

Construct Validity of the Multidimensional Scale of Perceived Social Support among Indonesian Mothers of Children with Autoimmune Conditions

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Doi: 10.31316/g-couns.v10i03.9112

Abstract

Social support is a multidimensional construct that is central to the psychological well-being of caregivers facing sustained caregiving responsibilities. Despite its importance, empirical evidence supporting the psychometric validity of the Multidimensional Scale of Perceived Social Support (MSPSS) among caregiver populations in Indonesia remains limited, particularly among mothers caring for children with autoimmune diseases. This study aimed to evaluate the construct validity of the MSPSS within this specific caregiving context. A quantitative psychometric approach was employed, involving 399 Indonesian mothers recruited from hospitals and autoimmune support communities. Confirmatory Factor Analysis (CFA) was conducted to assess the hypothesized three dimensions of perceived social support, namely family, friends, and significant others. The results demonstrated satisfactory model fit (CFI = 0.947; TLI = 0.932; RMSEA = 0.068; SRMR = 0.039). Convergent validity was supported by adequate indicator loadings, Average Variance Extracted values ≥ 0.50 , and Composite Reliability coefficients exceeding 0.70. These findings confirm that the MSPSS demonstrates robust construct validity and reliability for assessing perceived social support among Indonesian caregiver mothers, supporting its use in both research and clinical settings.

Keywords: construct validity, social support, confirmatory factor analysis, caregivers, autoimmune disease

Article info

Received December 2025, Revised January 2026, Accepted February 2026, Published February 2026

How to Cite:

Yuniarti, R., Setiasih., & Pramadi, A. (2026). Construct Validity of the Multidimensional Scale of Perceived Social Support among Indonesian Mothers of Children with Autoimmune Conditions. *G-Couns: Jurnal Bimbingan Dan Konseling*, 10 (03), July, 2026-2040. <https://doi.org/10.31316/g-couns.v10i03.9112>

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Available online at <https://journal.upy.ac.id/index.php/bk/index>



INTRODUCTION

Social support is a psychological construct that plays a central role in maintaining individuals' psychological well-being, particularly under life conditions characterized by chronic stress and long-term demands. Social support is not merely understood as the objective assistance received by individuals, but rather as individuals' perceptions of the availability, quality, and meaningfulness of support provided by their social environment (Zimet et al., 1988). Empirical evidence indicates that perceived social support functions as a protective factor against various mental health problems, including psychological distress, anxiety, and depression, especially among individuals engaged in long-term caregiving roles (Alsubaie et al., 2023). In clinical contexts, positively perceived social support also contributes to enhanced psychological resilience and individuals' adaptive capacity in coping with sustained psychosocial stressors (Kazlauskas & Želvienė, 2023).

In families with children experiencing chronic illnesses, including autoimmune diseases, the role of caregivers, particularly mothers, becomes critically important. Childhood autoimmune diseases require complex and prolonged caregiving, encompassing continuous medication management, regular medical monitoring, and comprehensive adjustments to family lifestyles. Such conditions have been consistently associated with increased risks of chronic stress, emotional exhaustion, and mental health problems among caregiving mothers (Kuhlthau et al., 2022; Kujawa et al., 2023). Empirical studies indicate that mothers caring for children with chronic illnesses report higher levels of caregiver burden, anxiety, and depression compared to parents of children without chronic health conditions, particularly when perceived social support is limited (Raina et al., 2023; Qudsi & Rizkillah, 2023).

Social support has been identified as one of the primary protective factors in the context of caregiving for children with chronic illnesses. Perceived support from family members, friends, and significant others has been shown to reduce psychological distress, improve emotion regulation, and enhance caregivers' quality of life (Prime et al., 2022). Alsubaie et al. (2023) further reported that caregivers with high perceived social support exhibit a lower risk of mental health disorders, even under conditions of substantial and prolonged caregiving burden. Therefore, accurate and culturally sensitive measurement of social support is a crucial aspect of health psychology research and family-based clinical intervention practices.

One of the most widely used instruments internationally for assessing perceived social support is the Multidimensional Scale of Perceived Social Support (MSPSS). Developed by Zimet et al. (1988), the MSPSS adopts a multidimensional approach that differentiates sources of social support into three dimensions: family, friends, and significant others. Recent psychometric studies have demonstrated that the three-factor structure of the MSPSS is supported through Confirmatory Factor Analysis (CFA) across diverse populations, including caregiver groups and clinical samples (Zhou et al., 2022; Park et al., 2023). Moreover, a recent meta-analytic confirmatory factor analysis has confirmed the cross-cultural stability of the MSPSS three-factor model, although variations in factor contributions across social and cultural contexts have been observed (Kořar & Kořar, 2024).

Nevertheless, the construct validity of a psychological instrument cannot be assumed to be universally applicable without empirical testing within specific cultural contexts. Collectivistic cultures, such as those predominantly found in Indonesia, emphasize the family as the primary social unit and the most meaningful source of support in individuals' lives. Cross-cultural research suggests that in collectivistic societies,



family support tends to be more dominant than support from friends or significant others, which may influence the factor structure of social support instruments such as the MSPSS (Triandis & Suh, 2022; Park et al., 2024). Within the Indonesian context, social norms, strong family ties, and patterns of interdependence among family members may shape how individuals, particularly caregiving mothers, perceive and evaluate available social support (Sulistiani et al., 2022).

Several studies in Indonesia have conducted adaptations and psychometric evaluations of the MSPSS across different populations. Using a Rasch analysis, Sulistiani et al. (2022) reported that the Indonesian version of the MSPSS demonstrated good internal consistency, although indications of differential item functioning were observed across several dimensions. Other studies among Indonesian adolescents have shown that the MSPSS retains its three-factor structure with satisfactory reliability and construct validity (Laksmi et al., 2020). Additionally, adaptations of the MSPSS among Indonesian teachers have reported good internal reliability and support for the instrument's factor model within the local sociocultural context (Oktarina et al., 2023). Studies involving clinical populations in Indonesia, such as cancer patients, have also indicated that the translated and culturally adapted MSPSS exhibits adequate validity and reliability for use in chronic health contexts (Setiawan et al., 2025). However, most of these studies have focused on general, educational, or specific medical populations, leaving empirical evidence regarding the construct validity of the MSPSS among caregiver groups, particularly mothers caring for children with autoimmune diseases, highly limited.

The characteristics of childhood autoimmune diseases, including prognostic uncertainty, fluctuating health conditions, and recurrent emotional demands, may influence how mothers perceive and prioritize sources of social support. Therefore, examining the construct validity of the MSPSS among Indonesian mothers caring for children with autoimmune diseases is essential to ensure that the instrument's factor structure accurately represents the lived experiences of social support within this population. Confirmatory Factor Analysis (CFA) enables evaluation of the fit between the theoretical MSPSS model and empirical data within a specific cultural and clinical context (Kořar & Kořar, 2024). Adequate instrument validation also holds significant clinical relevance, as assessments of social support can inform the development of targeted psychological interventions and family support programs for mothers who are psychologically vulnerable due to chronic caregiving burdens (Kazlauskas & Želvienė, 2023).

Based on the foregoing, the present study aims to examine the construct validity of the Multidimensional Scale of Perceived Social Support (MSPSS) among Indonesian mothers caring for children with autoimmune diseases using a Confirmatory Factor Analysis (CFA) approach. The research hypotheses are formulated as follows: (H1) the three dimensions structure of the MSPSS comprising family, friend, and significant others will be empirically confirmed in a sample of mothers experiencing chronic caregiving burden in Indonesia; and (H2) the family support dimension will demonstrate a more dominant factor contribution compared to the friend and significant others dimensions, in line with the collectivistic cultural characteristics of Indonesia. This study is expected to contribute theoretically by strengthening the psychometric evidence for the MSPSS within the Indonesian cultural context, and practically and clinically by providing a valid and reliable instrument for assessing social support and informing the development of family-based interventions for caregivers of children with chronic illnesses.



METHOD

This study employed the Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet et al. (1988), which consists of 12 items across three dimensions: family, friends, and significant others. All items are measured using a 7-point Likert scale. The MSPSS instrument used in this study was linguistically adapted into Indonesian through a forward–backward translation procedure.

Table 1.

Expert Panel Involved in the Forward Translation and Synthesis Stages

Panelist	Initials	Expertise	Role
Panelist 1	GN	Psychology, English Language (MSc, University of Twente, The Netherlands)	Forward Translation
Panelist 2	AW	English Language (MSc in Translation Linguistics, Universitas Sebelas Maret)	Forward Translation
Synthesis Panelist	PSA	Psychology, English Language, Resilience Researcher (MSc in Clinical Child Psychology, Universitas Indonesia; Doctoral Candidate)	Forward Translation Synthesis
Synthesis Panelist	EW	Psychology, English Language, Psychometrics (MSc in Psychology, Universitas Gadjah Mada)	Forward Translation Synthesis

The linguistic adaptation process followed standard forward–backward translation procedures to ensure semantic and conceptual equivalence of the instrument. During the forward translation stage, two independent panelists with backgrounds in psychology and English linguistics translated the MSPSS from English into Indonesian. The translated versions were subsequently synthesized by expert panelists with expertise in psychology and psychometrics.

Table 2.

Expert Panel Involved in the Back Translation and Synthesis Stages

Panelist	Initials	Expertise	Role
Panelist 1	EN	English Language (Master’s degree in English Literature, Universitas Sebelas Maret, Surakarta)	Back Translation
Panelist 2	W	English Language (Master’s degree in English Literature)	Back Translation
Synthesis Panelist	YDN	Psychology, English Language	Back Translation Synthesis

The back translation stage was conducted by two independent translators with academic backgrounds in English literature. The translated versions were subsequently synthesized to ensure equivalence of meaning with the original instrument. This process aimed to confirm that the MSPSS had been linguistically and culturally adapted to ensure its relevance to the Indonesian maternal caregiving context.



Table 3.
 Content Validity Expert Panel

Panelist	Initials	Expertise
Panelist 1	ARM	PhD in Psychology; Developmental and Family Psychology; Parenting
Panelist 2	AR	PhD in Psychology, Universitas Airlangga; Child Developmental Psychology
Panelist 3	RY	PhD, School of Psychology, Nanjing Normal University, China; Student Psychological Well-being
Panelist 4	PDY	PhD, Universitas Airlangga; Clinical Psychology and Mental Health
Panelist 5	PP	PhD, The University of Sydney; Developmental and Social Psychology; Community Research
Panelist 6	TFK	Master's degree in Psychology, Universitas Gadjah Mada; Psychometrics

In this study, evidence of instrument validity was primarily established based on test content. Each item was evaluated by expert panelists for its relevance and representativeness of the intended construct. Content validity was assessed using the Content Validity Index (CVI), with six experts in developmental, clinical, and family psychology, psychometrics, and mental health.

Table 4.
 Summary of CVI Results for the MSPSS

Scale	I-CVI Range	S-CVI	Interpretatio
Social Support (MSPSS)	0,917 – 1,000	0,99	Valid

The S-CVI was calculated by summing the I-CVI scores and dividing by the total number of items. An item was considered valid if it achieved an I-CVI ≥ 0.78 , while an S-CVI value ≥ 0.90 indicated adequate overall content validity (Polit et al., 2007). The I-CVI values for the Social Support scale ranged from 0.917 to 1.000, yielding an S-CVI of 0.99, indicating strong evidence of content validity for the MSPSS.

Prior to the main data collection, a pilot study was conducted to evaluate item clarity, cultural relevance, and preliminary internal consistency of the Indonesian version of the MSPSS. This preliminary testing aimed to ensure that each item was clearly understood by respondents and consistently measured the construct of social support within the target population. The pilot study involved 151 respondents. Results indicated that all MSPSS items were well understood, with no reports of significant ambiguity or comprehension difficulties. Preliminary internal consistency was assessed quantitatively using Cronbach's alpha coefficients for each social support dimension. The family dimension demonstrated a reliability coefficient of $\alpha = .814$, the friend dimension of $\alpha = .887$, and the significant other dimension of $\alpha = .844$. These values indicate good internal consistency across all dimensions during pilot testing.

The study sample comprised 399 mothers who had children diagnosed with autoimmune diseases and served as their primary caregivers. Respondents' ages ranged from late adolescence to middle adulthood, with the majority falling within early to middle adulthood, particularly in the late twenties to mid-thirties. This age group represents a life stage characterized by high caregiving intensity and substantial family



responsibilities, especially in the context of caring for a child with a chronic illness. In terms of educational background, respondents demonstrated diverse educational attainment, ranging from primary education to postgraduate degrees. Most participants had completed secondary education, while others had attained higher education at the diploma or undergraduate level. This variation in educational background provides an important social context for understanding differences in caregiving experiences, meaning-making processes, and access to social support resources. Children's autoimmune conditions varied across diagnoses. The most frequently reported conditions included lupus, thrombocytopenia, Hashimoto's disease, juvenile idiopathic arthritis, and immune thrombocytopenic purpura, as well as other autoimmune diagnoses. Some respondents reported multiple diagnoses due to disease-related complications, reflecting the complexity of the children's health conditions faced by mothers as primary caregivers. Regarding age, most children were in childhood, particularly under 12 years old, while others were in early adolescence. This distribution indicates that most respondents were managing caregiving demands during early to middle developmental stages, which are often accompanied by prolonged treatment and chronic disease management.

Sample size was determined using Cochran's formula, as described by Sugiyono (2019), since the population size could not be precisely determined. With a 95% confidence level and a 5% margin of error, the minimum required sample size was 384 respondents. The final sample of 399 participants exceeded this requirement. Furthermore, this sample size met the recommended minimum for Confirmatory Factor Analysis (CFA), which suggests that a sample size greater than 200 is necessary to obtain stable parameter estimates (Hair, 2021).

Data collection was conducted using both offline and online methods. Offline data collection was conducted in hospitals and involved mothers of children with autoimmune diseases who were undergoing routine medical check-ups or treatment. Data were collected with assistance from the researcher and trained research assistants. Participants completed the questionnaires after receiving detailed explanations regarding the study objectives, procedures, and data confidentiality. Written informed consent was obtained prior to participation. Online data collection was conducted through autoimmune-related community groups active on social media platforms. The questionnaire was distributed via an online survey platform with the assistance of community administrators, enabling participants from autoimmune communities to complete it independently. Prior to completing the online questionnaire, participants were provided with study information and an informed consent statement. This dual-method approach was implemented to reach participants across diverse geographical regions in Indonesia and to enhance sample representativeness.

Data analysis used a Confirmatory Factor Analysis (CFA) to examine the construct validity of the Multidimensional Scale of Perceived Social Support (MSPSS). The tested model was a three-factor model consistent with the MSPSS theoretical framework, encompassing the family, friend, and significant other dimensions (Zimet et al., 1988). CFA was conducted using JAMOVI version 2.7.15. Model fit was evaluated using several goodness-of-fit indices, including the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). A model was considered to demonstrate good fit if CFI and TLI values were ≥ 0.90 , $RMSEA \leq 0.08$, and $SRMR \leq 0.08$ (Hair et al., 2020).



Convergent validity was assessed using standardized factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). Factor loadings ≥ 0.50 were considered indicative of adequate item contributions to the latent constructs. Convergent validity was deemed satisfactory if AVE values were ≥ 0.50 , while construct reliability was considered adequate if CR values were ≥ 0.70 (Hair et al., 2020). To further support construct validity, Pearson correlation matrices among latent constructs were examined. Discriminant validity was evaluated by comparing the square root of AVE for each construct with the inter-construct correlations derived from the Pearson correlation matrix. Discriminant validity was considered established when the square root of AVE for a given construct exceeded its correlations with other constructs, indicating that each MSPSS dimension possessed sufficient empirical distinctiveness despite being theoretically related.

This study was conducted in accordance with ethical principles of psychological research. Participation was voluntary, and all participants were informed of the study objectives and their right to withdraw at any time without negative consequences. Participant confidentiality was strictly maintained, and all collected data were used solely for academic research purposes.

RESULTS AND DISCUSSION

Results

Prior to conducting a Confirmatory Factor Analysis (CFA), the distributions of responses for each item and the total scores for the Multidimensional Scale of Perceived Social Support (MSPSS) dimensions were examined using descriptive statistics, including mean, standard deviation (SD), skewness, and kurtosis. These statistics provide preliminary insights into respondent response patterns and the suitability of the data for analyses that assume univariate normality. According to Hair et al. (2020), univariate normality is considered acceptable when skewness values fall within the range of -2 to $+2$ and kurtosis values lie between -7 and $+7$. Values outside these thresholds indicate notable deviations from normality that may influence the interpretation of factor analytic results. The findings reveal that all individual items and total dimension scores exhibit skewness values ranging from -1.15 to -0.503 and kurtosis values ranging from -0.093 to 2.78 . All observed values fall well within the recommended thresholds for univariate normality as outlined by Hair et al. (2021).

Table 5.

Descriptive Statistics for the Significant Other Dimension

Variable	N	Mean	SD	Skewness	Kurtosis
SO 1	399	5.39	1.20	-0.698	0.110
SO 2	399	5.46	1.29	-0.786	0.0150
SO 3	399	5.57	1.10	-0.656	0.167
SO 4	399	5.66	1.14	-0.680	-0.0927
Total SO	399	22.1	3.66	-0.503	0.120

Note: SO = Significant Other



Table 6.

Descriptive Statistics for the Family Dimension

Variable	N	Mean	SD	Skewness	Kurtosis
F 1	399	5.68	1.16	-1.15	1.75
F 2	399	5.40	1.29	-0.902	0.729
F 3	399	5.51	1.20	-0.987	1.36
F 4	399	5.53	1.24	-1.03	1.18
Total F	399	22.1	3.96	-1.14	2.78

Note: F = Family

Table 7.

Descriptive Statistics for the Friend Dimension

Variable	N	Mean	SD	Skewness	Kurtosis
Fr 1	399	5.50	1.18	-0.863	0.898
Fr 2	399	5.28	1.25	-0.832	0.750
Fr 3	399	5.44	1.19	-0.829	0.667
Fr 4	399	5.13	1.25	-0.807	0.828
Total Fr	399	21.4	3.70	-0.653	0.854

Note: Fr = Friend

Convergent validity was assessed using the Average Variance Extracted (AVE), while construct reliability was evaluated through Composite Reliability (CR). The results indicate that all dimensions of the Multidimensional Scale of Perceived Social Support (MSPSS) meet the recommended thresholds. Specifically, the Family dimension yielded an AVE of 0.56 and a CR of 0.825, reflecting strong convergent validity and excellent internal consistency. The Friend and Significant Other dimensions demonstrated AVE values of 0.50 and 0.53, respectively, with corresponding CR values of 0.757 and 0.778—both satisfying the minimum criteria. According to Hair et al. (2021), an AVE ≥ 0.50 indicates that the latent construct explains more than 50% of the variance in its indicators, while a CR ≥ 0.70 signifies adequate internal consistency.

Table 8.

Convergent Validity and Construct Reliability

Dimension	AVE	CR
Family	0.56	0.825
Friend	0.50	0.757
Significant Other	0.53	0.778

These findings provide empirical support for the MSPSS's satisfactory convergent validity and construct reliability among Indonesian mothers caring for children with autoimmune disorders.

As part of a comprehensive assessment of discriminant validity, this study examined whether the three MSPSS dimensions, Family, Friend, and Significant Other, represent empirically distinct constructs despite their theoretical interrelatedness. The initial evaluation followed the Fornell–Larcker criterion (1981), which compares the square root of each construct's AVE ($\sqrt{\text{AVE}}$) with its inter-construct correlations. The $\sqrt{\text{AVE}}$ values for Family (0.748), Friend (0.707), and Significant Other (0.728) generally exceed their respective correlations with other constructs, with one notable exception: the correlation between Family and Significant Other is very high ($r = 0.848$). This suggests



potential perceptual overlap in the Indonesian cultural context, where family members, such as spouses or parents, often simultaneously serve as a significant other.

However, it is important to note that the Fornell–Larcker criterion is known to be overly conservative and less sensitive in large samples or when constructs are theoretically proximate (Hair et al., 2021). To strengthen the evidence for discriminant validity, the analysis was supplemented with the Heterotrait-Monotrait ratio of correlations (HTMT), a more robust and currently recommended approach (Henseler, Ringle, & Sarstedt, 2015). An HTMT value below 0.85 is considered acceptable for closely related constructs, such as those in social support measurement (Hair et al., 2021). All HTMT values in this study fell below this threshold, with the highest value (0.848) observed between Family and Significant Other. Thus, discriminant validity is supported according to this more reliable indicator.

Table 9.
 Phi Matrix and Square Root of AVE

Dimension	Family	Friend	Significant Other	$\sqrt{\text{AVE}}$
Family	—	0.609	0.848	0.748
Friend	0.609	—	0.722	0.707
Significant Other	0.848	0.722	—	0.728

Table 10.

Heterotrait-Monotrait ratio of correlations (HTMT)

Dimension	Family	Friend	Significant Other
Family	1.000		
Friend	0.609	1.000	
Significant Other	0.848	0.722	1.000

Taken together, using the combined criteria of $\text{AVE} \geq 0.50$ and $\text{HTMT} < 0.85$ the findings confirm that the MSPSS demonstrates both adequate convergent and discriminant validity in this sample of Indonesian mothers of children with autoimmune diseases. This reinforces the conclusion that the MSPSS does not merely capture a single source of social support but empirically distinguishes among three distinct sources, even though everyday boundaries between family and significant others may blur in Indonesia’s collectivistic cultural context.

To test whether the multidimensional structure of the MSPSS better represents the empirical data, two competing models were compared: (1) a one-factor model, in which all 12 MSPSS items load onto a single latent construct representing general social support, and (2) a three-factor model aligned with the original theoretical framework of the MSPSS (Zimet et al., 1988), which posits three correlated latent constructs Significant Other, Family, and Friend.

The results show that the one-factor model fails to achieve adequate fit: CFI (0.842) and TLI (0.807) fall below the conventional threshold of 0.90, and RMSEA (0.115) exceeds the recommended maximum of 0.08 (Hair et al., 2021; Hu & Bentler, 1999). In contrast, the three-factor model demonstrates excellent fit to the data (CFI = 0.947; TLI = 0.932; RMSEA = 0.0683; SRMR = 0.0386), meeting all widely accepted fit criteria. This provides strong evidence that perceived social support, as measured by the



MSPSS, is not unidimensional but comprises three empirically distinguishable yet interrelated sources.

Table 11.
Comparison of Model Fit Indices for CFA of the MSPSS

Model	CFI	TLI	SRMR	RMSEA
One-factor	0.842	0.807	0.0672	0.115
Three-factor	0.947	0.932	0.0386	0.0683

Accordingly, the three-factor model is not only statistically superior but also more theoretically coherent and culturally resonant within the Indonesian context, where support from family, friends, and significant others carries distinct psychological meanings and functional roles. The final selection of the three-factor model is thus justified by its adequate statistical fit, fulfilled convergent and discriminant validity, and substantive relevance to the lived experiences of mothers navigating the challenges of chronic childhood illness.

The factor loading analysis further substantiates the psychometric adequacy of the MSPSS in this sample. All items exhibited standardized factor loadings above 0.60 and were statistically significant at $p < .001$, indicating that each item makes a substantial contribution to its respective latent construct. Within the Significant Other dimension, the highest loadings were observed for SO1 (0.745) and SO2 (0.696), suggesting that the presence of a key supportive figure such as a spouse or another emotionally significant individual plays a pivotal role in shaping mothers' perceptions of social support. This aligns with the relational regulation theory proposed by Lakey and Orehek (2011), which posits that close, trusted individuals provide emotional regulation that stabilizes psychological well-being, particularly under chronic stressors such as caring for a child with an autoimmune disorder.

The Family dimension demonstrated consistently strong loadings, ranging from 0.707 to 0.757, reinforcing the centrality of familial support in this population. This finding resonates with the collectivistic cultural norms of Indonesia, where immediate family members are traditionally viewed as the primary source of emotional, instrumental, and normative support (Thoits, 2011; Uchino et al., 2018). The high loadings reflect the deeply embedded expectation that family serves as a foundational pillar of individual resilience and well-being.



Table 12.
 Factor Loadings

Dimension	Indicator	Estimate	SE	Z	p	Stand. Estimate
Significant Other	SO1	0.895	0.0553	16.2	<.001	0.745
	SO2	0.894	0.0607	14.7	<.001	0.696
	SO3	0.713	0.0527	13.5	<.001	0.652
	SO4	0.727	0.0548	13.3	<.001	0.641
Family	F1	0.866	0.0531	16.3	<.001	0.745
	F2	0.973	0.0583	16.7	<.001	0.757
	F3	0.883	0.0553	16.0	<.001	0.734
	F4	0.873	0.0574	15.2	<.001	0.707
Friend	FR1	0.794	0.0588	13.5	<.001	0.673
	FR2	0.783	0.0626	12.5	<.001	0.629
	FR3	0.813	0.0590	13.8	<.001	0.682
	FR4	0.829	0.0623	13.3	<.001	0.665

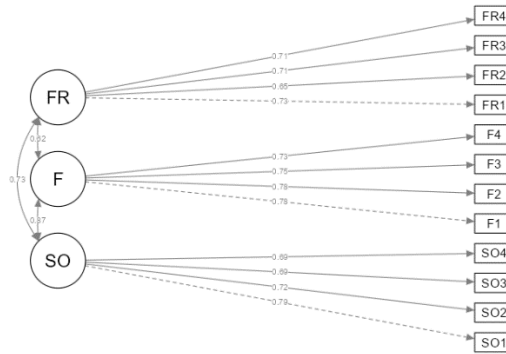


Figure 1. Visual Representation of the Three-Factor MSPSS

In the Friend dimension, standardized loadings ranged from 0.629 to 0.682, indicating that friendships constitute a meaningful supplementary source of support. Although somewhat lower than those for Family and Significant Other, these values remain well above conventional thresholds for indicator retention. Friends appear to fulfill critical functions by offering empathy, shared experiential understanding, and emotional validation, which help buffer parenting-related stress (Taylor, 2011). This underscores the complementary role of non-kin relationships in supporting maternal coping within the context of chronic pediatric illness. Collectively, these factor loadings not only confirm the structural integrity of the three-factor MSPSS model but also highlight the nuanced ways in which different sources of social support operate within the sociocultural and psychological landscape of Indonesian mothers managing their children's autoimmune conditions.

Discussion

The findings of this study have important theoretical implications. First, the results support the three-factor structure of the MSPSS as developed by Zimet et al. (1988) and demonstrate that this structure remains stable and applicable across different



cultural contexts, including the collectivistic culture of Indonesia. This is consistent with previous cross-cultural research, which emphasizes that perceptions of social support from family, friends, and significant others constitute critical components of individual psychological well-being (Taylor, 2011; Uchino et al., 2018). Second, these findings reinforce the notion that social support is a multidimensional construct that cannot be adequately represented by a single source, but rather emerges from the complementary interactions of multiple support sources (Lakey & Orehek, 2011; Santini et al., 2020). In other words, the psychological well-being of mothers facing the challenges of caregiving for children with chronic illnesses is determined by a combination of support from family, friends, and significant others.

From a practical perspective, the MSPSS can be utilized as a valid and reliable instrument to assess mothers' perceptions of social support within the context of caregiving for children with autoimmune conditions. The information obtained through this instrument can inform psychological and social interventions, such as family support enhancement programs, couple counseling, or peer support groups aimed at reducing stress and improving maternal psychological well-being. Furthermore, the MSPSS can be employed by researchers and practitioners to monitor the effectiveness of social support-based interventions and serve as an evaluative tool in longitudinal studies examining the relationships between social support, caregiving stress, anxiety, depression, and maternal quality of life (Thoits, 2011; Santini et al., 2020).

Nevertheless, this study has several limitations. First, the sample was limited to mothers with access to hospitals and online autoimmune communities, which may constrain the generalizability of the findings. Second, the cross-sectional design precludes assessing changes in perceived social support over time and its longitudinal impact on psychological well-being. Future research is recommended to employ longitudinal or experimental designs and to expand sampling across diverse regions and socio-demographic groups to evaluate the stability of the MSPSS construct and its causal relationships with indicators of mental health and caregiving stress.

Overall, the findings provide robust evidence that the MSPSS is a valid, reliable, and sensitive instrument for measuring perceived social support among Indonesian mothers of children with autoimmune diseases. The results highlight that family support remains the primary source of support, followed by significant others and friends, reflecting Indonesia's collectivistic cultural context and aligning with the multidimensional theory of social support (Uchino et al., 2018; Taylor, 2011; Thoits, 2011). Consequently, the MSPSS can be widely applied in research and in family- or community-based intervention practices to enhance the psychological well-being of mothers caring for children with chronic health conditions.

CONCLUSION

This study supports H1: the three-factor structure of the MSPSS (Family, Friend, Significant Other) is confirmed through CFA, convergent validity ($AVE \geq 0.50$), and discriminant validity ($HTMT < 0.85$), affirming its construct validity in the Indonesian context. H2 is also supported: Family support emerges as the dominant dimension, reflecting the central role of family in collectivistic culture, a finding that demonstrates social support theory must account for a contextually shaped hierarchy of support sources. Theoretically, these findings reinforce the cross-cultural stability of the MSPSS model while providing local nuance regarding how social support is organized in Indonesian society. Practically, the MSPSS is ready for use as a screening tool to identify the specific



needs of maternal caregivers and to evaluate family-based psychosocial interventions. However, this study is limited by its cross-sectional design, potential social desirability bias, and restricted generalizability, as the sample includes only mothers and excludes fathers, grandparents, and other older caregivers. Moving forward, it is essential to test MSPSS measurement invariance across groups, e.g., by region, socioeconomic status, or child's disease severity, integrate it into SEM to predict outcomes such as burnout or quality of life, and develop evidence-based interventions to strengthen the relatively weaker peer support dimension. Thus, the MSPSS is not only statistically valid but also culturally relevant and useful as a foundation for health psychology research and practice that is grounded in the sociocultural realities of caregivers in Indonesia.

ACKNOWLEDGMENTS

The author expresses sincere gratitude to hospitals and autoimmune support communities in Indonesia for their assistance and collaboration during the data collection process. Special thanks are extended to the mothers who willingly participated in this study, enabling the research to be conducted successfully. The author also expresses deep appreciation to the Faculty of Psychology, University of Surabaya, for its continuous support, facilities, and guidance throughout the research process.

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