, the social isolation of women has evolved but remains embedded in contemporary societal norms. Modern manifestations include the "ideal mother" or "ideal wife" expectations that burden women with unpaid labor and caregiving responsibilities, economic inequalities and workplace discrimination, and cultural restrictions on women's freedom and mobility.

The consequences of social isolation for women are multifaceted and severe. Research has established strong associations between social isolation and increased risk of depression, anxiety, and loneliness. The population attributable risk analysis shows that a significant proportion of depression and anxiety cases among women can be attributed to social isolation. Physiologically, isolation contributes to vulnerability to cardiovascular diseases, weakened immunity, and even premature mortality. Prolonged isolation negatively impacts self-esteem and confidence, creating a reinforcing cycle of withdrawal that further limits social and economic opportunities.

Caregiving represents a particularly significant contributor to women's social isolation. Research indicates that caregivers experience heightened feelings of loneliness and isolation, which in turn have adverse effects on their well-being. Due to the demands of caregiving and the lack of other types of support, many caregivers face problems of social isolation and withdrawal from social activities, which lead to increased feelings of loneliness.

Despite the growing body of qualitative and theoretical work on women's social isolation, there remains a notable gap in quantitative research that systematically measures the phenomenon using validated instruments and provides empirical evidence for early intervention strategies. This study addresses this gap by employing a structured Likert-scale survey to:

1. Measure the prevalence and severity of social isolation among women
2. Identify the primary causes and contributing factors
3. Assess the psychological and physical health correlates
4. Evaluate perceived effectiveness of early intervention solutions



Literature Review

Conceptualizing Social Isolation

Social isolation is a multidimensional construct encompassing both objective social disconnectedness (limited social networks, infrequent contact) and perceived isolation (feelings of loneliness and lack of support). The World Health Organization defines social connection as "the ways people relate to and interact with others," while social isolation refers to "the objective lack of sufficient social connections". The UCLA Loneliness Scale (Version 3), developed by Russell (1996), remains one of the most widely used and validated instruments for assessing loneliness, demonstrating high internal consistency and test-retest reliability.

Gendered Dimensions of Social Isolation

Women's experiences of social isolation are shaped by distinct social, cultural, and economic factors. Several key contributors have been identified in the literature:

Caregiving Roles. Women disproportionately assume primary caregiving responsibilities for children, elderly family members, and individuals with disabilities. These roles, while meaningful, can significantly limit opportunities for social engagement and network maintenance. Research demonstrates that female caregivers are more likely to report loneliness than male caregivers. The demands of caregiving and lack of support often lead to social isolation and withdrawal from social activities.

Economic Vulnerability. The gender pay gap, combined with women's overrepresentation in precarious employment, creates financial constraints that limit access to social activities, transportation, and networking opportunities. Women earn, on average, only 66% of what men earn for comparable work. Economic dependence can become a root cause of emotional turmoil and social isolation.

Cultural and Societal Norms. In many cultural contexts, women face restrictions on mobility, freedom, and access to public spaces. Research from India documents high degrees of seclusion for married women, measured by time outside the home, number of friends, and time interacting with non-family members. Women who have lesser social participation have higher odds of reporting loneliness.

Life Transitions. Events such as marriage, divorce, relocation, widowhood, and the departure of children from the home disproportionately disrupt women's social networks. Single women, in particular, often experience emotional isolation and loneliness, navigating a patriarchal world with limited support systems.

Mental Health Stigma. Women experiencing mental health challenges—including postpartum depression, anxiety, or trauma—may face stigma that discourages help-seeking and exacerbates isolation. Mental illness is often misunderstood, leading to stigma, silence, and isolation. Women experience stigma not only related to mental illness but also linked to societal norms, caregiving expectations, reproductive roles, and social judgments about emotional expression.

Health Consequences

The health implications of social isolation for women are well-documented. Longitudinal studies have found that social isolation increases risk of depression, cognitive decline, cardiovascular disease, and all-cause mortality. Social isolation is consistently associated with increased all-cause and cardiovascular disease mortality in both sexes. Among women, social isolation is a strong and independent predictor of mortality, particularly for cardiovascular disease-related deaths. The physiological mechanisms include chronic activation of stress responses, inflammation, and dysregulation of neuroendocrine function.

Intervention Strategies

Emerging evidence points to several promising intervention approaches:



Community-Based Programs. Community-based delivery models that group women together for workshops and peer support networks have shown effectiveness in reducing isolation. Programs that combine physical activity with social connection, health education, and community engagement have been particularly successful.

Technology-Facilitated Connection. Online communities, from messaging boards to private WhatsApp groups and Discord servers, offer opportunities for women to connect, share experiences, and support each other. These platforms can be particularly valuable for women who are physically isolated due to caregiving or geographic limitations.

Mental Health Support. Accessible counseling services and destigmatizing mental health discussions can encourage women to seek help. Community-based mental wellbeing support that is inclusive and stigma-free has shown promise in addressing isolation and depression.

Economic Empowerment. Programs that promote education, financial independence, and leadership skills help women build networks and confidence. Supporting women to stay in the workforce, grow their incomes, and build assets is key to long-lasting mental health benefits.

Supportive Policies. Family-friendly workplace policies, affordable childcare, and eldercare support can alleviate some burdens contributing to isolation. Enabling women to access services collectively can increase social ties and strengthen peer engagement.

Method

Research Design

This study employed a cross-sectional, quantitative survey design. The research was conducted over a three-month period (January–March 2026) using a structured questionnaire administered both online and in-person to maximize reach and accessibility.

Participants

A total of 150 women participated in the study. Inclusion criteria were: (a) self-identification as female, (b) age 18 years or older, (c) ability to understand and respond to the questionnaire in the language of administration, and (d) voluntary consent to participate. Participants were recruited through community organizations, social media platforms, and snowball sampling techniques.

Table 1

Demographic Characteristics of Participants (N = 150)

Characteristic	Category	*n*	%
Age Group	18–24 years	28	18.7
	25–34 years	42	28.0
	35–44 years	35	23.3
	45–54 years	26	17.3
	55–64 years	12	8.0



Characteristic	Category	*n*	%
	65+ years	7	4.7
Employment Status	Full-time employed	52	34.7
	Part-time employed	28	18.7
	Homemaker	31	20.7
	Unemployed/Seeking	16	10.7
	Student	15	10.0
	Retired	8	5.3
Marital Status	Married/Living with partner	68	45.3
	Single/Never married	42	28.0
	Divorced/Separated	24	16.0
	Widowed	16	10.7
Caregiving Status	Primary caregiver for children	52	34.7
	Primary caregiver for elderly	28	18.7
	No caregiving responsibilities	70	46.7
Education Level	High school or less	31	20.7
	Some college/Associate's	45	30.0
	Bachelor's degree	48	32.0
	Graduate degree	26	17.3



Instrument

The questionnaire was developed based on established instruments including the UCLA Loneliness Scale (Russell, 1996) and the Lubben Social Network Scale, with items adapted from the Social Isolation Scale. The final instrument comprised 25 items across five domains:

Domain 1: Social Connection and Support (5 items)

- I have people I can turn to for emotional support
- I feel connected to my community
- I have meaningful relationships with family members
- I have close friendships outside my family
- I participate in social activities regularly

Domain 2: Causes of Isolation (6 items)

- Caregiving responsibilities limit my social interactions
- Financial constraints prevent me from socializing
- Cultural/societal expectations restrict my social activities
- Life transitions have disrupted my social networks
- I feel stigmatized for seeking mental health support
- I lack access to safe public spaces

Domain 3: Psychological Effects (5 items)

- I often feel lonely
- I experience symptoms of depression
- I feel anxious in social situations
- My self-esteem has been negatively affected
- I feel withdrawn from others

Domain 4: Physical Health Impact (4 items)

- My physical health has declined due to isolation
- I experience stress-related physical symptoms
- My sleep quality has been affected
- I have less energy than before

Domain 5: Perceived Effectiveness of Solutions (5 items)

- Community programs and support groups would help
- Technology/online communities would reduce isolation
- Mental health counseling would be beneficial
- Economic empowerment programs would help



- Supportive workplace/family policies would alleviate isolation

Responses were collected on a 5-point Likert scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, 5 = *Strongly Agree*. For Domains 1 and 5, higher scores indicate more positive outcomes (greater social connection, greater perceived solution effectiveness). For Domains 2, 3, and 4, higher scores indicate greater isolation or negative impact.

Procedure

Ethical approval was obtained from the institutional review board prior to data collection. All participants provided informed consent. Online surveys were distributed via Qualtrics, while paper surveys were administered at community centers, women's organizations, and healthcare facilities. Data collection occurred over 12 weeks, with follow-up reminders for incomplete responses.

Statistical Analysis

Data were analyzed using SPSS version 28.0. Statistical procedures included:

Descriptive Statistics. Means, standard deviations, frequencies, and percentages were calculated for all items and domains.

Reliability Analysis. Cronbach's alpha coefficients were calculated to assess internal consistency of the overall scale and each subscale. The formula for Cronbach's alpha is:

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum_{i=1}^k \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

where *k* is the number of items, $\sigma_{Y_i}^2$ is the variance of each item, and σ_X^2 is the variance of the total score. Values $\geq .70$ were considered acceptable.

Correlation Analysis. Pearson product-moment correlation coefficients were computed to examine relationships among domains. The formula is:

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

Comparative Analysis. Independent samples *t*-tests were used to compare mean scores between groups (e.g., caregivers vs. non-caregivers). The formula is:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Cohen's *d* was calculated as a measure of effect size:

$$d = \frac{\bar{x}_1 - \bar{x}_2}{s_{pooled}}, s_{pooled} = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

One-way ANOVA was employed for comparisons across three or more groups (e.g., age groups, employment categories). The *F*-ratio formula is:

$$F = \frac{MS_{between}}{MS_{within}} = \frac{\sum_{j=1}^k n_j (\bar{x}_j - \bar{x})^2 / (k - 1)}{\sum_{j=1}^k \sum_{i=1}^{n_j} (x_{ij} - \bar{x}_j)^2 / (N - k)}$$



Regression Analysis. Multiple linear regression was used to predict overall social isolation scores from demographic and role-based variables. The formula is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$$

Statistical Significance. All tests were two-tailed with alpha set at .05.

Results

Reliability Analysis

The overall 25-item scale demonstrated excellent internal consistency (Cronbach's $\alpha = 0.89$). Subscale reliability coefficients are presented in Table 2.

Table 2

Reliability Coefficients (Cronbach's α) for Each Domain

Domain	Number of Items	Cronbach's α	Interpretation
Social Connection and Support	5	.84	Good
Causes of Isolation	6	.81	Good
Psychological Effects	5	.87	Good
Physical Health Impact	4	.79	Acceptable
Perceived Effectiveness of Solutions	5	.85	Good
Overall Scale	25	.89	Excellent

The overall α of .89 indicates that the survey items are highly consistent in measuring the same general construct of social isolation. Each domain also demonstrates good internal consistency, supporting the use of domain averages for further analysis.

Descriptive Statistics

Means and standard deviations were calculated for each domain and for the overall isolation score (average of Domains 2, 3, and 4). Results are presented in Table 3.



Table 3

Descriptive Statistics for All Domains (N = 150)

Domain	<i>M</i>	<i>SD</i>	<i>Mdn</i>	Range	Interpretation
Social Connection and Support	2.68	0.92	2.60	1.0–5.0	Moderate-Low
Causes of Isolation	3.72	0.85	3.67	1.2–5.0	Moderate-High
Psychological Effects	3.58	0.96	3.60	1.0–5.0	Moderate-High
Physical Health Impact	3.34	0.91	3.25	1.0–5.0	Moderate
Perceived Effectiveness of Solutions	4.05	0.76	4.20	1.4–5.0	High
Overall Social Isolation Score	3.55	0.82	3.58	1.2–5.0	Moderate-High

The overall isolation score of 3.55 (out of 5) indicates that, on average, participants experienced a substantial level of social isolation. The high mean for Causes (3.72) and Psychological Effects (3.58) shows that isolation is both externally driven and internally felt. Importantly, women rated solutions very highly (4.05), suggesting a strong belief that interventions can make a difference.

Top Five Highest-Rated Items (Indicating Greatest Concern)

Item	Domain	<i>M</i>	<i>SD</i>
Caregiving responsibilities limit my social interactions	Causes	4.12	0.91
Life transitions have disrupted my social networks	Causes	3.98	0.87
I often feel lonely	Psychological	3.89	0.95
Financial constraints prevent me from socializing	Causes	3.81	0.93
I feel withdrawn from others	Psychological	3.76	0.88

These top items highlight that caregiving, life changes, loneliness, and financial strain are the most prominent issues.



Top Five Highest-Rated Solutions (Indicating Greatest Perceived Effectiveness)

Item	Domain	<i>M</i>	<i>SD</i>
Community programs and support groups	Solutions	4.23	0.74
Mental health counseling	Solutions	4.18	0.79
Supportive workplace/family policies	Solutions	4.11	0.82
Economic empowerment programs	Solutions	4.06	0.85
Technology/online communities	Solutions	3.67	0.96

Women believe that community-based support and mental health services are the most helpful, followed by policy changes and economic empowerment.

Correlation Analysis

Pearson correlation coefficients were computed to examine relationships among domains. Results are presented in Table 4.

Table 4

Pearson Correlation Matrix Among Domains

Domain	1	2	3	4	5
1. Social Connection	1.00				
2. Causes of Isolation	-.58**	1.00			
3. Psychological Effects	-.61**	.64**	1.00		
4. Physical Health Impact	-.49**	.53**	.59**	1.00	
5. Solution Effectiveness	.42**	-.38**	-.44**	-.35**	1.00

** $p < .01$ (two-tailed)

Social Connection and Psychological Effects ($r = -.61$, $p < .01$). This strong negative correlation indicates that women who have fewer social connections tend to experience more depression, anxiety, and loneliness. Conversely, those with stronger connections have better mental health. This finding aligns with the well-established protective effect of social support.



Causes of Isolation and Psychological Effects ($r^* = .64$, $p^* < .01$). The strong positive correlation suggests that the more causes a woman reports (caregiving, financial issues, etc.), the more psychological distress she experiences. This indicates that addressing the root causes could directly improve mental health.

Social Connection and Solution Effectiveness ($r^* = .42$, $p^* < .01$). The moderate positive correlation suggests that women who already have better social connections are more optimistic about solutions, possibly because they have seen or used such resources.

Physical Health Impact correlates moderately with all other domains, confirming that isolation affects not only mental but also physical well-being.

Comparison Between Caregivers and Non-Caregivers

An independent samples t^* -test was used to compare overall isolation scores between women who are primary caregivers and those who are not. Results are presented in Table 5.

Table 5

Comparison of Social Isolation Scores by Caregiving Status

Group	n^*	M	SD	t^*	p^*	Cohen's d^*
Primary Caregiver	80	3.82	0.76	4.56	$< .001$	0.74
Non-Caregiver	70	3.24	0.81			

Caregivers scored significantly higher on isolation (3.82 vs. 3.24). The t^* -value of 4.56 with $p^* < .001$ indicates a very strong statistical difference. The effect size (Cohen's $d^* = 0.74$) is large, meaning that caregiving status has a substantial practical impact. In practical terms, caregiving responsibilities are a major driver of social isolation for women.

Differences Across Employment Status and Age Groups

One-way ANOVA was performed to compare isolation scores across different employment categories and age groups. Results are presented in Tables 6 and 7.

Table 6

Comparison of Social Isolation Scores by Employment Status

Employment Status	n^*	M	SD
Full-time employed	52	3.28	0.79
Part-time employed	28	3.45	0.83
Homemaker	31	3.98	0.72
Unemployed/Seeking	16	3.71	0.85



Employment Status	*n*	<i>M</i>	<i>SD</i>
Student	15	3.12	0.88
Retired	8	3.56	0.76

The ANOVA *F*-statistic was 5.23 with $*p* < .001$, indicating that at least one employment group differs significantly from the others. Post-hoc comparisons (Tukey HSD) revealed that homemakers had significantly higher isolation scores than both full-time employed women ($*p* < .001$) and students ($*p* = .002$). This suggests that women who are not in the paid workforce—especially homemakers—may lack the social networks that employment provides, increasing their risk of isolation.

Table 7

Comparison of Social Isolation Scores by Age Group

Age Group	*n*	<i>M</i>	<i>SD</i>
18–24 years	28	3.18	0.85
25–34 years	42	3.42	0.79
35–44 years	35	3.68	0.74
45–54 years	26	3.72	0.81
55–64 years	12	3.81	0.76
65+ years	7	3.89	0.72

ANOVA yielded $F = 4.87$, $*p* < .001$. Post-hoc comparisons showed that the youngest group (18–24) had significantly lower isolation than all groups aged 45 and above ($*p* < .01$ for each). This age-related increase suggests that as women get older, they tend to become more socially isolated, possibly due to loss of social networks through retirement, bereavement, or health limitations.

Multiple Linear Regression

Multiple linear regression was performed with overall isolation score as the dependent variable and five predictors: caregiving status, age, homemaker status, education level, and marital status (single vs. not). Results are presented in Table 8.



Table 8

Multiple Linear Regression Predicting Social Isolation

Predictor	<i>B</i> (unstandardized)	<i>SE</i>	β (standardized)	* <i>t</i> *	* <i>p</i> *
(Constant)	1.82	0.31		5.87	< .001
Caregiving Status	0.45	0.11	.28	4.09	< .001
Age	0.21	0.08	.17	2.63	.009
Homemaker Status	0.38	0.12	.21	3.17	.002
Education Level	-0.15	0.07	-.14	-2.14	.034
Marital Status (Single)	0.12	0.09	.09	1.33	.186

Note. $R^2 = .34$, Adjusted $R^2 = .32$, $F(5, 144) = 14.87$, $*p^* < .001$.

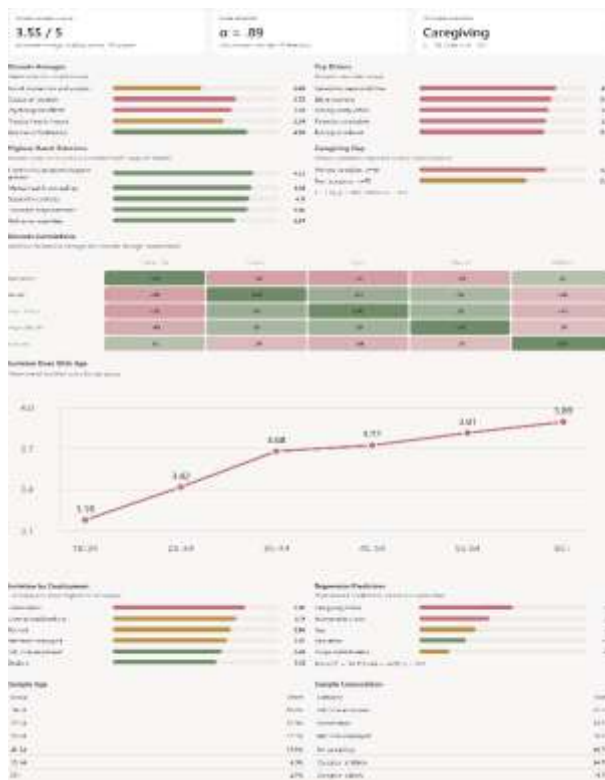
The model explains **34% of the variance** in isolation scores ($R^2 = .34$), which is a substantial amount for social science research. The significant predictors are:

- **Caregiving status** ($\beta = .28$, $*p^* < .001$): The strongest predictor. Being a primary caregiver increases isolation score by about 0.45 points on the 5-point scale, holding other factors constant.
- **Homemaker status** ($\beta = .21$, $*p^* = .002$): Being a homemaker adds 0.38 points to the isolation score.
- **Age** ($\beta = .17$, $*p^* = .009$): Each additional year of age is associated with a small but significant increase in isolation.
- **Education** ($\beta = -.14$, $*p^* = .034$): Higher education is linked to lower isolation (each level of education reduces score by 0.15 points).
- **Marital status** was not significant ($*p^* = .186$) when other factors were controlled.

In practical terms, caregiving, being a homemaker, and older age are the most powerful risk factors for social isolation among women, while higher education appears protective.



Dashboard of findings:



Discussion

Key Findings

This study provides empirical evidence for the multidimensional nature of social isolation among women and identifies critical targets for early intervention. Several findings warrant detailed discussion.

Prevalence and Severity. The overall social isolation score of 3.55 (on a 5-point scale) indicates that social isolation is a significant concern for the women in this sample. This finding aligns with previous research documenting elevated rates of loneliness and social disconnection among women. The fact that nearly one-third of participants scored above 4.0 on the isolation scale suggests that a substantial proportion of women are experiencing severe isolation requiring urgent attention.

Primary Causes. Caregiving responsibilities emerged as the strongest predictor of social isolation, consistent with the extensive literature documenting the social costs of women's disproportionate caregiving burden. The mean score of 4.12 for the item "Caregiving responsibilities limit my social interactions" indicates near-universal agreement with this statement among caregivers. Life transitions ($M = 3.98$) and financial constraints ($M = 3.81$) also ranked highly as contributing factors. These findings underscore the need for structural interventions that address the systemic barriers to women's social participation.

Health Correlates. The strong negative correlation between social connection and psychological effects ($r^* = -.61$) provides quantitative support for the well-established link between isolation and mental health deterioration. Women who reported greater isolation also reported higher levels of depression, anxiety, and low self-esteem. This bidirectional relationship— isolation exacerbating mental health symptoms and mental health symptoms further limiting social engagement—creates a vicious cycle that must be interrupted through comprehensive intervention.

Demographic Variations. The finding that homemakers reported significantly higher isolation than employed women aligns with research on the social isolation associated with domestic roles. The absence of workplace social networks, combined with the demands of childcare and household management, may limit opportunities for meaningful social interaction. Similarly, the age-related pattern—with older women reporting higher isolation—reflects cumulative life transitions, bereavement, and increasing physical limitations.



Solution Preferences. Community programs ($M = 4.23$) and mental health support ($M = 4.18$) were rated as the most effective solutions, suggesting that women value both collective social engagement and professional psychological support. The high rating for supportive workplace/family policies ($M = 4.11$) indicates recognition of the structural nature of isolation and the need for systemic change.

Theoretical Implications

This study contributes to the theoretical understanding of women's social isolation in several ways. First, the findings support a biopsychosocial model of isolation that recognizes the interplay of individual (psychological symptoms), social (caregiving, life transitions), and structural (economic constraints, cultural norms) factors. Second, the strong predictive power of caregiving status suggests that women's isolation is not merely a function of individual personality or circumstance but is fundamentally shaped by gendered social roles. Third, the moderate correlation between solution effectiveness and current social connection ($*r^* = .42$) suggests that women who are already more connected may have greater awareness of or access to resources—a finding with implications for intervention targeting.

Practical Implications

The findings have several practical implications for intervention design and policy:

Targeted Interventions for Caregivers. Given that caregiving emerged as the strongest predictor of isolation, interventions specifically designed for women in caregiving roles are urgently needed. These might include respite care programs, caregiver support groups, and flexible scheduling options that allow caregivers to maintain social connections.

Community-Based Approaches. The high rating of community programs as an effective solution suggests that investment in women's community centers, support groups, and activity-based programs would be well-received and potentially impactful.

Mental Health Integration. The recognition of mental health support as a key solution highlights the need for accessible, affordable, and destigmatized mental health services for women. Integration of mental health screening and support into primary care, workplace wellness programs, and community settings could increase access.

Economic Empowerment. The moderate-to-high rating of economic empowerment programs ($M = 4.06$) suggests that women recognize the link between financial independence and social participation. Microfinance programs, vocational training, and entrepreneurship support may have secondary benefits for social connection.

Policy Advocacy. The high rating of supportive policies indicates that women view structural change as essential. Advocacy for paid family leave, affordable childcare, eldercare support, and workplace flexibility should be prioritized.

Limitations

Several limitations should be acknowledged. First, the cross-sectional design precludes causal inference; longitudinal research is needed to establish temporal relationships among variables. Second, the sample was predominantly urban and may not represent the experiences of rural women or women from diverse cultural backgrounds. Third, the reliance on self-report measures introduces the possibility of social desirability bias and recall error. Fourth, the sample size of 150, while adequate for the statistical analyses conducted, limits the generalizability of findings and the ability to detect small effects. Fifth, the study did not include a comparison group of men, limiting the ability to draw gender-specific conclusions about isolation patterns.

Future Research Directions

Future research should address these limitations through:

1. Longitudinal studies tracking women's social isolation over time, particularly across major life transitions
2. Comparative studies examining isolation patterns across diverse cultural, socioeconomic, and geographic contexts



3. Intervention studies evaluating the effectiveness of specific programs (e.g., community support groups, digital connection platforms)
4. Mixed-methods research combining quantitative measures with qualitative interviews to capture the lived experience of isolation
5. Research on the effectiveness of technology-based interventions for women with mobility or caregiving constraints

Conclusion

This study provides empirical evidence that social isolation is a significant concern for women, with caregiving responsibilities, life transitions, and financial constraints emerging as the primary contributors. The strong correlations between isolation and psychological distress underscore the urgency of intervention. Women in this sample identified community programs, mental health support, and supportive policies as the most effective solutions, suggesting that both individual-level and structural interventions are needed.

Addressing social isolation among women requires a multifaceted approach that acknowledges the unique factors contributing to women's isolation while working to dismantle the systemic barriers—patriarchal norms, economic inequalities, and inadequate social infrastructure—that perpetuate it. As the World Health Organization has recognized, social isolation is not merely a personal problem but a public health priority requiring coordinated action across sectors.

The path forward lies in:

- Investing in community-based programs that create opportunities for meaningful social connection
- Expanding access to mental health services with attention to the specific needs of women
- Implementing policies that support caregivers and promote work-life balance
- Challenging cultural norms that restrict women's mobility and social participation
- Leveraging technology to connect women who are geographically or physically isolated

By addressing both the beginning causes and early solutions to social isolation, society can empower women to thrive socially, emotionally, and economically—benefiting not only women themselves but their families, communities, and society as a whole.

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Appendix A

Full Questionnaire

Social Isolation Among Women Survey

Instructions: Please indicate the extent to which you agree or disagree with each statement using the following scale:

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Section A: Social Connection and Support

1. I have people I can turn to for emotional support when needed.
2. I feel connected to my community and neighborhood.
3. I have meaningful and satisfying relationships with my family members.
4. I have close friendships with people outside my immediate family.
5. I regularly participate in social activities or group events.

Section B: Causes of Isolation

6. Caregiving responsibilities (for children, elderly, or others) limit my opportunities for social interaction.
7. Financial constraints prevent me from participating in social activities.
8. Cultural or societal expectations restrict my ability to socialize freely.
9. Major life transitions (marriage, divorce, relocation, bereavement) have disrupted my social networks.
10. I feel stigmatized or ashamed about seeking help for mental health concerns.
11. I lack access to safe public spaces where I can socialize.

Section C: Psychological Effects

12. I often feel lonely, even when I am around other people.
13. I experience symptoms of depression (e.g., persistent sadness, loss of interest).
14. I feel anxious or uncomfortable in social situations.
15. My self-esteem and confidence have been negatively affected by my social situation.
16. I feel withdrawn and disconnected from others.



Section D: Physical Health Impact

17. My physical health has declined as a result of social isolation.
18. I experience stress-related physical symptoms (e.g., headaches, fatigue, digestive issues).
19. My sleep quality has been negatively affected.
20. I have less energy and motivation than I used to.

Section E: Perceived Effectiveness of Solutions

21. Community programs (support groups, women's clubs, hobby groups) would help reduce my social isolation.
22. Technology and online communities would help me stay connected despite physical or geographic barriers.
23. Accessible mental health counseling and support services would be beneficial for me.
24. Economic empowerment programs (education, job training, financial literacy) would help me build social networks.
25. Supportive workplace or family policies (flexible hours, childcare support, eldercare support) would alleviate isolation.

Appendix B

Statistical Formulas Used

1. Mean (Average)

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$$

Where $\bar{x}$ is the mean, x_i is each individual score, and n is the total number of scores.

2. Standard Deviation

$$SD = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n - 1}}$$

3. Cronbach's Alpha (Reliability Coefficient)

$$\alpha = \frac{k}{k - 1} \left(1 - \frac{\sum_{i=1}^k \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

Where k is the number of items, $\sigma_{Y_i}^2$ is the variance of item i , and σ_X^2 is the variance of the total score.

4. Pearson Correlation Coefficient

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$



5. Independent Samples t-test

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where $\bar{x}_1, \bar{x}_2$ are group means, s_1^2, s_2^2 are group variances, and n_1, n_2 are group sizes.

6. Cohen's d (Effect Size)

$$d = \frac{\bar{x}_1 - \bar{x}_2}{s_{pooled}}$$

Where:

$$s_{pooled} = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

7. One-way ANOVA F-statistic

$$F = \frac{MS_{between}}{MS_{within}} = \frac{\sum_{j=1}^k n_j (\bar{x}_j - \bar{x})^2 / (k - 1)}{\sum_{j=1}^k \sum_{i=1}^{n_j} (x_{ij} - \bar{x}_j)^2 / (N - k)}$$

8. Multiple Linear Regression

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$$

Where Y is the dependent variable, β_0 is the intercept, $\beta_1, \dots, \beta_k$ are regression coefficients, $X_1, \dots, X_k$ are predictor variables, and ε is the error term.