

Validation of the Actually Received Support Scale for Chinese Adolescents

Experiencing School Bullying

Jianli Xing ^a, Ted C.T. Fong ^b, and Rainbow T.H. Ho ^{a,b*}

^a Department of Social Work and Social Administration, The University of Hong Kong,

Pokfulam Road, Hong Kong, China

^b Centre on Behavioral Health, The University of Hong Kong, 5 Sassoon Road, Pokfulam,

Hong Kong, China

*Corresponding author: Professor Rainbow T. H. Ho, Email: tinho@hku.hk, Postal address:

Centre on Behavioral Health, 2/F, The Hong Kong Jockey Club Building for Interdisciplinary

Research, 5 Sassoon Road, Pokfulam, Hong Kong

Abstract

Although social support has been recognized as an important resource for coping with bullying, there is a lack of valid and reliable tools for assessing the social support received by victims of school bullying in China. This study aimed to translate the Actually Received Support scale from the Berlin Social Support Scales (BSSS-RS) and adapt it for the Chinese context. Three hundred and seventy-eight Chinese students (Grades 4 to 9) in Hebei Province who had experienced school bullying in the past six months were recruited. The psychometric properties of the Chinese BSSS-RS in terms of factorial validity, reliability, and convergent validity were examined from three sources (family, friend/classmate, and teacher). Confirmatory factor analyses found a better fit for the three-factor model than the one-factor and two-factor models. The three-factor model had an acceptable fit with the data on support from a family member and a friend or classmate, but not for the data on support from a teacher. Satisfactory internal consistency and test–retest reliability were found for the emotional (six items), instrumental (three items), and informational (two items) types of received support. The convergent validity of the factors was also confirmed against validating variables. The findings support the BSSS-RS as a reliable and valid measurement tool for the actual support received by bullied adolescents from a family member and friend or classmate. Future use is recommended to better understand the role of social support in the context of school bullying.

Keywords: social support, school bullying, China, adolescents, psychometrics

Highlights

- The Chinese BSSS-RS was examined for use among Chinese adolescents affected by school bullying.
- The factorial validity, reliability, and convergent validity of the BSSS-RS were examined.
- Three factors were confirmed, representing emotional, instrumental, and informational types of support.
- The BSSS-RS is a reliable and valid tool for measuring actually received support from a family member and a friend or classmate.

Validation of the Actually Received Support Scale for Chinese Adolescents

Experiencing School Bullying

School bullying, a type of adolescent aggression, is a growing concern in China and around the globe. A meta-analysis of 80 studies covering 335,519 adolescents found a mean prevalence of 36.2% for traditional bullying victimization and 15.4% for cyberbullying victimization (Modecki et al., 2014). Large-scale studies in China reported 38.2% of adolescents having been victimized through traditional bullying (Xie & Wei, 2019) and 14.2% having been victimized through cyberbullying (Chang et al., 2015). Bullying victimization is one of the most pronounced stressors during adolescence (Esposito et al., 2019) and being a victim of either traditional bullying or cyberbullying can cause substantial harm (Hansson et al., 2020; Hymel & Swearer, 2015; Östberg et al., 2018; Zaborskis et al., 2019). Recent research has documented links between bullying victimization and negative outcomes among adolescents, such as higher levels of loneliness (Cao et al., 2020; Cava et al., 2020), depression (Sullivan et al., 2020; Yen et al. 2014), anxiety (Zhang et al., 2019), and suicidality (Östberg et al., 2018; Wang, et al., 2020). The characteristics of bullying—repetition, intentionality, and an observed or perceived power imbalance in favor of the bullies (Olweus, 2013)—make it difficult for victims to defend themselves. Social support is therefore crucial in helping bullied victims to respond to bullying.

Social support refers to the social relationships that provide individuals with actual assistance, embed individuals within a social system that is perceived to provide love and care, or attach individuals to a valued social group (Hobfoll & Stokes, 1988). Social support is a multifaceted concept, which can be perceived or received in various ways (through emotional concern, instrumental aid, or informational support). The three main sources of social support for adolescents have been identified as family, friends, and school personnel (Cauce & Srebnik, 1990). Social support has long played an essential role in adolescence. Social support might benefit the mental health and academic performance of adolescents and reduce their risk-taking behavior (Jia et al., 2020; Moral-García et al., 2020; Pössel et al., 2018). Furthermore, the protective role of social support can help adolescents to cope with such stressful events as being bullied at school. Not only is social support useful as a buffer against the adverse health consequences of school bullying, it can also contribute to an earlier cessation of bullying victimization (Frisén et al., 2012; Klomek, 2020).

Both perceived and received social support can facilitate adolescent coping with bullying, highlighting the multi-dimensionality of the construct. Perceived support refers to people's belief that help would be provided to them if needed, and received support refers to the help actually provided (Norris & Kaniasty, 1996). Recent studies have stated the need to distinguish received support from perceived support when analyzing the process of coping with stress (Hartley & Coffee, 2019; Zhou et al., 2017). In theory, received support will enhance

people's ability to cope with stressful events, whereas perceived support will help individuals to view a threatening situation as less stressful (Lakey & Cohen, 2000). Empirical studies have suggested that perceived social support cushions the negative effects of bullying on victims, being linked to higher levels of self-efficacy, reduced severity of threat perception, and fewer mental health problems (Adler-Constantinescu et al., 2013; Otake et al., 2019; Reid et al., 2016; Yin et al., 2017).

There have been few quantitative studies of the role of received support in helping bullied adolescents. Qualitative studies have shown that received social support can improve victims' psychological adjustment and prevent subsequent bullying victimization (Frisén et al., 2012; Ramirez, 2013; Song, 2019; Tenenbaum et al., 2011). Although perceived and received support have been theorized as separate constructs in studying the health outcomes of stress, most quantitative studies on bullying have focused on perceived rather than actually received support. Consequently, there is a dearth of information on the types of received support that are most beneficial for adolescent victims of school bullying. Given that seeking social support is one of the most common and effective strategies used by bullied adolescents (Evans et al., 2017; Song, 2019; Tenenbaum et al., 2011; Xie et al., 2020), a better understanding of the effects of actually received support for bullied adolescents is needed to inform timely and effective interventions.

The concept of received social support has been operationalized in Western contexts, but research in the Chinese context remains scant. Although social support might take similar forms across different cultures (Luo et al., 2017), there are cultural differences in the role of social support in dealing with stressful events. While the more individualistic cultures often found in Western societies emphasize independence and weaker social connections, the collectivistic culture in China emphasizes interdependence and embeds the individual in tighter and more supportive networks (Hofstede, 2019). Chinese adolescents might therefore rely more heavily on social support in response to school bullying. However, a valid and reliable tool for measuring the support received by Chinese adolescent victims of school bullying is lacking, and the buffering effects of received support for bullied adolescents in China have not been identified.

The Berlin Social Support Scales (BSSS) are a series of self-report questionnaires developed by Schulz and Schwarzer (2003). The Actually Received Support scale (BSSS-RS) is a 14-item measure of the actual support provided to an individual trying to cope with a stressful episode. The BSSS-RS encompasses multiple types and sources of social support. Originally developed in German, the BSSS-RS has been translated into English and widely used in previous studies (DiMillo et al., 2019; Sullivan et al., 2020). Schulz and Schwarzer (2003) originally proposed three dimensions representing three types of received support—emotional (six items), instrumental (three items), and informational (two items)—after

removing three reverse-scored items. However, the recent scale validation studies of DiMillo et al. (2019) and Roomaney et al. (2020) revealed that the 11-item BSSS-RS is unidimensional in cancer patients. Meanwhile, a two-factor model has been proposed to classify social support (Beutel et al., 2017) into tangible (e.g., encouragement, emotional nurturance, and advice) and intangible forms (e.g., material aid and behavioral assistance). The scale has been used in a variety of contexts involving vulnerable individuals, such as measuring the support provided to cancer patients by their partners (Schulz & Schwarzer, 2003; DiMillo et al., 2019) and assessing the support provided by grandparents to adolescents in single-parent families (Napora, 2018).

The BSSS-RS has shown adequate reliability and validity in studies conducted in Western contexts (DiMillo et al., 2019; Napora, 2018; Roomaney et al., 2020). However, no studies have evaluated the psychometric properties of the BSSS-RS for Chinese adolescents affected by school bullying. The present study translated the BSSS-RS into Chinese and evaluated the psychometric properties (factorial validity, scale reliability, and convergent validity) of the Chinese version against other psychological constructs for use with adolescents experiencing bullying. We expected that the BSSS-RS would correlate positively with perceived social support and life satisfaction, and negatively with loneliness and depression. We also expected that the BSSS-RS would be more strongly associated with measures that are theoretically closer to social support (i.e., support quality or relationship quality) and more

weakly associated with measures of distal constructs (i.e., depression). Our study also explored the profile of received support in the school bullying context across demographic subgroups divided by gender and grade level.

Method

Participants and Procedure

This survey recruited 462 students from a primary school (Grades 4 to 6) and a middle school (Grades 7 to 9) in Hebei Province, China, using a three-stage sampling method. First, the schools were selected by convenience sampling. Second, one class in each grade was randomly selected by simple random sampling. Third, all of the students in the selected classes were invited to participate in the survey. Written informed consent was obtained from the students' parents before the survey was administered. The students completed a self-report questionnaire in class with the help of a professionally trained monitor. The purpose of the study and limited use of the data were explained to the participants, and they were ensured of the confidentiality of their responses. The participants were also informed that they were free to withdraw from the study at any time. The students received education-related gifts (e.g., a bookmark) for their participation. Considering the potential for psychological discomfort from completing items related to bullying, counseling and referral services were available to students in need. Ethical approval was obtained from the ethics committee of the authors' university (Ref. no. EA1903069). One week after completing the questionnaire (Test 1), 157 students

from Grades 5 and 8 were invited to complete the same questionnaire again (Test 2). One hundred students returned the second questionnaire. The final sample included 378 students who reported in Test 1 having been bullied at least once in the past six months. About half of the students were boys (52.4%) and about half were enrolled in primary school (51.1%). The participants' ages ranged from 10 to 17 years ($M_{\text{age}} = 13.44$, $SD = 1.64$). Eighty-four of the 378 participants completed both Test 1 and Test 2.

Translation Procedure for the BSSS-RS

The English version of the BSSS-RS was translated into Chinese using the guidelines developed by Tsang et al. (2017). Permission to translate and use the scale was obtained from its original developer, Dr. Ralf Schwarzer. To measure the frequency of received support, the response options were transformed from a 4-point response (from 1 = *strongly disagree* to 4 = *strongly agree*) referring to events in the past week to a 5-point response (from 1 = *almost never or never* to 5 = *almost always or always*) referring to events in the past six months. The initial translation from English to Chinese was made by two independent translators. Both translators were bilingual Chinese native speakers; one of them was familiar with the concept being measured, whereas the other was unaware of the objectives of the scale. Any discrepancies were discussed and resolved by consensus.

The initial translation was back-translated into English by two different translators, neither of whom were familiar with the scale or its underlying concept. Subsequently, an expert

committee, composed of two scholars familiar with the concept, a methodologist, and the translators, reviewed all of the translations and resolved any discrepancies through consensus on all items. The committee produced the pre-final version after assessing its equivalence with the original version. This version was finalized in cognitive interviews with 20 students from Grades 4 to 9 to check whether the questions were easy to comprehend and whether the translated items retained the meaning of the original items.

Instruments

The translated BSSS-RS measured the actual support received for coping with stressful episodes of school bullying over the previous six months (Schulz & Schwarzer, 2003). Due to the identified problems with the three reverse-scored items in the original BSSS-RS (DiMillo et al., 2019; Roomaney et al., 2020; Schulz & Schwarzer, 2003), we omitted these three items in our analyses. The remaining 11-item scale was used to separately measure the support received from three sources: a close family member, a friend or classmate, and a teacher. The items were scored on a 5-point scale ranging from 1 (*almost never or never*) to 5 (*almost always or always*).

Students' experience of bullying victimization over the past six months was measured by the 14-item self-reported Victim Scale from the School Bullying Scales (Cheng et al., 2011). The items were scored on a 5-point scale from 0 (*never*) to 4 (*several times a week*). This scale has shown good internal consistency and convergent validity for use with Chinese adolescents

(Cheng et al., 2011; Wu & Hou, 2017). Cronbach's α for the total scale was .86 in this study.

Students who scored 1 (*once or twice*) or more on at least one item of the scale were selected as self-reported bullying victims in the current study.

Perceived social support was measured with the Chinese version of the 12-item self-reported Multidimensional Scale of Perceived Social Support (Chou, 2000) from family, friends, and significant others. To be consistent with the three domains of the BSSS-RS, we replaced "significant others" with "teachers." The items were scored on a 7-point scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). The measure has shown good reliability and validity for use with Chinese adolescents (Chen et al., 2017; Chou, 2000). Cronbach's α values for this study were .84 for the total scale and .73 to .77 for the subscales.

Overall cognitive judgements of life satisfaction were measured with the Chinese version of the 5-item self-reported Satisfaction with Life Scale (Shek, 1992). The items were scored on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale has shown good reliability and validity for use with Chinese adolescents (Wang et al., 2017). Cronbach's α for the scale was .82 in this study.

Perceived loneliness was measured with the Chinese version of the 16-item self-reported Children's Loneliness Scale (Wang, 1999). The items were scored on a 5-point Likert scale ranging from 1 (*not true at all*) to 5 (*always true*). The scale has shown good reliability

and validity for use with Chinese adolescents (Tan et al., 2016). Cronbach's α for the scale was .89 in this study.

Depression symptoms were measured with the Chinese version of the 20-item self-reported Center for Epidemiological Studies Depression Scale for Children (William Li et al., 2010), which asks respondents about symptoms of depression experienced over the past week. The items were scored on a 4-point Likert scale ranging from 0 (*not at all*) to 3 (*a lot*). The measure has shown good reliability and validity for use with Chinese adolescents (Fu et al., 2017). Cronbach's α was .87 in this study.

Data Analyses

To examine the factor structure, confirmatory factor analyses were conducted using Mplus 7.4 (Muthén & Muthén, 2017) under the robust maximum likelihood estimator to examine the one-factor, two-factor, and three-factor models for the BSSS-RS for the three sources of support (family member, friend or classmate, and teacher). The models were modified for fit according to the modification index and standardized expected parameter change (Kaplan, 1989). Model fit was evaluated using the following criteria: chi-square (χ^2) test; comparative fit index (CFI) $\geq .95$; root mean square error of approximation (RMSEA) $\leq .06$; and standardized root mean square residual (SRMR) $\leq .08$ (Hu & Bentler, 1999). The Akaike information criterion (AIC) was used to compare the models for parsimony, with a lower AIC denoting a more parsimonious model (Akaike, 1974). Missing data were handled

using the full information maximum likelihood method under the missing at random assumption.

The reliability of the BSSS-RS was measured by its internal consistency and temporal stability. Cronbach's α and item-total correlations (ITC) were used as indicators of internal consistency. Cronbach's α of .70 or greater and item-total correlations of .40 or greater were considered acceptable (DeVellis, 2016; Nunnally & Bernstein, 1994). Temporal stability was evaluated based on the intraclass correlation coefficient (ICC). An average-measures ICC was calculated using a 2-way random consistency model. The ICC values were interpreted as follows: less than .40 = poor; .40 to .75 = fair to good; greater than .75 = excellent (Fleiss, 1986). To explore the demographic characteristics, independent t tests were conducted to compare the scores of the three BSSS-RS sources of support across genders and grades, using Cohen d as an indicator of effect size across subgroups. The convergent validity of the BSSS-RS was examined using partial correlations between the BSSS-RS and the validating variables (perceived social support, life satisfaction, loneliness, and depression) after controlling for gender and grade.

Results

Factorial Validity

Table 1 shows the results of the confirmatory factor analyses for the one-factor, two-factor, and three-factor models of support received from a family member, friend or classmate,

and teacher, separately assessed by the BSSS-RS. None of the three models had a satisfactory fit ($p_s < .05$, CFIs $< .95$, RMSEAs $> .06$). The three-factor models had a better fit than the other two models, as shown by the smaller AIC. As a result, the three-factor model of the BSSS-RS was adopted for subsequent analyses.

After specifying a residual correlation (modification index = 31.47, standardized expected parameter change = .41) between Item 11 (“This person took care of many things for me”) and Item 12 (“This person took care of things I could not manage on my own”), the three-factor model showed an acceptable fit for the Actually Received Support scale for support from a family member (CFI = .97, RMSEA = .05, SRMR = .04). For the Actually Received Support scale for support from a friend or classmate, the specification of the residual correlation (modification index = 24.26, standardized expected parameter change = .40) between Items 11 and 12 improved the model fit and the revised three-factor model had an acceptable fit (CFI = .96, RMSEA = .06, SRMR = .05). For the Actually Received Support scale for support from a teacher, the specification of the residual correlation between Items 11 and 12 (modification index = 16.8, standardized expected parameter change = .24) improved the model fit. However, the revised model still did not have an adequate fit (CFI = .93, RMSEA = .08).

In the revised three-factor models, all of the factor loadings were statistically significant ($p < .01$) and substantial ($\lambda = .49$ to $.80$ for family support, $.50$ to $.81$ for friend/classmate

support, and .51 to .88 for teacher support). The three factors in each scale were also strongly correlated with each other ($r \geq .66, p < .01$).

Summary Statistics and Reliability

Table 2 reports the summary statistics and Cronbach's α of the BSSS-RS for the three sources of support. For all three sources, the BSSS-RS achieved adequate reliability ($\alpha = .73$ to .90) for the total scale and for the emotional and instrumental support types. The informational support factor, with only two items, had lower reliability ($\alpha = .65$ to .72). The three separate scales of the BSSS-RS displayed satisfactory levels of test-retest reliability for both Test 1 and Test 2 (ICC = .72 to .83).

Demographic Differences in the BSSS-RS

The descriptive statistics of the BSSS-RS for the three sources of support across genders and grades are shown in Table 3. There were no significant differences between genders in the measures of support actually received from a family member or from a teacher for either the total scale or for any of the three types of support ($p = .17$ to .93). In the measures of support actually received from a friend or classmate, girls reported significantly higher levels of support than boys on the total scale ($t = 2.67$, Cohen's $d = .28, p < .01$), and for the emotional ($t = 3.25, d = .34, p < .01$) and informational types of support ($t = 2.53, d = .27, p = .01$), but not for the instrumental type of support ($t = 1.14, p = .25$). There were significant differences between grades for support actually received from all three sources, with students in Grades 7 to 9

consistently reporting significantly higher levels of social support on the total scale and for the three types of support ($p < .01$) than those in Grades 4 to 6.

Convergent Validity

Table 4 reports the correlations between the BSSS-RS and the validating variables of perceived support, loneliness, depression, and life satisfaction, after controlling for gender and grade. For all three sources of support, moderate positive correlations were found between actually received support and perceived support ($r = .47$ to $.56$, $p < .01$) and life satisfaction ($r = .32$ to $.42$, $p < .01$), moderate negative correlations were found between actually received support and loneliness ($r = -.35$ to $-.53$, $p < .01$), and small-to-moderate negative correlations were found between actually received support and depression ($r = -.25$ to $-.38$, $p < .01$).

Discussion

We translated the BSSS-RS into Chinese and examined its psychometric properties for support from a family member, friend or classmate, and teacher in a sample of Chinese students experiencing school bullying. Satisfactory internal consistency, temporary stability, and convergent validity indicate that the BSSS-RS is a reliable and valid tool for measuring the support received from a family member and a friend or classmate among Chinese adolescents affected by school bullying.

The originally proposed three-factor model showed the best model fit with data on support received from a family member and a friend or classmate. The residual correlation

specified between Items 11 (“This person took care of many things for me”) and 12 (“This person took care of things I could not manage on my own”) probably reflects the substantial overlap in the content of the two items and the similarity in their wordings. After specifying the residual correlation, the revised three-factor models showed an adequate model fit for the family member and friend or classmate sources of support. The lack of an adequate model fit for the BSSS-RS for support received from a teacher may be attributable to the large class sizes and high student-to-teacher ratios in Chinese schools (Zhou et al., 2014). The limited number of individual interactions and support from teachers might have prevented bullying victims from identifying with some of the teacher-related BSSS-RS items. Our findings indicate the need to further validate the BSSS-RS for use with a teacher as the source of support.

For the different sources of support, the BSSS-RS demonstrated good levels of reliability for the total scale ($\alpha = .81$ to $.90$) comparable to those found in previous studies (DiMillo et al., 2019; Roomaney et al., 2020; Schulz & Schwarzer, 2003). An adequate level of scale homogeneity was indicated by the significant and substantial ITC ($r \geq .40$). The internal consistency of the instrumental and informational types of support was found to be lower than that of the emotional type, which might be explained by the small number of items used to measure these two factors (Vaske et al., 2017). The strong correlations between the three BSSS-RS factors ($r \geq .66$) support the presence of a higher-order factor representing actually received support as a hierarchical construct (Eid & Koch, 2014).

Non-significant differences were found between girls and boys on the BSSS-RS for the family member and teacher sources. In previous studies (Hameed et al., 2018; Rueger et al., 2010), girls have reported receiving more peer support than boys. In general, women have been found to be more likely to turn to their social groups when dealing with stress than men (Taylor, 2007). Although the literature has suggested that younger students are more likely to seek support from others, we found that middle school students reported receiving more social support than primary school students. It is possible that middle school students held alternative perceptions and interpreted the items differently from primary school students as a result of their different developmental stages.

Our results support the convergent validity of the Chinese BSSS-RS, demonstrating positive correlations with perceived social support and life satisfaction and negative correlations with loneliness and depression. The specific hypotheses regarding the convergent validity of the scale were largely supported. Moderate correlations were found between the BSSS-RS and constructs related to social relationships (perceived social support and loneliness). Weaker correlations were expected between the BSSS-RS and more distal constructs related to subjective well-being. However, the correlations between the BSSS-RS and life satisfaction were not found to differ from those between the BSSS-RS and loneliness, except for the friend or classmate source of support. As more than half of the 11 BSSS-RS items measure emotional support, it is not surprising that emotional support and total score

were more strongly correlated with life satisfaction and depression, which reflect emotional states.

Study Implications

This study is the first scale validation study to introduce the BSSS-RS in the Chinese context, with the following implications for research and practice in relation to bullied adolescents in China. First, in accordance with previous research (Eagle et al., 2019), only moderate correlations were found between received and perceived support. Future research may explore the incremental role of received support as a separate construct in studying responses to school bullying. The moderate and negative correlations between received social support and psychological functioning suggest that received social support plays a protective role for victims of bullying. Further studies could explore the buffering effects of received support on the physical, social, and psychological outcomes of bullying victimization and on the likelihood of involvement in subsequent bullying incidents.

Second, our findings indicate that the BSSS-RS is a reliable and valid tool for measuring the support received by a Chinese adolescent victim of bullying from a family member or a classmate or friend. However, family and peers might play different roles in adolescent coping with bullying victimization. Individuals gain more space to build autonomous social networks during adolescence, and they might depend less on their parents and more on their peers. Furthermore, as reflected by the Chinese saying “*zai jia kao fu mu*,

zai wai kao peng you” (one depends on one’s parents when at home, and on one’s friends when away from home), the respective roles of family members and peers may depend on where bullying occurs. Therefore, the roles of family and peers in helping adolescents deal with school bullying should be explored separately, especially while paying attention to both traditional bullying and cyberbullying.

Third, gender and grade differences in responding to the BSSS-RS might imply different interpretations of the construct or different support needs in tackling bullying. Future studies are recommended to further examine the measurement variance between genders and grades. The effects of received support in the bullying context could also be explored between genders or age groups. The BSSS-RS provides a feasible and reliable way to quantify the support received in the context of bullying, through which support for bullied adolescents can be identified. Intervention programs designed to provide support to bullied adolescents can be optimized by considering the types and sources of support, and the gender and age of the victims.

Limitations

There are several limitations to this study. First, the participants were all recruited from a single city in northern China and the schools were selected using convenience sampling. This might limit the generalizability of the findings. Second, the cross-sectional design meant that it was not possible to examine the predictive validity of the Chinese version of the BSSS-RS

on distal outcomes such as academic results, self-efficacy, and dropping out of school. Third, not every student who has been bullied experiences stress. Future studies could take the frequency and severity of bullying victimization into account. Furthermore, all of the data were collected from self-report measures, which may cause bias due to common method variance.

References

- Adler-Constantinescu, C., Beșu, E.-C., & Negovan, V. (2013). Perceived social support and perceived self-efficacy during adolescence. *Procedia-Social and Behavioral Sciences*, 78, 275–279.
- Akaike, H. (1974). A new look at the statistical model identification. *IEEE Transactions on Automatic Control*, 19(6), 716–723.
- Barker, G. (2007). *Adolescents, social support and help-seeking behaviour: An international literature review and programme consultation with recommendations for action*. Geneva, Switzerland: WHO Press.
- Beutel, M. E., Brähler, E., Wiltink, J., Michal, M., Klein, E. M., Jünger, C., Wild, P. S., Münzel, T., Blettner, M., Lackner, K., Nickels, S., & Tibubos, A. N. (2017). Emotional and tangible social support in a German population-based sample: Development and validation of the Brief Social Support Scale (BS6). *PLOS ONE*, 12(10), e0186516.

- Cao, Q. L., Xu, X., Xiang, H. J., Yang, Y. Z., Peng, P. Y., & Xu, S. Y. (2020). Bullying victimization and suicidal ideation among Chinese left-behind children: Mediating effect of loneliness and moderating effect of gender. *Children and Youth Services Review, 111*, 104848.
- Cauce, A. M., & Srebnik, D. S. (1990). Returning to social support systems: A morphological analysis of social networks. *American Journal of Community Psychology, 18*(4), 609–616.
- Cava, M. J., Tomás, I., Buelga, S., & Carrascosa, L. (2020). Loneliness, depressive mood and cyberbullying victimization in adolescent victims of cyber dating violence. *International Journal of Environmental Research and Public Health, 17*(12), 4269.
- Chang, F. C., Chiu, C. H., Miao, N. F., Chen, P. H., Lee, C. M., Huang, T. F., & Pan, Y. C. (2015). Online gaming and risks predict cyberbullying perpetration and victimization in adolescents. *International Journal of Public Health, 60*(2), 257–266.
- Chen, W. F., Zhang, D. J., Pan, Y. G., Hu, T. Q., Liu, G. Z., & Luo, S. L. (2017). Perceived social support and self-esteem as mediators of the relationship between parental attachment and life satisfaction among Chinese adolescents. *Personality and Individual Differences, 108*, 98–102.

- Cheng, Y.-Y., Chen, L.-M., Liu, K.-S., & Chen, Y.-L. (2011). Development and psychometric evaluation of the school bullying scales: A Rasch measurement approach. *Educational and Psychological Measurement, 71*(1), 200–216.
- Chou, K.-L. (2000). Assessing Chinese adolescents' social support: The Multidimensional Scale of Perceived Social Support. *Personality and Individual Differences, 28*(2), 299–307.
- DeVellis, R. F. (2016). *Scale development: Theory and applications* (4th ed.). Los Angeles: Sage.
- DiMillo, J., Hall, N. C., Ezer, H., Schwarzer, R., & Körner, A. (2019). The Berlin Social Support Scales: Validation of the Received Support Scale in a Canadian sample of patients affected by melanoma. *Journal of Health Psychology, 24*(13), 1785–1795.
- Eagle, D. E., Hybels, C. F., & Proeschold-Bell, R. J. (2019). Perceived social support, received social support, and depression among clergy. *Journal of Social and Personal Relationships, 36*(7), 2055–2073.
- Eid, M., & Koch, T. (2014). The meaning of higher-order factors in reflective-measurement models. *Measurement: Interdisciplinary Research & Perspectives, 12*(3), 96–101.
- Esposito, C., Bacchini, D., & Affuso, G. (2019). Adolescent non-suicidal self-injury and its relationships with school bullying and peer rejection. *Psychiatry Research, 274*, 1–6.

- Evans, C. B., Cotter, K. L., & Smokowski, P. R. (2017). Giving victims of bullying a voice: A qualitative study of post bullying reactions and coping strategies. *Child and Adolescent Social Work Journal*, *34*(6), 543–555.
- Fleiss, J. (1986). *The design and analysis of clinical experiments* (Wiley series in probability and mathematical statistics). New York: Wiley.
- Frisén, A., Hasselblad, T., & Holmqvist, K. (2012). What actually makes bullying stop? Reports from former victims. *Journal of Adolescence*, *35*(4), 981–990.
- Fu, M. C., Xue, Y., Zhou, W. H., & Yuan, T. F. (2017). Parental absence predicts suicide ideation through emotional disorders. *PLOS ONE*, *12*(12), e0188823.
- Hartley, C., & Coffee, P. (2019). Perceived and received dimensional support: Main and stress-buffering effects on dimensions of burnout. *Frontiers in Psychology*, *10*, 1724.
- Hameed, R., Riaz, A., & Muhammad, A. (2018). Relationship of gender differences with social support, emotional behavioral problems and self-esteem in adolescents. *Journal of Psychiatry and Behavioral Science*, *2*(1), 1–6.
- Hansson, E., Garmy, P., Vilhjálmsón, R., & Kristjánssdóttir, G. (2020). Bullying, health complaints, and self-rated health among school-aged children and adolescents. *Journal of International Medical Research*, *48*(2), 0300060519895355.

- Hobfoll, S. E., & Stokes, J. P. (1988). The process and mechanics of social support. In L. Baxler & S. Duck (Eds.), *Handbook of personal relationships* (pp. 497–517). Oxford: Wiley.
- Hofstede, G. (2019). Compare countries. *Hofstede insights*.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Hymel, S., & Swearer, S. M. (2015). Four decades of research on school bullying: An introduction. *American Psychologist*, 70(4), 293–299.
- Jia, X. J., Cai, L., Lin, L., & Lin, C. D. (2020) The relationship between perceived teachers' support and academic engagement among high school students: The chain mediating effect of academic self-efficacy and achievement goal orientation. *Psychological Development and Education*, 36(6), 700–707.
- Kaplan, D. (1989). Model modification in covariance structure analysis: Application of the expected parameter change statistic. *Multivariate Behavioral Research*, 24(3), 285–305.
- Klomek, A. B. (2020). Peer and parents' support are crucial protective factors against adolescent victimization by bullying. *EClinicalMedicine*, 22.
- Lakey, B., & Cohen, S. (2000). Social support theory and measurement. In S. Cohen, L.G. Underwood, & B. H. Gottlieb (Eds.), *Social support measurement and intervention: A*

guide for health and social scientists (pp. 29–52). New York, NY: Oxford University Press.

Luo, X. F., Chen, Q. S., & Mu, S. K. (2017). The revision and adaption of the Chinese version of Child and Adolescent Social Support Scale. *Chinese Journal of Clinical Psychology*, 25(4), 671–674.

Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *Journal of Adolescent Health*, 55(5), 602–611.

Moral-García, J. E., Urchaga-Litago, J. D., Ramos-Morcillo, A. J., & Maneiro, R. (2020). Relationship of parental support on healthy habits, school motivations and academic performance in adolescents. *International Journal of Environmental Research and Public Health*, 17(3), 882.

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide*. Los Angeles, CA: Muthén & Muthén.

Napora, E. (2018). Support of grandparents, relationships with peers, and resilience in adolescents brought up by single mothers. *Psychologia Wychowawcza*, 55, 83–103.

Norris, F. H., & Kaniasty, K. (1996). Received and perceived social support in times of stress:

A test of the Social Support Deterioration Deterrence Model. *Journal of Personality and*

Social Psychology, 71(3), 498.

Nunnally, J., & Bernstein, I. (1994). The reliability of reliability. *Psychometric Theory* (3rd

ed.). New York: McGraw-Hill.

Olweus, D. (2013). School bullying: Development and some important challenges. *Annual*

Review of Clinical Psychology, 9, 751–780.

Östberg, V., Modin, B., & Låftman, S. B. (2018). Exposure to school bullying and

psychological health in young adulthood: A prospective 10-year follow-up study. *Journal*

of School Violence, 17(2), 194–209.

Otake, Y., Liu, X., & Luo, X. (2019). Involvement in bullying among left-behind children in

provincial Chinese cities: The role of perceived emotional support. *Journal of Aggression,*

Maltreatment & Trauma, 28(8), 943–957.

Pössel, P., Burton, S. M., Cauley, B., Sawyer, M. G., Spence, S. H., & Sheffield, J. (2018).

Associations between social support from family, friends, and teachers and depressive

symptoms in adolescents. *Journal of Youth and Adolescence, 47*(2), 398–412.

Ramirez, O. (2013). Survivors of school bullying: A collective case study. *Children & Schools,*

35(2), 93–99.

- Reid, G. M., Holt, M. K., Bowman, C. E., Espelage, D. L., & Green, J. G. (2016). Perceived social support and mental health among first-year college students with histories of bullying victimization. *Journal of Child and Family Studies, 25*(11), 3331–3341.
- Roomaney, R., Kagee, A., & Knoll, N. (2020). Received and perceived support subscales of the Berlin Social Support Scales in women diagnosed with breast cancer attending the breast clinic at Tygerberg hospital: Structure and correlates. *South African Journal of Psychology, 50*(1), 54–66.
- Rueger, S. Y., Malecki, C. K., & Demaray, M. K. (2010). Relationship between multiple sources of perceived social support and psychological and academic adjustment in early adolescence: Comparisons across gender. *Journal of Youth and Adolescence, 39*(1), 47.
- Schulz, U., & Schwarzer, R. (2003). Social support in coping with illness: The Berlin Social Support Scales (BSSS). *Diagnostica, 49*(2), 73–82.
- Schwarzer, R., & Knoll, N. (2007). Functional roles of social support within the stress and coping process: A theoretical and empirical overview. *International Journal of Psychology, 42*(4), 243–252.
- Shek, D. T. (1992). Actual–ideal discrepancies in the representation of self and significant-others and psychological well-being of Chinese adolescents. *In International Journal of Psychology, 27*(3-4), 229.

- Song, Y. P. (2019). *A study on school bullying behaviors of X middle school students* [Master's thesis, Central China Normal University]. China National Knowledge Infrastructure. <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202001&filename=1019205493.nh>
- Sterzing, P. R., Gibbs, J. J., Gartner, R. E., & Goldbach, J. T. (2018). Bullying victimization trajectories for sexual minority adolescents: Stable victims, desisters, and late-onset victims. *Journal of Research on Adolescence, 28*(2), 368–378.
- Sullivan, M., Moore, M., Blom, L. C., & Slater, G. (2020). Relationship between social support and depressive symptoms in collegiate student athletes. *Journal for the Study of Sports and Athletes in Education, 14*(3), 192–209.
- Tan, J., Ai, Y., Wen, X., Wu, Y., & Wang, W. (2016). Relationship between shyness and loneliness among Chinese adolescents: Social support as mediator. *Social Behavior and Personality: An International Journal, 44*(2), 201–208.
- Taylor, S. E. (2007). Social support. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 145–163). New York, NY: Oxford University Press.
- Tenenbaum, L. S., Varjas, K., Meyers, J., & Parris, L. (2011). Coping strategies and perceived effectiveness in fourth through eighth grade victims of bullying. *School Psychology International, 32*(3), 263–287.

- Tsang, S., Royse, C. F., & Terkawi, A. S. (2017). Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi Journal of Anaesthesia, 11*(Suppl 1), S80.
- Vangelisti, A. L. (2009). Challenges in conceptualizing social support. *Journal of Social and Personal Relationships, 26*(1), 39–51.
- Vaske, J. J., Beaman, J., & Sponarski, C. C. (2017). Rethinking internal consistency in Cronbach's alpha. *Leisure Sciences, 39*(2), 163–173.
- Wang, X. D. (1999). Rating scales for mental health (revised and enlarged ed.). *Beijing Chinese Mental Health Journal, 318–320*.
- Wang, G. F., Han, A. Z., Zhang, G. B., Xu, N., Xie, G. D., Chen, L. R., ... & Su, P. Y. (2020). Sensitive periods for the effect of bullying victimization on suicidal behaviors among university students in China: The roles of timing and chronicity. *Journal of Affective Disorders, 268*, 12–19.
- Wang, D., Hu, M., & Xu, Q. (2017). Testing the factorial invariance of the Satisfaction with Life Scale across Chinese adolescents. *Social Behavior and Personality: An International Journal, 45*(3), 505–516.

- William Li, H. C., Chung, O. K. J., & Ho, K. Y. (2010). Center for Epidemiologic Studies Depression Scale for Children: Psychometric testing of the Chinese version. *Journal of Advanced Nursing*, 66(11), 2582–2591.
- Wu, Y. W., & Hou, H. B. (2017). The impacts and countermeasures of school bullying: Evidence from rural boarding primary schools. *Studies in Labor Economics*, 5(06), 36–55.
- Xie, J. S., Wei, Y. M., Zhu, Z. Z. (2019). Patterns of bullying victimization among adolescents in China: Based on latent profile analysis. *Psychological Development and Education*, 35(1), 95–102.
- Xie, S., Xu, J., & Gao, Y. (2020). Bullying victimization, coping strategies, and depression of children of China. *Journal of Interpersonal Violence*, 0886260520907361.
- Yen, C. F., Lin, I. M., Liu, T. L., Hu, H. F., & Cheng, C. P. (2014). Mediating effects of depression and anxiety on the relationship between bullying involvement and pain problems among adolescents in Taiwan. *Comprehensive Psychiatry*, 55(6), 1415–1421.
- Yin, X. Q., Wang, L. H., Zhang, G. D., Liang, X. B., Li, J., Zimmerman, M. A., & Wang, J. L. (2017). The promotive effects of peer support and active coping on the relationship between bullying victimization and depression among Chinese boarding students. *Psychiatry Research*, 256, 59–65.

- Zaborskis, A., Ilionsky, G., Tesler, R., & Heinz, A. (2019). The association between cyberbullying, school bullying, and suicidality among adolescents. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *40*(2), 100–114.
- Zhang, H., Chi, P., Long, H., & Ren, X. (2019). Bullying victimization and depression among left-behind children in rural China: Roles of self-compassion and hope. *Child Abuse & Neglect*, *96*, 104072.
- Zhou, X., Hu, Y., & He, X. (2014). Variations of “large class size” in Chinese elementary schools and analysis of policy factors. *Studies in Sociology of Science*, *5*(4), 85.
- Zhou, K., Li, H., Wei, X., Yin, J., Liang, P., Zhang, H., Kou, L., Hao, M., You, L., Li, X., & Zhuang, G. (2017). Relationships between received and perceived social support and health-related quality of life among patients receiving methadone maintenance treatment in Mainland China. *Substance Abuse Treatment, Prevention, and Policy*, *12*(1), 33.

Table 1*Results of Confirmatory Factor Analyses of BSSS-RS (N = 378)*

Scale	χ^2	<i>df</i>	<i>p</i>	CFI	RMSEA	SRMR	AIC
Received family support							
1-factor model	159.29	44	< .01	.90	.08	.05	11845.34
2-factor model	132.34	43	<.01	.92	.07	.05	11805.21
3-factor model	109.82	41	< .01	.94	.07	.05	11776.17
Revised 3-factor model	77.68	40	< .01	.97	.05	.04	11734.63
Received friend/classmate support							
1-factor model	197.63	44	< .01	.86	.10	.06	11673.14
2-factor model	151.85	43	<.01	.90	.08	.06	11606.83
3-factor model	111.35	41	< .01	.94	.07	.06	11550.72
Revised 3-factor model	87.50	40	< .01	.96	.06	.05	11517.30
Received teacher support							
1-factor model	221.22	44	< .01	.86	.10	.07	11561.96
2-factor model	206.34	43	<.01	.87	.10	.07	11540.34
3-factor model	137.65	41	< .01	.92	.08	.06	11443.02
Revised 3-factor model	129.44	40	< .01	.93	.08	.05	11431.95

Note. χ^2 = chi-square from robust maximum likelihood estimation, *df* = degrees of freedom, CFI = comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean residual, AIC = Akaike information criterion.

Table 2*Summary Statistics and Internal Consistency of the BSSS-RS (N = 378)*

Scale	Mean	SD	α	ITC range
Received family support	2.62	0.84	.89	.49 - .71
Emotional support	2.77	0.87	.81	.41 - .71
Instrumental support	2.60	1.00	.78	.52 - .67
Informational support	2.17	1.10	.69	.53
Received friend/classmate support	2.15	0.82	.89	.51 - .70
Emotional support	2.30	0.85	.81	.43 - .71
Instrumental support	1.93	0.99	.78	.50 - .70
Informational support	1.95	1.06	.65	.48
Received teacher support	2.13	0.84	.90	.51 - .73
Emotional support	2.14	0.93	.86	.44 - .76
Instrumental support	2.18	0.95	.73	.50 - .61
Informational support	1.99	1.05	.72	.56

Note. α = Cronbach's alpha, ITC = item-total correlation.

Table 3*Descriptive Statistics of the BSSS-RS Across Demographic Subgroups*

Mean (SD)	By gender			By grade		
	Male (N = 198)	Female (N = 180)	Cohen <i>d</i>	Grade4 to 6 (N = 193)	Grade7 to 9 (N = 185)	Cohen <i>d</i>
Received family support	2.57 (0.83)	2.67 (0.85)	.12	2.34 (0.78)	2.90 (0.80)	.71
Emotional support	2.73 (0.88)	2.82 (0.85)	.10	2.52 (0.84)	3.04 (0.82)	.63
Instrumental support	2.59 (0.95)	2.60 (1.06)	.01	2.38 (1.01)	2.82 (0.94)	.45
Informational support	2.09 (1.09)	2.25 (1.10)	.15	1.76 (1.08)	2.59 (1.02)	.79
Received friend/classmate support	2.04 (0.79)	2.27 (0.83)	.28	1.88 (0.81)	2.41 (0.73)	.69
Emotional support	2.16 (0.84)	2.45 (0.85)	.34	2.01 (0.84)	2.59 (0.76)	.72
Instrumental support	1.87 (1.00)	1.99 (0.98)	.12	1.76 (1.08)	2.09 (0.86)	.34
Informational support	1.82 (1.04)	2.10 (1.06)	.27	1.59 (1.07)	2.32 (0.91)	.73
Received teacher support	2.11 (0.85)	2.16 (0.83)	.06	1.83 (0.86)	2.43 (0.71)	.76
Emotional support	2.10 (0.94)	2.18 (0.91)	.09	1.86 (0.96)	2.42 (0.81)	.63
Instrumental support	2.20 (0.97)	2.17 (0.94)	.03	1.95 (1.06)	2.42 (0.76)	.51
Informational support	1.96 (1.07)	2.02 (1.03)	.06	1.57 (1.05)	2.42 (0.85)	.89

Table 4

Correlations Between the Three Scales of BSSS-RS and Validating Variables After Controlling for Gender and Grade (N = 378)

	Perceived family support	Perceived peer support	Perceived teacher support	Loneliness	Life satisfaction	Depression
Received family support						
Family support	.56**	.31**	.34**	-.35**	.40**	-.25**
Emotional support	.51**	.32**	.32**	-.38**	.39**	-.26**
Instrumental support	.49**	.23**	.26**	-.25**	.36**	-.18**
Informational support	.49**	.25**	.34**	-.24**	.28**	-.17**
Received friend/classmate support						
Friend/Classmate support	.32**	.47**	.34**	-.53**	.32**	-.38**
Emotional support	.30**	.48**	.33**	-.52**	.34**	-.38**
Instrumental support	.23**	.40**	.25**	-.41**	.22**	-.30**
Informational support	.30**	.28**	.29**	-.43**	.21**	-.27**
Received teacher support						
Teacher support	.46**	.25**	.51**	-.40**	.42**	-.38**

	Emotional					
support	.47**	.25**	.49**	-.38**	.40**	-.38**
	Instrumental					
support	.38**	.24**	.42**	-.32**	.38**	-.30**
	Informational					
support	.28**	.10	.36**	-.30**	.28**	-.26**

Note. ** $p < .01$.