Health Psychology

© 2025 American Psychological Association
ISSN: 0278-6133

2025, Vol. 44, No. 5, 509–517
https://doi.org/10.1037/hea0001409

Social Asymmetry and Physical Health in the United States and Japan

Anthony D. Ong[1, 2, 3], Dakota W. Cintron[1, 2], Tomiko Yoneda[4], Emorie D. Beck[4], Kathryn Jackson[5], Jing Luo[5], Daniel K. Mroczek[5, 6], Andrew Steptoe[7], and Eileen K. Graham[5]

[1] Department of Psychology, Cornell University
[2] Center for Integrative Developmental Science, Cornell University
[3] Department of Medicine, Weill Cornell Medicine
[4] Department of Psychology, University of California, Davis
[5] Department of Medical Social Sciences, Northwestern University
[6] Department of Psychology, Northwestern University
[7] Department of Behavioural Science and Health, University College London

Objective: Social relationships are increasingly recognized as crucial determinants of health, but cultural variations in the health implications of social disconnection remain understudied. This study examines how nationality, reflecting cultural differences in social norms, moderates the relationship between social asymmetry and physical health in Japanese and U.S. adults. We hypothesized that the association between greater social asymmetry and poorer health would be attenuated in Japan compared to the United States. ***Method:*** The sample comprised adults aged 23–84 years from Japan ($N = 1,027$) and the United States ($N = 6,650$) participating in the Midlife in Japan and Midlife in the United States longitudinal studies. Social asymmetry was quantified as the residual score from regressing loneliness on social isolation, with positive residuals indicating higher loneliness than expected based on isolation levels. Physical health was a latent variable indicated by chronic conditions, symptoms, activities of daily living, and physical activity. Structural equation modeling examined the moderating effect of nationality on the social asymmetry–health link. ***Results:*** Across both cultural contexts, greater social asymmetry (i.e., higher loneliness than predicted by isolation) was associated with worse physical health. However, as hypothesized, this relationship was significantly weaker in Japan compared to the United States, highlighting the role of cultural context in shaping the health implications of discrepant social experiences. ***Conclusions:*** Findings contribute to understanding cultural variations in the health consequences of social disconnection and emphasize the need to consider sociocultural factors when examining social determinants of health across diverse populations.

Public Significance Statement
This cross-cultural study emphasizes the significance of considering sociocultural factors when examining the health consequences of social disconnection. The research demonstrates the complex interplay between social asymmetry—the mismatch between perceived loneliness and objective isolation—and physical health across different cultural contexts. While greater social asymmetry is associated with poorer health outcomes in both the United States and Japan, the detrimental impact is attenuated in the more collectivistic Japanese society. These findings highlight the necessity of considering cultural aspects in public health strategies, particularly when addressing the global issue of social disconnection and its effects on health.

Keywords: social isolation, loneliness, social asymmetry, Japan

Supplemental materials: https://doi.org/10.1037/hea0001409.supp

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Jenny M. Cundiff served as action editor.

Anthony D. Ong https://orcid.org/0000-0002-5032-667X

This research was supported, in part, by Grant P01-AG020166 from the National Institute on Aging to conduct a longitudinal follow-up of the Midlife in the United States investigation. The original study was supported by the John D. and Catherine T. MacArthur Foundation Research Network on Successful Midlife Development.

Anthony D. Ong served as lead for conceptualization, writing–original draft, and writing–review and editing. Dakota W. Cintron served as lead for formal analysis and served in a supporting role for writing–review and editing. Tomiko Yoneda served in a supporting role for methodology and writing–review and editing. Emorie D. Beck served in a supporting role for methodology and writing–review and editing. Kathryn Jackson served in a supporting role for writing–review and editing. Jing Luo served in a supporting role for writing–review and editing. Daniel K. Mroczek served in a supporting role for writing–review and editing. Andrew Steptoe served in a supporting role for writing–review and editing. Eileen K. Graham served in a supporting role for writing–review and editing. Andrew Steptoe and Eileen K. Graham contributed equally to conceptualization.

Correspondence concerning this article should be addressed to Anthony D. Ong, Department of Psychology, Cornell University, 116 Reservoir Avenue, G421 Martha Van Rensselaer Hall, Ithaca, NY 14853-4401, United States. Email: anthony.ong@cornell.edu

Social relationships have emerged as critical factors influencing health and well-being throughout the life course, with a growing body of evidence highlighting their profound impact on various aspects of physical and mental health (Hawkley & Cacioppo, 2010; Holt-Lunstad, 2018). A key theoretical distinction is between objective social isolation and subjective loneliness experiences (Perlman & Peplau, 1981). Social isolation refers to the quantifiable lack of social interactions, reflecting reduced network size and frequency of contacts (S. Cohen et al., 1997; Holt-Lunstad, 2018). In contrast, loneliness denotes the subjective feeling of inadequate social connection and dissatisfaction with one's relationships (Hawkley & Cacioppo, 2010; Weiss, 1973).

The quantity and quality of social connections have been linked to diverse mental and physical health outcomes, including depression, cardiovascular disease, neuroendocrine functioning, inflammation, and mortality risk (Cacioppo & Cacioppo, 2014; Foster et al., 2023; Holt-Lunstad, 2022; Naito et al., 2023; Steptoe et al., 2013). However, isolation and loneliness are often discordant—socially embedded individuals may still feel lonely, while some socially disconnected individuals are content with solitude (e.g., de Jong-Gierveld, 1987; Newall & Menec, 2019; Weinstein et al., 2023).

Social Asymmetry and Health

Social asymmetry refers to mismatches between objective social isolation and subjective loneliness (McHugh et al., 2017; Ong et al., 2023). The literature on social asymmetry gives rise to four different isolation–loneliness combinations: being isolated and lonely, being isolated but not lonely, not being isolated but feeling lonely, and neither being isolated nor feeling lonely (McHugh et al., 2017; Newall & Menec, 2019). In the present study, we focus on one manifestation of social asymmetry: loneliness that exceeds levels predicted by objective isolation.

Loneliness in the absence of isolation may indicate particularly high levels of desired social connectedness compared to loneliness that is proportionate to one's isolation level. Individuals who feel lonely despite social contact likely have unmet social needs and a strong motivation for more or higher quality connections (Hawkley & Cacioppo, 2010; Perlman & Peplau, 1981). The perception of one's social relationships as inadequate, even in the presence of social contact, may be a more potent stressor than loneliness stemming from objective isolation, as it signifies a discrepancy between desired and actual social connection (Cacioppo & Hawkley, 2009; Rook, 1984). This form of loneliness may be especially detrimental to well-being, as it suggests a lack of fulfillment in one's social interactions and a yearning for greater intimacy and support (Akhter-Khan et al., 2023; Newall & Menec, 2019).

Conceptually, social asymmetry may help differentiate vulnerable versus resilient individuals in terms of health risks, even at similar isolation levels (Newall & Menec, 2019; Smith & Victor, 2019). For instance, Lee and Ko (2018) found that older adults who were lonely but not isolated tended to have fewer meaningful interactions with close ties. In contrast, individuals resilient to loneliness may be less susceptible to the detrimental effects of isolation (Cloutier-Fisher et al., 2011; Dykstra, 1995). Examining the interplay between objective isolation and subjective loneliness may further elucidate associations with health outcomes.

Cultural Variations in Social–Health Links

The link between loneliness not attributable to isolation and health may differ across cultures due to variations in social norms, values, and expectations. Existing research on social asymmetry and its health implications has primarily been conducted in individualistic cultural contexts, such as the United States and Europe (e.g., McHugh et al., 2017; Menec et al., 2020). In these cultures, which place a high value on personal autonomy, self-sufficiency, and voluntary social ties, loneliness that exceeds expected levels based on isolation may be particularly distressing and detrimental to health, as it contradicts cultural ideals of self-sufficiency and social mastery (Kitayama et al., 2009; Uchida et al., 2008). The discrepancy between desired and actual social connection may be perceived as a personal failure or a sign of social incompetence, exacerbating the negative health consequences of loneliness (Hawkley & Cacioppo, 2010; Heinrich & Gullone, 2006).

In contrast, in collectivistic cultures like Japan, which prioritize social harmony and the fulfillment of relational obligations over individual preferences (Kitayama et al., 2010), loneliness in the presence of social contact may be less threatening to well-being. In these cultural contexts, the experience of loneliness despite having social ties may be viewed as a natural part of navigating complex social roles and expectations, such as those related to filial piety (e.g., the obligation to care for one's aging parents; Karasawa et al., 2011), rather than a personal shortcoming (Uchida et al., 2008).

Several additional factors in Japanese society may further mitigate the negative effects of social disconnection. For example, the concept of "amae," referring to the culturally valued dependence on others, may render social isolation less threatening (Niiya et al., 2006). Moreover, Japan's cultural acceptance of solitude, as reflected in concepts like "hikikomori" (acute social withdrawal) and "kodokushi" (solitary death), suggests that social isolation may be viewed with less stigma and alarm compared to the United States (Kato et al., 2017). The notion of "ibasho," referring to a sense of belonging and purpose, can emerge through solitary engagement in culturally meaningful activities (Bamba & Haight, 2007), also points to the possibility of "contented solitude" and a decoupling of isolation from loneliness.

These cultural differences in the understanding and experience of social disconnection are further reinforced by the distinct explanatory frameworks for health in Japan and the United States (Kitayama et al., 2022). In Japan, a collectivistic society emphasizing interdependence and situational influences, health problems are commonly attributed to contextual and relational factors (Miyamoto & Ryff, 2011). This attribution style aligns with the Japanese cultural view of the self as fundamentally embedded within a network of social relationships and responsibilities (Markus & Kitayama, 1991). In contrast, in the United States, an individualistic society that values personal autonomy and self-sufficiency, health problems are more commonly attributed to dispositional factors, such as personal choices, lifestyle habits, or predispositions (Levy et al., 2009). This emphasis on individual responsibility for health reflects the U.S. cultural ideal of the independent, self-contained self, whose thoughts, feelings, and behaviors are seen as primary determinants of well-being (Kitayama et al., 2022; Markus & Kitayama, 1991). These divergent explanatory frameworks for health may further shape the perceived impact of social disconnection on well-being in these two cultural contexts.

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Study Aims

While nationality and culture are interrelated, they are not fully equivalent, as there is variability in individualistic and collectivistic values within nations (Kapoulea et al., 2023). However, Japan and the United States represent two contexts that lie on opposite ends of the individualism–collectivism spectrum (Hofstede, 2001), permitting opportunities to investigate how this cultural dimension may shape manifestations of social asymmetry and its health correlates across nations.

The present study examines cultural differences in the association between social asymmetry and physical health by leveraging data from the Midlife in Japan (MIDJA) and Midlife in the United States (MIDUS) studies. We hypothesize that social asymmetry, defined as loneliness exceeding levels predicted by objective isolation, will be linked to poorer physical health in both countries. However, we hypothesize that this association will be significantly weaker among Japanese compared to U.S. adults, given the prevailing cultural norms, values, and explanatory frameworks for health in each society.

Method

Transparency and Openness Promotion

This study meets Level 2 requirements for open science practices as outlined in the Transparency and Openness Promotion Guidelines (Nosek et al., 2015). Data for the study are available at https://midus.colectica.org/. Materials, including study code and measures, are publicly available. The study design, hypotheses, and analysis plan were not preregistered. In this article, we report how the sample was obtained, data exclusions, and all measures that were included. Data were analyzed using R Version 4.3.1.

Participants

Data for this study were drawn from the MIDJA and MIDUS longitudinal studies (Brim et al., 2004; Ryff et al., 2015). MIDJA participants were recruited in 2008 as part of the first wave of data collection. MIDUS participants were selected from the second wave of the original MIDUS cohort (2004–2006) as well as the first wave of the MIDUS refresher sample (2011–2014). All data collection procedures for the MIDUS studies were approved by the Institutional Review Boards at each participating site. Informed consent was obtained from all participants prior to data collection.

Measures

Physical Health

Physical health was measured as a latent variable (Di Gessa et al., 2016; Heidrich & Ryff, 1993; Hisler & Brenner, 2019) with four manifest indicators: number of chronic conditions, number of physical symptoms, intermediate activities of daily living (IADL) limitations, and limitations to physical activity (see Figure 1). Chronic health conditions were assessed by a checklist of 30 self-reported health issues (e.g., stroke, diabetes, high blood pressure) respondents experienced in the past year, with total scores reflecting a greater number of chronic conditions. Physical symptoms captured the frequency of eight symptoms (e.g., headaches, backaches, aches/joint stiffness) experienced in the past 30 days, using a 6-point scale from 1 = *almost every day* to 6 = *not at all*. Scores were reverse-coded and averaged so higher values indicated more frequent physical symptoms. IADL limitations were evaluated using eight items that assessed difficulty with daily living activities due to health issues. Specifically, participants rated how much health issues impacted their ability to engage in activities such as climbing stairs and walking several blocks. Responses were made on a 4-point scale from 1 = *a lot* to 4 = *not at all*. Scores were reverse-coded and averaged, so higher scores indicated greater limitations. Physical activity was assessed with two items. Respondents rated the degree to which their health limited them in performing moderate ("bowling or using a vacuum cleaner") and vigorous ("running or lifting heavy objects long enough to work up a sweat") activities using a 1 = *a lot* to 4 = *not at all* scale. Physical activity scores were reverse coded and averaged such that higher scores indicated greater issues with physical health limitations.

To enable cross-cultural comparisons, physical health was modeled as a latent variable indicated by four manifest variables: chronic conditions, physical symptoms, IADL, and physical activity limitations. The manifest indicators were standardized to create compatible scale scores between the Japanese and U.S. samples. The set of indicators demonstrated good internal reliability ($\alpha = .81$). Scalar invariance testing also revealed strong measurement equivalence across cultures ($\Delta CFI \leq .01$ metric; Cheung & Rensvold, 2002), further validating the physical health construct for cross-cultural analysis (see Supplemental Table 1 in the online supplemental materials). In sum, the latent physical health variable, composed of the four indicators, provided a rigorous approach to assessing overall physical health while reducing measurement error.

Loneliness and Social Isolation

Loneliness was assessed with three items that asked participants how often they felt in the past 30 days: "lonely," "close to others," and "like they belonged" (Freilich et al., 2023). Response options for each item ranged from 1 = *all of the time* to 5 = *none of the time*. To create a composite, the items on feeling close to others and sense of belonging were reverse-coded. The three items were then averaged so that higher total scores represented higher loneliness levels. Social isolation was assessed using three items that measured the frequency of contact with neighbors, friends, and family (Cornwell & Waite, 2009; Steptoe et al., 2013). Response options for neighbor contact ranged from 1 = *almost every day* to 6 = *never*, whereas those for friend and family contact ranged from 1 = *several times a day* to 8 = *never or hardly ever*. Responses were coded so that higher scores represented higher social isolation levels. For the current study, items from both scales were percent of maximum possible scored to create compatible 0–100 scales. Conversion to percent of maximum possible scores enabled standardized comparisons and interpretation of constructs on a common metric (P. Cohen et al., 1999).

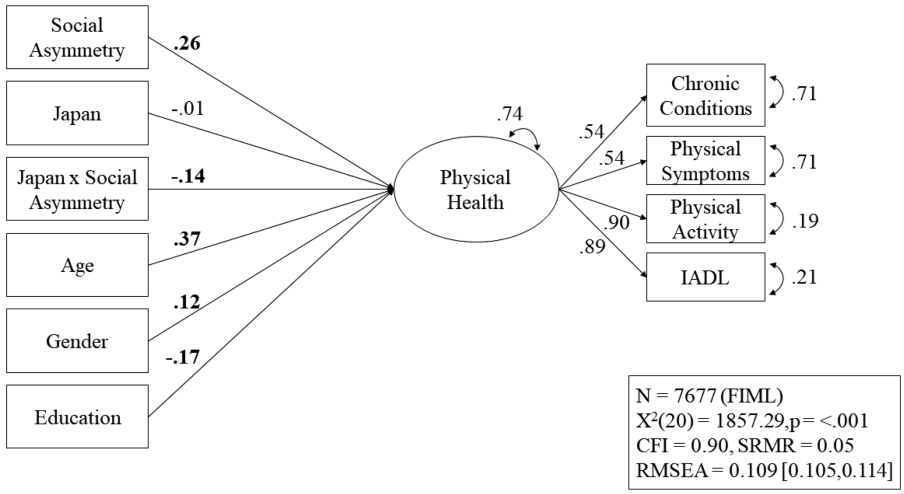
Calculation of Social Asymmetry

We calculated social asymmetry by regressing loneliness on social isolation. The residuals from this regression served as our primary outcome reflecting social asymmetry. Conceptually, a residual value of zero indicates an individual's level of loneliness was fully accounted for by their degree of isolation. Positive residuals suggest

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Figure 1

Measurement and Structural Models Depicting Associations Between Social Asymmetry and Latent Physical Health



Note. Values are standardized path coefficients and variances. Bolded coefficients are significant at $p < .05$. IADL = intermediate activities of daily living; FIML = full information maximum likelihood; CFI = comparative fit index; SRMR = standardized root-mean-square residual; RMSEA = root-mean-square error of approximation.

higher loneliness than expected given one's isolation level (i.e., social vulnerability). Negative residuals indicate lower loneliness than expected given isolation (i.e., social resilience).

This approach aligns with recent studies operationalizing social asymmetry as the discrepancy between observed and expected loneliness levels (McHugh et al., 2017; Ong et al., 2023).

Covariates

Age, culture, education, and gender were used as covariates. Age was treated as a continuous covariate in the analyses. Binary covariates included culture (1 = Japan, 0 = United States) and gender (1 = women, 0 = men). A dichotomous education variable was created by collapsing response options without bachelor's degrees into a single category, coded as 0. This enabled consistent coding between the United States and Japan, since below bachelor's degree options differed across samples (e.g., General Educational Diploma in the United States but not Japan). The category representing bachelor's degree or higher education was coded as 1.

Statistical Analysis

Analyses were conducted using structural equation modeling (SEM) in R (lavaan package; Rosseel, 2012). Full information maximum likelihood estimation was employed to handle missing data (Enders & Bandalos, 2001). Cases were excluded only if they were missing on all physical health indicators. Three SEM models examined associations between social asymmetry and the latent physical health outcome indicated by chronic conditions, symptoms, functional limitations, and activity limitations. Model 1 tested the unadjusted association. Model 2 adjusted for age, gender, education, and nationality. Model 3 incorporated the social asymmetry × nationality interaction.

Model fit was evaluated using standard criteria (Briesch et al., 2020; Hu & Bentler, 1999; McCoach & Cintron, 2022).: χ^2 test of absolute misfit, comparative fit index (CFI) ≥ .95 for good fit, root-mean-square error of approximation (RMSEA) ≤ .08 for acceptable fit, and standardized root-mean-square residual (SRMR) < .08 for good fit. SEM enabled modeling of physical health as a latent construct to reduce measurement error (e.g., Di Gessa et al., 2016; Heidrich & Ryff, 1993; Hisler & Brenner, 2019). However, the distinct health indicators may also provide unique insights. Thus, supplementary regression analyses predicted each indicator separately.

Results

Descriptive Statistics

The combined analytical sample comprised 1,027 Japanese adults aged 30–79 from the MIDJA study and 6,650 U.S. adults aged 23–84 years from the MIDUS study. The overall mean age was similar between countries (Japan, $M = 54.36$ years, $SD = 14.14$; United States, $M = 54.63$ years, $SD = 13.31$). In both samples, there were slightly more women than men (Japan, 51% female; United States, 55% female). The majority of participants had below a bachelor's degree education (Japan, 68%; United States, 58%). Table 1 displays complete sociodemographic information for each country. Supplemental Table 2 in the online supplemental materials presents intercorrelations among variables within each cultural sample.

Social Asymmetry in Japan and the United States

The measurement model showed acceptable fit, supporting the adequacy of the health indicators (CFI ≥ .90 and SRMR ≤ .08). Figure 1 depicts the measurement model with standardized loadings from 0.53 to 0.90. As shown in Table 2, social asymmetry

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Table 1
Descriptive Statistics

Variable	United States ($n = 6{,}650$)			Japan ($n = 1{,}027$)		
	M	*SD*	% missing	*M*	*SD*	% missing
Age	54.63	13.31	0.00	54.36	14.14	0.00
Chronic conditions (STD)	0.01	1.03	0.81	−0.05	0.79	1.46
Physical symptoms (STD)	0.05	1.01	0.50	−0.31	0.86	0.19
Physical activity (STD)	0.06	1.02	0.60	−0.38	0.78	0.68
IADL (STD)	0.03	1.00	0.42	−0.21	0.98	0.49
Felt lonely (POMP)	13.58	21.66	1.20	15.01	22.28	0.78
Felt close to others (POMP)	35.77	24.27	1.01	42.27	21.88	1.46
Felt like belonged (POMP)	33.14	24.64	0.84	41.57	22.39	1.27
Contact with neighbors (POMP)	21.31	25.83	1.34	24.88	30.60	0.19
Contact with friends (POMP)	34.59	24.97	1.13	47.24	25.65	7.69
Contact with family (POMP)	29.18	22.06	0.98	53.30	25.78	30.57
Loneliness (POMP)	27.52	19.61	0.47	32.86	18.24	0.58
Social isolation (POMP)	28.37	16.75	0.63	40.12	20.68	0.00
Social asymmetry (POMP)	38.42	15.26	1.10	40.02	14.03	0.58
Gender	0.55	0.50	0.00	0.51	0.50	0.00
Bachelor's degree	0.42	0.49	0.12	0.32	0.47	1.17

Note. STD = standardized; IADL = intermediate activities of daily living; POMP = percent of maximum possible score.

demonstrated associations with the latent physical health outcome in the expected direction. Greater social asymmetry was linked to worse physical health in both unadjusted ($B_{std} = 0.21$, $p = < .001$) and covariate-adjusted ($B_{std} = 0.26$, $p = < .001$) models. Furthermore, nationality emerged as a predictor, with Japanese adults reporting better health outcomes than U.S. adults on average ($B_{std} = -0.23$ $p = < .001$), independent of social asymmetry. However, this main effect was explained by the

Table 2
Results From Structural Equation Models Examining Associations Between Social Asymmetry and Latent Physical Health

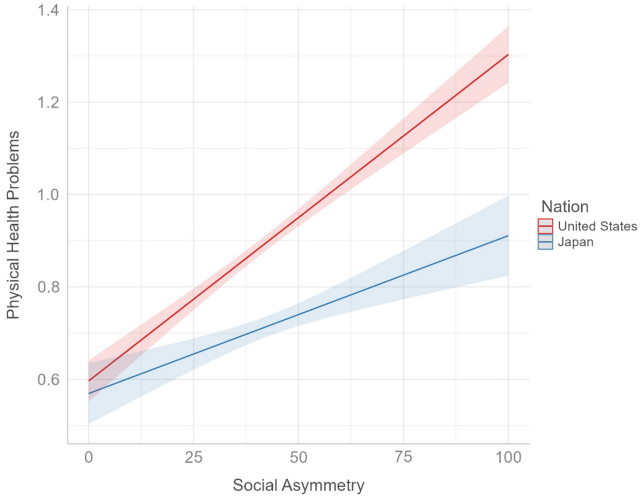
Predictor	Model 1				Model 2				Model 3			
	Ustd	Std	*SE*	*p*	Ustd	Std	*SE*	*p*	Ustd	Std	SE	*p*
Physical health												
Chronic conditions	1.00	0.53	0.01	<.001	1.00	0.54	0.01	<.001	1.00	0.54	0.01	<.001
Physical symptoms	1.01	0.54	0.01	<.001	1.01	0.54	0.01	<.001	1.01	0.54	0.01	<.001
Physical activity	1.67	0.89	0.00	<.001	1.68	0.90	0.00	<.001	1.68	0.90	0.00	<.001
IADL	1.69	0.90	0.00	<.001	1.67	0.90	0.00	<.001	1.67	0.89	0.00	<.001
Regression(s)												
SA	.01	.21	.01	<.001	.01	.24	.01	<.001	.01	.26	.01	<.001
Age					.02	.37	.01	<.001	.02	.37	.01	<.001
Female					.13	.12	.01	<.001	.13	.12	.01	<.001
Bachelor's degree					−.19	−.17	.01	<.001	−.19	−.17	.01	<.001
Japan					−.23	−.15	.01	<.001	−.02	−.01	.03	.657
Japan × SA									−.01	−.14	.03	<.001
Intercepts												
Chronic conditions	−0.29	−0.29	0.02	<.001	−1.1	−1.1	0.04	<.001	−1.1	−1.1	0.04	<.001
Physical symptoms	−0.29	−0.29	0.02	<.001	−1.1	−1.1	0.04	<.001	−1.1	−1.1	0.04	<.001
Physical activity	−0.48	−0.48	0.03	<.001	−1.8	−1.8	0.05	<.001	−1.9	−1.9	0.05	<.001
IADL	−0.49	−0.49	0.03	<.001	−1.8	−1.8	0.05	<.001	−1.9	−1.9	0.05	<.001
Variances												
Chronic conditions	0.71	0.72	0.01	<.001	0.71	0.71	0.01	<.001	0.71	0.71	0.01	<.001
Physical symptoms	0.71	0.71	0.01	<.001	0.71	0.71	0.01	<.001	0.71	0.71	0.01	<.001
Physical activity	0.21	0.21	0.01	<.001	0.19	0.19	0.01	<.001	0.19	0.19	0.01	<.001
IADL	0.20	0.19	0.01	<.001	0.21	0.21	0.01	<.001	0.21	0.21	0.01	<.001
Physical health	0.27	1.00	0.01	<.001	0.21	0.74	0.01	<.001	0.21	0.74	0.01	<.001
Model fit statistics												
$\chi^2(df)$	(5) = 1348.78, $p = < .001$				(5) = 1348.78, $p = < .001$				(20) = 1857.29, $p = < .001$			
CFI	.90				.90				.90			
RMSEA	.187 [.179, .196]				.187 [.179, .196]				.109 [.105, .114]			
SRMR	.07				.07				.05			

Note. $N = 7{,}677$; Ustd = unstandardized coefficient; Std = standardized path coefficient; IADL = intermediate activities of daily living; SA = social asymmetry; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual. Bracketed values represent 95% confidence intervals.

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Figure 2

Moderating Effect of Culture on the Relationship Between Social Asymmetry and Latent Physical Health



Note. The plot depicts the predicted values of physical health problems for the United States and Japan with 95% confidence intervals. Predicted factor scores were used for physical health problems. See the online article for the color version of this figure.

social asymmetry by nationality interaction that emerged in the subsequent model.

A key study aim was to examine whether nationality moderates the relationship between social asymmetry and physical health. As seen in Table 2, Model 3 showed acceptable fit (CFI $\geq$ .90 and SRMR $\leq$ .08), and the interaction between nationality and social asymmetry was found to be significant ($B_{std} = -0.14$, $p = < .001$). Figure 2 illustrates the moderation effect—while greater asymmetry was broadly associated with worse physical health, effects were mitigated for Japanese adults compared to their U.S. counterparts.

To examine outcome-specific effects, follow-up regressions tested moderation for each health indicator separately (Table 3). Aligning with the latent SEM model, nationality significantly moderated the association between asymmetry and both physical activity ($B_{std} = -0.12$, $p = < .001$) and IADL limitations ($B_{std} = -0.15$, $p = < .001$). For Japanese adults, these links were attenuated, suggesting that the health consequences of social asymmetry were less pronounced in this cultural context. However, moderation effects were nonsignificant for chronic conditions and symptoms, indicating more uniform associations across nationalities.

Discussion

This study examined whether nationality moderates the relationship between social asymmetry and physical health outcomes. Specifically, greater mismatch between subjective loneliness and objective isolation was linked to more chronic conditions, physical symptoms, functional difficulties, and less physical activity in both samples. This aligns with prior research indicating that unmet belongingness needs arising from social disconnection can adversely impact physical health and well-being (Lee & Ko, 2018; Menec et al., 2020). Critically, the association between social asymmetry and poorer health was weaker among Japanese adults than U.S. adults. This moderation effect emerged across latent and individual health indicators, highlighting how national contexts may influence social perceptions and, in turn, health outcomes (Kitayama et al., 2010; Ryff et al., 2015).

Several key aspects of Japanese culture likely contribute to the cross-cultural variations in social asymmetry and health observed in this study. The concept of "amae," which refers to the culturally valued dependence on others (Niiya et al., 2006), suggests that social isolation may be experienced differently and perceived as less threatening in Japan compared to more individualistic contexts like the United States. Moreover, the notion of "ibasho," representing a sense of belonging and purpose that can emerge through solitary engagement in culturally meaningful activities (Bamba & Haight, 2007), points to the possibility of experiencing contentment and fulfillment even in relative social isolation. These cultural frameworks around interdependence and deriving meaning from solitude may help explain why loneliness in the presence of social ties was less strongly linked to adverse health outcomes among Japanese adults.

In addition to these cultural norms and values, the distinct explanatory frameworks for health in Japan and the United States may also play a role in shaping the link between social disconnection and well-being. In Japan, health problems are commonly attributed to contextual and relational factors, rooted in the cultural view of the self as embedded within a network of social relationships and responsibilities (Markus & Kitayama, 1991; Miyamoto & Ryff, 2011). This contrasts with the U.S. emphasis on individual responsibility for health, which reflects the cultural ideal of the independent, self-contained self (Kitayama et al., 2022; Levy et al., 2009). These divergent health attribution frameworks could affect how

Table 3

Results From Structural Equation Models Examining Associations Between Social Asymmetry and Individual Indicators of Physical Health

	Chronic conditions			Physical symptoms			Physical activity			IADL		
Predictor	Std	*SE*	*p*	Std	*SE*	*p*	Std	*SE*	*p*	Std	SE	*p*
SA	0.26	0.01	<.001	0.28	0.01	<.01	0.20	0.01	<.001	0.22	0.01	<.001
Age	0.22	0.01	<.001	0.12	0.01	<.01	0.36	0.01	<.001	0.32	0.01	<.001
Female	0.11	0.01	<.001	0.16	0.01	<.01	0.09	0.01	<.001	0.09	0.01	<.001
Bachelor's degree	−0.10	0.01	<.001	−0.15	0.01	<.01	−0.13	0.01	<.001	−0.17	0.01	<.001
Japan	0.02	0.03	.651	−0.13	0.03	<.01	−0.05	0.03	.084	−0.05	0.03	.14
Japan × SA	−0.05	0.03	.140	−0.01	0.03	.808	−0.12	0.03	<.001	−0.15	0.03	<.001
Residual SE	0.93			0.92			0.89			0.90		
Adjusted R^2	0.13			0.16			0.22			0.19		

Note. $N = 7{,}677$. IADL = intermediate activities of daily living; Std = standardized coefficient; SA = social asymmetry.

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

individuals perceive and address social disconnection, potentially explaining the observed cross-national differences in how social isolation, loneliness, and physical health are interconnected. Further research is warranted to explore the influence of these sociocultural factors on the nexus between culture, social perceptions, and health outcomes.

Limitations and Future Research

Several limitations of this study warrant consideration. First, while the MIDJA and MIDUS studies are large national samples, they are not fully representative of their respective populations. The MIDJA sample was drawn exclusively from the Tokyo metropolitan area, which is more urbanized and potentially more individualistic than other regions of Japan (Yamawaki, 2012). This could contribute to the attenuation of social asymmetry–health effects, as urban Japanese may resemble Westerners in prioritizing independence. The weaker associations in the Japanese sample diverge from some prior work showing stronger loneliness–health links in more collectivistic contexts (Beller & Wagner, 2020), underscoring the need for further research across diverse samples. The MIDUS sample, although more geographically diverse, overrepresented individuals with higher educational attainment compared to the U.S. population (Ryff et al., 2015). This skew could also impact the generalizability of findings, as education is associated with both social connectedness and health (Turner & Turner, 2013).

A related limitation is the use of nationality as a cultural proxy, as it cannot disentangle cultural influences from sociodemographic differences and may obscure within-country heterogeneity (Kapoulea et al., 2023). Moreover, the Tokyo-only Japanese sample likely does not capture the full range of Japanese orientations toward independence–interdependence. Regional variations in individualism–collectivism have been documented, with rural areas tending to be more collectivistic (Yamawaki, 2012). Thus, sampling from a single urban center limits generalizability.

A third limitation of our study is the use of abbreviated measures of loneliness and isolation, common in large national datasets. Although these brief scales have demonstrated reliability and validity (Hughes et al., 2004), they may not fully capture the complexity of these constructs compared to more comprehensive assessments. For example, the three-item loneliness measure may not adequately represent the diverse dimensions of loneliness described by Weiss (1973), such as the distinction between emotional and social loneliness. Similarly, our measure of social isolation did not capture the nuanced forms of solitude elucidated by Weinstein et al. (2023), such as "public solitude," characterized by mental distancing while in the presence of others. Future research should aim to replicate these results using more extensive, well-validated measures of isolation and loneliness while also considering the diverse forms that solitude can take.

Lastly, we did not account for dispositional factors that may shape both social asymmetry and health. Individual differences in personality traits like extraversion and neuroticism, as well as attachment styles, could influence one's susceptibility to loneliness in the face of isolation (Buecker et al., 2020; Mikulincer & Shaver, 2013). For instance, individuals high in sociability may be more likely to experience loneliness that exceeds their isolation levels, while those high in introversion may be more resilient to isolation. Similarly, securely attached individuals may be better able to maintain a sense of connection despite limited social contact than those with anxious or avoidant attachment. Thus, personality and attachment could contribute to social asymmetry and health. Future research should examine the role of these individual differences in shaping both the prevalence and consequences of social asymmetry. Longitudinal designs that assess personality and attachment prior to the development of social asymmetry and health issues could help disentangle their effects. Ultimately, social asymmetry likely arises from a complex interplay of contextual and individual factors, which should be further elucidated.

Conclusion

This study provides evidence that nationality moderates the relationship between social asymmetry and physical health outcomes. Specifically, greater mismatch between loneliness and isolation had less pronounced adverse effects on health for Japanese compared to U.S. adults. These cross-national variations underscore the need for conceptual models that incorporate sociocultural factors shaping social experiences and health outcomes. Future work should examine cultural factors longitudinally to establish temporal precedence, test culture-specific mediating mechanisms, and include samples from diverse collectivistic contexts beyond East Asia. Incorporating direct measures of cultural values can also clarify their role in shaping social disconnection and health. Finally, intervention studies should test culturally tailored strategies for promoting social connectedness and mitigating isolation's health toll. In more collectivistic societies like Japan, strategies that leverage traditional social roles (e.g., filial piety) and shared community spaces may be especially effective. Interventions might focus on harmonizing individual needs with collective ties. In more individualistic cultures like the United States, efforts to destigmatize loneliness and emphasize the benefits of interdependence may be impactful. Across contexts, screening for the subjective experience of disconnection, even among socially embedded adults, can help identify those at risk. Elucidating the nuances in these social–health links can ultimately inform efforts to reduce cross-cultural health disparities and promote wellness through tailored interventions targeting social relationships.

Resumen

Objetivo: Las relaciones sociales se reconocen cada vez más como determinantes cruciales de la salud, pero las variaciones culturales en las implicaciones de la desconexión social para la salud siguen siendo poco estudiadas. Este estudio examina si la nacionalidad modera la relación entre la asimetría social, la discrepancia entre la soledad subjetiva y el aislamiento objetivo, y la salud física en adultos japoneses y estadounidenses. Nuestra hipótesis es que la asociación entre una mayor asimetría social y una peor salud se atenuaría en Japón en comparación con los Estados Unidos. ***Método:*** La muestra estuvo compuesta por adultos de 23 a 84 años de Japón ($N = 1{,}027$) y Estados Unidos ($N = 6{,}650$) que participaron en los estudios longitudinales Midlife in Japan (MIDJA) y Midlife in the United States (MIDUS). La asimetría social se cuantificó como la puntuación residual de la regresión de la soledad en el aislamiento social, con residuos positivos indicando una soledad mayor de la esperada según los niveles de aislamiento. La salud

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

física fue una variable latente indicada por condiciones crónicas, síntomas, actividades de la vida diaria y actividad física. El modelo de ecuaciones estructurales (SEM, por sus siglas en inglés) examinó el efecto moderador de la nacionalidad en el vínculo entre la asimetría social y la salud. ***Resultados:*** En ambos contextos culturales, una mayor asimetría social (es decir, mayor soledad que la prevista por el aislamiento) se asoció con una peor salud física. Sin embargo, como se planteó la hipótesis, esta relación fue significativamente más débil en Japón en comparación con los Estados Unidos, lo que destaca el papel del contexto cultural en la configuración de las implicaciones para la salud de las experiencias sociales discrepantes. ***Conclusiones:*** Los hallazgos contribuyen a comprender las variaciones culturales en las consecuencias para la salud de la desconexión social y enfatizan la necesidad de considerar factores socioculturales al examinar los determinantes sociales de la salud en poblaciones diversas.

References

Akhter-Khan, S. C., Prina, M., Wong, G. H.-Y., Mayston, R., & Li, L. (2023). Understanding and addressing older adults' loneliness: The social relationship expectations framework. *Perspectives on Psychological Science*, *18*(4), 762–777. https://doi.org/10.1177/17456916221127218

Bamba, S., & Haight, W. L. (2007). Helping maltreated children to find their Ibasho: Japanese perspectives on supporting the well-being of children in state care. *Children and Youth Services Review*, *29*(4), 405–427. https://doi.org/10.1016/j.childyouth.2006.10.001

Beller, J., & Wagner, A. (2020). Loneliness and health: The moderating effect of cross-cultural individualism/collectivism. *Journal of Aging and Health*, *32*(10), 1516–1527. https://doi.org/10.1177/0898264320943336

Briesch, A. M., Cintron, D. W., Dineen, J. N., Chafouleas, S. M., McCoach, D. B., & Auerbach, E. (2020). Comparing stakeholders' knowledge and beliefs about supporting students' social, emotional, and behavioral health in schools. *School Mental Health*, *12*(2), 222–238. https://doi.org/10.1007/s12310-019-09355-9

Brim, O. G., Ryff, C. D., & Kessler, R. C. (Eds.). (2004). *How healthy are we?: A national study of well-being at midlife*. The University of Chicago Press.

Buecker, S., Maes, M., Denissen, J. J. A., & Luhmann, M. (2020). Loneliness and the Big Five personality traits: A meta-analysis. *European Journal of Personality*, *34*(1), 8–28. https://doi.org/10.1002/per.2229

Cacioppo, J. T., & Cacioppo, S. (2014). Social relationships and health: The toxic effects of perceived social isolation: Social relationships and health. *Social and Personality Psychology Compass*, *8*(2), 58–72. https://doi.org/10.1111/spc3.12087

Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, *13*(10), 447–454. https://doi.org/10.1016/j.tics.2009.06.005

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, *9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Cloutier-Fisher, D., Kobayashi, K., & Smith, A. (2011). The subjective dimension of social isolation: A qualitative investigation of older adults' experiences in small social support networks. *Journal of Aging Studies—J AGING STUD*, *25*(4), 407–414. https://doi.org/10.1016/j.jaging.2011.03.012

Cohen, P., Cohen, J., Aiken, L. S., & West, S. G. (1999). The problem of units and the circumstances for POMP. *Multivariate Behavioral Research*, *34*(3), 315–346. https://doi.org/10.1207/S15327906MBR3403_2

Cohen, S., Doyle, W. J., Skoner, D. P., Rabin, B. S., & Gwaltney, J. M., Jr. (1997). Social ties and susceptibility to the common cold. *Journal of the American Medical Association*, *277*(24), 1940–1944. https://doi.org/10.1001/jama.1997.03540480040036

Cornwell, E. Y., & Waite, L. J. (2009). Measuring social isolation among older adults using multiple indicators from the NSHAP Study. *The Journals of Gerontology: Series B*, *64B*(suppl_1), i38–i46. https://doi.org/10.1093/geronb/gbp037

de Jong-Gierveld, J. (1987). Developing and testing a model of loneliness. *Journal of Personality and Social Psychology*, *53*(1), 119–128. https://doi.org/10.1037/0022-3514.53.1.119

Di Gessa, G., Glaser, K., & Tinker, A. (2016). The impact of caring for grandchildren on the health of grandparents in Europe: A lifecourse approach. *Social Science & Medicine*, *152*, 166–175. https://doi.org/10.1016/j.socscimed.2016.01.041

Dykstra, P. A. (1995). Loneliness among the never and formerly married: The importance of supportive friendships and a desire for independence. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, *50B*(5), S321–329. https://doi.org/10.1093/geronb/50b.5.s321

Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, *8*(3), 430–457. https://doi.org/10.1207/S15328007SEM0803_5

Foster, H. M. E., Gill, J. M. R., Mair, F. S., Celis-Morales, C. A., Jani, B. D., Nicholl, B. I., Lee, D., & O'Donnell, C. A. (2023). Social connection and mortality in UK Biobank: A prospective cohort analysis. *BMC Medicine*, *21*(1), Article 384. https://doi.org/10.1186/s12916-023-03055-7

Freilich, C. D., Mann, F. D., & Krueger, R. F. (2023). Comparing associations between personality and loneliness at midlife across three cultural groups. *Journal of Personality*, *91*(3), 653–666. https://doi.org/10.1111/jopy.12765

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine*, *40*(2), 218–227. https://doi.org/10.1007/s12160-010-9210-8

Heidrich, S. M., & Ryff, C. D. (1993). Physical and mental health in later life: The self-system as mediator. *Psychology and Aging*, *8*(3), 327–338. https://doi.org/10.1037/0882-7974.8.3.327

Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical Psychology Review*, *26*(6), 695–718. https://doi.org/10.1016/j.cpr.2006.04.002

Hisler, G. C., & Brenner, R. E. (2019). Does sleep partially mediate the effect of everyday discrimination on future mental and physical health? *Social Science & Medicine*, *221*, 115–123. https://doi.org/10.1016/j.socscimed.2018.12.002

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations* (2nd ed.). Sage Publications.

Holt-Lunstad, J. (2018). Why social relationships are important for physical health: A systems approach to understanding and modifying risk and protection. *Annual Review of Psychology*, *69*(1), 437–458. https://doi.org/10.1146/annurev-psych-122216-011902

Holt-Lunstad, J. (2022). Social connection as a public health issue: The evidence and a systemic framework for prioritizing the "social" in social determinants of health. *Annual Review of Public Health*, *43*(1), 193–213. https://doi.org/10.1146/annurev-publhealth-052020-110732

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Hughes, M. E., Waite, L. J., Hawkley, L. C., & Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys. *Research on Aging*, *26*(6), 655–672. https://doi.org/10.1177/0164027504268574

Kapoulea, E. A., Ready, R. E., & Ginn, J. C. (2023). Loneliness and risk for cardiovascular disease in the United States and Japan: The effects of

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

nationality, collectivism, and gender. *Social Science & Medicine (1982)*, *337*, Article 116299. https://doi.org/10.1016/j.socscimed.2023.116299

Karasawa, M., Curhan, K. B., Markus, H. R., Kitayama, S. S., Love, G. D., Radler, B. T., & Ryff, C. D. (2011). Cultural perspectives on aging and well-being: A comparison of Japan and the United States. *The International Journal of Aging & Human Development*, *73*(1), 73–98. https://doi.org/10.2190/AG.73.1.d

Kato, T. A., Shinfuku, N., Sartorius, N., & Kanba, S. (2017). Loneliness and single-person households: Issues of kodokushi and hikikomori in Japan. In N. Okkels, C. B. Kristiansen, & P. Munk-Jørgensen (Eds.), *Mental health and illness in the city* (pp. 205–219). Springer Science + Business Media. https://doi.org/10.1007/978-981-10-2327-9_9

Kitayama, S., Karasawa, M., Curhan, K. B., Ryff, C. D., & Markus, H. R. (2010). Independence and interdependence predict health and wellbeing: Divergent patterns in the United States and Japan. *Frontiers in Psychology*, *1*(1), Article 163. https://doi.org/10.3389/fpsyg.2010.00163

Kitayama, S., Park, H., Sevincer, A. T., Karasawa, M., & Uskul, A. K. (2009). A cultural task analysis of implicit independence: Comparing North America, Western Europe, and East Asia. *Journal of Personality and Social Psychology*, *97*(2), 236–255. https://doi.org/10.1037/a0015999

Kitayama, S., Salvador, C. E., Nanakdewa, K., Rossmaier, A., San Martin, A., & Savani, K. (2022). Varieties of interdependence and the emergence of the Modern West: Toward the globalizing of psychology. *The American Psychologist*, *77*(9), 991–1006. https://doi.org/10.1037/amp0001073

Lee, Y., & Ko, Y. (2018). Feeling lonely when not socially isolated: Social isolation moderates the association between loneliness and daily social interaction. *Journal of Social and Personal Relationships*, *35*(10), 1340–1355. https://doi.org/10.1177/0265407517712902

Levy, B. R., Ashman, O., & Slade, M. D. (2009). Age attributions and aging health: Contrast between the United States and Japan. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, *64B*(3), 335–338. https://doi.org/10.1093/geronb/gbp002

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

McCoach, D. B., & Cintron, D. (2022). *Introduction to modern modelling methods*. Sage Publications.

McHugh, J. E., Kenny, R. A., Lawlor, B. A., Steptoe, A., & Kee, F. (2017). The discrepancy between social isolation and loneliness as a clinically meaningful metric: Findings from the Irish and English longitudinal studies of ageing (TILDA and ELSA). *International Journal of Geriatric Psychiatry*, *32*(6), 664–674. https://doi.org/10.1002/gps.4509

Menec, V. H., Newall, N. E., Mackenzie, C. S., Shooshtari, S., & Nowicki, S. (2020). Examining social isolation and loneliness in combination in relation to social support and psychological distress using Canadian Longitudinal Study of Aging (CLSA) data. *PLOS ONE*, *15*(3), Article e0230673. https://doi.org/10.1371/journal.pone.0230673

Mikulincer, M., & Shaver, P. R. (2013). An attachment perspective on loneliness. In R. J. Coplan & J. C. Bowker (Eds.), *The handbook of solitude* (pp. 34–50). John Wiley & Sons https://doi.org/10.1002/9781118427378.ch3

Miyamoto, Y., & Ryff, C. D. (2011). Cultural differences in the dialectical and non-dialectical emotional styles and their implications for health. *Cognition and Emotion*, *25*(1), 22–39. https://doi.org/10.1080/02699931003612114

Naito, R., McKee, M., Leong, D., Bangdiwala, S., Rangarajan, S., Islam, S., & Yusuf, S. (2023). Social isolation as a risk factor for all-cause mortality: Systematic review and meta-analysis of cohort studies. *PLOS ONE*, *18*(1), Article e0280308. https://doi.org/10.1371/journal.pone.0280308

Newall, N. E. G., & Menec, V. H. (2019). Loneliness and social isolation of older adults: Why it is important to examine these social aspects together. *Journal of Social and Personal Relationships*, *36*(3), 925–939. https://doi.org/10.1177/0265407517749045

Niiya, Y., Ellsworth, P., & Yamaguchi, S. (2006). Amae in Japan and the United States: An exploration of a "culturally unique" emotion. *Emotion (Washington, D.C.)*, *6*(2), 279–295. https://doi.org/10.1037/1528-3542.6.2.279

Nosek, B. A., Alter, G., Banks, G. C., Borsboom, D., Bowman, S. D., Breckler, S. J., Buck, S., Chambers, C. D., Chin, G., Christensen, G., Contestabile, M., Dafoe, A., Eich, E., Freese, J., Glennerster, R., Goroff, D., Green, D. P., Hesse, B., Humphreys, M., … Yarkoni, T. (2015). Promoting an open research culture. *Science*, *348*(6242), 1422–1425. https://doi.org/10.1126/science.aab2374

Ong, A. D., Graham, E. K., Jackson, K., Atherton, O., Luo, J., Willroth, E. C., Beck, E. D., Yoneda, T., Cintron, D. W., Mroczek, D. K., & Steptoe, A. (2023). Associations between generativity and social asymmetry among older adults in Japan. *Journal of Gerontology: Psychological Sciences*, *79*(2), Article gbad183. https://doi.org/10.1093/geronb/gbad183

Perlman, D., & Peplau, L. A. (1981). Toward a social psychology of loneliness. In S. W. Duck & R. Gilmour (Eds.), *Personal relationships in disorder* (pp. 31–56). Academic Press.

Rook, K. S. (1984). Promoting social bonding: Strategies for helping the lonely and socially isolated. *American Psychologist*, *39*(12), 1389–1407. https://doi.org/10.1037/0003-066X.39.12.1389

Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*(2), 1–36. https://doi.org/10.18637/jss.v048.i02

Ryff, C. D., Miyamoto, Y., Boylan, J. M., Coe, C. L., Karasawa, M., Kawakami, N., Kan, C., Love, G. D., Levine, C., Markus, H. R., Park, J., & Kitayama, S. (2015). Culture, inequality, and health: Evidence from the MIDUS and MIDJA comparison. *Culture and Brain*, *3*(1), 1–20. https://doi.org/10.1007/s40167-015-0025-0

Smith, K. J., & Victor, C. (2019). Typologies of loneliness, living alone and social isolation, and their associations with physical and mental health. *Ageing & Society*, *39*(8), 1709–1730. https://doi.org/10.1017/S0144686X18000132

Steptoe, A., Shankar, A., Demakakos, P., & Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. *Proceedings of the National Academy of Sciences of the United States of America*, *110*(15), 5797–5801. https://doi.org/10.1073/pnas.1219686110

Turner, J. B., & Turner, R. J. (2013). Social relations, social integration, and social support. In C. S. Aneshensel, J. C. Phelan, & A. Bierman (Eds.), *Handbook of the sociology of mental health* (pp. 341–356). Springer Netherlands. https://doi.org/10.1007/978-94-007-4276-5_17

Uchida, Y., Kitayama, S., Mesquita, B., Reyes, J., & Morling, B. (2008). Is perceived emotional support beneficial? Well-being and health in independent and interdependent cultures. *Personality and Social Psychology Bulletin*, *34*(6), 741–754. https://doi.org/10.1177/0146167208315157

Weinstein, N., Hansen, H., & Nguyen, T. (2023). Definitions of solitude in everyday life. *Personality and Social Psychology Bulletin*, *49*(12), 1663–1678. https://doi.org/10.1177/01461672221115941

Weiss, R. S. (1973). *Loneliness: The experience of emotional and social isolation* (pp. xxii, 236). MIT Press.

Yamawaki, N. (2012). Within-culture variations of collectivism in Japan. *Journal of Cross-Cultural Psychology*, *43*(8), 1191–1204. https://doi.org/10.1177/0022022111428171

Received December 1, 2023
Revision received April 9, 2024
Accepted June 5, 2024 ■

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.