



Validation of the Multidimensional Scale of Perceived Social Support on Nigerian Female Undergraduates

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Social support is a vital factor in promoting physical and psychological well-being. The cross-sectional survey research design was adopted to validate the Multidimensional Scale of Perceived Social Support on Nigerian Female Undergraduates using a sample of 454 Nigerian female undergraduates. Participants responded to the Multidimensional Scale of Perceived Social Support (MSPSS), and Interpersonal Support Evaluation List (shortened version -12 item). The item-total statistics of the scale indicates that all items present good discrimination. Also, the scale's internal consistency among the Nigerian sample reveals positively significant reliability coefficients. Paired with ISEL-Short Form, MSPSS has good concurrent validity. The authors conclude that MSPSS has appropriate psychometric properties for assessing social support in Nigeria and similar cultural contexts.

Keywords: Validation; social support; female undergraduates; Nigeria.

1. INTRODUCTION

Health researchers were interested in the health repercussions of being socially integrated in the 1970s, which sparked scientific interest in the value of social support [1] and has emerged as a well-documented psychosocial element influencing health outcomes [2,3,4,5,6].

Social Support is the giving of support or comfort to others, usually to assist them in dealing with biological, psychological, or social pressures [7]. It refers to the soothing impact of friends, family, and acquaintances [8]. Perceived social support, an individual's perception of being cared for, valued, and part of a mutually supporting social network, has been shown to improve mental and physical health [9]. Having family and friends around in times of need or crisis for support helps build a broader focus and a positive self-image while enhancing the quality of life and buffering adverse life events [10]. Social support by our social network proves to be essential for our health and represents a vital salutogenic resource for individuals' mental health [11].

A network of social support has been demonstrated to be beneficial in promoting a healthy self-esteem, decreasing cardiovascular risks including blood pressure, and supporting a healthy lifestyle, improving the ability to cope with the stress, lessening the impact of psychological distress, and boosting lifelong mental health, promoting healthy lifestyle behaviours and promoting treatment plan adherence [12]. Social support creates essential opportunities for increasing a sense of coherence among people with mental health problems [13]. Social support has proven beneficial in boosting immune system functioning, especially among people experiencing stress [14] across populations, including spousal caregivers of people living with dementia, medical students, elderly adults, and cancer patients [15]. Social support has also been associated with reductions in cancer and infectious disease death rates [4,16].

On average, the level of perceived social support among female students is higher than that of their male counterparts, and one of the possible explanations for this observation is that females tend to be more emotionally expressive [17]. This could lead to receiving more social support from multiple sources than males [18].

Social support is a multifaceted concept with many different forms [16]. Several researchers

have assessed perceived social support among individuals. The Multidimensional Scale of Perceived Social Support (MSPSS) is a short scale that assesses a respondent's sense of support from three different sources: family, friends and significant other. The MSPSS was first validated in western populations, but it has now been validated among a variety of non-western populations [19,20,21,22,23,24,25,26, 27,28].

This study attempts to revalidate the Multidimensional Scale of Perceived Social Support (MSPSS) scale among Nigerian female undergraduates to ascertain culture-sensitive psychometric properties.

1.1 Objectives

This study aims to validate the Multidimensional Scale of Perceived Social Support on Nigerian Female Undergraduates developed by Zimet et al. [29] using a Nigerian sample of female undergraduates to ascertain socio-culturally sensitive and acceptable psychometric properties.

2. MATERIALS AND METHODS

2.1 Participants

A total of 454 participants were purposively selected and took part in the study; the participants' mean \pm SD age was 21.26 \pm 2.84.

2.2 Measurement

Two scales were used in this study. First is the Multidimensional Scale of Perceived Social Support Scale developed by Zimet et al. [29]. This 12-item scale has three different sub-scales designed to measure three dimensions of social support, specifically Family (Fam), Friends (Fri) and Significant Other (SO). Four items are devoted to measuring each of three dimension on a 7-point scale with response options ranging from "Very Strongly Agree" to "Very Strongly Disagree". By adding the results of all items, a total score is generated. The potential score range is 12 to 84; the higher the score, the more social support is seen. Also, separate sub-scales can be used by summing the responses from the items in each of the three dimensions. The possible score range for the sub-scales is between 4 and 28.

The second instrument is the Interpersonal Support Evaluation List (shortened version -12 item) developed by Cohen et al. [30] to measure the functional components of perceived social support. This 12-item measure is a shortened version of the original ISEL-40 items [31]. This 12-item scale has three different sub-scales that measure three dimensions of perceived social support: Appraisal Support, Belonging Support, and Tangible Support. Four items on a four-point scale ranging from "Definitely True" to "Definitely False" are used to assess each dimension. Four questions each make up for each dimension, and 5 of the 12 items are reverse scored. All scores are kept continuous.

2.3 Existing Psychometric Properties of MSPSS

The MSPSS has good reliability with Cronbach's alpha ranging from 0.85 to 0.91 [29]. In addition, according to Zimet et al. [29], confirmatory factor analysis (CFA) revealed that the MSPSS has a strong three-component structure (family support, friend support, and significant other support). Furthermore, the MSPSS was shown to be adversely associated with parental stress, loneliness, and depression, but positively associated with self-esteem and life satisfaction, suggesting that the MSPSS has strong concurrent validity [32,33,34,28,35].

The MSPSS has been translated into a variety of languages over the years, including Swedish, Hausa, Igbo, Thai, Polish, and Malaysian, studies have shown high reliability and validity [36,37,38,39,22,27,40]. Also, the MSPSS has acceptable psychometric properties among vulnerable populations, such as mental patients, people with implantable cardioverter defibrillators, and patients with heart failure [41,42,43]. All of these findings indicated that the MSPSS had substantial psychometric properties.

The instrument has been successfully used by various Nigerian researchers who used the original psychometric properties by the developer [44,45]. The scale has also been translated to Hausa, the most predominant language in Northern Nigeria [46] and Igbo, the most predominant language in South-Eastern Nigeria [36].

The scale's psychometric properties have been investigated among Nigerian high school adolescents [47]. However, there is a need for the validation of the scale to establish its psychometric properties across diverse populations.

2.4 Data Analysis

Cronbach's standardised α , Spearman-Brown coefficient and Guttman Split-Half coefficient were computed to ascertain the reliability of MSPSS on the sample. The item-total correlation were also obtained to test the relationship between each item and the composite/total item score. Using Pearson's Correlation Analysis, MSPSS was correlated with Interpersonal Support Evaluation List (shortened version-12 items) to determine the concurrent validity of MSPSS. The new norms for the instrument were determined using descriptive statistics such as mean and standard deviation.

3. RESULTS

3.1 Measure of Reliability of Multidimensional Scale of Perceived Social Support Scale

Item-Total Statistics, Cronbach's alpha, Spearman-Brown coefficient, and Guttman Split-Half coefficient were used to measure the reliability and internal consistency of the scale Table 1 displays the the internal consistency of the scale. The corrected item-total correlation ranged from .57 to .77. The scale Cronbach's coefficient is ($\alpha = .93$), with a Spearman-Brown coefficient of .86 and Guttman Split-Half coefficient of .90 for part 1 and .87 for part 2.

This analysis shows that MSPSS is a reliable measure for social support for the Nigerian population. The goodness-of-fit measures for all of the scale's items were satisfactory.

3.2 Measure of Validity of MSPSS

To measure the validity of MSPSS, a concurrent validity technique was employed to show how well MSPSS compares to another well established related scales measuring the same construct. Using the Pearson's r , correlations between MSPSS and ISEL-Short Form were investigated. As summarized in Table 2, MSPSS correlated positively and significantly with ISEL-Short Form ($r = .350$, $p = .000$). This result shows that MSPSS is valid for the Nigerian population.

Table 1. Item-total statistics of MSPSS

| Item-total statistics | | | | | |
|-----------------------|---|-----------|------|----------------------------------|---------------------------------|
| S/N | Items | Item mean | SD | Corrected item-total correlation | Crobach's Alpha if item deleted |
| 1 | There is a special person who is around when I am in need | 3.86 | 2.27 | .644 | .925 |
| 2 | There is a special person with whom I can share my joys and sorrows | 4.05 | 2.02 | .745 | .921 |
| 3 | My family really tries to help me | 4.20 | 2.07 | .741 | .921 |
| 4 | I get the emotional help and support I need from my family | 4.09 | 2.11 | .721 | .922 |
| 5 | I have a special person who is a real source of comfort to me | 4.03 | 2.02 | .774 | .920 |
| 6 | My friends really try to help me | 4.02 | 1.98 | .715 | .922 |
| 7 | I can count on my friends when things go wrong | 3.89 | 2.02 | .658 | .924 |
| 8 | I can talk about my problems with my family | 4.04 | 2.04 | .701 | .923 |
| 9 | I have friends with whom I can share my joys and sorrows | 4.03 | 1.99 | .731 | .922 |
| 10 | There is a special person in my life who cares about my feelings | 4.19 | 2.03 | .687 | .923 |
| 11 | My family is willing to help me make decisions | 3.95 | 2.07 | .648 | .925 |
| 12 | I can talk about my problems with my friends | 3.67 | 2.05 | .573 | .928 |

Table 2. Correlation matrix

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----------------------|--------|--------|--------|--------|--------|--------|--------|-------|
| 1. Appraisal Support | 1 | | | | | | | |
| 2. Belonging Support | .509** | 1 | | | | | | |
| 3. Tangible Support | .498** | .471** | 1 | | | | | |
| 4. ISEL Short Form | .820** | .819** | .801** | 1 | | | | |
| 5. Family | .252** | .281** | .217** | .308** | 1 | | | |
| 6. Friends | .288** | .325** | .217** | .342** | .771** | 1 | | |
| 7. Significant Other | .270** | .256** | .251** | .319** | .830** | .731** | 1 | |
| 8. MSPSS | .292** | .311** | .248** | .350** | .940** | .901** | .928** | 1 |
| Mean | 9.72 | 9.60 | 10.10 | 29.42 | 16.28 | 15.61 | 16.14 | 48.02 |
| SD | 2.58 | 2.72 | 2.55 | 6.39 | 6.67 | 6.48 | 6.87 | 18.47 |

**Significant at .01 level (2-tailed)

Table 3 summarises Pearson's *r* of MSPSS and ISEL-Short Form subscale and composite scores. Results show a significant positive validity coefficient between MSPSS and ISEL-Short Form ($r=.350, p=.000$). Results further reveal significant validity coefficients between MSPSS and the Appraisal Support ($r=.292, p=.000$), Belonging Support ($r=.311, p=.000$), and Tangible Support ($r=.248, p=.000$) subscales of ISEL-Short Form. Also, significant validity coefficients exist between ISEL-Short Form and the Family ($r=.308, p=.000$), Friends ($r=.342, p=.000$), and Significant Other ($r=.319, p=.000$)

subscales of MSPSS. This result proves that MSPSS is a valid measure of social support.

3.3 Calculation of Norms for MSPSS

This study employed the 95% Confidence Interval method in estimating the cut-off point for MSPSS. As summarised in Table 4 with 95% confidence, the population mean is between 32.3 and 33.5 based on 454 samples [32.87 (95% CI 32.3 to 33.5)]. The lower limit of the interval (i.e., mean score minus one margin of error) of ≥ 32.3 is considered the cut-off point for the sample.

Table 3. The 95% Confidence Interval of cut-off point determination for MSPSS

| | Sample |
|-------------------------|-----------------------------|
| Margin of Error | 1.70 |
| Sample size | 454 |
| Sample mean | 48.02 |
| Standard deviation | 18.47 |
| 95% Confidence Interval | 48.02 (95% CI 46.3 to 49.7) |
| Cut-off point | ≥ 46.3 |

Table 4. Score Guide for Multidimensional Scale of Perceived Social Support Scale (MSPSS)

| Rating | General scoring pattern | Sample scores |
|-----------------------|-------------------------|---------------|
| Low Social Support | 12 - 35 | 10 – 45 |
| Medium Social Support | 36 – 60 | 46 - 70 |
| High Social Support | 61 – 84 | 71 - 84 |

4. DISCUSSION

Social Support is a crucial construct to the experience of physical and psychological well-being. This study aims to ascertain the Multidimensional Scale of Perceived Social Support Scale (MSPSS) psychometric properties in Nigeria in order to derive culture-sensitive psychometric properties. The scale reliability, validity, and norms were assessed using a sample of 454 Nigerian female undergraduates. The MSPSS reported high psychometric properties obtained by the developer [29]. Findings from the study reveal good scale psychometric properties among the Nigerian population.

The assessment of MSPSS reliability on Nigerian female undergraduates reveals a Cronbach's coefficient value of ($\alpha = .93$), a Spearman-Brown coefficient of .86 and a Guttman Split-Half coefficient of .90 for part 1 and .87 for part 2.

The MSPSS is a valid construct for the measurement of Social Support. Results show that a positive significant validity coefficient exists between the composite scores of MSPSS and Interpersonal Support Evaluation List (shortened version -12 items) ($r=.350, p =.000$). Results further reveal significant validity coefficients between MSPSS and the Appraisal Support ($r=.292, p =.000$), Belonging Support ($r=.311, p =.000$), and Tangible Support ($r=.248, p =.000$) subscales of ISEL-Short Form. Also, significant

validity coefficients exist between ISEL-Short Form and the Family ($r=.308, p =.000$), Friends ($r=.342, p =.000$), and Significant Other ($r=.319, p =.000$) subscales of MSPSS.

The study also derived new culture-sensitive norms and scoring patterns for the scale based on the sample understudied.

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the MSPSS reveal appropriate culture-sensitive psychometric properties for the Nigerian sample. This study, however, sampled female undergraduates. Hence, there is a need to sample other populations using the MSPSS. Authors recommend further validation studies using a larger sample of diverse populations across different geographic locations within and outside Nigeria.

ETHICAL CONSIDERATIONS AND CONSENT

This study involved human subjects, and hence the Helsinki Declaration was adopted in the research procedures. The Internal Research Ethics Committee (IREC) of Redeemer's University Nigeria scrutinised the research intention and proposed procedures. Informed consent was obtained from participants. All participants remain anonymous.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Stroebe W, Stroebe M. The social psychology of social support. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles*. The Guilford Press. 1996;597–621.
2. Brunelli A, Murphy G, Athanasou J. Effectiveness of social support group interventions for psychosocial outcomes: A meta-analytic review. *The Australian Journal of Rehabilitation Counselling*. 2016;22(2):104-127. DOI: 10.1017/jrc.201
3. Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: A meta-analytic review. *PLoS Med*. 2010 Jul 27;7(7):e1000316.

4. Pinquart M, Duberstein PR. Associations of social networks with cancer mortality: A meta-analysis. *Crit Rev Oncol Hematol*. 2010;75(2):122-37.
5. Uchino BN. Understanding the links between social support and physical health: A life-span perspective with emphasis on the separability of perceived and received support. *Perspectives on Psychological Science*. 2009;4(3):236–255.
Available:<https://doi.org/10.1111/j.1745-6924.2009.01122.x>
6. Berkman LF, Glass T, Brissette I, Seeman TE. From social integration to health: Durkheim in the new millennium. *Soc Sci Med*. 2000;51(6):843-57.
7. American Psychological Association. Social Support. *APA Dictionary of Psychology*; 2022.
Available:<https://dictionary.apa.org/social-support>
8. Taylor SE. Social Support: A review. In H. S. Friedman (Ed.), *The Oxford Handbook of Health Psychology*. London: Oxford University Press. 2011;189–214.
9. Towey S. Social Support; 2016.
Available:<https://www.takingcharge.csh.umn.edu/social-support>
10. Drageset J. Social Support. In: Haugan G., Eriksson M. (eds) *Health Promotion in Health Care – Vital Theories and Research*. Cham: Springer; 2021.
Available:https://doi.org/10.1007/978-3-030-63135-2_11
11. Mayo Clinic. Social support: Tap this tool to beat stress; 2020.
Available:<https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/social-support/art-20044445#:~:text=Other%20studies%20have%20shown%20the,Promoting%20lifelong%20good%20mental%20health>
12. Langeland E, Wahl AK. The impact of social support on mental health service users' sense of coherence: A longitudinal panel survey. *International Journal of Nursing Studies*. 2009;46(6):830-837.
Available:<https://doi.org/10.1016/j.ijnurstu.2008.12.017>
13. Uchino BN, Vaughn AA, Carlisle M, Birmingham W. Social support and immunity. In S. C. Segerstrom (Ed.), *The Oxford Handbook of Psychoneuroimmunology*. United Kingdom: Oxford University Press. 2012; 214–233.
Available:<https://doi.org/10.1093/oxfordhb/9780195394399.013.0012>
14. Kiecolt-Glaser JK, McGuire L, Robles TF, Glaser R. Psychoneuroimmunology: Psychological influences on immune function and health. *Journal of Consulting and Clinical Psychology*. 2002;70(3):537–547.
Available:<https://doi.org/10.1037//0022-006x.70.3.537>
15. Lee M, Rotheram-Borus MJ. Challenges associated with increased survival among parents living with HIV. *American Journal of Public Health*. 2001;91(8):1303-9.
16. Stanley MA, Beck JG, Zebb BJ. Psychometric properties of the MSPSS in older adults. *Ageing Mental Health*. 1998; 2:186–193.
DOI: 10.1080/13607869856669
17. Siddiqui RS, Anjum A, & Hassan A. Gender differences on perceived social support and psychological distress among university students. *The Global Management Journal for Academic & Corporate Studies*. 2019;9(2):210-223.
18. Hess U, Senécal S, Kirouac G, Herrera P, Philippet P, & Kleck RE. Emotional expressivity in men and women: Stereotypes and self-perceptions. *Cognition & Emotion*. 2000;14(5):609-642.
19. Guan NC, Sulaiman AR, Seng LH, Ann AYH, Wahab S, Pillai SK. Factorial validity and reliability of the Tamil version of multidimensional scale of perceived social support among a group of participants in University Malaya Medical Centre. *Indian Journal Psychology and Medicine*. 2013; 35:385.
20. Qadir F, Khalid A, Haqqani S, Medhin G. The association of marital relationship and perceived social support with mental health of women in Pakistan. *BMC Public Health*. 2013;13:1150.
21. Tonsing K, Zimet GD, Tse S. Assessing social support among South Asians: The multidimensional scale of perceived social support. *Asian J Psychiatr*. 2012;5:164–168.
22. Wongpakaran N, Wongpakaran TA. A revised Thai multidimensional scale of perceived social support. *Spanish Journal of Psychology*. 2012;15:1503–1509.
DOI:10.5209/rev_SJOP.2012.v15.n3.3943

23. Wongpakaran T, Wongpakaran N, Ruktrakul R. Reliability and validity of the multidimensional scale of perceived social support (MSPSS): Thai version. *Clin Pract Epidemiol Ment Health*. 2011;7:161–166.
24. Akhtar A, Rahman A, Husain M, Chaudhry IB, Duddu V, Husain N. Multidimensional scale of perceived social support: Psychometric properties in a South Asian population. *J Obstet Gynaecol Res*. 2010;36: 845–851.
25. Eker D, Arkar H. Perceived social support: Psychometric properties of the MSPSS in normal and pathological groups in a developing country. *Soc Psychiatry Psychiatr Epidemiol*. 2010;30:121–126.
26. Nakigudde J, Musisi S, Ehnvall A, Airaksinen E, Agren H. Adaptation of the multidimensional scale of perceived social support in a Ugandan setting. *Afr Health Sci*. 2009;9(Suppl 1):S35–S41.
27. Ng CG, Amer Siddiq AN, Aida SA, Zainal NZ, Koh OH. Validation of the malay version of the multidimensional scale of perceived social support (MSPSS-M) among a group of medical students in faculty of medicine, University Malaya. *Asian Journal of Psychiatry*. 2010;3:3–6.
28. Bruwer B, Emsley R, Kidd M, Lochner C, Seedat S. Psychometric properties of the multidimensional scale of perceived social support in youth. *Compr. Psychiatry*. 2008;49:195–201.
DOI: 10.1016/j.comppsy.2007.09.002
29. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. *Journal of Personality Assessment*. 1988;52:30–41.
DOI: 10.1207/s15327752jpa5201_2
30. Cohen S., Mermelstein R., Kamarck T., & Hoberman, H.M. (1985). Measuring the functional components of social support. In Sarason, I.G. & Sarason, B.R. (Eds), *Social support: theory, research, and applications*. The Hague, Netherlands: Martinus Nijhoff.
31. Cohen, S., & Hoberman, H. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology*, 13, 99-125.
32. Kong F, Ding K, Zhao J. The relationships among gratitude, self-esteem, social support and life satisfaction among undergraduate students. *J. Happiness Stud*. 2015;16:477–489.
DOI: 10.1007/s10902-014-9519-2
33. Jeong Y-G, Jeong Y-J, Bang J-A. Effect of social support on parenting stress of Korean mothers of children with cerebral palsy. *J. Phys. Ther. Sci*. 2013;25:1339–1342.
DOI: 10.1589/jpts.25.1339
34. Zhao J, Kong F, Wang Y. The role of social support and self-esteem in the relationship between shyness and loneliness. *Pers. Individ. Dif*. 2013;54:577–581.
DOI: 10.1016/j.paid.2012.11.003
35. Dunst CJ, Trivette CM, Cross AH. Mediating influences of social support: Personal, family, and child outcomes. *Am. J. Ment. Defic*. 1986;90:403–417.
36. Igwesi-Chidobe CN, Kitchen S, Sorinola IO, Godfrey EL. Adaptation and validation of the Nigerian Igbo Multidimensional Scale of Perceived Social Support in patients with chronic low back pain. *Meas Instrum Soc Sci*. 2021;3, 8 .
Available:https://doi.org/10.1186/s42409-021-00026-7
37. Mohammad AH, Al Sadat N, Loh SY, Chinna K. Validity and reliability of the Hausa version of multidimensional scale of perceived social support index. *Iranian Red Crescent Medical Journal*. 2015;17(2): e18776.
Available:https://doi.org/10.5812/ircmj.18776
38. Adamczyk K. Development and validation of the Polish-language version of the multidimensional scale of perceived social support (MSPSS). *Rev. Int. Psychol. Soc*. 2013;26:25–48.
39. Ekbäck M, Benzein E, Lindberg M, Årestedt K. The Swedish version of the multidimensional scale of perceived social support (MSPSS)—a psychometric evaluation study in women with hirsutism and nursing students. *Health Qual. Life Outcomes*. 2013;11:168.
DOI: 10.1186/1477-7525-11-168
40. Duru E. Re-examination of the psychometric characteristics of the multidimensional scale of perceived social support among Turkish university students. *Soc. Behav. Pers*. 2007;35:443–452.
DOI: 10.2224/sbp.2007.35.4.443
41. Shumaker SC, Frazier SK, Moser DK, Chung ML. Psychometric properties of the multidimensional scale of perceived social

- support in patients with heart failure. *J. Nurs. Meas.* 2017;25:90–102.
DOI: 10.1891/1061-3749.25.1.90
42. Pedersen SS, Spinder H, Erdman RA, Denollet J. Poor perceived social support in implantable cardioverter defibrillator (ICD) patients and their partners: cross-validation of the multidimensional scale of perceived social support. *Psychosomatics.* 2009;50:461–467.
DOI: 10.1016/S0033-3182(09)70838-2
43. Cecil H, Stanley MA, Carrion PG, Swann A. Psychometric properties of the MSPSS and NOS in psychiatric outpatients. *J. Clin. Psychol.* 1995;51:593–602.
DOI:10.1002/1097-4679(199509)51:5<593::AID-JCLP2270510503>3.0.CO;2-W
44. Osuji PN, Onu JU. Feeding behaviors among incident cases of schizophrenia in a psychiatric hospital: Association with dimensions of psychopathology and social support. *Clinical Nutrition ESPEN.* 2019; 34:125-129.
Available: <https://doi.org/10.1016/j.clnesp.2019.08.001>.
45. Akanbi ST, Oyewo NA. Influence of work-family conflict and perceived social support on marital satisfaction of individuals with dual-career family in Oyo, Nigeria. *Journal of Education, Society and Behavioural Science.* 2014;1400-1411.
DOI: 10.9734/BJESBS/2014/9114
46. Hamza AM, Al-Sadat N, Loh SY, Chinna K. Validity and Reliability of the Hausa Version of Multidimensional Scale of Perceived Social Support Index. *Iranian Red Crescent Medical Journal.* 2015;17(2): e18776.
DOI: 10.5812/ircmj.18776
47. Aloba O, Opakunle T, Ogunrinu O. Psychometric characteristics and measurement invariance across genders of the Multidimensional Scale of Perceived Social Support (MSPSS) among Nigerian adolescents. *Health Psychology Report.* 2019;7(1):69–80. Available: <https://doi.org/10.5114/hpr.2019.82629>

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