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Title

School Victimization, Social Support and Mental Health among School Students in Taiwan, Hong Kong, and China.

Abstract

Objectives: This paper examines how peer social support mediates the association between school victimization and student psychological health among junior-high students in three Chinese societies (i.e., Taiwan, Hong Kong, and China), and further examines how three societies differ in the interrelationships of school violence, peer social support and psychological health.

Methods: Data were obtained from a random sample of over 2000 junior-high students (grades 7 to 9) in Taiwan, Hong Kong and China. Students were given an anonymous structured questionnaire, including items regarding basic demographics and school social experiences.

Results: The results of structural equation modeling analysis provided a good fit for the sample as a whole. The final model accounted for 32% of the variance in student psychological health. Overall findings showed that student psychological health is weakly associated with victimization by students and student maltreatment by teachers; however, student psychological health is indirectly associated with victimization by students, mediated through peer social support. Similar findings were found for students from other societies.

Conclusion: The findings imply that peer social support plays an important mediating role between exposure to school violence and student psychological health. The findings provide empirical evidence and information to help school practitioners and policymakers justify developing or incorporating social support into prevention and intervention strategies. The findings suggest that interventions or policies promoting social support incorporated at a national level could be effective across three Chinese societies.

Introduction

A few empirical studies have shown that peer social support plays an influential mediating role between exposure to school violence and its negative outcomes (Malecki, Demaray, & Davison, 2008; Seeds, Harkness, & Quilty, 2010). However, these studies were conducted in Western countries, using small convenience samples. Little is known about how peer social support mediates outcomes of school violence in Asian cultures, and even less is known about how student gender and ethnicity influence the interrelationships of these factors in Chinese societies.

Using a large-scale sample from Taiwan, Hong Kong and Mainland China, this study expands the literature on school victimization by examining how peer social support mediates the association between exposure to school violence and student psychological health in Chinese cultural contexts.

Definition

School violence in this study is defined as any behavior intended to harm students psychologically or physically while in school (Benbenishty & Astor, 2005). The term "violence" includes physical violence (e.g., beating), verbal and social violence (e.g., cursing and social exclusion), and threatening behavior (e.g., extortion) (see Benbenishty & Astor, 2005 for a critical discussion). Based on this definition, the two most common types of school victimization discussed in current literature are: student victimization by students (e.g., Benbenishty & Astor, 2005; Chen & Wei, 2011b) and student maltreatment by teachers (e.g., Chen & Wei, 2011a; 2011b). This study examines these two types of school victimization.

Social support has been defined as assistance, help or information leading individuals to believe they are loved, cared for and valued and that they share mutual

obligation with members of a network (Cobb, 1976; Cohen & Wills, 1985; Seeman, 1996). It includes emotional support (e.g., trust and empathy), instrumental support (e.g., time and money), appraisal support (e.g., evaluative feedback) and informational support (e.g., knowledge and skills) (Malecki & Demaray, 2003; Tardy, 1985). In addition, social support can be categorized into *actual use* of social support and *perception* of social support (Malecki & Demaray, 2002). Studies have indicated that perception of peer support has greater influence on adolescent mental health than does actual received social support, whether from peers or from other sources, such as parents and school adults (Papalia, Olds, & Feldman, 2009). Thus, this study examines students' perception of peer social support.

Literature Review

Social support deterioration model theorizes that trauma and stressful events can both directly and indirectly, through perceived social support, influence psychological well-being (Kaniasty & Norris, 1993; Norris & Kaniasty 1996; Prati & Pietrantoni, 2010; Prelow et al., 2006; Punamaki, Komproe, Qouta, El-Masri, & de Jong, 2005). Specifically, the model emphasizes that stressors or trauma events can involve dramatic change in available social support sources and potentially diminish the perception of social support, which then leads to poor psychological outcomes (Berrera, 1986).

School violence has been recognized as a major school stressor, a type of trauma that challenges students' mental health (Graham & Bellmore, 2007). Some researchers argue that once students experience school violence perpetrated by school peers and/or teachers, their sense of insecurity about interpersonal relationships and distrust of available resources may lead to perceptions of less peer social support.

Subsequently, the risk of suffering psychological distress is greatly increased (Malecki et al., 2008; Seeds et al., 2010).

To date, the social support deterioration model has been widely applied to explain psychological distress among people who experience natural disaster, family violence, and racial discrimination (e.g., Kaniasty & Norris, 1993; Norris & Kaniasty 1996; Prati & Pietrantoni, 2010; Prelow et al., 2006; Punamaki et al., 2005). However, relatively few studies have employed this model to examine school victimization, and most of those studies used small convenience samples from Western countries (Malecki et al., 2008; Seeds et al., 2010). There is a lack of empirical data showing how this theoretical model applies to the outcomes of school violence in Chinese/Asian contexts. In order to fill the research gap, the current study examines how the social support deterioration model is relevant to the context of school violence in three major Chinese societies (i.e., Taiwan, Hong Kong and Mainland China).

Theoretical model for this study

Based on previous literature and theory, this study proposes that students exposed to school violence (i.e., student victimization by students and student maltreatment by teachers) report lower levels of perception of peer social support and psychological health. Most importantly, this study proposes that perception of peer social support mediates the effects of exposure to school violence on student psychological health.

Methods

The data used in this study were based on a direct grant funded by The Chinese University of Hong Kong, entitled “A Pilot Study of School Violence among Chinese

Societies: An examination of prevalence and associates of school violence in Hong Kong, Mainland China and Taiwan" (Wei & Chen, 2009). Over 2,000 students from Taiwan, Hong Kong and Mainland Chinese students participate in this pilot study. The students were given a structured questionnaire in classrooms under the guidance of professionally trained survey monitors. The questionnaire included over 150 items regarding basic demographics and personal, family and school experiences, and took approximately 30 minutes to complete. Respondents were assured of anonymity, were encouraged to respond truthfully and were free to withdraw from the study at any time and for any reason. This study was supported by the Chinese University of Hong Kong, whose internal review board approved and supervised the questionnaires, procedures, informed consent forms and ethical concerns (Wei et al., 2009).

The probability sampling method was a multi-stage cluster random sample, and the strata were the geographical districts of each society. In the first stage, schools were randomly selected from the sampling frame according to the appropriate strata. In the next stage, one class was randomly selected from each grade in the selected schools. The sample included all students in the selected classes (Wei et al., 2006).

Measurement

Demographics. The student demographic variables (e.g., gender and grade level) were self-reported.

Student maltreatment by teachers (α=.70). This latent variable involved three items asking students how many times they had experienced maltreatment by teachers in school during this semester. The three items in this scale were selected and adapted from a version of the California School Climate and Safety Survey (CSCSS) (e.g., Benbenishty & Astor, 2005; Chen & Wei, 2011a, 2011b; Furlong et al., 2005; Wei &

Chen, in press; Wei, Williams, Chen, & Chang, 2010). The original items in the CSCSS were translated from English to Chinese to form a standardized version, and a standard back-translation procedure was employed in order to ensure accuracy. A five-point Likert scale was provided (1= never, 2= 1-2 times, 3= 3-4 times, 4= 5-6 times and 5= 7 times or more). Previous studies showed that the CSCSS demonstrated high validity and reliability (Chen & Wei, 2011a, 2011b; Furlong et al., 2003; Furlong et al., 2005). The three items were: "Teachers hit, beat, slapped or kicked you"; "Teachers cursed you"; and "Teachers mocked, insulted or humiliated you". The score for this variable was the sum of the ratings for these three items.

School victimization by students (α=.76). This latent variable asked students if they had experienced victimization by their peers in school in this semester. The five items in this scale were selected from a version of the CSCSS (e.g., Benbenishty & Astor, 2005; Chen & Wei, 2011a, 2011b; Furlong et al., 2005; Wei & Chen, in press; Wei et al., 2010). The original items in the adapted version of the CSCSS were translated from English to Chinese to form a standardized version, and a standard back-translation procedure was employed in order to ensure accuracy. A five-point Likert scale was provided (1= never, 2= 1-2 times, 3= 3-4 times, 4= 5-6 times and 5= 7 times or more). These items related to being hit, beaten or kicked; being cursed; being socially excluded; and being threatened or having rumors spread. The score for this variable was the sum of the ratings for these five items.

Peer social support (α=.90).This variable involved twelve items asking students about their perception of social support from school peers. These items were selected from a Chinese version of the Children and Adolescent Social Support Scale (CASSS) (Chen, 2005; Malecki, Demaray & Elliot, 2000; Malecki & Demaray, 2002). CASSS

has been used to measure 3rd- 12th-grade students' perception of social support (Malecki et al., 2000; Malecki & Demaray, 2002). The Chinese version of CASSS has been shown to have high reliability and good factorial validity (Chen, 2005; Malecki et al., 2000; Malecki & Demaray, 2002).

The results of exploratory factor analysis suggested the scale was unidimensional. The twelve items were randomly parceled into three indicators (i.e., Support 1, Support 2 and Support 3) in order to build up robust latent structures (Alhija & Wisenbaker, 2006; Little, Lindenberger & Nesselroade, 1999; Marsh, Hau, Balla & Grayson, 1998), and the score of each indicator was the sum of the items included. Support 1 included four items related to peers' friendly treatment and peer assistance (α=.82, factor loading=.91). Support 2 included four items related to peers' sharing, suggestion and advice, and activity participation and invitation (α=.84, factor loading=.92). Support 3 included four items related to peers' appraisal and appreciation, and spending time together (α=.86, factor loading=.90).

Psychological health (α=.84). This latent variable involved six items asking students about their general mental health situation. These six items in this scale were selected from the 12-item Chinese version of the General Health Questionnaire-12 (GHQ-12) (e.g., Chan, 1993; Ye, 2009). The GHQ-12 has been used to measure general psychological health in many cultures and countries (e.g., Chan, 1993; Ye, 2009), and the Chinese version of GHQ has been shown to have high reliability and good factorial validity (Ye, 2009). Some studies have identified the GHQ-12 as comprising two meaningful dimensions (Ye, 2009), which are mostly defined by negatively worded versus positively worded items. In this study, six positively worded items were used because previous studies suggested the negatively worded effects in

the Chinese version of GHQ-12 (e.g., Ye, 2009). These six items included, for example, “being able to concentrate on what you are doing”, “being able to enjoy your normal day-to-day activities” and “been feeling reasonably happy, all things considered”. A five-point Likert scale was provided (1= never, 2=seldom, 3= sometimes, 4= often and 5= all the time). The score for this variable was the sum of the ratings for these six items.

Analysis Plan

The primary analysis method in this study is latent-variable structural equations modeling (SEM) with maximum likelihood (ML) estimation using the AMOs program. SEM is a statistical methodology that takes a confirmatory approach to the analysis of structural theory, describing relationships among endogenous factors (Bentler, 1988). The structure/hypothesized model can be tested statistically in a simultaneous analysis of an entire system of variables to determine the extent to which it is consistent with the data. Confirmative factor analysis (CFAs) was first conducted to ensure the measurement model was a good fit. Following the CFAs, the final SEM model, with the full dataset of all junior-high students, was tested. Next, comparative analyses were conducted in order to determine whether patterns of relationships and mediating effects were different between male and female students and between Han Chinese and Indigenous students. In this comparative analysis, all factor loadings, paths, and covariances were constrained to be equal simultaneously to the same model across ethnicities and genders. Then, the model was tested by releasing path constraints one at a time in order to find out if releasing equality constraints would significantly improve the fit.

There are various indicators of the goodness of fit for a specific model. The

chi-square coefficient is used to assess the size of discrepancies between the relationships in the original data matrix from those implied by the model. A low chi-square measure reveals non-significant discrepancies, meaning that the data "fit" the theoretical model. However, due to the sensitivity of the chi-square coefficient to sample size, it is not preferred for large samples such as the one in this study. Researchers have addressed the chi-square limitation by developing goodness-of-fit indices that take a more pragmatic approach to the evaluation process. More commonly used fit indices includes Bentler and Bonnett's (1980) Normed Fit Index (NFI), Bollen's (1989) Incremental Fit Index (IFI), and Bentler's (1990) Compared Fit Index (CFI). Typically, these three fit indices consider a model to be a good fit when the value is above .90 (Bentler, 1992), and a superior fit when it is close to .95 (Hu & Bentler, 1999). A common misfit measure, the Root Mean Square Error (RMSEA), was also reported in the SEM analysis. The RMSEA considers a mediocre fit to range from .08 to .10, and a good fit to be below .06 (Hu & Bentler, 1999). Due to the large sample size of this study, statistical significance was set at $\alpha<.01$.

Results

Overall model

The results of the analysis, based on the total sample, provided a good fit to the data [χ^2 (113, N=2,650) =629.38, p<.001, and with NFI=.95, IFI=.96, CFI=.96, and RMSEA=.053]. This suggested that the model is a good one.

Figure 1 shows that student psychological health is not directly associated with student victimization by students (β=-.01). However, psychological health is indirectly associated with student victimization by students, mediated through perception of peer social support. Contrary to our prediction, student maltreatment by

teachers has an insignificant association with psychological health (β=-.08), and a weakly indirect association mediated through peer support.

Overall, perception of peer social support was the best predictor of student psychological health (β=.50). Taken together, all of these variables accounted for approximately one-fourth of the explained variance for student psychological health (R^2=.32).

Cross society-comparison analysis

In this analysis, factor loadings, paths, and covariances were constrained to be equal, in order to fit the covariance matrices of the subgroups simultaneously to the same model. The analysis provided a good fit to the data [χ^2 (245) =921.705, p<.001 and with NFI=.92, IFI=.94, CFI=.94, and RMSEA= .04].

Next, the model was tested to determine if releasing equality constraints on the paths could significantly improve the fit. After releasing path constraints one at a time, it was determined that the release of any constraints did not yield a significantly better fit. The overall model explained 32 percent of the variance in student psychological health for Taiwan (R^2=.32), 34 percent for Hong Kong (R^2=.34), and 34 percent for Mainland China (R^2=.34).

Discussion

The results of this study show good indices of model fit. This suggested that the theoretical model of how the interrelationships of exposure to school violence perpetrated by students and teachers and perception of peer support associated with student psychological health is supported in Chinese cultural contexts. Furthermore, the variables in this model account for a relatively large amount of the explained variance in student psychological health. This suggested that our proposed model

explains psychological health well among students in these three Chinese societies. The overall results of this study indicate that the social support deterioration model is relevant to school violence in Taiwan, Hong Kong and Mainland China.

The results show that student psychological health is not directly associated with student victimization by students and student maltreatment by teachers. The findings are consistent with large-scale empirical studies on school victimization conducted in other countries (e.g., Chen & Wei, 2011b; Malecki et al., 2008), but conflict with theories and most Western studies indicating strong direct associations between school victimization and student psychological health (e.g., Baldry, 2003, 2004; Chen & Wei, 2011a; Flannery et al., 2004; Gladstone et al., 2006; Graham & Bellmore, 2007). The findings may imply that the direct impact of exposure to school violence on student psychological health in these societies is weaker than in most Western countries (Chen & Wei, 2011b).

However, the results of this study show that student psychological health is indirectly associated with student victimization by students, mediated through perception of peer social support. The findings support our proposition that social support can be a psychosocial mechanism in the relationships between school violence and its negative outcomes. Specifically, consistent with previous studies, the findings suggest that the perception of peer social support can play an important mediating role in the relationships between school victimization and psychological distress (Malecki et al., 2008; Seeds, et al., 2010). That is, students in these societies who experience school violence perpetrated by their school peers are more likely to perceive less available peer social support; in turn, their risk of suffering from psychological distress is increased (Malecki et al., 2008; Seeds et al., 2010). The

findings also imply that it is not the exposure to school violence itself that direct contributes to psychological distress among students; rather, it is the perceptions of these student victims about how their available social support reacts to violence, which in turn influences level of psychological distress. The findings provide empirical evidence that school peer social support is a unique factor contributing directly and indirectly to outcomes of school violence among students in these Chinese societies (Chen & Astor, in-press, 2011a, 2011b, 2010; Chen & Wei, 2011b).

The results of this study show that student maltreatment by teachers is a weak predictor of perception of peer social support. These findings were unexpected, because previous studies and theories suggested that child maltreatment by adults should be a strong predictor of poor perception of social support (e.g., Pepin & Banyard, 2006). Possible explanations for the inconsistent findings may be that Taiwanese students tend to perceive maltreatment by teachers as a proper disciplinary method to correct student misbehavior, which leads these students to perceive that teachers' maltreatment does not affect their peer relationships or resources (Chen & Wei, 2011a, 2011b). Another possible explanation is that maltreatment by teachers often takes place in a context of student-teacher interaction rather than a peer context (Chen & Wei, 2011a, 2011b). Thus, students may be more likely to associate maltreatment by teachers with perception of social support from teachers or adults than with support from peers. Future studies may consider further examining the role of teacher support in the model to confirm this proposition.

Limitations

It is important to acknowledge some limitations of this study. The analysis is based on cross-sectional and self-reported data, which restricts the establishment of

causality and increases the possibility of students' under-or-over reporting victimization (Benbenishty & Astor, 2005). Further longitudinal research is required to examine the cause-effect relationships of exposure to school violence, perception of social support and student mental health.

The present study has examined peer social support. Other important sources of social support, such as parents and teachers, were not assessed in this study. Future researchers should consider examining if these sources of social support play a mediating role between school victimization and outcomes. Future research may also examine how these sources of social support differentiate the mediation mechanism (Seeds et al., 2010). The results of that examination may provide fruitful information to school practitioners in determining which source(s) of social support should be the focus of intervention.

Implications

Our findings provide strong evidence and information for school practitioners and policymakers to justify developing or incorporating social support into prevention and intervention strategies.

Overall, our findings imply that social support plays an important role in influencing the level of negative outcomes of school violence. This indicates that school-violence interventions focusing on increasing social support for victims may be effective. In particular, increasing student perception of available school peer support may be a focus of cognitive and behavioral intervention for school victimization in schools (Seeds et al., 2010). In addition, school practitioners may consider providing a series of training sessions to help students learn social supportive behavior (i.e., in emotional, informational, appraisal and instrumental dimensions)

(Malecki et al., 2008; Tardy, 1985) and build up supportive school peer networks when school violence occurs, which may be able to help students overcome victimization and reduce the further risk of mental health problems (Malecki et al., 2008).

Finally, the findings show that the overall theoretical model is applicable across societies. The findings imply that national-level interventions or policies promoting social support could be effective across societies.

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