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Relational Dimensions of Perceived Social Support and Psychosocial Need Satisfaction Among Left-Behind Older Adults in Rural China

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Research Article

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Abstract

Using cross-sectional survey data from 199 rural left-behind older adults in P Village, southwestern Shandong Province, China, this study examined the associations between four functional dimensions of perceived social support and psychosocial need satisfaction. It also assessed whether social companionship and emotional support explained additional variance beyond instrumental and informational support. Pearson correlation and hierarchical multiple regression analyses showed that all four dimensions of perceived social support were significantly and positively associated with overall psychosocial need satisfaction. After adjustment for sociodemographic characteristics, self-rated health, and instrumental and informational support, adding social companionship and emotional support increased the explained variance by 15.5 percentage points ($\Delta R^2 = .155$, $p < .001$). In exploratory dimension-specific models, social companionship had the largest standardized coefficient for social belonging, whereas emotional support had the largest coefficients for esteem and self-actualization. The findings indicate that psychosocial need satisfaction among rural left-behind older adults is associated not only with perceived access to practical assistance and information but also with sustained social companionship and emotional responsiveness. Rural eldercare services should therefore complement practical assistance and information provision with opportunities for social participation, regular companionship, and responsive emotional support, while attending to older adults' perceptions of the availability, adequacy, and responsiveness of such support. Given the cross-sectional design, no causal conclusions can be drawn.

Introduction

Population ageing, urbanization, and labour migration are reshaping older adults' living arrangements, family relationships, and social support structures. The United Nations has noted that declining fertility, changing family structures, rural-to-urban migration, and urbanization are transforming both the living arrangements of older people and the social environments in which care is provided (United Nations Department of Economic and Social Affairs [UN DESA], 2020). In settings where support in later life relies heavily on families, the migration of adult children may reduce face-to-face interaction and everyday care without eliminating family support altogether. Previous research has linked adult-child migration to changes in intergenerational support and to loneliness, depression, and life satisfaction among rural older adults left behind (Guo et al., 2009; Scheffel & Zhang, 2019; Li, 2024). Migration may therefore reorganize the forms, frequency, and functions of support rather than simply remove it.

This issue is particularly relevant in rural China. By the end of 2025, China had 323.38 million people aged 60 years or older, accounting for 23.0% of the total population; 223.65 million people, or 15.9% of the population, were aged 65 years or older (National Bureau of Statistics of China, 2026). Continued rural-to-urban migration has intensified the intersection of population ageing and labour out-migration in rural areas, leaving a substantial population of older adults living apart from their adult children. In this study, rural left-behind older adults refers to older rural residents who do not share their everyday residence with adult children because those children have migrated for employment or other reasons.

Support received, however, is not necessarily support perceived. Similar levels of financial assistance, contact, or service provision may be experienced by different older adults as adequate, effective, or insufficient. Support functions may also relate differently to psychosocial needs. Instrumental and informational support primarily address practical problems and access to services, whereas social companionship and emotional support involve sustained interaction, social connection, care, and emotional responsiveness. For rural left-behind older adults, financial assistance and remote contact may preserve some forms of family support but may not replace everyday companionship, emotional interaction, or social participation. Previous studies have generally examined loneliness, depression, and life satisfaction or classified support according to sources such as adult children, neighbours, and communities (Guo et al., 2009; Li et al., 2014; Scheffel & Zhang, 2019; Shin & Park, 2022). Less attention has been paid to whether social companionship and emotional support explain additional variation in psychosocial need satisfaction beyond instrumental and informational support.

Drawing on survey data from 199 rural left-behind older adults in P Village, Shandong Province, this study distinguishes four functional dimensions of perceived social support: instrumental, informational, social companionship, and emotional support. It addresses three questions. First, are perceived instrumental and informational support associated with overall psychosocial need satisfaction after sociodemographic characteristics and self-rated health are taken into account? Second, do perceived social companionship and emotional support explain additional variance in overall psychosocial need satisfaction? Third, what exploratory patterns emerge between the four support dimensions and satisfaction of needs for social belonging, esteem, and self-actualization? By addressing these questions, the study provides a more differentiated account of how rural older adults experience social support in the context of labour migration.

Literature Review and Research Gap

Migration and the Psychosocial Needs of Rural Left-Behind Older Adults

The migration of adult children changes how older rural parents receive intergenerational support. Previous research suggests that migration may increase financial transfers while reducing everyday care and face-to-face interaction. Even after intergenerational support is taken into account, adult-child migration may remain associated with higher depressive symptoms and lower life satisfaction among older parents (Guo et al., 2009). Geographic distance alone, however, does not necessarily result in poorer psychological outcomes. Longitudinal evidence indicates that the relationship between children's residential location and parental well-being depends partly on emotional closeness between generations; weak emotional ties may be associated with poorer well-being even when adult children live nearby (Lin & Chen, 2018). The central change experienced by rural left-behind older adults is therefore not simply the loss of family support, but a reconfiguration of financial assistance, everyday care, social interaction, and emotional connection.

Research on ageing in China has linked older adults' unmet psychosocial needs to changes in family structures, social roles, and relationship networks (Geng & Feng, 2009; Ming, 2000; Mu, 2004; Zhou, 2007). More recent research has identified needs for social interaction, belonging, social recognition, and self-actualization among Chinese older adults (Chen et al., 2023). This literature provides a basis for understanding psychosocial needs in later life. Nevertheless, most empirical studies continue to focus on loneliness, depression, mental health, or subjective well-being. Although these outcomes capture important aspects of psychological functioning, they do not fully represent the positive extent to which needs for social belonging, esteem, and self-actualization are satisfied.

Perceived Social Support and Psychosocial Well-Being in Later Life

Social support is widely regarded as an important resource for maintaining psychological well-being and social connection in later life. Studies in China have linked social support to subjective well-being and mental health among older adults (Fang, 2016; Zhai & Wang, 2018). Evidence from rural China further suggests that self-worth may partly account for the association between social support and subjective well-being (Su et al., 2022). National survey evidence also indicates that community support may be associated with life satisfaction through lower levels of social isolation and loneliness (Jiang et al., 2024).

Enacted support, however, is not identical to an individual's subjective appraisal of that support. Perceived social support concerns whether assistance is believed to be available when needed and whether existing support is experienced as adequate, effective, and responsive to personal needs (Cobb, 1976; Zimet et al., 1988). Older adults receiving similar levels of financial assistance, services, or family contact may therefore evaluate that support differently. Among rural left-behind older adults, examining only how much support families or communities provide may be insufficient to explain whether psychosocial needs are being satisfied.

From Sources to Functions of Support

Much of the existing literature classifies social support according to its source. Li et al. (2014), for example, compared support from spouses, adult children, and friends. Shin and Park (2022) distinguished perceived support from spouses, children, friends, and parents, and found that basic psychological need satisfaction partly accounted for the association between perceived support and psychological well-being. A source-based classification identifies who provides support but does not distinguish the practical assistance, information, companionship, and emotional responsiveness that the same person may provide.

A functional perspective instead focuses on how support operates. Different forms of support are not necessarily interchangeable, and their relevance may depend on how well they correspond to an individual's particular needs. Social relationships may also contribute to well-being through distinct processes, including belonging, companionship, reassurance of worth, and perceived support availability (Cutrona, 1990; Thoits, 2011). Research involving older adults further indicates that the associations of emotional and instrumental support with well-being may vary according to the support provider and the quality of the relationship (Merz & Huxhold, 2010). It is therefore important to examine whether perceived social companionship and emotional support account for additional variance in psychosocial need satisfaction after perceived instrumental and informational support have been considered.

Theoretical Framework and Key Concepts

Rural Left-Behind Older Adults

Existing definitions of rural left-behind older adults generally consider age, the duration of adult children's migration, household living arrangements, and whether migrant children remain able to provide everyday care (Du et al., 2004; Ministry of Civil Affairs et al., 2017; Wu, 2015). Drawing on these definitions and the eligibility criteria used in this study, rural left-behind older adults are defined as rural Chinese residents aged 60 years or older whose adult children have all migrated for work or residence and who do not live with any adult child. They may live alone, with a spouse, or with grandchildren.

Maslow's Hierarchy of Needs and Psychosocial Need Satisfaction

Maslow's hierarchy distinguishes physiological, safety, love and belonging, esteem, and self-actualization needs (Maslow, 1943). This study draws on the categories of belonging, esteem, and self-actualization without treating the hierarchy as a fixed sequence in which one level must be satisfied before another emerges. Instead, these categories provide a framework for examining the psychosocial needs of rural left-behind older adults in China. Informed by Chinese research on older adults' nonmaterial support and psychological needs (Mu, 2004; Fu et al., 2011), psychosocial needs are defined here as needs for social interaction, group belonging, care and respect, and the affirmation and realization of personal value.

The study examines neither the presence nor the intensity of these needs, but older adults' subjective assessment of the extent to which they are satisfied. Psychosocial need satisfaction comprises three dimensions. Social belonging concerns access to meaningful interaction, connection with social groups, and a sense of acceptance. Esteem concerns whether older adults feel that their views, identity, and past contributions are valued and recognized. Self-actualization concerns opportunities to use their abilities, engage in meaningful activities, and affirm their personal value.

Perceived Social Support and Its Functional Framework

Social support includes both resources actually received from others and individuals' subjective perceptions of those resources. Cobb (1976) conceptualized social support as a relational resource through which individuals experience care, esteem, and social inclusion. Zimet et al. (1988) subsequently measured subjective appraisals of support from family, friends, and significant others. In this study, perceived social support refers to rural left-behind older adults' subjective appraisals of the availability, adequacy, and effectiveness of functionally different forms of support, including their evaluations of support they have already experienced. It is therefore distinct from objective records of financial transfers, service use, or frequency of contact.

Social support is multidimensional in function. House (1981) distinguished emotional, instrumental, informational, and appraisal support, whereas Cohen and Wills (1985) identified esteem, informational, social companionship, and instrumental support. Drawing on these classifications and the rural context examined here, the present study distinguishes four dimensions of perceived social support. Instrumental support includes financial assistance, everyday care, and practical help. Informational support includes advice and information concerning health care, public policies, and social services. Social companionship concerns opportunities for everyday interaction, shared activities, and social participation. Emotional support involves care, understanding, listening, and emotional responsiveness.

For the purpose of structuring the theoretical analysis and hierarchical regression, instrumental and informational support are grouped as resource-oriented dimensions, whereas social companionship and emotional support are grouped as relationship-oriented dimensions. The former primarily address practical assistance, access to information, and problem-solving resources; the latter primarily sustain everyday interaction, social connection, and emotional responsiveness. These groupings indicate broad functional emphases rather than mutually exclusive categories. They do not constitute two new composite scales: all four dimensions are scored and analysed separately.

Methods

Study Design, Setting, and Participants

This cross-sectional household survey was conducted in December 2024 in P Village, southwestern Shandong Province, China. P Village is a pseudonym. The village relies primarily on agriculture and is characterized by substantial out-migration of younger adults and population ageing. Eligible participants were aged 60 years or older, resided in P Village, had all adult children living away for employment or other reasons for at least six consecutive months, and were not living with any adult child at the time of the survey. Participants could live alone, with a spouse, or with grandchildren.

Potential participants were identified from a list of eligible residents compiled with the assistance of village officials. Researchers invited those who could be contacted and were willing to participate in a household survey. A total of 225 questionnaires were returned. Following verification of eligibility and data completeness, 26 questionnaires were excluded because the respondent did not meet the definition of a rural left-behind older adult, key items were missing, or the available responses were insufficient to calculate the study variables. The final analytic sample comprised 199 participants, representing 88.4% of the returned questionnaires.

For participants who could not complete the questionnaire independently, trained interviewers read each item using standardized wording and recorded the response without altering the original meaning. All participants provided oral informed consent before the survey. To reduce within-household dependence, only one eligible older adult was surveyed in each household.

All participants provided verbal informed consent before the survey.

Measures

Perceived Social Support

Items assessing perceived social support were informed by the general measurement approach of the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988), functional classifications of social support, and preliminary field interviews. The instrument was not a direct translation or adaptation of the original MSPSS. Whereas the MSPSS organizes perceived support according to its sources—family, friends, and significant others—the present instrument distinguishes instrumental, informational, social companionship, and emotional support according to function.

The items assessed whether participants believed that relevant support would be available when needed, as well as their subjective evaluations of support previously experienced, opportunities for social participation, access to and understanding of information, and the perceived effectiveness of support. The instrument therefore provides a context-specific assessment of perceived support conditions and experiences rather than an objective count of supportive behaviours or contacts.

The initial item pool comprised 39 unique perceived social support items. Following a theory-based content review, 10 items that primarily assessed general satisfaction, psychosocial outcomes, or content overlapping with the psychosocial need satisfaction measure were excluded. The final 29-item instrument included eight items measuring instrumental support, nine informational support, seven social companionship, and five emotional support. The item-screening process and reasons for exclusion are reported in Online Resource 1.

All items were rated on a five-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). A score for each dimension was calculated as the mean of its retained items, with higher scores indicating a more positive evaluation of the availability and usefulness of that form of support. To accommodate differences in literacy and comprehension, the items were phrased in accessible spoken Chinese before data collection, and interviewers used standardized explanations when clarification was required. The complete set of retained items is provided in Online Resource 1.

Psychosocial Need Satisfaction

The measure of psychosocial need satisfaction was developed with reference to Maslow's distinction among belonging, esteem, and self-actualization needs (Maslow, 1943), previous research on older adults' psychological needs, and preliminary field interviews. It comprised three dimensions—social belonging, esteem, and self-actualization—with six items in each dimension and 18 items in total.

All items were rated on a five-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied), with higher scores indicating greater satisfaction of the corresponding psychosocial needs. Overall psychosocial need satisfaction was calculated as the mean of all 18 items, and each dimension score was calculated as the mean of its six corresponding items. The complete items are provided in Online Resource 1.

Psychometric Evaluation

Internal consistency was evaluated using Cronbach's alpha. Exploratory factor analyses were conducted separately for the 29 perceived social support items and the 18 psychosocial need satisfaction items. Factors were extracted using principal axis factoring and subjected to Promax oblique rotation, with factor retention guided by parallel analysis. The Kaiser–Meyer–Olkin measure and Bartlett's test of sphericity were used to assess the suitability of the data for factor analysis. Discriminant validity among the four support dimensions and three need-satisfaction dimensions was examined using the heterotrait–monotrait ratio (HTMT), with values below .85 considered acceptable (Henseler et al., 2015). Complete psychometric results and item-level information are reported in Online Resource 1.

Covariates

Sex, age, educational attainment, number of children, self-rated health, and marital status were included as covariates. Age was divided into five groups. Marital status was dichotomized as currently married or not currently married, with the latter category including widowed and unmarried. All categorical covariates were entered as dummy variables. Reference categories are specified in the note to Table 4.

Statistical Analysis

Descriptive statistics were used to summarize participant characteristics and the distributions of the study variables. Pearson correlations were calculated to examine the bivariate associations between the four dimensions of perceived social support and overall psychosocial need satisfaction.

Hierarchical multiple linear regression was then used to examine overall psychosocial need satisfaction. Model 1 included the covariates. Model 2 added perceived instrumental and informational support, and Model 3 further added perceived social companionship and emotional support. The primary comparison concerned the change in explained variance (ΔR^2) from Model 2 to Model 3 and its statistical significance, indicating whether social companionship and emotional support accounted for additional variance beyond instrumental and informational support.

Additional models separately examined social belonging, esteem, and self-actualization as outcomes. Standardized regression coefficients were used only to describe the relative magnitude of the associations and were not interpreted as evidence that coefficients differed significantly from one another. Regression results are reported as unstandardized coefficients, standard errors, 95% confidence intervals, standardized coefficients, and p values. Model fit is reported using R^2 and adjusted R^2, with ΔR^2 additionally reported for the hierarchical models.

Variance inflation factors were examined for multicollinearity, the Durbin–Watson statistic for residual autocorrelation, and the White and Breusch–Pagan tests for heteroscedasticity. Tests of regression coefficients were two-sided, with $p < .05$ considered statistically significant. Analyses were conducted primarily using Python 3.12; the heteroscedasticity tests were performed using SPSS 26.0.

Results

Participant Characteristics

Table 1
Participant Characteristics (N = 199)

Characteristic	Category	n (%)
Sex	Male	119 (59.8)
	Female	80 (40.2)
Age group	60–65 years	52 (26.1)
	66–70 years	47 (23.6)
	71–75 years	43 (21.6)
	76–80 years	33 (16.6)
	≥ 81 years	24 (12.1)
Education	Illiterate	75 (37.7)
	Primary school	74 (37.2)
	Junior high school	50 (25.1)
Marital status	Currently married	103 (51.8)
	Not currently married	96 (48.2)
Number of children	One	63 (31.7)
	Two	71 (35.7)
	Three or more	65 (32.7)
Self-rated health	Very good	17 (8.5)
	Good	49 (24.6)
	Fair	72 (36.2)
	Poor	52 (26.1)
	Very poor	9 (4.5)

Note. The not-currently-married category included widowed and unmarried. Percentages may not sum to 100 because of rounding.

The analytic sample comprised 199 rural left-behind older adults. Of these, 59.8% were men, 71.4% were aged 60–75 years, and 74.9% were illiterate or had completed only primary school. Slightly more than half were currently married (51.8%), and 68.3% had two or more children. Two-thirds (66.8%) rated their health as fair, poor, or very poor. Full participant characteristics are presented in Table 1.

Psychometric Properties

Table 2
Scale Composition and Internal Consistency

Measure	Dimension	No. of items	Cronbach's α
Perceived social support	Instrumental support	8	.914
	Informational support	9	.940
	Social companionship	7	.908
	Emotional support	5	.881
Psychosocial need satisfaction	Social belonging	6	.907
	Esteem	6	.911
	Self-actualization	6	.908
	Total scale	18	.931

As shown in Table 2, Cronbach's alpha ranged from .881 to .940 across the four perceived social support subscales and from .907 to .911 across the three psychosocial need satisfaction subscales. Cronbach's alpha for the overall psychosocial need satisfaction scale was .931.

The Kaiser–Meyer–Olkin values were .932 for the perceived social support items and .928 for the psychosocial need satisfaction items. Bartlett's tests of sphericity were significant for both measures (both $p < .001$), supporting their suitability for factor analysis. Exploratory factor analyses using principal axis factoring and Promax rotation, together with parallel analysis, supported a four-factor structure for perceived social support and a three-factor structure for psychosocial need satisfaction. The cumulative variance explained was 60.34% and 62.94%, respectively. All HTMT values were below .85, with a maximum of .601, indicating acceptable discriminant validity. Items loaded primarily on their intended factors, with no problematic cross-loadings, supporting the proposed factor structures.

Descriptive Statistics and Bivariate Correlations

Table 3
Descriptive Statistics and Bivariate Correlations Among Study Variables (N = 199)

Variable	M	SD	1	2	3	4	5
1. Perceived instrumental support	2.476	0.845	—				
2. Perceived informational support	2.648	0.944	.429***	—			
3. Perceived social companionship	2.616	0.888	.405***	.407***	—		
4. Perceived emotional support	2.643	0.898	.394***	.465***	.422***	—	
5. Psychosocial need satisfaction	2.605	0.787	.542***	.540***	.604***	.574***	—

Note. M = mean; SD = standard deviation. Entries are Pearson correlation coefficients. The overall psychosocial need satisfaction score was calculated as the mean of all 18 items. ***$p < .001$.

Table 3 presents the descriptive statistics and bivariate correlations. The mean score for overall psychosocial need satisfaction was 2.605 (SD = 0.787), and the means of the four perceived social support dimensions ranged from 2.476 to 2.648. Perceived instrumental, informational, social companionship, and emotional support were all positively correlated with psychosocial need satisfaction ($r = .542$, .540, .604, and .574, respectively; all $p < .001$). The correlations were numerically higher for social companionship and emotional support.

Hierarchical Regression Predicting Overall Psychosocial Need Satisfaction

Table 4
Hierarchical Regression Predicting Overall Psychosocial Need Satisfaction (N = 199) Panel A. Regression Coefficients

Predictor	Model 2 B (SE) [95% CI]	β	p	Model 3 B (SE) [95% CI]	β	p
Perceived instrumental support	.354 (.060) [.236, .472]	.380	< .001	.207 (.054) [.100, .313]	.222	< .001
Perceived informational support	.304 (.054) [.199, .410]	.365	< .001	.149 (.050) [.051, .247]	.179	.003
Perceived social companionship	—	—	—	.273 (.050) [.175, .372]	.308	< .001
Perceived emotional support	—	—	—	.246 (.051) [.146, .346]	.280	< .001

Panel B. Model Fit

Model statistic	Model 1	Model 2	Model 3
Covariates included	Yes	Yes	Yes
R^2	.083	.451	.607
Adjusted R^2	.013	.403	.567
ΔR^2	—	.369	.155
F (df_1, df_2)	1.187 (14, 184)	9.358 (16, 182)	15.419 (18, 180)
Model p	.289	< .001	< .001
F change (df_1, df_2)	—	61.127 (2, 182)	35.515 (2, 180)
p for F change	—	< .001	< .001
Durbin–Watson	2.087	2.071	2.162
Maximum VIF	1.563	1.587	1.616

Note. Model 1 included the covariates. Model 2 added perceived instrumental and informational support, and Model 3 added perceived social companionship and emotional support. Reference categories were female, aged 60–65 years, illiterate, currently married, one child, and poor self-rated health. Covariate estimates are omitted.ΔR^2 values were calculated from unrounded model statistics.

The covariate-only model was not statistically significant, F(14, 184) = 1.187, p = .289, R^2 = .083. Adding perceived instrumental and informational support increased the explained variance by 36.9 percentage points, ΔR^2 = .369, F change(2, 182) = 61.127, p < .001. Adding perceived social companionship and emotional support produced a further increase of 15.5 percentage points, ΔR^2 = .155, F change(2, 180) = 35.515, p < .001. The final model explained 60.7% of the variance in overall psychosocial need satisfaction (adjusted R^2 = .567).

In the final model, perceived instrumental support (β = .222, p < .001), informational support (β = .179, p = .003), social companionship (β = .308, p < .001), and emotional support (β = .280, p < .001) were all positively associated with psychosocial need satisfaction. The standardized coefficients were numerically largest for social companionship and emotional support. The maximum VIF in the final model was 1.616, and the Durbin–Watson statistic was 2.162. Neither the White test nor the Breusch–Pagan test was significant (p = .570 and p = .130, respectively), providing no indication of substantial multicollinearity, residual autocorrelation, or heteroscedasticity.

Associations With Specific Dimensions of Psychosocial Need Satisfaction

The adjusted associations between the four dimensions of perceived social support and the three dimensions of psychosocial need satisfaction are presented in Table 5.

Table 5
Adjusted Associations of Perceived Social Support With Dimensions of Psychosocial Need Satisfaction (N = 199) Panel A. Regression Coefficients

Predictor	Social belonging B (SE) [95% CI]	β	p	Esteem B (SE) [95% CI]	β	p	Self-actualization B (SE) [95% CI]	β	p
Perceived instrumental support	.184 (.078) [.030, .339]	.163	.020	.236 (.078) [.083, .389]	.205	.003	.200 (.081) [.041, .359]	.176	.014
Perceived informational support	.117 (.072) [– .025, .259]	.115	.107	.180 (.071) [.039, .321]	.174	.013	.150 (.074) [.004, .297]	.148	.044
Perceived social companionship	.334 (.072) [.191, .476]	.310	< .001	.241 (.072) [.100, .382]	.220	< .001	.245 (.074) [.099, .392]	.227	.001
Perceived emotional support	.190 (.074) [.045, .336]	.179	.010	.286 (.073) [.142, .430]	.264	< .001	.261 (.076) [.111, .410]	.244	< .001

Panel B. Model Fit

Model statistic	Social belonging	Esteem	Self-actualization
R^2	.435	.467	.407
Adjusted R^2	.378	.413	.348
F (df_1, df_2)	7.695 (18, 180)	8.751 (18, 180)	6.875 (18, 180)
Model p	< .001	< .001	< .001

Note. All models included the same covariates as Table 4; covariate estimates are omitted. B = unstandardized coefficient; SE = standard error; CI = confidence interval; β = standardized coefficient. Coefficient p values are two-sided.No adjustment for multiple testing was applied; the dimension-specific analyses were exploratory.

All three models were statistically significant (all p < .001), with adjusted R^2 values ranging from .348 to .413. In the social belonging model, perceived instrumental support (β = .163, p = .020), social companionship (β = .310, p < .001), and emotional support (β = .179, p = .010) were positively associated with the outcome, whereas informational support was not (β = .115, p = .107). Social companionship had the numerically largest standardized coefficient.

All four dimensions of perceived social support were positively associated with esteem need satisfaction. Emotional support had the numerically largest standardized coefficient (β = .264, p < .001). All four support dimensions were also positively associated with self-actualization need satisfaction, with emotional support again showing the largest standardized coefficient (β = .244, p < .001). The association between informational support and self-actualization was comparatively weak and close to the conventional significance threshold (β = .148, p = .044).

Discussion

This study examined the associations between functional dimensions of perceived social support and psychosocial need satisfaction among rural left-behind older adults. After adjustment for sociodemographic characteristics and self-rated health, adding perceived instrumental and informational support increased the explained variance by 36.9 percentage points. Adding perceived social companionship and emotional support produced a further increase of 15.5 percentage points after the resource-oriented dimensions had been taken into account. This increment depends partly on the order in which variables were entered and therefore does not establish that relationship-oriented support is more important than resource-oriented support. Nevertheless, all four dimensions remained positively associated with psychosocial need satisfaction in the final model. Psychosocial need satisfaction among rural left-behind older adults was therefore related not only to perceived access to practical assistance and information but also to sustained social interaction and emotional responsiveness.

These findings are consistent with previous research linking social interaction, family emotional ties, and psychological well-being in later life (Zhang et al., 2023; Su et al., 2022), while further highlighting the relevance of subjective support appraisals and support functions. Perceived social companionship and emotional support accounted for additional variance even after perceived instrumental and informational support had been considered. The present study did not, however, directly compare objectively received support with perceived social support. The findings therefore cannot establish whether perceived or objectively received support is more important for the psychosocial need satisfaction of rural left-behind older adults.

The dimension-specific analyses revealed an exploratory pattern consistent with a support–need matching perspective. Perceived social companionship had the largest standardized coefficient for social belonging, whereas perceived emotional support had the largest coefficients for esteem and self-actualization. The pattern was not exclusive, however. Perceived instrumental support was positively associated with all three dimensions of psychosocial need satisfaction, while informational support was associated with esteem and self-actualization. The latter association was close to the conventional significance threshold ($p = .044$). These findings suggest that support functions may overlap and complement one another. Support–need matching is therefore better understood as a relative pattern of association than as a fixed one-to-one correspondence between a particular form of support and a particular need. Because differences between the standardized coefficients were not formally tested, the findings provide only tentative support for the matching perspective.

This pattern can be interpreted in terms of resource compensation and relational loss in the context of migration. Research from Thailand, Moldova, and Nepal suggests that adult-child migration may help sustain family support through remittances and remote communication while simultaneously reducing face-to-face care, social contact, and emotional companionship (Knodel et al., 2010; Böhme et al., 2015; Thapa et al., 2018; Ghimire et al., 2018). Evidence from Poland further indicates that neighbours and other non-kin relationships may become important supplementary sources of practical and emotional support when adult children live at a distance (Conkova & King, 2019). Studies in China similarly suggest that financial support may only partly offset the disadvantages associated with adult-child migration and that emotional closeness between parents and adult children is closely related to older parents' psychological well-being (Guo et al., 2009; Scheffel & Zhang, 2019; Li, 2024). In settings experiencing youth out-migration, changing family-care arrangements, and rural population ageing, attention should therefore extend beyond remittances and remote contact to how support is reorganized and experienced across family, community, and non-kin networks. Because family norms, community networks, and public eldercare systems differ across settings, the patterns observed here require further examination in multi-site and cross-national research.

Implications for Policy and Practice

The findings suggest that rural eldercare should extend beyond assistance with daily living, financial support, and information provision. The associations of instrumental and informational support with psychosocial need satisfaction confirm the continuing importance of resource-oriented support. At the same time, social companionship and emotional support accounted for additional variance after these resource-oriented dimensions had been considered. Social interaction, companionship, and emotional responsiveness should therefore be incorporated into rural eldercare design rather than treated only as optional additions to practical assistance.

At the local level, eldercare services could combine practical assistance and information provision with more consistent opportunities for companionship and emotional engagement. Village public spaces could support regular neighbourhood interaction and social participation, while routine household visits, volunteer companionship, and facilitated contact with migrant family members could help older adults maintain social connections. The aim should not simply be to increase the number of activities or contacts, but to ensure that interactions are sustained and responsive to older adults' needs.

Service evaluation should likewise consider older adults' experiences of support alongside conventional indicators of service provision. In addition to financial inputs, material assistance, and service frequency, needs assessments and service feedback could examine whether older adults perceive support as available, adequate, and responsive. Including such indicators would help determine whether formally provided resources are experienced by older adults as meaningful support.

Limitations and Future Research

Several limitations should be acknowledged. First, the cross-sectional design does not establish the temporal or causal direction of the association between perceived social support and psychosocial need satisfaction. Moreover, the increase in explained variance in hierarchical regression depends on the order in which variables are entered. The additional variance associated with social companionship and emotional support therefore does not demonstrate that relationship-oriented support is more important than resource-oriented support.

Second, the sample was drawn from a single village, limiting the generalizability of the findings to rural communities with different migration patterns, family structures, economic conditions, or eldercare systems. Multi-site studies are needed to examine whether the observed patterns are replicated across rural settings.

Third, the predictors and outcomes were reported by the same participants in the same survey. Common-method bias therefore cannot be ruled out. Because objective indicators of support provision were not included in the present analysis, the study also could not examine the full process through which support provision may be perceived by older adults and related to psychosocial need satisfaction. Future research could combine reports from older adults, family members, and service providers with objective indicators of financial assistance, contact, and service use.

Finally, the measures were developed from existing theory and preliminary interviews and adapted to the local context. Some items captured social participation, information comprehension, or satisfaction with support, and the boundaries between constructs may therefore not be entirely distinct. Although the HTMT results indicated acceptable discriminant validity, the factor structure and conceptual distinctiveness of the measures require further validation in independent samples and across different regions and older populations.

Conclusion

All four dimensions of perceived social support were positively associated with psychosocial need satisfaction among rural left-behind older adults. After sociodemographic characteristics, self-rated health, and perceived instrumental and informational support had been taken into account, perceived social companionship and emotional support accounted for an additional 15.5 percentage points of explained variance. This finding indicates that relationship-oriented support experiences provide explanatory value beyond perceived access to practical assistance and information, without establishing that one category of support is more important than another.

Sustained social interaction, emotional responsiveness, and a sense of connection are important to understanding psychosocial need satisfaction among rural left-behind older adults. Research and practice should therefore consider both the functions of support and whether formally provided support is experienced by older adults as available, adequate, and responsive to their needs.

Declarations

Author Contribution

X.S. conceived and designed the study, developed the survey instrument, coordinated data collection, performed data curation and statistical analyses, interpreted the findings, and drafted and revised the manuscript. X.S. approved the final manuscript and accepts responsibility for the integrity of the work.

Data Availability

The data generated and analyzed during the current study are not publicly available because they contain potentially sensitive information from a small, geographically identifiable population of older adults. De-identified data may be available from the corresponding author upon reasonable request, subject to applicable ethical and privacy considerations.

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