DEVELOPMENT AND VALIDATION OF THE POLISH-LANGUAGE VERSION OF THE MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT (MSPSS)

Katarzyna Adamczyk

Presses univ. de Grenoble | « Revue internationale de psychologie sociale »

2013/4 Volume 26 | pages 25 - 48
ISSN 0992-986X
ISBN 9782706118630

Available online at :

https://www.cairn-int.info/article-E_RIPSO_264_0025--development-and-validation-of-the.htm

How to cite this article :


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Development and validation of the Polish-language version of the Multidimensional Scale of Perceived Social Support (MSPSS)

Développement et validation de la version en langue polonaise de l’Échelle Multidimensionnelle du Soutien Social Perçu (EMSSP)

Katarzyna Adamczyk*

Abstract
The development and validation of the Polish-language version of the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988) is described in this article. The aim of this study was to translate the MSPSS into Polish and establish the psychometric properties of this instrument evaluating the perceptions of social support adequacy from three specific and distinct sources: family, friends and the significant other.

A total of 418 university students completed the Polish version of the MSPSS. Exploratory and confirmatory factor analyses evidenced the factor structure of the original English-language MSPSS for the three subscales translated into Polish. All three subscales showed good internal consistency. The results from the present study indicated that the Polish version of the MSPSS is a reliable and valid multi-dimensional instrument.

Résumé
Le développement et la validation de la version en langue polonaise de l’Échelle multidimensionnelle du soutien social perçu (EMSSP) sont décrits dans cet article. Le but de cette étude était de traduire l’EMSSP en Polonais et d’établir les propriétés psychométriques de cet instrument évaluant l’adéquation des perceptions du soutien social de trois sources spécifiques et distinctes: famille, amis et partenaire. Au total, 418 étudiants universitaires ont complété la version polonaise du EMSSP. Des analyses factorielles exploratoires et confirmatoires ont confirmé la structure factorielle de l’EMSSP original en langue anglaise pour les trois sous-échelles traduit en Polonais. Les trois sous-échelles ont montré une bonne consistance interne. Les résultats de la présente étude indiquent que la version Polonaise de l’EMSSP est une mesure multidimensionnelle fiable.

Key-words
Adult assessment, perceived social support, MSPSS, Polish adaptation

Mots-clés
Évaluation chez les adultes, soutien social perçu, EMSSP, adaptation polonaise

I would like to warmly thank the Institute of Psychology, Adam Mickiewicz University in Poznan, for financing the research project.

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Social support is a broad construct with many different definitions and operationalizations which vary across studies (Walen & Lachman, 2000; Zimet, 1998). Thus, some researchers in their studies focused, for instance, on the perceived availability of social support (e.g., Procidano & Heller, 1983; Sarason, Levine, Basham, & Sarason, 1983), and others investigated the perception of received support (e.g., Vinokur & van Ryn, 1993). Perceived social support refers to perceptions of the extent to which people from one's social network are available to provide support (e.g., Demaray & Malecki, 2002). It is suggested that available and received social support may represent different dimensions of the social support concept (e.g., Abbey, Andrews, & Halman, 1991; Sarason, Shearin, Pierce, & Sarason, 1987). Despite a major difficulty found in the literature concerning how to best define the term ‘social support’ (Zimet, 1998), social support is considered to be an important factor in mental health and well-being (e.g., Kazarian & McCabe, 1991; Clara, Cox, Enns, Murray, & Torgrudc, 2003; Segrin & Domschke, 2011; Zimet, 1998). Perceived social support was found to be a primary interpersonal resource in coping with stress (Haber, Cohen, Lucas, & Baltes, 2007), a protective factor against mental health problems (Clara et al., 2003), and a mediator of the links between stressful life events and psychological consequences, such as anxiety, depression, and behavioral distress (Russell & Cutrona, 1991). Some authors have also suggested that perceived social support may have a more significant effect (e.g., on loneliness) than actual received social support (Pinquart & Sorensen, 2003; Wethington & Kessler, 1986).

Regarding the significance of perceived social support for an individual’s functioning and well-being, the necessity of effective assessment of social supports is an essential issue for researchers.
and clinicians (Clara et al., 2003). In line with this need, a number of scales to measure social support have been designed and described in the literature (for a review, see López & Cooper, 2011). Example scales include the following: Duke-UNC Functional Social Support Questionnaire (DUFSS; Broadhead, Gehlbach, DeGruy, & Kaplan, 1988) which is an instrument that measures the amount and type of perceived emotional social support; Norbeck Social Support Questionnaire (NSSQ; Norbeck, Lindsey, & Carrié, 1981) which assesses perceived emotional, functional, and tangible social support, and examines the size of the support network, stability of the network, and recent loss of social support; Perceived Social Support Scale (PSSS; Procidano & Heller, 1983) is a scale that measures perceived social support from friends and family; and Social Support Questionnaire (SSQ; Sarason et al., 1983) which assesses perceived availability of social support and satisfaction with social support that has been received. At the same time, according to Zimet (1998), the desire to capture in one single measurement all or several aspects or dimensions of social support may generate complex and lengthy questionnaires. Therefore, out of the numerous scales designed to measure social support particular attention has been paid to a scale that is brief and easy to administer, namely the Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet et al. (1988). The scale was designed as a “measure of subjective assessment of the adequacy of received emotional social support” (Zimet, 1998, p. 186). It allows for the measurement of the perception of received social support from three distinct sources (family, friends, and the significant other), as well as of the perception of total social support. The MSPSS was initially designed as a scale with 24 items concerning relationships with family, friends, and the significant other in such spheres as social popularity, respect, and items directly addressing perceived social support (Zimet et al., 1988). In the pilot studies the results of factor analyses revealed that items not directly addressing perceived social support (i.e., social popularity and respect) did not constitute clear theoretical factors. Therefore, the researchers excluded these items, which resulted in the construction of the scale consisting of 12 items (see Table 1) that directly refer to perceived social support. The psychometric properties of the MSPSS were originally evaluated in a study.
conducted on a sample of 275 university undergraduates (136 females and 139 males) aged 17-22 ($M = 18.60$, $SD = .88$).

The interest in the MSPSS is due to the fact that it possesses the following key properties that make it a useful tool (Zimet et al., 1988): (1) it focuses not only on objective and quantitative, but also on subjective and qualitative aspects of social support; (2) it is designed to assess perceptions of social support adequacy from three specific, separate, and distinct sources: family, friends and significant other; (3) it is a relatively brief, quick and easily administered inventory for the measurement of subjective social support; (4) it is a scale of good reliability, factorial validity and adequate construct validity confirmed in numerous studies using different samples from normal and clinical populations, and also different cultures, racial and ethnic groups, for instance among Mexican, African American and European adolescents (e.g., Canty-Mitchell & Zimet, 2000; Cecil, Stanley, Carrion, & Swann, 1995; Clara et al., 2003; Edwards, 2004; Eker & Arkar, 1995; Eker, Arkar, & Yaldiz, 2000; Kazarain & McCabe, 1991; Stanley, Beck, & Zebb, 1998; Zimet et al., 1988; Zimet, Powell, Farley, Werkman, & Berkoff, 1990).

To date, most studies of the MSPSS have been conducted to evaluate perceived social support by analyzing associations between the MSPSS subscales and such variables as gender, anxiety, loneliness, satisfaction with life, and commitment in an intimate relationship. With regard to gender differences, previous research using the MSPSS provided inconsistent findings. In the original study by Zimet et al. (1988) women reported greater support from the significant other and friends, and greater overall support than men. There were no gender differences in terms of support from family. Duru (2007) found that female students reported receiving greater support from family and friends as well as greater total support than male students. Prezza and Pacilli (2002) found in their study run on a sample of individuals aged 18-77 that men received more support from the family, particularly when very young (from 19 to 25 years) or older (from 46 to over 65 years). Younger women (up to about the age of 45) had higher support from friends than men did. In regard to anxiety, Zimet et al. (1988) found that anxiety was inversely related to family support, but not to friends and the
significant other support. Wongpakaran, Wongpakaran, and Ruktrakul (2011) found a negative correlation of the MSPSS with the State Trait Anxiety Inventory. Regarding loneliness, Duru (2007) and Eshbaugh (2010) found that all three distinct sources of support were inversely correlated with loneliness as measured by the UCLA Loneliness Scale. Also in the study by Çeçen (2007) using the short form of the Social and Loneliness Scales for Adults (SELSA-S), three types of loneliness and three sources of perceived social support were negatively associated: the lesser the family, friend, and significant other perceived social support, the greater the family, romantic, and social loneliness. In previous research satisfaction with life was found to be positively related to perceived social support from family, friends, and significant others (Çeçen, 2007; Duru, 2007). Current involvement in a romantic relationship was found to be a factor differentiating the level of perceived social support. In a study by Zimet et al. (1990), married individuals reported significantly greater support from the significant other than single individuals did. Similarly, Prezza and Pacilli (2002) found that married people reported higher support from the significant other than unmarried people did, but there was no difference in family support between married and single participants.

The presented features of the MSPSS and the fact that no scale to measure perceived social support from a multidimensional perspective in Polish culture currently exists, encouraged the author to develop a Polish version of the MSPSS. Therefore, the aim of the present study was to develop and validate the Polish adaptation of the Multidimensional Scale of Perceived Social Support (MSPSS) by testing whether the Polish MSPSS would replicate prior findings in terms of factorial structure, psychometric properties, gender differences and associations with indicators of psychological functioning such as anxiety, loneliness, satisfaction with life, and current involvement in a romantic relationship. It was expected that the three dimensional structure of Polish version of the MSPSS would be confirmed, and it was hypothesized that the Polish version of MSPSS would be a reliable measure of perceived social support. Finally, all the above evidence would provide further support for the psychometric integrity of the MSPSS.
Method

The adaptation process of the Polish-language version of the MSPSS was performed in the following three stages: (1) translation of the English-language version of the MSPSS into Polish, (2) the process of testing the psychometric equivalence of the Polish and English versions of the MSPSS, and (3) verification of the factor structure, and the concurrent and discriminant validity of the Polish version of the MSPSS.

Translation procedure and psychometric equivalence assessment of English and Polish versions of the MSPSS

To establish the Polish version of the MSPSS, all of the items were separately translated into Polish by three independent translators who were competent in both written and spoken English and had experience in social and psychological research. The translated forms were reviewed by the author and a native English speaker, and then compared to each other in terms of the content and clarity of the items. In addition, the Polish form was reviewed by one Polish linguist to assess the appropriateness of the grammatical structure of each item. As a result, the Polish version was created and first applied to a small sample of university students (n = 40) who were instructed to indicate any confusing words or sentences. Subjective feedback revealed that some of the items were not clear and comprehensible. The problematic items were evaluated and corrected to ensure that all points were understandable. The final Polish version was back-translated into English by three different experienced translators.

The back-translation resulted in a version highly similar to the original scale, which as an experimental version was used in the second phase of research on a bilingual group of 150 English Philology students from The School of English, Adam Mickiewicz University in Poznan, Poland. Ninety five females and 55 males participated in this stage. The mean age of the sample was 20.87 years, ranging from 19 to 25 and a standard deviation of 1. The student sample completed both the short form of the English and Polish MSPSS in a counterbalanced order to ascertain the effectiveness of the translation. In order to minimize item recall,
a one-month interval separated the completion of each version. The English version was completed in October, 2011, and after an interval of one month, all students completed the Polish version in November, 2011. Participating students completed the two questionnaire forms during their classes. The whole procedure lasted about 15 minutes. A series of paired t tests comparing the two forms at the item and subscale levels revealed no significant differences between the two measures. They were highly correlated: Friends, $r = .82, p = .01$; Family, $r = .85, p = .01$; Significant Other, $r = .81, p = .05$; therefore, the Polish version of the MSPSS was judged to be an effective translation of the scale.

**Participants and procedure**

The main study was carried out on a sample of university students from different faculties (Sociology, 40%; Philosophy, 20%; Pedagogy, 20%; Mathematics, 20%) of Adam Mickiewicz University in Poznan, Poland. Six hundred questionnaires were originally distributed of which 520 were returned. One hundred and two participants were excluded from the study due to incomplete data, yielding a final sample of 418 students – 262 females (62.68%) and 156 males (37.32%). Participants were 19-25 years old ($M = 21.12, SD = 2.05$), resided in large Polish cities, mainly with a population exceeding 500,000 inhabitants. All the respondents were unmarried. Two hundred and sixteen students (51.70%) declared being in a romantic relationship at the time of the assessment whilst 202 students (48.30%) were not.

The author distributed the measures to the participants across different courses. The questionnaire packages were administered in classrooms to groups of 30 to 60 students at a time and participation was voluntary. The purpose of the study was explained to students. The students were assured that the information provided would remain anonymous and confidential. The instructions were read aloud. Participants completed a demographic questionnaire and a package of measures. In order to minimize the possible influence of the order of questionnaire presentation, the Polish version of the MSPSS appeared equally often in each ordinal position. Completing the questionnaire package took approximately 20 minutes.
Measures

The questionnaire package presented to the study participants was comprised of the following instruments: the focus of the study, the Polish version of the MSPSS, and the Social and Emotional Loneliness Scale for Adults – Short Form (SELSA-S), the State-Trait Anxiety Inventory (STAI), Satisfaction With Life Scale (SWLS) – to evaluate the concurrent and discriminant validity of the MSPSS, and a demographic questionnaire.

Demographic questionnaire. This questionnaire was designed by the present author to obtain general descriptive information such as age, gender, faculty and current relationship status.

Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988). It is a self reported instrument that measures the adequacy of one’s perceived social support from three domains: family, friends, and a significant other. There are four items per subscale, each with response options ranging from 1 (very strongly disagree) to 7 (very strongly agree). Higher scores on each of the subscales indicate higher levels of perceived support, and a sum of the three scales yields a global satisfaction with perceived support score. Zimet et al. (1988) investigated and found internal reliability estimates of .88 for total score, and .91, .87, and .85, for Significant Other, Family, and Friends subscales, respectively. In the study on Turkish adaptation of the MSPSS, the values were .85, .90, and .88, respectively, and for the total scale the reliability was .87 (Duru, 2007).

The Social and Emotional Loneliness Scale for Adults - Short Form (SELSA-S; DiTommaso, Brannen, & Best, 2004) (Polish adaptation, Adamczyk, 2012). The SELSA-S is a multidimensional measure of loneliness. It consists of 15 items designed to measure emotional (romantic and family) and social loneliness. The items are rated on a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). High SELSA scores indicate high levels of emotional and social loneliness. The SELSA-S’s three subscales have high internal reliability, with Cronbach’s alphas ranging from .87 to .90, and have been shown to be a valid measure of loneliness (DiTommaso et al., 2004). In the present study the internal consistency for the subscales were high: $\alpha =$...
.87, .84, and .83 for the Family, Social and Romantic Loneliness scales, respectively.

The State-Trait Anxiety Inventory (STAI; Spielberger, 1983) (Polish adaptation, Spielberger, Strelau, Łysarczyk, & Wrześniewski, 2006). This inventory includes 40 items (the first 20 items measure the level of state anxiety while the last 20 items measure the level of trait anxiety). The STAI has excellent internal reliability (α = .90) and has been shown to be a valid measure of both situational and trait anxiety. The Cronbach’s alphas in the present study were .90 for the State and .88 for the Trait anxiety scales.

Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) (Polish adaptation, Juczyński, 2009). This scale measures an individual’s satisfaction with his/her life. The SWLS uses a 7-point Likert scale, ranging from strongly disagree (1) to strongly agree (7), yielding a possible score range of 5 (low life satisfaction) to 35 (high life satisfaction). The scale’s internal consistency was high (α = .87) and two week test-retest reliability was r = .85. The Cronbach’s alpha in the current study was .82.

Data Analysis

First, the factorial structure of the Polish adaptation of the MSPSS was investigated by conducting a principal components analysis and confirmatory factor analyses. Second, psychometric properties of the scale were investigated. Reliability of the MSPSS scales was tested by calculating their internal consistencies and descriptive statistics for the respective scales were determined. Third, the correlations between the Polish version of the MSPSS and constructs of psychological functioning such as anxiety, social, family, and romantic loneliness, satisfaction with life and information on respondents’ commitment in an intimate relationship were analyzed.
Results

Exploratory factor analysis

In order to compare findings concerning the factorial structure of the present study with the results from the original study by Zimet et al. (1988), an exploratory factor analysis with Varimax rotation with Kaiser Normalization was performed. In line with recommendations in the literature for an exploratory factor analysis in the case of violation or severe violation of the normal distribution of data (e.g., Bedynska & Cypryanska, 2013; Costello & Osborne, 2005; Fabrigar, Wegener, MacCallum, & Strahan, 1999), principal axis factoring (PAF) was used as the extraction method. The Kaiser-Meyer-Olkin index of adequate sampling was .87 for the sample and indicated that the data represented a homogeneous collection of variables that were suitable for factor analysis. Barlett’s test of sphericity was significant for the sample, \( \chi^2 = 3740.50, df = 66, p < .001 \), which indicated that the set of correlations in the correlation matrix were significantly different from zero and suitable for factor analysis. Similarly to the results obtained in Zimet et al.’s (1988) original study, an exploratory factor analysis extracted three distinct factors. This analysis resulted in three eigenvalues greater than 1. The three factors with eigenvalues greater than 1 explained 78.92% of the total variance, and the three-factor solution showed clear loadings of the items on the respective scales (all as > .40). The items, loadings and variance for the three factors of the Polish version of MSPSS are presented in Table 1.

As can be seen in Table 1, 12 items exhibited high loading in the factors for which they were intended and they loaded on the same subscales as in the original MSPSS, indicating confirmation of the subscale groupings presented in Zimet et al.’s (1988) original study. After Varimax rotation, the four variables loaded more than .82 on Factor 1, more than .65 on Factor 2, and more than .72 on Factor 3. Factor 1 represents perceived support received from friends and accounts for 45.68% of the common variance. Factor 2 represents support from significant other and accounts for 19.28% of the common variance. Lastly, Factor 3 represents support from family and accounts for 13.96% of the
Table 1: Items and Varimax rotated factor loadings for the MSPSS.

<table>
<thead>
<tr>
<th>Items/Subscales</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained variance</td>
<td>45.68%</td>
<td>19.28%</td>
<td>13.96%</td>
</tr>
<tr>
<td>Friends Support Subscale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. My friends really try to help me.</td>
<td>.83</td>
<td>.22</td>
<td>.19</td>
</tr>
<tr>
<td>7. I can count on my friends when things go wrong.</td>
<td>.84</td>
<td>.26</td>
<td>.15</td>
</tr>
<tr>
<td>9. I have friends with whom I can share my joys and sorrows.</td>
<td>.89</td>
<td>.17</td>
<td>.09</td>
</tr>
<tr>
<td>12. I can talk about my problems with my friends.</td>
<td>.86</td>
<td>.18</td>
<td>.05</td>
</tr>
<tr>
<td>Significant Other Subscale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. There is a special person who is around when I am in need.</td>
<td>.16</td>
<td>.89</td>
<td>.16</td>
</tr>
<tr>
<td>2. There is a special person with whom I can share joys and sorrows.</td>
<td>.24</td>
<td>.82</td>
<td>.14</td>
</tr>
<tr>
<td>5. I have a special person who is a real source of comfort to me.</td>
<td>.26</td>
<td>.66</td>
<td>.22</td>
</tr>
<tr>
<td>10. There is a special person in my life who cares about my feelings.</td>
<td>.17</td>
<td>.77</td>
<td>.17</td>
</tr>
<tr>
<td>Family Support Subscale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. My family really tries to help me.</td>
<td>.07</td>
<td>.17</td>
<td>.81</td>
</tr>
<tr>
<td>4. I get the emotional help and support I need from my family.</td>
<td>.09</td>
<td>.16</td>
<td>.87</td>
</tr>
<tr>
<td>8. I can talk about my problems with my family.</td>
<td>.15</td>
<td>.17</td>
<td>.78</td>
</tr>
<tr>
<td>11. My family is willing to help me make decisions.</td>
<td>.10</td>
<td>.13</td>
<td>.73</td>
</tr>
</tbody>
</table>

Note: Items scored on a scale from 1 = Very strongly disagree to 7 = Very strongly agree

common variance. These results are similar to the results obtained in the original English version of the study, and indicate that the three subscales of the Polish version of the MSPSS have good structural stability.

**Confirmatory factor analysis**

To examine the adequacy of the three-factor structure of the Polish version of the MSPSS a confirmatory factor analysis was performed for the 12-item scale by Amos version 18. Consistent with previous research (e.g., Hau & Marsh, 2004) which indicated that in many ways maximum likelihood solutions are robust to
violations of multivariate normality, the maximum likelihood estimator was used in the current analysis. In addition, the three-factor structure was compared to one- and two-factor models. The latter was found by Stanley et al. (1998) in their study on a sample of elderly adults with a generalized anxiety disorder in which the subscales of perceived support from Family and Significant Others were collapsed into a single factor. The following commonly used criteria were used to evaluate the adequacy of the hypothesized and alternative models: chi-square, chi-square/df ratio, the adjusted goodness of fit index (AGFI), goodness-of-fit indices (GFI), comparative fit index (CFI), incremental fit index (IFI), normed fit index (NFI), relative fit index (RFI), and the standardized (RMR). It is expected that the value of $\chi^2/df$ ratio is $2 > - 5$ (Marsh & Hocevar, 1985). The AGFI, GFI, CFI, IFI, NFI, and RFI fit indices range from 0 to 1, with values of .90 or higher indicating an adequate fit, a value greater than 0.95 as a very good model fit (Williams & Holahan, 1994; Newsom, 2012). For the standardized RMR and RMSEA, values below .05 indicate a good fit (Bentler, 1990; Browne & Cudeck, 1993), and values between .08 and .10 represent a mediocre fit (Duru, 2007). Goodness-of-fit indices for the hypothesized and alternative models in the present study are displayed in Table 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2/df$</th>
<th>AGFI</th>
<th>CFI</th>
<th>GFI</th>
<th>IFI</th>
<th>NFI</th>
<th>RFI</th>
<th>RMSEA</th>
<th>RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-Factor Model</td>
<td>209.88***</td>
<td>51</td>
<td>4.12</td>
<td>.88</td>
<td>.97</td>
<td>.92</td>
<td>.97</td>
<td>.97</td>
<td>.96</td>
<td>.08</td>
<td>.04</td>
</tr>
<tr>
<td>Two-Factor Model</td>
<td>995.47***</td>
<td>53</td>
<td>18.78</td>
<td>.51</td>
<td>.78</td>
<td>.66</td>
<td>.78</td>
<td>.77</td>
<td>.72</td>
<td>.21</td>
<td>.15</td>
</tr>
<tr>
<td>One-Factor Model</td>
<td>1866.09***</td>
<td>54</td>
<td>34.56</td>
<td>.28</td>
<td>.56</td>
<td>.50</td>
<td>.56</td>
<td>.56</td>
<td>.46</td>
<td>.28</td>
<td>.21</td>
</tr>
</tbody>
</table>

*Note.* AGFI = adjusted goodness of fit index; CFI = comparative fit index; GFI = goodness of fit index; IFI = incremental fit index; NFI = normed fit index; RFI = relative fit index; RMSEA = root mean squared error of approximation; RMR = root mean square residual. *** $p < .001$.

As shown in Table 2, the fit indices in the study indicated that the three-factor model (Friends, Family, and Significant Others) was clearly superior to the one-factor and two-factor models, and represented an acceptable fit to the data.
Reliability

The reliability of the MSPSS scales was tested by calculating their internal consistencies. Cronbach’s coefficient alpha was obtained for the MSPSS subscales and for the scale as a whole. For Significant Other, Family and Friends subscales, the values were .90, .89, and .94, respectively. The reliability of the total scale was .89. The coefficient alpha values for individual subscales, and for the scale as a whole, demonstrated very good internal reliability with coefficient alpha levels comparable to those obtained in the original study (Zimet et al., 1988), and in the study on the re-examination of the Turkish adaptation (Duru, 2007).

Descriptive characteristics of the MSPSS items and subscales

The descriptive statistics (i.e., means, standards deviations, kurtosis and skewness) for the MSPSS items and subscales, and also item-to-total and item-to-subtotal correlations are presented in Table 3.

As displayed in Table 3, in general, the means and standard deviations for the 12 items and three subscales in the Polish sample are similar to the values obtained in the studies by Zimet et al. (1988) and Duru (2007). The values of skewness and kurtosis are given only for the Polish sample as these statistics were not provided by Zimet et al. (1988) or Duru (2007). The values of skewness indicated that the distribution of answers per 12 items and three subscales is significantly non-normal and is negatively skewed. The values of kurtosis indicated that the distribution of data is leptokurtic with the exception of the distribution of answers for the items n° 4, 8, and 11, and for the Family Support subscale, as well as the Total Support.

Intercorrelations

To ensure comparability with Zimet et al. (1988), the product-moment correlation between the scales with 95% confidence intervals on the population value of Pearson’s correlation was calculated. In the original study by Zimet et al. (1988), the correlations between Family subscale and Friends, and Significant other subscales were \( r = .34, p > .05 \), and \( r = .24, p > .05 \),
<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1. There is a special person who is around when I am in need.</td>
<td>5.55</td>
<td>1.37</td>
<td>4.67</td>
<td>2.77</td>
<td>5.77</td>
<td>1.41</td>
<td>.71**</td>
</tr>
<tr>
<td>2. There is a special person with whom I can share joys and sorrows.</td>
<td>5.83</td>
<td>1.48</td>
<td>4.67</td>
<td>2.13</td>
<td>5.96</td>
<td>1.29</td>
<td>.71**</td>
</tr>
<tr>
<td>3. My family really tries to help me.</td>
<td>6.22</td>
<td>1.07</td>
<td>6.40</td>
<td>1.13</td>
<td>5.74</td>
<td>1.32</td>
<td>.65**</td>
</tr>
<tr>
<td>4. I get the emotional help &amp; support I need from my family.</td>
<td>5.62</td>
<td>1.49</td>
<td>5.81</td>
<td>1.48</td>
<td>5.37</td>
<td>1.56</td>
<td>.69**</td>
</tr>
<tr>
<td>5. I have a special person who is a real source of comfort to me.</td>
<td>5.70</td>
<td>1.51</td>
<td>4.44</td>
<td>2.23</td>
<td>5.72</td>
<td>1.44</td>
<td>.71**</td>
</tr>
<tr>
<td>6. My friends really try to help me.</td>
<td>5.78</td>
<td>1.02</td>
<td>5.65</td>
<td>1.28</td>
<td>5.39</td>
<td>1.18</td>
<td>.68**</td>
</tr>
<tr>
<td>7. I can count on my friends when things go wrong.</td>
<td>5.77</td>
<td>1.22</td>
<td>5.42</td>
<td>1.45</td>
<td>5.44</td>
<td>1.25</td>
<td>.69**</td>
</tr>
<tr>
<td>8. I can talk about my problems with my family.</td>
<td>5.38</td>
<td>1.59</td>
<td>5.47</td>
<td>1.66</td>
<td>4.91</td>
<td>1.66</td>
<td>.70**</td>
</tr>
<tr>
<td>9. I have friends with whom I can share my joys and sorrows.</td>
<td>6.01</td>
<td>1.01</td>
<td>5.82</td>
<td>1.34</td>
<td>5.62</td>
<td>1.33</td>
<td>.61**</td>
</tr>
<tr>
<td>10. There is a special person in my life who cares about my feelings.</td>
<td>5.90</td>
<td>1.34</td>
<td>4.32</td>
<td>2.22</td>
<td>5.80</td>
<td>1.47</td>
<td>.68**</td>
</tr>
<tr>
<td>11. My family is willing to help me make decisions.</td>
<td>5.98</td>
<td>1.20</td>
<td>5.94</td>
<td>1.45</td>
<td>4.86</td>
<td>1.60</td>
<td>.65**</td>
</tr>
<tr>
<td>12. I can talk about my problems with my friends.</td>
<td>5.85</td>
<td>1.17</td>
<td>5.65</td>
<td>1.42</td>
<td>5.64</td>
<td>1.26</td>
<td>.57**</td>
</tr>
<tr>
<td>MSPSS Subscales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significant Other Support</td>
<td>5.74</td>
<td>1.25</td>
<td>18.10</td>
<td>7.70</td>
<td>5.81</td>
<td>1.22</td>
<td>-.179</td>
</tr>
<tr>
<td>Family Support</td>
<td>5.80</td>
<td>1.12</td>
<td>25.60</td>
<td>4.70</td>
<td>5.22</td>
<td>1.33</td>
<td>-.796</td>
</tr>
<tr>
<td>Friends Support</td>
<td>5.85</td>
<td>0.94</td>
<td>22.50</td>
<td>7.70</td>
<td>5.52</td>
<td>1.15</td>
<td>-.989</td>
</tr>
<tr>
<td>Total</td>
<td>5.80</td>
<td>0.86</td>
<td>26.40</td>
<td>13.10</td>
<td>5.52</td>
<td>0.94</td>
<td>-.654</td>
</tr>
</tbody>
</table>

Note: The values of skewness and kurtosis are given only for the Polish sample as these statistics were not provided by Zimet et al. (1988) or Duru (2007).
respectively, while the correlation between Significant other and Friends subscale was $r = .63, p < .05$. In the current study, the correlations between Family subscale and Friends, and Significant other subscales were $r = .28, p < .01$ with a 95% confidence interval of .19 - .37, and $r = .38, p < .01$ with a 95% confidence interval of .30 - .46, respectively. The correlations between Significant other and Friends subscale was $r = .45, p < .01$ with a 95% confidence interval of .37 - .52. Therefore, in the current study the three subscales were positively and significantly correlated with each other. The correlations were moderate and did not limit the individual usefulness of each scale.

**Gender differences**

The Mann-Whitney $U$ test was performed to evaluate differences between women and men in regard to perceived social support. Women reported greater support from the significant other ($M = 5.97, SD = 1.09$) than men did ($M = 5.53, SD = 1.38$), $U = 16434.50, p = .001, r = .16$. Women had also higher levels of family support ($M = 5.37, SD = 1.31$) than men ($M = 4.95, SD = 1.33$), $U = 16268.00, p = .001, r = .16$, and higher levels of friends support ($M = 5.77, SD = 1.03$) with respect to men ($M = 5.10, SD = 1.23$), $U = 13337.50, p = .000, r = .28$. Women also reported receiving greater overall perceived social support ($M = 5.70, SD = .89$) then men did ($M = 5.19, SD = .94$), $U = 14031.50, p = .000, r = .25$.

**Concurrent and discriminant validity**

To assess the validity of the MSPSS subscales, the relationship between the MSPSS and the other measures was evaluated. It was hypothesized that perceived support from family, friends, and significant others would be negatively related to loneliness and anxiety, and positively related to satisfaction with life. It was also anticipated that perceived support from significant other would be positively related to current involvement in a romantic relationship. The Pearson product correlations of the MSPSS subscales with individual difference measures are presented in Table 4.
As can be seen in Table 4, all of the correlations of the MSPSS subscales with the analyzed variables were in the expected direction, indicating that increased perception of support was related to lower levels of loneliness and anxiety, and to higher levels of life satisfaction. The analysis also showed that participants with partners scored higher on the Significant Other subscale ($M = 6.37, SD = .74$) than single participants ($M = 5.22, SD = 1.36$), $U = 11026.50, p = .000, r = .43$. Current involvement versus non-involvement in a romantic relationship was neither associated with the scores on the Family subscale, $U = 19491.50, p = .059, r = .09$, nor with the scores on the Friends subscale, $U = 21673.00, p = .907, r = .00$. At the same time, individuals with partners scored higher on the total perceived social support ($M = 5.75, SD = .76$) than single participants ($M = 5.27, SD = 1.05$), $U = 15688.50, p = .000, r = .24$.

Discussion

The present study provided evidence that the Polish adaptation of the MSPSS is a reliable and valid self-report measure for assessing the perceived social support for the Polish population. Regarding factor structure, reliability and associations with indicators of psychological functioning, the Polish translation of the MSPSS, including the three subscales Family, Friends, and
Significant Other, corresponds to the original English version. Exploratory factor analysis demonstrated that the three-factor model was replicated within the sample of Polish university students and provided support for the construct validity of the scale. Confirmatory factor analysis yielded results similar to the ones obtained by the authors of the original test and other language adaptations, and indicated an adequate fit with three-factor model that includes 4 items per factor. With respect to reliability, internal consistency coefficients of the three MSPSS’ scales were very good and were comparable to those obtained in the original English (Zimet et al., 1988) and other language versions. The intercorrelations of the MSPSS scales were generally comparable with the pattern found in the original version of the English, and also Turkish MSPSS. The low and moderate intercorrelations between the three MSPSS subscales and the high Cronbach’s alpha coefficient for its subscales support the existence of three distinct sources of support.

The current investigation revealed gender differences in terms of all of three sources of social support: female students had higher perceived support from family, friends, significant other and higher total support than did male students. Previous research provided inconsistent patterns of gender differences. For instance, Zimet et al. (1988) found that female students had higher levels of perceived social support from friends and a significant other, whereas Edwards (2004) found no gender difference among Latino youths. Attempting to explain gender differences in the current study we may refer to studies in which women were found to have larger, denser, and more diverse social networks than men (Antonucci & Akiyama, 1987; Haines & Hurlbert, 1992). Thus, it is plausible to assume that women having social networks of the above-mentioned characteristics may also report higher perception of social support than men.

The three subscales of the Polish MSPSS also displayed high levels of concurrent validity by the pattern of associations between perceived social support and such variables as anxiety, loneliness, life satisfaction and current involvement in a romantic relationship. There were statistically significant and negative correlations between each subscale scores and the scores on the
STAI (both state and trait anxiety). This pattern was consistent with previous studies by Zimet et al. (1988) and Wongpakaran et al. (2011). The Polish version of MSPSS was highly and inversely correlated with the Polish version of the SELSA-S. High correlations between the Family Loneliness subscale and Family Support subscale, and between the Social Loneliness subscale and Friends Support subscale were obtained; however, a moderate correlation between the Romantic Loneliness subscale and the Significant Other Subscale was obtained. This pattern of correlations was consistent with those of previous studies suggesting that greater reported loneliness is associated with lower perceived social support (Çeçen, 2007). As predicted, all three MSPSS subscale scores were also strongly associated in the expected directions with the scores in satisfaction with life measure: increased perceptions of support was related to higher levels of life satisfaction (Duru, 2007). Finally, as expected and consistent with previous research (e.g., Prezza & Pacilli, 2002; Zimet et al., 1990), the results from the present study supported the hypothesis that participants with partners reported significantly greater support from a significant other in comparison to single participants.

It is important to note that the present study was not without its limitations. One such limitation was that the Polish version of the MSPSS was tested on a relatively homogenous, normative sample of university students. Therefore, it would be important to investigate the psychometric properties, including temporal stability, and factor structure of the MSPSS with subjects drawn from other populations, such as a clinical sample or sample of older adults. Because for most MSPSS items the distribution moderately violates the normality assumption, further investigation with a more heterogeneous sample is also necessary to confirm psychometric properties and validation of the Polish version of the MSPSS. This violation may be due to the fact that perceived social support received by students is strong across the three sources. Secondly, in the present study only a few measures to test the validity of the Polish version of the MSPSS were used. To further refine the Polish version of the MSPSS it is suggested using additional measures such as measures of depression and self-esteem to assess concurrent and discriminant validity of the Polish adaptation of the MSPSS in future studies. Furthermore, the instrument
appears to function well in the sample of Polish university students. Thus, further prospective research should examine the role of perceived social support in mental and physical health, as well as in coping with stress in university samples.

References


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