

The Multidimensional Scale of Perceived Social Support (MSPSS-SK): Validation Study of the Slovak Version for Adolescents¹

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Abstract:

The goal of the paper is to verify the factor structure of the MSPSS questionnaire, which measures social support sources within the original three-factor structure, verify its psychometric properties, and adjust it to Slovak conditions including the correct language adaptation. MSPSS is one of the most widely used methodologies measuring an individual's perception of social support from three sources: family, friends and a significant other. The empirical verification was performed on a research file of adolescent high school students ($n = 249$). The questionnaires were administered to secondary school students who were randomly drawn from a list of all the secondary schools in the Košice and Prešov regions of Slovakia with the consent of the management of the secondary school concerned. The factor analysis confirmed the original model with three subscales: significant other, family, friends. The study also sufficiently confirmed the psychometric properties (reliability and concurrent validity) of the Slovak version of the research instrument as well as its reliability for use in adolescents as a target group, therefore it can be concluded that MSPSS-SK can be used by helping professionals (such as teachers, school psychologists, or school social workers) to measure the social support of high school students.

Keywords:

MSPSS (Slovak version), social support, factor analysis, psychometric properties, adolescence

Introduction

The absence of a validated methodology for measuring sources of social support in adolescents in the Slovak conditions led the authors to a validation study of the MSPSS questionnaire as one of the most commonly used methodologies for measuring social support in order to support researchers from social work practice and other helping professions.

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Social support as a concept has been addressed by specialised literature for more than 50 years and its research remains of current interest² due to the fact that it is a broad, multi-dimensional, and complex construct.³ The classic view of social support defines it as an individual's recognition that others are willing to provide assistance. This fosters a sense of social security, facilitating an individual to undertake risks and empowering them to attempt problem-solving independently, often regarded as a 'stress buffer'. More recent perspectives propose a broader framework emphasising that social support goes beyond mere assistance, extending to aiding the recipient in their personal development, flourishing, or advancement, particularly in the face of adversity.⁴ Social support can be categorised according to different criteria, for example, macrolevel, meso-level, and microlevel.⁵ We can distinguish types of social support such as instrumental support, informational support, emotional support, assessment support.⁶ It is also possible to differentiate social support sources (availability of family members and friends providing the individual with psychological and material resources).⁷

Social support is often used in the context of the individual's relationships and includes their perception of support provided by family, friends, or any person with a special role in their life.⁸ The social support network consists of persons from the individual's social environment who affect their feelings and perception by playing an important role in making positive changes (e.g., reducing insecurity, anxiety, or tension) mainly during difficult life situations and crises.⁹ This

- 2 Maria Ekbäck et al., 'The Swedish version of the multidimensional scale of perceived social support (MSPSS) – a psychometric evaluation study in women with hirsutism and nursing students', *Health and Quality of Life Outcomes* 11, no.168 (2013): 1–9; Anna Jašková and Antónia Sabolová Fabianová, *Sociálna práca ako rizikové povolanie* (Prešov: Vydavateľstvo Prešovskej university, 2018).
- 3 Katarzyna Adamczyk, 'Development and validation of the Polish-language version of the Multidimensional Scale of Perceived Social Support (MSPSS)', *Revue internationale de psychologie sociale* 26, no. 4 (2013): 25–48; Reza Bagherian-Sararoudi et al., 'Psychometric properties of the persian version of the multidimensional scale of perceived social support in Iran', *International Journal of Preventive Medicine* 4, no. 11 (2013): 1277–1281; Gülşah Başol, 'Validity and Reliability of the Multidimensional Scale of Perceived Social Support-Revised, with a Turkish Sample', *Social Behavior and Personality* 36, no. 10 (2008): 1303–1314, <https://doi.org/10.2224/sbp.2008.36.10.1303>; Belinda Bruwer, 'Psychometric properties of the Multidimensional Scale of Perceived Social Support in youth', *Comprehensive Psychiatry*, no. 49 (2008): 195–201, <https://doi.org/10.1016/j.comppsy.2007.09.002>; Arechabala M. C. Mantuliz and Claudia. M. Castillo, 'Validation of a scale of perceived social support in a group of elders under control in a hypertension program in the metropolitan region', *CIENCIA Y ENFERMERIA* 8, no. 1 (2002), 49–55; Muhammad Rizwan and Sobia Aftab, 'Psychometric properties of the multidimensional scale of perceived social support in Pakistan young adults', *Pakistan Journal of Psychology* 40, no. 1 (2009): 51–65; Kaina Zhou et al., 'Reliability and validity of the multidimensional scale of perceived social support in Chinese mainland patients with methadone maintenance treatment', *Comprehensive Psychiatry*, no. 60 (2015):182–188, <https://doi.org/10.1016/j.comppsy.2015.03.007>.
- 4 Irwin G. Sarason and Barbara R. Sarason, *Social Support: Theory, Research and Applications* (Washington: Springer Science & Business Media, 2013); Feeney, Brooke C., and Nancy L. Collins, 'New Look at Social Support: A Theoretical Perspective on Thriving through Relationships', *Personality and Social Psychology Review* 19, no. 2 (2015): 113–147.
- 5 Vladimír Kebza, *Psychosociální determinanty zdraví* (Praha: Academia, 2005); Jaro Křivohlavý, *Psychologie zdraví* (Praha: Portál, 2009).
- 6 Brenda E. Hogan, Linden Wolfgang, and Bahman Najarian, 'Social support interventions: Do they work?' *Clinical Psychology Review* 22, no. 3 (2002): 381–440. [https://doi.org/10.1016/S0272-7358\(01\)00102-7](https://doi.org/10.1016/S0272-7358(01)00102-7); Jaro Křivohlavý, *Psychologie zdraví* (Praha: Portál, 2001); Teresa Seeman, *Support & social conflict: Section one – Social support* (San Francisco: University of California, 2008); Cathy D. Sherbourne and Anita L. Stewart 'The MOS Social Support Survey', *Social Science Medicine*, no. 32 (1991): 705–714. [https://doi.org/10.1016/0277-9536\(91\)90150-b](https://doi.org/10.1016/0277-9536(91)90150-b); Catarina Sjolander and Gerd Ahlstrom, 'The meaning and validation of social support networks for close family of persons with advanced cancer', *BMC Nursing* 11, no. 17 (2012): 1–14. <https://doi.org/10.1186/1472-6955-11-17>.
- 7 Anne Denis, Callahan Stacey, and Martine Bouvard, 'Evaluation of the French Version of the Multidimensional Scale of Perceived Social Support During the Postpartum Period', *Maternal and Child Health Journal*, no. 19 (2015): 1245–1251. <https://doi.org/10.1007/s10995-014-1630-9>.
- 8 Larissa M. D. Gabardo-Martins, Maria C. Ferreira, and Felipe Valentini, 'Psychometric Properties of the Multidimensional Scale of Perceived Social Support', *Trends in Psychology* 25, no. 4 (2017): 1885–1895. <https://doi.org/10.9788/TP2017.4-18En>; Kamalpreet Kaur and Nimisha Beri, 'Psychometric Properties Of Multidimensional Scale Of Perceived Social Support (MSPSS): Indian Adaptation', *International Journal of Scientific & Technology Research* 8, no. 11 (2019): 2796–2801; Janet Nakigudde et al., 'Adaptation of the multidimensional scale of perceived social support in a Ugandan setting', *African Health Sciences* 9, no. 1 (2009): 35–41; Michaela Šavrnichová, Holdoš Juraj and Angela Almašiová, *Excesívne používanie internetu u adolescentov na Slovensku* (Banská Bystrica: Univerzita Mateja Bela, Belianum, 2020).
- 9 Viera Bačová, *Kvalita života a sociálny kapitál* (Prešov: FF, PU v Prešove, 2008); Yuki Komatsu et al., 'Buffering effect of social support in the workplace on job strain and depressive symptoms', *Journal of Occupational Health*, no. 52 (2010): 140–148, <https://doi.org/10.1539/sangyoeisei.b9012>; Eva Koubeková, 'Vzťahy medzi percipovanou sociálnou oporou a niektorými osobnostnými charakteristikami

social network helps improve emotional and physical health, that is, overall optimal functioning.¹⁰ Social support is a direct protective or buffering factor in situations when an individual is exposed to the effects of chronic stress.¹¹

Adolescence is a difficult life period. It is characterised by family conflicts, mood swings, and risk behaviour. During this period, adolescents are challenged by many requirements as well as opportunities.¹² Social relationships are an important aspect of adolescent life.¹³ Social support plays an important role in the adolescent's mental health and well-being and works as a buffer against a variety of negative phenomena they face.¹⁴ Social support provided by family, peers, and friends is irreplaceable for adolescents.¹⁵ During adolescence, the process of individualisation is taking place – a battle between autonomy and personal identity, therefore it may not always be easy to provide the adolescent with social support or for the adolescence to accept it. However, an appropriate form of social support helps the adolescent use effective coping strategies: adolescents with better support manifest higher levels of self-respect and better social capabilities. It gives them an opportunity to share common interests and feel understood and respected.¹⁶

Measuring the Social Support

There are several standardised instruments useful in measuring social support. Very often, the Social Support Survey (MOS)¹⁷ is used to measure types of social support, which we subsequently

adolescentov', *Psychológia a patopsychológia dieťaťa* 36, no. 1 (2001): 39–49; Jiří Kožený and Lýdie Tišanská, 'Dotazník sociálnej opory - MOS: Vnútna štruktúra nástroja', *Československá psychologie* 47, no. 2 (2003): 135–143; Jiří Mareš, 'Diagnostika sociálnej opory u detí a dospievajúcich', *Pedagogika* 52, no. 3 (2002): 267–289; Eva Šimová, 'Starí rodičia ako zdroj sociálnej opory', *Československá psychologie* 47, no. 1 (2003): 31–41; Helena Zděnková, 'Sociálna opora vnímaná deťmi hospitalizovanými na pediatrickom oddelení', *Psychológia a patopsychológia dieťaťa* 35, no. 4 (2000): 334–343.

- 10 Lubica Bánovčinová and Martina Bašková, 'Role of the Family, Friends and Significant Others in Providing Social Support and Enhancing Quality of Life in Cancer Patients', *SHS Web of Conferences* 30 (January 1, 2016): 00020, <https://doi.org/10.1051/shsconf/20163000020>, Maddalena De Maria et al., 'Psychometric evaluation of the Multidimensional Scale of Perceived Social Support (MSPSS) in people with chronic diseases', *Ann Ist Super Sanità* 54, no. 4 (2018): 308–315, https://doi.org/10.4415/ANN_18_04_07; Kaur and Beri, 'Psychometric Properties Of Multidimensional Scale Of Perceived Social Support (MSPSS): Indian Adaptation', 2797; Orsolya Papp-Zipernovszky, Kékesi Márk Z. and Szilvia Jámbori, 'A multidimenzióális észlelt társas támogatás kérdőív magyar nyelvű validálása', *Mentálhigiéne és Pszichoszomatika folyóirat* 18, no. 3 (2017): 230–262; Eleni Tsilika et al., 'Psychometric Properties of the Multidimensional Scale of Perceived Social Support in Greek Nurses', *Canadian Journal of Nursing Research* 51, no. 1 (2019): 23–30, <https://doi.org/10.1177/0844562118799903>.
- 11 Karen Aroian, Templin Thomas N., and Vidya Ramaswamy, 'Adaptation and Psychometric Evaluation of the Multidimensional Scale of Perceived Social Support for Arab Immigrant Women', *Health Care for Women International*, no. 31 (2010): 153–169, <https://doi.org/10.1080/07399330903052145>; Markéta Elichová, Monika Flídrová, and Alena Jilečková, 'Burn Out Syndrome in Social Workers in the Czech Republic', *Journal of Engineering and Applied Sciences* 11, no. 7 (2016): 1617–1622, <https://doi.org/10.36478/jeasci.2016.1617.1622>; Ana M. Trejos-Herrera et al., 'Validity and Reliability of the Multidimensional Scale of Perceived Social Support in Colombian Adolescents', *Psychosocial Intervention* 27, no. 1 (2018): 1–22, <https://doi.org/10.5093/pi2018a1>; Jozef Výrost and Ivan Slaměník, *Sociální psychologie* (Praha: Grada, 2008).
- 12 Peter Brnula and Ladislav Vaska, 'After the Divorce: Social Work in Slovakia since the Peaceful Division of Czechoslovakia', in *European Social Work Education and Practice*, 2020, https://doi.org/10.1007/978-3-030-45811-9_4; Janie Canty-Mitchell and Gregory D. Zimet, 'Psychometric properties of the Multidimensional Scale of Perceived Social Support in Urban Adolescents', *American Journal of Community Psychology* 28, no. 3 (2000): 391–400, <https://doi.org/10.1023/A:1005109522457>.
- 13 Angelina Wilson, Joana S. Yendork, and Nceba Z. Somhlaba, 'Psychometric Properties of Multidimensional Scale of Perceived Social Support among Ghanaian Adolescents', *Child Indicators Research*, no. 10 (2017): 101–115, <https://doi.org/10.1007/s12187-016-9367-1>.
- 14 Bruwer et al., 'Psychometric properties of the Multidimensional Scale of Perceived Social Support in youth', 197; Okki D. Laksmi et al., 'Multidimensional Scale of Perceived Social Support in Indonesian adolescent disaster survivors: A psychometric evaluation', 6.
- 15 Angela Almašiová et al., 'Excessive use of the internet and playing computer games in socially excluded Slovak communities', *Addictology* 19, no. 4 (2019): 169–177, <https://doi.org/10.35198/01-2019-004-0001>; Lisa M. Edwards, 'Measuring Perceived Social Support in Mexican American Youth: Psychometric Properties of the Multidimensional Scale of Perceived Social Support', *Hispanic Journal of Behavioral Sciences* 26, no. 2 (2004): 187–194, <https://doi.org/10.1177/0739986304264374>; Vidya Ramaswamy, Aroian Karen J., and Thomas Templin, 'Adaptation and psychometric evaluation of the multidimensional scale of perceived social support for Arab American adolescents', *American Journal of Community Psychology*, no. 43 (2009): 49–56, <https://doi.org/10.1007/s10464-008-9220-x>; Wilson, Yendork and Somhlaba, 'Psychometric Properties of Multidimensional Scale of Perceived Social Support among Ghanaian Adolescents', 110.
- 16 Trejos-Herrera et al., 'Validity and Reliability of the Multidimensional Scale of Perceived Social Support in Colombian Adolescents', 18.
- 17 Sherbourne and Stewart, 'The MOS Social Support Survey', 705–714.

use in the study to test for concurrent validity, and we therefore also describe in greater detail in the Methods section. The Social Support Questionnaire (SSQ)¹⁸ measures perceived social support; it has a longer (27 items) and shorter (6 items) version. Each item measures two aspects (number of available persons whom the individual can address when in distress in different situations and the individual's level of perceived support available in a specific situation). The Social Support behaviours scale (SS-B)¹⁹ measures different types of social support (emotional, socialisation, material, financial, and instrumental support). However, its disadvantage is that it has as many as 45 items.

The Multidimensional Scale of Perceived Social Support (MSPSS)²⁰ is the most widely used one to measure social support provided by an individual's perception of social support from three sources: family, friends, and a significant other. The MSPSS methodology will be addressed in detail further on, as it is the specific subject of this validation study. Its aim is to validate the factor structure of the MSPSS questionnaire, which measures sources of social support within the original three-factor structure, to verify its psychometric properties and to adapt it to Slovak conditions, including correct language adaptation. The MSPSS has been validated as a three-factor model (family, friends, significant other) using different target groups, most frequently chronic patients. We offer an overview of the different validation studies in Table 1, which is sorted by year and the research sets are described in every case.

Table 1 Overview of validation studies of the MSPSS questionnaire with different research sets

Authors	Location	Year	Research set	Cronbach's alpha	Comment
Başol	Turkey	2008	school staff (n=433)	.87 – .92	Highlighting the issue of understanding the <i>significant other</i> factor.
Pedersen et al.	Denmark	2009	cardiac patients and their partners (n=446)	.91 – .95	
Nakigudde et al.	Uganda	2009	women after childbirth (n=240)	.79 – .82	
Ng et al.	Malaysia	2010	students of medicine (n=237)	.89	
Wongpakaran, Wongpakaran, Ruktrakul	Thailand	2011	students of medicine (n=310); Psychiatric patients (n=152)	.87 - .91	

18 Irwin G. Sarason, Barbara R. Sarason, and Gregory R. Pierce, 'Social Support: The Search for Theory', *Journal of Social and Clinical Psychology* 9, no. 1 (1990): 133–147, <https://doi.org/10.1521/jscp.1990.9.1.133>.

19 Alan Vaux, Riedel Sharon, and Doreen Stewart, 'Modes of social support: The social support behaviors (SS-B) scale', *Community psychology* 15, no. 2 (1987): 209–232, <https://doi.org/10.1007/BF00919279>.

20 Gregory D. Zimet et al., 'The Multidimensional Scale of Perceived Social Support', *Journal of Personality Assessment* 52, no. 1 (1988): 30–41, https://doi.org/10.1207/s15327752jpa5201_2.

Ng et al.	Malaysia	2012	psychiatric outpatients (n=228)	.89	
Ekbäck et al.	Sweden	2013	women with hirsutism (n=127), control sample nursing students (n=154)	.91 - .95	
Bagherian-Sararoudi et al.	Iran	2013	heart attack patients (n=176) general population (n=71)	.85 - .93 .87 - .92	
Stewart et al.	Malaysia	2014	women attending antenatal clinic (n=583)	.85 - .88	
Denis, Callahan, Bouvard	France	2015	women after childbirth (n=148)	.89	
Zhou et al.	China	2015	methadone users (n=1212)	.84 - .89	
Wang et al.	China	2017	parents of children with cerebral palsy (n=487)	.90 - .84	
Gabardo-Martins et al.	Brazil	2017	general population (employees) (n=831)	.96 - .93	
Papp-Zipernovszky, Kékesi, Jámbo	Hungary	2017	adult population (n=1073)	.87 - .93	Confirmed three factors after removing two items (one item from the family factor and one from the friends factor).
De Maria et al.	Italy	2018	chronic patients (n=176)	.91 - .96	
Tsilika et al.	Greece	2019	nurses (N=150)	.95 - .96	

As the study focuses on adolescents, we offer an overview of the validation studies conducted through this research sample in the separate Table 2.

Table 2 Overview of validation studies of the MOS questionnaire with an adolescent research sample

Authors	Location	Year	Research set	Cron- bach's alpha	Comment
Edwards	Mexico	2004	$n=290$.61 – .90	
Rizwan, Aftab	Pakistan	2009	$n=273$.86 – .87	
Adamczyk	Poland	2013	$n=418$ (university students)	.89 – .94	
Wilson et al.	Ghana	2017	$n=717$.61 – .74	In conclusion, they also considered a 2-factor formulation of the questionnaire because it would therefore seem that other contextual factors, translation and sampling issues might explain the emergence of either a single- or two-factor structure.
Kaur, Beri	India (Pun- jab region)	2019	$n=461$.84 – .87	

It can be concluded that in most countries, MSPSS has showed good reliability and validity corresponding with the three-dimensional structure, mainly in countries where individualist culture prevails and individuals can clearly differentiate between different sources of support,²¹ which indicates the international validity of MSPSS. The scale represents an internationally recognised instrument with quick implementation.²²

However, it is necessary to point out that in some countries, only the two-factor model has been confirmed, for example, in Chile, the scale has been verified with a sample of adults ($n = 76$; $\alpha = .86$) and the Family and Friends subscales have been confirmed.²³ The two-factor model has also been accepted in Nigeria after being verified with a sample of patients with brain stroke ($n = 140$; $\alpha = .78$), again on the Family and Friends subscales.²⁴ In Zimbabwe, a sample of cancer patients has been used ($n = 120$), accepting the Family (including the 'significant other' factor; $\alpha = .89$) and Friends ($\alpha = .89$) subscales (overall $\alpha = .91$).²⁵

The authors of the Multidimensional Scale of Perceived Social Support, Zimet et al.,²⁶ have paid special attention to perceived social support. They have proposed for the concept to be investigated

21 Wilson, Yendork, and Somhlaba, 'Psychometric Properties of Multidimensional Scale of Perceived Social Support among Ghanaian Adolescents', 101–115.

22 Jermaine M. Dambi et al., 'Psychometric evaluation of the Shona version of the Multidimensional Scale of Perceived Social Support Scale (MSPSS–Shona) in adult informal caregivers of patients with cancer in Harare, Zimbabwe', *Malawi Medical Journal* 29, no. 2 (2017): 89–96, <https://doi.org/10.4314/mmj.v29i2.3>; Denis, Stacey, and Bouvard, 'Evaluation of the French Version of the Multidimensional Scale of Perceived Social Support During the Postpartum Period', *Maternal and Child Health Journal*, no. 19 (2015): 1245–1251. <https://doi.org/10.1007/s10995-014-1630-9>.

23 Mantuliz and Castillo, 'Validation of a scale of perceived social support in a group of elders under control in a hypertension program in the metropolitan region', 52.

24 Ashiru H. Mohammad et al., 'Validity and Reliability of the Hausa Version of Multidimensional Scale of Perceived Social Support Index', *Iran Red Crescent Medical Journal* 17, no. 2 (2015): 1–15, <https://doi.org/10.5812/ircmj.18776>.

25 Dambi, Chiwaridzo, Tadyanemhandu, and Nhunzvi, 'Psychometric evaluation of the Shona version of the Multidimensional Scale of Perceived Social Support Scale (MSPSS–Shona) in adult informal caregivers of patients with cancer in Harare, Zimbabwe', 89–96.

26 Zimet et al., 'The Multidimensional Scale of Perceived Social Support', 30–41.

multidimensionally, that is, using the three dimensions incorporated in MSPSS. This approach is currently the most frequently used method in investigating perceived social support. The first dimension represents support provided by the family (the extent to which an individual perceives they receive support from their relatives), the second dimension represents support provided by friends, and the third represents support provided by a significant other. The third dimension is unique as it lets the respondent decide who this 'significant other' should be.²⁷ The Significant Other dimension is saturated by items focused on one's perception of social support received from a 'special person'. It can be interpreted in a variety of ways as it could be a romantic partner, teacher, advisor, etc. The concept of 'significant other' can refer to a romantic as well as any other kind of close relationship.²⁸ It is necessary to take into account that this special person can differ according to the culture in which the research is performed.²⁹ However, using a more specific term could weaken the instrument, such as 'romantic partner' would assume the existence of a romantic relationship.³⁰

In the studies in which two dimensions have been confirmed, the Significant Other dimension is incorporated in the Family or Friends dimensions.³¹ In general, it is assumed that the respondents understand 'significant other' as their current romantic partner. However, not all respondents are bound to have romantic relationships. Moreover, in some specific groups, the respective items may seem inappropriate (e.g. dating is strictly forbidden for Arabic adolescents as the Islamic codes of conduct allow romantic relationship only within marriage). For the purpose of investigating adolescent Arabic immigrants,³² a revised version of MSPSS has been proposed in which they replace the significant other related items with items focused on social support provided by school staff. Their design has been confirmed by factor analysis. Prezza and Pacilli³³ asked their respondents to specify what kind of significant other they had in mind after filling in the questionnaire. More than three-quarters of the older, married respondents had their spouse in mind. Separated, divorced, or widowed respondents usually, but not exclusively meant their children. The younger as well as unmarried respondents opted for their friends, relatives, but also romantic partners. The results have confirmed that 'significant other' can be interpreted differently based on the age or marital status of the individual. Wongpakaran and Wongpakaran³⁴ have also proposed a revised version of MSPSS. They have instructed the respondents not to use friends or family when asked about the significant other. Two groups of respondents have been used in this research: the first group was administered the original survey while the other filled in the reviewed version. The reviewed version has showed higher reliability. It is necessary to think about the language asymmetry in translation. For example, 'significant other' has been translated as 'one best friend' in Chinese, therefore Chinese

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- 27 Sheung-Tak, Cheng, and Alfred C. M. Chan, 'The Multidimensional Scale of Perceived Social Support: dimensionality and age and gender differences in adolescents', *Personality and Individual Differences*, no. 37 (2004): 1359–1369, <https://doi.org/10.1016/j.paid.2004.01.006>.
- 28 Karen Aroian, Templin Thomas N., and Vidya Ramaswamy, 'Adaptation and Psychometric Evaluation of the Multidimensional Scale of Perceived Social Support for Arab Immigrant Women', *Health Care for Women International*, no. 31 (2010): 153–169, <https://doi.org/10.1080/07399330903052145>.
- 29 Başol, 'Validity and Reliability of the Multidimensional Scale of Perceived Social Support-Revised, with a Turkish Sample', 1303–1314.
- 30 Bagherian-Sararoudi, Ahmadreza, Ehsan, Sarafranz, and Zimet, 'Psychometric properties of the persian version of the multidimensional scale of perceived social support in Iran', 1277–1281.
- 31 Sammy K. Ho and Edmund S. Chan, 'Modification and validation of the multidimensional scale of perceived social support for Chinese school teachers', *Cogent Education* 4, no. 1 (2017): 1–11, <https://doi.org/10.1080/2331186X.2016.1277824>.
- 32 Ramaswamy, Aroian, and Templin, 'Adaptation and psychometric evaluation of the multidimensional scale of perceived social support for Arab American adolescents', 49–56.
- 33 Miretta Prezza and Maria G. Pacilli, 'Perceived social support from significant others, family and friends and several socio-demographic characteristics', *Journal of Community and Applied Social Psychology*, no. 12 (2002): 422–429, <https://doi.org/10.1002/casp.696>.
- 34 Nahathai Wongpakaran and Tinakon Wongpakaran, 'A revised Thai Multi-Dimensional Scale of Perceived Social Support', *The Spanish Journal of Psychology* 15, no. 3 (2012): 1503–1509, https://doi.org/10.5209/rev_sjop.2012.v15.n3.39434.

respondents would probably speak of their best friends instead of their romantic partner (if applicable at the time). Ho and Chan³⁵ have therefore used the reviewed scale,³⁶ replacing four items from the Significant Other dimension with items measuring social support in the respondents' work life (questions about their colleagues and superiors); the respondents have been teachers. Moreover, the term 'friends' was also specified as 'not a colleague'. The authors have proposed a four-factor structure allowing the analysis of support from both the working as well as other environments.

Methodology

Participants

We compiled a list of all secondary schools in the Košice and Prešov regions (irrespective of the sponsor). From this list, secondary schools were randomly selected based on a chosen criterion – one gymnasium (grammar school) and two vocational schools. Only schools with instruction in the Slovak language were included in the selection process (for the sake of understanding item meanings and eliminating cultural specifics). Subsequently, schools were invited to participate in the research, with a request to provide access to one class each from the second and third classes. In the case of refusal by any school, substitute schools were pre-drawn for each category. The questionnaires were administered in person.

In the process of validating the research instrument, it is not necessarily imperative to conduct data collection on a nationally representative sample, as it is not crucial to generalise the interpretation back to the population.³⁷ The sample size takes precedence, and it was considered for both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) applications.³⁸ According to the application of Rules of Thumb, our sample falls within the boundary of being considered fair to good.³⁹

The scale was verified on a research sample of high school students ($n = 249$; 60.6% girls) from the Košice and Prešov self-governing regions in the 2nd and 3rd year of studies (61% and 39% respectively). The average age was 17.34 years ($SD = .799$; Min-Max = 16-21; Median = 17).

Research instrument

The research for validation consisted of a battery of questionnaires to establish the validity of the Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire. For concurrent validity verification, The Social Support Survey (MOS) questionnaire designed to measure social support was to be positively correlated. To verify concurrent validity in the negative direction, we chose the Social and Emotional Loneliness Scale for Adults (SELSA-S), a questionnaire measuring loneliness. We then offer more detailed descriptions of each methodology.

35 Ho and Chan, 'Modification and validation of the multidimensional scale of perceived social support for Chinese school teachers', 1–11.

36 Robert D. Šolcová et al., *Job demands and worker health* (Washington DC: Department of Health, Education, and Welfare, National Institute for Occupational Safety and Health, 1975); Zimet et al., 'The Multidimensional Scale of Perceived Social Support', 30–41.

37 Peter Gavora, 'Validita a reliabilita výskumných nástrojov: princípy a reálna prax', *Pedagogická orientace* 23, no. 4 (2013): 511–534.

38 Erika J. Wolf et al., 'Sample Size Requirements for Structural Equation Models: An Evaluation of Power, Bias, and Solution Propriety', *Educational and Psychological* 76, no. 6 (2013): 913–934, <https://doi.org/10.1177/001316441349523>. Theodoros A. Kyriazos, 'Applied Psychometrics: Sample Size and Sample Power Considerations in Factor Analysis (EFA, CFA) and SEM in General', *Psychology* 9, (2018): 2207–2230, <https://doi.org/10.4236/psych.2018.98126>. Michael White, 'Sample size in quantitative instrument validation studies: A systematic review of articles published in Scopus, 2021', *Heliyon* 8, no.12, (2022): 1–6, <https://doi.org/10.1016/j.heliyon.2022.e12223>.

39 Robert F. DeVellis, *Scale Development: Theory and Applications*. (Thousand Oaks, CA: Sage, 2017).

The Multidimensional Scale of Perceived Social Support (MSPSS)⁴⁰ version consists of 12 items divided into dimensions of the social support sources (family – items: 3, 4, 8, 11; friends – items: 6, 7, 9, 12; significant other – items: 1, 2, 5, 10). It also measures perceived social support using a 7-point Likert scale (1 – strongly disagree to 7 – strongly agree). It is a brief, but complete and easy-to-understand instrument. The MSPSS-SK (we will only use the abbreviation MSPSS-SK to refer to the Slovak version) research instrument in the Slovak language was created through a standard translation process performed by professional translators, and it was verified by independent back-translation.

The Social Support Survey (MOS)⁴¹ measures the types of social support by means of 19 items covering four dimensions (emotional, positive social interaction, availability for a person for fun, instrumental support, affectionate support). The psychometric properties of the original survey ($n = 2\,987$) were reliable since the Cronbach's alpha for the whole scale was .97 and .91 – .96 for the individual dimensions. The survey measures social support using a 5-point Likert scale (1 = Never; 5 = Always).

Social and Emotional Loneliness Scale for Adults (SELSA-S)⁴² is a shortened 15-item version of the original SELSA scale for identifying loneliness using three subscales (romantic, family, and social relationships). The respondents express their level of agreement using a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree) and the individual items were formulated as positive as well as negative statements. The original questionnaire provided good internal consistency values for individual subscales as verified by Cronbach's alpha (romantic – .87; family – .89; social – .90).⁴³

Table 3 presents a general overview of each questionnaire in the context of factor scores using means, standard deviations, and reliability estimates for each of the subscales MSPSS-SK, SELSA, and MOS. All values from the research instrument are listed in Table 3.

Table 3 Means, standard deviations, and reliability estimates for each of the subscales the Multidimensional Scale of Perceived Social Support Slovak adaptation (MSPSS-SK), SELSA, and MOS

Factors and the number of items		Standard deviation	Min.	Max.	Cronbach's alpha
MSPSS-SK	SO – 4	1.39	1	7	.65
	FA – 4	1.46	1	7	.92
	FR – 4	1.48	1	7	.92
SELSA	ROM – 5	1.81	1	7	.79
	FAM – 5	1.39	1	6.8	.87
	SOC – 5	1.19	1	5.8	.79

40 Zimet et al., 'The Multidimensional Scale of Perceived Social Support', 30–41.

41 Sherbourne and Stewart, 'The MOS Social Support Survey', 705–714.

42 Enrico DiTomasso and Barry Spinner, 'The development and initial validation of the Social and Emotional Loneliness Scale for Adults (SELSA)', *Personality and Individual Differences* 14, no. 1 (1993): 127–134, [https://doi.org/10.1016/0191-8869\(93\)90182-3](https://doi.org/10.1016/0191-8869(93)90182-3).

43 Enrico DiTomasso, Brannen Cyndi, and Lisa A. Best, 'Measurement and Validity Characteristics of the Short Version of the Social and Emotional Loneliness Scale for Adults', *Educational and Psychological Measurement* 64, no. 1 (2004): 99–119, <https://doi.org/10.1177/0013164403258450>.

MOS	TAN – 4	.65	2	5	.79
	AFF – 3	.98	1	5	.80
	POS – 3	.71	1	5	.78
	EMI – 8	.77	1,25	5	.92

MSPSS-SK – Multidimensional Scale of Perceived Social Support Slovak adaptation – family (FA), friends (FR), and significant other (SO)

SELSA – romantic (ROM), family (FAM), social (SOC)

MOS – Social Support Survey – tangible support (TAN); affectionate support (AFF); positive social interaction (POS); emotional/informational support (EMI)

Statistical analyses

The statistical procedures were performed using the available statistical software (SPSS v.25 for measuring Exploratory Factor Analysis and AMOS v.25 for measuring Confirmatory Factor Analysis). Analyses were performed with the same data. Exploratory Factor Analysis (EFA) was chosen first and later Confirmatory Factor Analysis (CFA) was used to confirm the structure. We also used Varimax Rotation to determine the maximisation of the shared variance of the correlations.⁴⁴ To verify the factor structure of MSPSS-SK, a confirmatory factor analysis⁴⁵ was used in accordance with the original questionnaire. At the same time, additional statistical methods (calculating Cronbach's alpha and correlation coefficients; non-parametric methods in terms of sample distribution), and calculation of descriptive characteristics (arithmetic average, standard deviation, median).

In terms of the internal consistency analysis, the SELSA-S scale shows good reliability values as verified by Cronbach's alpha. Reliability of the whole instrument was $\alpha = .91$ and the reliability of the subscales varied from .91 to .92. The internal consistency values in the subscales were comparable to the original validation study of this methodology (original values: Family .85; Friends .75; Significant other .72).

Factor analysis was performed first, which showed the same distribution of factors as in the questionnaire by Zimet et al.⁴⁶ (3 factors). This has been confirmed by a considerable number of other validation studies, including, for example, the validation of the Polish version of the MSPSS.⁴⁷ Factor analysis here extracted three distinct factors. The results suggest confirmation of the subscale groupings presented in the original study by Zimet et al.⁴⁸ The results in the De Maria et al.⁴⁹ study support the use of scores for each factor and the combined scores of the 12 items of the MSPSS. Cronbach's alpha was 0.92 for the Family factor, 0.96 for the Friends factor, 0.93 for the Significant Others factor, and 0.91 for the entire scale, indicating excellent internal consistency, comparable to the authors' results (Cronbach's alpha was 0.92 for the Family factor, 0.96 for the Friends factor, 0.93 for the Significant Others factor, and 0.91 for the entire scale, showing an excellent internal

44 Christian Acal, Ana M. Aguilera, and Manuel Escabias, 'New Modeling Approaches Based on Varimax Rotation of Functional Principal Components', *Mathematics* 8, no. 11 (2020): 2085, <https://doi.org/10.3390/math8112085>; Keith E. Dilbeck, *The SAGE Encyclopedia of Communication Research Methods* (SAGE Publications, 2017), <https://dx.doi.org/10.4135/9781483381411>.

45 Yan Xia and Yanyun Yang, 'RMSEA, CFI, and TLI in structural equation modeling with ordered categorical data: The story they tell depends on the estimation methods', *Behavior Research Methods* 51, no. 1 (2019): 409–428, <https://doi.org/10.3758/s13428-018-1055-2>.

46 Zimet et al., 'The Multidimensional Scale of Perceived Social Support', 30–41.

47 Katarzyna Adamczyk, 'Development and validation of the Polish-language version of the Multidimensional Scale of Perceived Social Support (MSPSS)', 25–48.

48 Zimet et al., 'The Multidimensional Scale of Perceived Social Support', 30–41.

49 De Maria et al., 'Psychometric evaluation of the Multidimensional Scale of Perceived Social Support (MSPSS) in people with chronic diseases', 308–315.

consistency). In the context of the validation of the Hungarian MSPSS on a sample of adults, the authors Papp-Zipernovszky et al.⁵⁰ calculated psychometric properties suggesting that each of the three factors has a good level of reliability and validity (Family: Cronbach's $\alpha = 0.91$; Friends: Cronbach's $\alpha = 0.93$; Significant Others: Cronbach's $\alpha = 0.87$, MSPSS Total: Cronbach's $\alpha = 0.91$). The computed psychometric properties suggest that each factor has a good level of reliability and validity (Family: Cronbach's $\alpha = .91$; Friends: Cronbach's $\alpha = .93$; Significant Others: Cronbach's $\alpha = .87$, MSPSS Total: Cronbach's $\alpha = .91$). The CFA study by Wang et al.⁵¹ suggested that the original three-factor model was replicated in a specific population: Chinese parents of children with cerebral palsy.

High statistical significance was confirmed in the correlation between factors and individual items as well as between the factors themselves (Tables 4, 5). It may indicate that the scale could also be used as a one-dimensional scale for measuring perceived social support. However, its ability to measure the level of perceived social support from the sources represented by the respective factors is of much greater importance.

Table 4 Exploratory factor analysis: Items and Varimax Rotated Factor Loadings for the Multidimensional Scale of Perceived Social Support Slovak adaptation

Items	Significant other	Family	Friend
1. There is a special person who is around when I am in need	.890**		
2. There is a special person with whom I can share joys and sorrows	.878**		
3. My family really tries to help me		.896**	
4. I get the emotional help and support I need from my family		.882**	
5. I have a special person who is a real source of comfort to me	.876**		
6. My friends really try to help me			.909**
7. I can count on my friends when things go wrong			.919**
8. I can talk about my problems with my family		.870**	
9. I have friends with whom I can share my joys and sorrows			.905**
10. There is a special person in my life who cares about my feelings	.887**		
11. My family is willing to help me make decisions		.899**	
12. I can talk about my problems with my friends			.882**

** $p < .005$

Extraction Method: Principal Component Analysis

50 Papp-Zipernovszky, Kékesi and Jámori, 'A multidimenzionális észlelt társas támogatás kérdőív magyar nyelvű validálása', 230–262.

51 Yongli Wang et al., 'Psychometric Properties of Multi-Dimensional Scale of Perceived Social Support in Chinese Parents of Children with Cerebral Palsy', *Frontiers in Psychology*, no. 8 (2017): 1–6, <https://doi.org/10.3389/fpsyg.2017.02020>.

Table 5 Intercorrelations of the Multidimensional Scale of Perceived Social Support Slovak adaptation

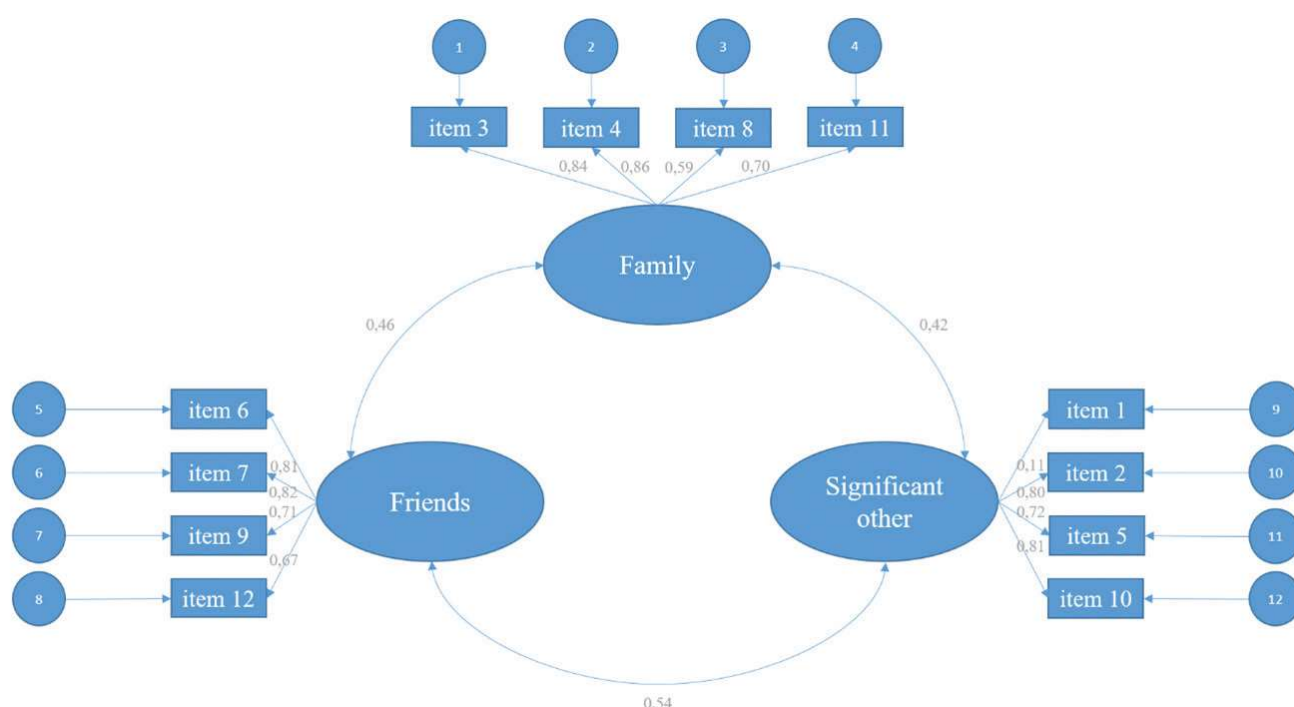
	Family	Friend
Significant other	.379**	.487**
Family		.516**

** $p < .005$

Extraction Method: Principal Component Analysis

Subsequently, a confirmatory factor analysis was performed to confirm the factor structure. This method based on structural equation modelling allows for the identification of causal relationships between the observed and latent variables in theoretical models;⁵² it also allowed for verifying the adequacy of the solution. The results of the three-factor modelling indicate satisfactory correspondence values with the data in all indices observed (CFI = .960; TLI = .948; GFI = .917; RMSEA = .083). Further adjustment would be possible, but unnecessary in terms of theoretical justification. There were potential residual covariances between the items pertaining to different factors, but their anticipated impact was not that significant. Therefore, it can be concluded that this model (Figure 1) is consistent with practice in statistics⁵³ and it can be considered suitable.

Figure 1 The Structure Model of the Multidimensional Scale of Perceived Social Support (Slovak adaptation) with standardised factor loadings and correlations



52 Gregory R. Hancock and Ralph O. Mueller, 'Rethinking construct reliability within latent variable systems', *Structural Equation Modeling: Present and Future*, 195–216.

53 Peter Prudon, 'Confirmatory Factor Analysis as a Tool in Research Using Questionnaires: A Critique', *Comprehensive Psychology* 4, no. 10 (2015): 1–18, <https://doi.org/10.2466/03.CP.4.10>; Bruce Thompson, *Exploratory and Confirmatory Factor Analysis: Understanding Concepts and Applications* (Washington, D.C.: American Psychological Association, 2004), <https://doi.org/10.1037/10694-000>.

By identifying the mutual correlations between the individual factors in MSPSS-SK, SELSA Loneliness Scale and MOS – Social Support Survey, the concurrent and discriminant validity was verified (Table 6). Statistically significant correlation was confirmed in the expected direction with SELSA (measuring individual loneliness subscales) in which the strongest negative correlation was found in the following subscales: Family (SELSA) and Family (MSPSS-SK), ($r = -.707$); Social Relationships (SELSA) and Friends (MSPSS-SK), ($r = -.674$). The medium strong negative intensity between the Romantic Relationships (SELSA) and Significant Other (MSPSS-SK) indicate the importance of interpreting the ‘significant other’ as a source of social support for adolescents (who exactly is a significant other). In general, it is assumed that the respondents understand ‘significant other’ as their current romantic partner. However, a medium strong negative correlation was also confirmed between the social relationships (SELSA) and significant other (MSPSS-SK) subscales. Therefore, it is possible that adolescent individuals without romantic relationships understood this source of social support as any kind of social relationship with a special person (this issue will be further addressed in the discussion). Loneliness during adolescence (statistically very high significant correlation) in the Family subscale is saturated by social support from a significant other (MSPSS-SK) although with a weak negative correlation ($r = -.234$).

Table 6 Correlations of factors of the Multidimensional Scale of Perceived Social Support Slovak adaptation (MSPSS-SK) Subscales with the SELSA, MOS and Individual Difference Measures

		Significant other	Family	Friends
SELSA	ROM	-.473**	-.051	-.057
	FAM	-.234**	-.707**	-.371**
	SOC	-.337**	-.349**	-.674**
MOS	TAN	.414**	.515**	.374**
	AFF	.602**	.295**	.237**
	POS	.573**	.330**	.528**
	EMI	.678**	.479**	.571**

** $p < .005$

SELSA – romantic (ROM), family (FAM), social (SOC)

MOS – Social Support Survey – tangible support (TAN); affectionate support (AFF); positive social interaction (POS); emotional/informational support (EMI)

As for the MOS methodology measuring social support, positive correlation between individual subscales was expected and confirmed (all with high statistical significance). The strongest correlation was found between the significant other (MSPSS-SK) and emotional/informational support (MOS) subscales, ($r = .676$). Equally strong correlation was found between affectionate support and positive social interaction (MOS) subscales. Very high statistical significance was also measured in the correlation between Family (MSPSS-SK) and affectionate support (MOS) social support sources, although with low intensity ($r = .295$).

Discussion

This article presents a validation study to measure adolescents' sources of social support. As it has been shown to be a multidimensional construct, it is essential to take this into account when measuring it. The objective was to present a Slovak adaptation of the Multidimensional Scale of Perceived Social Support questionnaire as a multidimensional instrument for measuring sources of social support and to validate its psychometric properties. The adequacy of the three-factor structure of the Slovak version in accordance with the original questionnaire,⁵⁴ namely the factors family, friends, and significant other, was firstly demonstrated by means of exploratory factor analysis. This structure was subsequently validated and confirmed in confirmatory factor analysis (CFI = .960; TLI = .948; GFI = .917; RMSEA = .083).

We have demonstrated that the methodology is correctly focused on measuring sources of social support through the identification of concurrent validity. Statistically significant correlations in the negative direction were anticipated with the SELSA methodology (measuring loneliness) (strongest for the family factor in both questionnaires, .707; weakest for the family (MSPSS-SK) and romantic relationships (SELSA) factors, .051). Associations between social support and loneliness have been confirmed by several other studies with different target groups.⁵⁵

In contrast, positive correlations were anticipated with the MOS (strongest for emotional/informational support (MOS) and significant other (MSPSS-SK) .678; weakest for affectionate support (MOS) and friends (MSPSS-SK) .237).

The Slovak adaptation of the MSPSS-SK, as well as the original questionnaire and other language versions, confirms the validity of all three subscales, and we feel that the above research review has demonstrated this, as well as the validity of the Slovak adaptation of the MSPSS-SK used for the target group of adolescents. There were also lower correlations within the model. The lowest one was in the significant other factor (item 1). However, the possibility of finding out which other persons in addition to family and friends are a source of social support (especially for such a specific group as adolescents) is considered to be very important. In several studies cited, this factor appears worthy of further investigation.⁵⁶

The authors are aware of the existence of limitations in the research conducted. One of them includes the measured reliability of the research instrument. We are aware that for the reliability of the research instrument to be sufficient, the correlations must be high enough, ideally at least .70. However, in the analysis of various studies, it has been confirmed that when assessing the adequacy of reliability, it is necessary to strongly consider the specific conditions of a particular piece of research (type of instrument, conditions in which it is implemented, characteristics of the research sample...).⁵⁷ In our case, it was a short research instrument, while lower reliability may be observed with shorter instruments. Another limitation of the research may lie in the fact that the research population is overrepresented by girls (60.6%), which may affect the results

54 Zimet et al., 'The Multidimensional Scale of Perceived Social Support', 30–41.

55 Luíze A. G. Amorim et al., 'Social and Emotional Loneliness Scale: psychometrics evidence in the Brazilian northeast', *Ciencias Psicológicas July-December 2019* 13, no. 2 (2019): 283–295. <https://doi.org/10.22235/cp.v13i2.1885>, Jose Tomás et al., 'Loneliness and social support: Differential predictive power on depression and satisfaction in senior citizens', *Journal of Community Psychology* 47, no. 5 (2019): 1225–1234, <https://doi.org/10.1002/jcop.22184>.

56 For example, De Maria, Vellone, Durante, Biagioli, and Matarese, 'Psychometric evaluation of the Multidimensional Scale of Perceived Social Support (MSPSS) in people with chronic diseases', 308–315; Edwards, 'Measuring Perceived Social Support in Mexican American Youth: Psychometric Properties of the Multidimensional Scale of Perceived Social Support', 187–194; Rizwan and Aftab, 'Psychometric properties of the multidimensional scale of perceived social support in Pakistan young adults', 51–65.

57 Peter Gavora, 'Validita a reliabilita výskumných nástrojov: princípy a reálna prax', *Pedagogická orientace* 23, no. 4 (2013): 511–534, <https://doi.org/10.5817/PedOr2013-4-511>.

of the research. However, the selection of the research population was random, carried out using a lottery technique that ensured that each element of the population had an equal opportunity to be included in the selection. However, this reflects the actual structure in schools in the Slovak context. The index of femininity, as one of the demographic indicators in Slovakia, reflecting the ratio of the number of females to the number of males in the population, is an indicator of such a gender structure of the population. It declares the predominance of women in the Slovak population. Similarly, the 2021 Slovak population census⁵⁸ highlights the predominance of the female component of the population. The proportion of women in the Slovak population was 51.09% at the beginning of 2021, which corresponds to the predominance of girls in this research population. Another limitation may be that there is a dimension in the questionnaire that ascertains the perception of social support from an 'exceptional person'. This can be interpreted in different ways, for example, as a partner, teacher, counsellor, etc. An exceptional person may be one with whom the respondent has a romantic or other particularly close relationship.⁵⁹ It should be borne in mind that the person we refer to as special may vary according to the culture in which the research is conducted.⁶⁰ However, the use of a more specific term could weaken the instrument, for example, the use of the term partner would refer to the existence of a romantic relationship.⁶¹ In studies where the questionnaire shows two dimensions, there is a conflation of the exceptional person dimension with the family dimension or the friends dimension.⁶² For the future, it might be useful to include an open-ended question in the questionnaire where respondents are asked to add who they consider to be an exceptional person.

Conclusion

MSPSS is a quickly implemented and internationally recognised instrument for measuring social support. The factor analysis of its Slovak version, MSPSS-SK, confirmed the three-factor model used in most countries, which focuses on three sources: significant other, family, and friends. The results confirmed that it was reliable for use with adolescents as a target group. Although the presented study provided sufficient evidence about the psychometric properties of the Slovak version of the research instrument, the 'significant other' factor may be ambiguous and decrease homogeneity when applied to adolescents in comparison to adult population as it can be understood in different ways. Therefore, further research should focus on identifying who the adolescents consider to be their significant other.

In the context of resolving difficult life situations of the adolescent, it is necessary to consider not only the individual factors, but also the whole social environment, which supports the individual in dealing with a variety of life events. Social support represents one of these sources; as a part of the adolescent's environment, it is highly important and beneficial in dealing with specific negative situations. The role of social workers and other helping professionals from different fields is also to identify a multidimensional context in which the relationship between individuals and

58 Statistical Office of the Slovak Republic. *Population – Basic Results*. <https://www.scitanie.sk/obyvatelia/zakladne-vysledky/pocet-obyvatelov/SR/SK0/SR>.

59 Aroian, Templin, and Ramaswamy, 'Adaptation and Psychometric Evaluation of the Multidimensional Scale of Perceived Social Support for Arab Immigrant Women', 153–169.

60 Başol, 'Validity and Reliability of the Multidimensional Scale of Perceived Social Support-Revised, with a Turkish Sample', 1303–1314.

61 Bagherian-Sararoudi et al., 'Psychometric properties of the persian version of the multidimensional scale of perceived social support in Iran', 1277–1281.

62 Ho and Chan, 'Modification and validation of the multidimensional scale of perceived social support for Chinese school teachers', 1–11.

their environment is activated and maintained in order to meet their needs.⁶³ It is of major importance especially in the context of adolescence as a developmental period, which is characterised by ongoing changes, identity development, separation from parents, and establishing important relationships with peers as well as adults outside the family. The results confirmed that MSPSS is reliable for use with adolescents as the target group, therefore, it can be concluded that it can be used by helping professionals (such as teachers, school psychologists, or school social workers) to measure the social support of high school students.

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63 Michael K. Zapf, 'Social Work and the Environment: Understanding People and Place', 30–46.