The roles of emotional competence and social problem-solving in the relationship between physical abuse and adolescent suicidal ideation in China

Kwok Lai, Sylvia Y. C.; Yeung, Jerf W. K.; Low, Andrew Y. T.; Lo, Herman H. M.; Tam, Cherry H. L.

Published in:
Child Abuse & Neglect

Published: 01/06/2015

Document Version:
Post-print, also known as Accepted Author Manuscript, Peer-reviewed or Author Final version

Published version (DOI):
10.1016/j.chiabu.2015.03.020

Publication details:
Kwok Lai, S. Y. C., Yeung, J. W. K., Low, A. Y. T., Lo, H. H. M., & Tam, C. H. L. (2015). The roles of emotional competence and social problem-solving in the relationship between physical abuse and adolescent suicidal ideation in China. *Child Abuse & Neglect*, *44*, 117 - 129. https://doi.org/10.1016/j.chiabu.2015.03.020

The roles of emotional competence and social problem-solving in the relationship between physical abuse and adolescent suicidal ideation in China

Sylvia Y.C.L. Kwok∗, Jerf W.K. Yeung, Andrew Y.T. Low, Herman H.M. Lo, Cherry H.L. Tam

Department of Applied Social Sciences, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong

∗ Corresponding author.

Abstract

The study investigated the relationship among physical abuse, positive psychological factors including emotional competence and social problem-solving, and suicidal ideation among adolescents in China. The possible moderating effects of emotional competence and social problem-solving in the association between physical abuse and adolescent suicidal ideation were also studied. A cross-sectional survey employing convenience sampling was conducted and self-administered questionnaires were collected from 527 adolescents with mean age of 14 years from the schools in Shanghai. Results showed that physical abuse was significantly and positively related to suicidal ideation in both male and female adolescents. Emotional competence was not found to be significantly associated with adolescent suicidal ideation, but rational problem-solving, a sub-scale of social problem-solving, was shown to be significantly and negatively associated with suicidal ideation for males, but not for females. However, emotional competence and rational problem-solving were shown to be a significant and a marginally significant moderator in the relationship between physical abuse and suicidal ideation in females respectively, but not in males. High rational problem-solving buffered the negative impact of physical abuse on suicidal ideation for females. Interestingly,

females with higher empathy and who reported being physically abused by their parents have higher suicidal ideation. Findings are discussed and implications are stated. It is suggested to change the attitudes of parents on the concept of physical abuse, guide them on appropriate attitudes, knowledge and skills in parenting, and enhance adolescents' skills in rational problem-solving.

Keywords: Suicidal ideation; Emotional competence; Problem-solving; Physical abuse; Child abuse; Emotional intelligence; Adolescents; Moderating effect; Chinese; Suicidal behavior

Introduction

China is a country with one of the highest suicide rates in the world, with 22.2 per 100,000 people committing suicide each year (Centre for Disease Control and Prevention, 2011). Suicide is the leading cause of death among young Chinese adults aged between 15 and 34 (Phillips, Li, & Zhang, 2002). The rate of adolescent suicidal ideation increased from 11.9% in 2008 to 13% in 2012 in Beijing (Yang, Han, Shao, & Su, 2013). Previous studies have shown that suicidal ideation is an important predictor of suicidal acts and completed suicide (Kwok, 2011; Thompson et al., 2012). Hence, this problem deserves attention.

Studies have shown that suicidal behavior is associated with personal and family factors. A study that examined 392 Chinese rural youth suicide cases in 16 counties identified several suicide risk factors, namely, lack of positive coping skills and dysfunctional impulsivity (Zhang, Li, Tu, Xiao, & Jia, 2011). Family conflict and parental discipline style involving physical punishment are prominent family risk factors for suicidal behavior in Chinese adolescents (Liu, Sun, & Yang, 2008; Xing et al., 2010). Although certain empirical studies have supported the association between family risk factors and suicidality among Chinese adolescents, a dearth of investigations examining the role of positive psychological factors (e.g., emotional competence and problem-solving) in moderating the effects of adverse family situations (e.g., child abuse) on the suicidal ideation of Chinese adolescents exists.

Child Abuse in China

Despite the lack of consistent official statistics regarding the prevalence and severity of child maltreatment in China, cases involving abuse and neglect are common, considering that authoritarian parenting is practiced in Chinese families (Qiao & Chan, 2008). Among parents from 1394 primary school students, 595 (42.7%) and 301 (21.6%) reported that they have

exhibited minor and severe physical maltreatment behavior toward their children during the past three months, respectively (Ma, Chen, Xiao, Wang, & Zhang, 2011). In addition, according to Leung, Wong, Chen, and Tang (2008), 15.1% and 2.8% of 6,592 junior high school students in Guangzhou, China, claimed that they had experienced "severe" and "very severe" physical maltreatment from their parents in the past six months, respectively. Hence, child abuse in China is a problem that warrants our attention.

Physical Abuse and Suicidal Ideation

Physical abuse in this study is defined as mild to severe physical maltreatment from parents but excludes corporal punishment that is regarded as the expected response of parents to persistent child misbehavior in the Chinese culture. Previous research has revealed an association between child abuse and mental health problems, including suicidal behavior. Chinese studies have shown that physical or emotional abuse from parents is significantly associated with adolescent mental health problems, such as depression, anxiety, and paranoid ideation (Chen, Ma, & Liang, 2008; Chen, Fu, Peng, Cai, & Zhou, 2011; Zhang, Zhang, Yang, & Zhang, 2010). In a study of 1,051 eight-year-old children, severity of physical abuse was identified as a significant predictor of suicidal ideation among other family variables (Thompson et al., 2012). Similarly, among 18 cross-sectional surveys with community samples, 16 reported a positive relationship between childhood physical abuse and suicidal ideation (Miller, Esposito-Smythers, Weismoore, & Renshaw, 2013); the two other studies failed to identify an association because of the small sample size and composite outcome measure that incorporated content more than suicidality.

In Chinese societies, parents are respected as household heads (*jiazhang*) and have absolute power and authority to control and discipline their children. Parents believe that "severe

beating is caring and scolding is loving" (Qiao & Chan, 2005). Chinese parents tend to use authoritarian parenting styles, e.g., physical punishment, to solve parent–child problems and conflicts, enforce family rules, and enhance the strength and endurance of their children. Such parenting style may easily lead to child abuse (Qiao & Chan, 2008). Interestingly, a study on conceptions of physical child abuse in China revealed that most parents do not regard child battering by biological parents as child abuse, and many children confess that they accept their parents' harsh discipline because of filial piety (Qiao, 2007). Hence, association between physical abuse and adolescent suicidal ideation may differ in Chinese societies when compared with that in Western ones.

Positive Psychological Factors

Recently, increasing attention has been provided to the resilient roles of individual positive psychological factors in facing challenges and adversities. Positive psychology is the study of resilience and strength factors that contribute to positive human development and fulfillment of lives even under circumstances of adversities and hardships, leading to the improvement of one's quality of life and a reduction in the incidence of psychopathology (Seligman & Csikszentmihalyi, 2000). By applying this framework to the current study, we investigated how particular psychosocial resilience and strength factors (emotional competence and social problem-solving) moderate the harmful impact of child abuse on the development of psychopathology (suicide ideation) among a sample of Chinese adolescents in Mainland China.

Emotional competence and social problem-solving are two of the positive psychological constructs that incorporate both emotional and cognitive–behavioral components. They provide a foundation for people to strive for individual wellbeing and flourishing. In adverse

family environments (e.g., physical abuse), emotional competence and social problem-solving may reduce suicidal ideation. As such, the present study investigates physical abuse, emotional competence, and social problem-solving in relation to suicidal ideation in Chinese adolescents. The study highlights the moderating roles of these two positive psychological constructs in the association between physical abuse and adolescent suicidal ideation.

Emotional Competence and Suicidal Ideation

Considering that emotional intelligence is the most crucial determinant of emotional competence, the present study applies Chan's conceptualization of emotional intelligence (Chan, 2003) as the optimal measure to reflect emotional competence. According to Chan (2003), emotional competence is a trainable skill that includes self-management of emotions, social skills, empathy, and creative use of emotions. Self-management of one's emotions reflects an individual's awareness, perception, understanding, and regulation of his or her own emotions. Empathy reflects an individual's sensitivity to the emotional expression of others. Social skills describe positive interactions with others in sharing experiences and influencing the emotions of others, which can be interpreted as the management of others' emotions. Creative use of emotions refers to the positive use of emotions by an individual to facilitate the evaluation and generation of new ideas. This conceptualization is more comprehensive and encompasses both intrapersonal and interpersonal dimensions as well as perceptual and behavioral domains.

The results of previous research on the relationship between emotional competence and suicidal ideation are inconsistent. High emotion reactivity, restrictive emotionality, and lack of emotion regulation strategies have been found to be associated with suicidal ideation in samples of adolescents and college students (Dour, Cha, & Nock, 2011; Jacobson, Marrocco,

Kleinman, & Gould, 2010; Rajappa, Gallagher, & Miranda, 2011). Emotional intelligence, which is the ability to understand and manage emotions, has been shown to be a protective correlate for suicidal ideation in college students (Cha & Nock, 2009; Sadhan & Soma, 2011). However, a study has shown that emotion regulation has no effect on suicidality at high extremes of temperament (Tamás et al., 2007). Hence, emotion regulation may not work under extreme circumstances.

According to Klineberg (1983), the Chinese believe that expressing emotions is "dangerous." Chinese children are taught to suppress strong and negative emotions and are raised to have emotional restraint and self-control (Hsu, 1971). Extreme emotions may contribute to different mental health problems; hence, people should be moderate in expressing their emotions to attain internal balance (Bond, 1993). The protective effects of emotional competence on suicidal ideation may thus be less significant for Chinese adolescents.

Social Problem-Solving and Suicidal Ideation

D'Zurilla and Maydeu-Olivares (1995) distinguished between two types of problem-solving measures, namely, process and outcome. As a process measure, social problem-solving is a cognitive–behavioral construct that includes problem orientation and problem solving proper (D'Zurilla, Nezu, & Maydeu-Olivares, 1996). The current study adopts the process measure, which includes negative problem orientation, impulsiveness/carelessness style, avoidance style, rational problem-solving, and positive problem orientation.

Previous studies have revealed close associations between problem solving and suicidal behavior. For example, studies have shown that adolescents who lack problem-solving skills are prone to suicidal thoughts and behavior (Hirsch, Chang, & Jeglic, 2012; Speckens &

Hawton, 2005; Thompson, Mazza, Herting, Randell, & Eggert, 2005). A community study on 712 adolescents aged 14 to 18 found that dysfunctional problem-solving style predicts serious suicidal ideation in adolescents (Labelle, Breton, Pouliot, Dufresne, & Berthiaume, 2013). However, no significant differences were observed in several problem-solving measures among groups of suicidal psychiatric inpatients, non-suicidal psychiatric inpatients, and community high school students (Fremouw, Callahan, & Jody, 1993). Hence, the results are inconsistent.

Chinese social problem-solving is based on the principles of kindness (*ren*), righteousness (*yi*), courtesy (*li*), and face concern (*mianzi*) (Chen & Starosta, 1997). Several studies have found that the Chinese tend to use avoidance coping styles or depend on fate or other superstitious power when dealing with problems (Friedman, Chi, & Liu, 2006; Garcia, Adams, Friedman, & East, 2002; Kirkbride, Tang, & Westwood, 1991). Hence, whether social problem-solving in China is as effective as supported by studies from non-Chinese cultural societies deserves further investigation.

Emotional Competence and Social Problem-Solving as Moderators

Previous studies have also revealed that positive psychological factors help buffer the impact of adversities on psychopathology (e.g., Suldo & Huebner, 2004). Specifically, a study by Cha and Nock (2009) revealed that emotional intelligence moderates the relationship between retrospectively reported childhood sexual abuse and suicidal ideation. The findings also showed that child emotion regulation is a moderator in the relationship between harsh parenting and child externalizing behavior, and between perceived low family functioning and suicidal ideation (Kwok, 2014; Whitson & El-Sheikh, 2003). However, several studies have found that emotional intelligence does not moderate the negative effects of life stress on

suicidal ideation or of role stress on burnout (Garrosa, Moreno-Jimenez, Rodriguez-Munoz, & Rodriguez-Carvajal, 2011; Wang, Lai, Hsu, & Hsu, 2011). Other studies have even revealed that emotional intelligence increases the impact of stressors on mental health problems (Ciarrochi, Dean, & Anderson, 2002, Davis & Humphrey, 2012). Thus, emotional intelligence may only be effective in alleviating mental health problems under certain types of stressors. The moderating role of emotional competence in the relationship between physical abuse and suicidal ideation is thus worthy of further study.

Previous studies have reported that problem solving moderates the associations between life stress and suicidal ideation in a clinical sample of adolescents and college students (Grover et al., 2009; Priester & Clum, 1993). Esposito and Clum (2002) found that problem-solving confidence moderates the relationship between physical abuse and suicidal ideation in a sample of 200 delinquent youth. However, another study by Dixon, Heppner, and Anderson (1991) indicated that problem-solving appraisal does not moderate the relation between negative life stress and suicidal ideation among 1,277 college students. Given that the findings of previous studies on the moderating role of problem solving are controversial, further research needs to be conducted.

Gender Differences

Studies have shown that females are significantly more likely than males to have suicidal ideation, but males generally have higher rates of suicide completion (Chen, Lee, Wong, & Kaur, 2005; Cheng et al., 2009). This finding also applies to Chinese adolescents (Stewart et al., 2005; Blum, Sudhinaraset, & Emerson, 2012). Emotional regulation strategies and problem-solving abilities also differ between males and females. A study on Chinese youth reported that girls have significantly higher scores than boys in terms of effortful control,

affability, and negative mood but lower scores on aggression (Zhang, Shen, & Gao, 2008). Furthermore, a study on depression revealed that female adolescents' lower levels of positive thinking, higher scores on negative problem orientation, and self-focused negative cognitions partially mediate gender differences in depressive symptoms (Calvete & Carden˜oso, 2005). Studies conducted in Hong Kong also revealed that boys have significantly higher scores in rational problem-solving and impulsiveness/carelessness style than girls, while girls tend to cope with failure by seeking social support (Poon & Lau, 1999; Siu, 2003).

In addition, previous literature revealed the differences between males and females in terms of the association between positive psychological constructs and suicidal behavior. In the relationship between emotional competence and suicidal behavior, a Hong Kong study reported that all sub-scales of emotional competence are significant predictors of male adolescent suicidal ideation, but the sub-scale of social skills is not a significant predictor of female suicidal ideation (Kwok & Shek, 2010). Furthermore, a study on 710 youngsters with a mean age of 18 showed that males use emotion regulation frequently. This helps them reduce their stress and leads to a decrease in suicidal ideation (Khurana & Romer, 2012). With regard to the association between problem solving and suicidal behavior, the predictive power of negative problem orientation in suicidal ideation is significantly higher in female adolescents than in male ones (Kwok & Shek, 2010). However, weak self-appraisal of problem-solving skills is a significant predictor of suicide potential in boys but not in girls (Eskin, Ertekin, Dereboy, & Demirkiran, 2007). Negative problem-solving or avoidance style is a bigger risk factor of suicidal behavior for boys than for girls (Labelle et al., 2013).

The results on gender differences linking physical abuse and suicidal ideation are inconsistent. A study indicated that boys are more likely to experience severe physical

maltreatment by parents than girls (Wong et al., 2009). Two studies revealed a significant correlation between physical abuse and adolescent suicidal ideation among females relative to males (Baldry & Winkel, 2003; Silverman, Reinherz, & Giaconia, 1996). Conversely, two studies did not find any gender differences in the association between physical abuse and adolescent suicidal ideation (Brezo et al., 2008; Kaplan et al., 1999). Considering that boys are more valued and given a higher status in Chinese families than girls, the relationship between physical abuse and suicidal ideation may be different. Hence, the present study aims to examine gender differences in the association between physical abuse and suicidal ideation, between emotional competence and suicidal ideation, and between social problem-solving and suicidal ideation as well as the probable differences in the moderating roles of emotional competence and social problem-solving in suicidal ideation.

The four hypotheses in this research are listed below.

Hypothesis 1. A higher level of physical abuse is significantly associated with greater suicidal ideation in both males and females.

Hypothesis 2. Higher emotional competence is significantly associated with lower suicidal ideation in both males and females.

Hypothesis 3. Higher social problem-solving is significantly associated with lower suicidal ideation in both males and females.

Hypothesis 4. Emotional competence is a significant moderator between physical abuse and suicidal ideation in both males and females.

Hypothesis 5. Social problem-solving is a significant moderator between physical abuse and suicidal ideation in both males and females.

Methods

Procedure and Participants

A cross-sectional survey employing convenience sampling was conducted. The study was approved by the City University Research Ethics Committee. Consent was obtained from the principals of three government-operated schools in Shanghai, China. A total of 567 questionnaires were completed by students from pre-secondary to junior secondary school year three (Grades 6–9). Among the returned questionnaires, 527 were regarded as valid. The purpose of the study was clearly explained to the parents and students in class and on the consent forms. Two aspects were stressed: participation is completely voluntary and non-participation would not affect grades. The consent forms were signed by both students and their parents, and all questionnaires were anonymous. Hence, individual participants could not be identified. A teacher and two research assistants were present to explain the study's objectives, reassure the participants about the confidentiality of the study, and answer queries raised by the participants. The entire administrative process lasted for 45 min. The teachers in the schools were responsible for following up issues arising from the completion of the questionnaires.

Among the 527 participants, 52.4% were males and 47.6% were females. Their mean age was 14 years. Only 18.7% of the participants had religious beliefs. Most parents of the participants (83.5%) were married. About one-third (30.2%) reported that their total annual family income is below RMB 10k (approximately US$1,600), 52.0% indicated RMB 10k–70k (approximately US$1,600–11,200), and the remaining 17.8% had a family income above RMB 70k. About one-third of the participants (37.8%) reported physical abuse encounters within the past year (see Table 1).

Table 1
Demographics on study sample ($n = 527$).

Demographics	*N*	%
Gender		
Male	276	52.4
Female	251	47.6
Age		
12–13	190	36.1
14–15	265	50.3
16–17	72	13.7
Religious belief		
Without religious belief	428	81.3
With religious belief	99	18.7
Annual family income		
Below RMB 10k	159	30.2
RMB 10k–70k	274	52.0
Above RMB 70k	94	17.8
Parent's marital status		
Married	440	83.5
Other status	87	16.5
Physical abuse encounter within a year		
Without physical abuse encounter	328	62.2
With physical abuse encounter	199	37.8

Measures

Physical Abuse. Perceived physical abuse on the part of the children was measured with two sub-scales in the Chinese version of the Parent–Child Conflict Tactics Scale (CTSPC) (Chan, 2011) originally developed by Straus and his colleagues (Schutte et al., 1998). The original scale contains 22 items that measures non-violent discipline, psychological aggression, corporal punishment, physical maltreatment, and severe physical maltreatment. Only the physical maltreatment (e.g., "hitting the child with a fist or kicking him/her hard") and severe physical maltreatment (e.g., "grabbing the child around the neck and choking him/her") sub-scales were utilized in this study. These sub-scales examine the occurrence of more severe aspects of physical assault (a total of eight items). Participants were asked to indicate on a 7-point scale the frequency of a particular behavior exhibited by their parents in the past year (0 = this has never happened, 1 = once in the past year, 2 = twice in the past year, 3 = three to five times in the past year, 4 = six to ten times in the past year, 5 = 11–20 times in the past year, 6 = more than 20 times in the past year). Only the prevalence score that indicates whether or not the participants have had physical maltreatment encounters in the past year was utilized in the analysis. The psychometric characteristics of CTSPC, including its

reliability and discriminant and construct validity, have been well documented (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). The Chinese version of CTSPC has also been validated (Chan, 2011). The items in this measure were slightly adjusted to reflect differences in Western societies and China. For example, in the item "threatened him/her with a knife or a gun," the word "gun" was deleted because guns are rarely used in China. The internal reliability of the physical maltreatment and severe physical maltreatment sub-scales in this study was good and acceptable (, = .88 and .68), respectively.

Emotional Competence. Emotional competence was assessed with the Chinese Emotional Intelligence Scale in a short form (C-EIS-R) (Chan, 2003). The instrument was adopted from the English 33-item EIS (Schutte et al., 1998). The short form of the 12-item C-EIS-R has four empirical sub-scales, namely, self-management of emotions, social skills, empathy, and creative use of emotions (e.g., "I have new ideas with a change in emotions"). The respondents were asked to indicate their agreement with each statement according to a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). A higher score indicates better emotional competence. The scale has been validated and demonstrated to have a significant correlation with theoretically related constructs, such as mood repair, optimism, and impulse control (Chan, 2005). The scale was found to be internally consistent in this study (, = .74).

Social Problem-Solving. Social problem-solving was assessed with the Chinese version of the Social Problem-solving Inventory in a short form (C-SPSI-R) developed by Siu and Shek (2005). The instrument was adopted from the 52-item Social Problem-solving Inventory Revised (SPSI-R) (D'Zurilla et al., 1996). A validation study was conducted locally with 352 secondary school students (Siu & Shek, 2005). The short form of the 25-item C-SPSI-R has

five-factor structures, namely, negative problem orientation (NPO), impulsiveness/carelessness style (ICS), avoidance style (AS), rational problem-solving (RPS), and positive problem orientation (PPO). For each of these items, the respondents were requested to select an answer on a 5-point Likert scale ranging from “not at all true for me” to “extremely true for me.”

RPS and PPO indicate a constructive orientation toward problem solving, whereas NPO, ICS, and AS indicate a dysfunctional or inhibitive orientation. Sub-scale scores were computed by averaging the item scores; a higher score indicates higher inclination toward that particular problem solving style. The overall scale score was computed by averaging item scores from positive sub-scales and reversed item scores from negative sub-scales, with a higher score indicating better social competence. The findings showed that the related measure is valid and reliable (Siu & Shek, 2005). Reliability analyses indicated that this abridged version of C-SPSI-R is reliable in this study (, = .74).

Suicidal Ideation. Suicidal ideation was assessed with the Suicidal Ideation Sub-scale (C-SIS) of the Suicidal Risk Scale for Hong Kong Students developed locally by Tse and Bagley (2002). The instrument is often utilized as a screening tool to identify high-risk students so that effective intervention can be implemented. The instrument is also used to assess suicidal risk during the intervention phase and evaluate the effectiveness of intervention and treatment programs.

C-SIS contains 13 items (e.g., “I really want to put an end to all this so that I don’t have to continue to bear the pain” and “I think being dead may be better than what I am experiencing now”). For each item, the respondents were required to select an answer from a 4-point Likert

scale ranging from “1 (strongly disagree) to 4 (strongly agree). A high score indicates a high level of suicidal ideation. The previous findings of a validation study with Hong Kong secondary school students (Tse & Bagley, 2002) showed that C-SIS has high internal consistency (ˇ = .92), split-half consistency (ˇ = .88), and test–retest reliability (r = .72). C-SIS has significant relationships with other related measures, such as the Suicide Behavior Questionnaire (Linehan, 1981). The C-SIS scores were able to differentiate suicidal students from non-suicidal ones, with a significant t-value (p < .001). The scale was found to be internally consistent in this study (ˇ = .91).

Demographics. Demographic variables, including the participants’ gender, age, religious background, annual family income, and marital status of parents, were incorporated as covariates in the hierarchical regression analyses in this study.

Data Analyses

The mean, standard deviation, and Cronbach’s alpha values were computed. Pearson correlation analysis was then conducted to investigate the relationship among the proposed variables for the overall sample (see Table 2) and for the different genders separately (see Table 3). Comparison of the studied variables across genders was performed by using independent *t*-test (see Table 4). In the hierarchical regression analyses for the overall sample (see Table 5), demographic variables, such as gender, age, religious belief, and parents’ marital status, were entered into the first block.

Physical abuse was entered into the second block to examine its predictive power, and the moderating variables (emotional competence and social problem-solving) were entered into the third block in the model. The interaction terms of physical abuse with the moderating

variables were entered into the fourth block. The interaction terms were computed by multiplying the centered physical abuse score with the centered emotional competence and rational problem-solving scores. Hierarchical regression analyses were separately conducted for two genders with two different moderators (see Table 6). The potential existence of a multi-collinearity problem was checked with reference to the VIF value. All the VIF values of the variables in the regression models were smaller than 10; hence, no significant multi-collinearity problem exists. Separate regression lines were computed and plotted for different levels of moderators with different levels of predictors (1 standard deviation above and below the mean was considered the "high" and "low" groups, respectively, and that at the mean range was considered the "medium" group) to understand the significance pattern better.

Table 2
Correlation table of studied variables ($n = 527$).

	EC	SPS	SI	UE	SME	EM	SS	NPO	ICS	AS	RPS	PPO	PA
EC	–	.24***	−.13**	.67***	.73***	.72***	.71***	−.17***	−.01	−.19***	.10*	.17***	−.07
SPS		–	−39***	.14**	.24***	.05	.28***	−.56***	−.45***	−.72***	.42***	.62***	−.21***
SI			–	−.07	−.12**	−.05	−.15***	.31***	.16***	.33***	−.10*	−.19***	.30***
UE				–	.28***	.27***	.37***	−.10*	.03	−.11*	.07	.10*	−.01
SME						.38***	.42***	−.17***	−.01	−.19***	.09*	.17***	−.11*
EM						–	.30***	−.06	−.01	−.03	.01	.03	−.02
SS							–	−.16***	−.03	−.22***	.13**	.19***	−.07
NPO								–	.28***	.50***	.20***	−.03	.12**
ICS									–	.47***	.20***	.08	.16***
AS										–	.09*	−.15**	.22***
RPS											–	.47***	−.01
PPO												–	−.08
PA													–

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 3
Correlation of studied variables for samples in different gender ($n = 527$).

	EC	SPS	SI	UE	SME	EM	SS	NPO	ICS	AS	RPS	PPO	PA
EC	–	.25***	−.08	.66***	.74***	.77***	.75***	−.16**	.01	−.19**	.12*	.19**	−.02
SPS	.23***	–	−.38***	.12	.20***	.15*	.24***	−.57***	−.49***	−.73***	.45***	.60***	−.21**
SI	−.21**	−.40***	–	−.01	−.04	−.04	−.14*	.30***	.11	.30***	−.14*	−.23***	
UE	.69***		.31***										
SME	.71***	.17**	−.15*	–	.25***	.32***	.38***	−.11	.07	−.11	.05	.10	.07
EM	.66***	.29***	−.22**	.34***		.46***	.47***	−.15*	.02	−.17**	.10	.15*	−.08
SS	.65***	−.09	−.06	.20**	.28***	–	.39***	−.11	−.06	−.11	.06	.09	−.03
		.32***	−.16*	.36***	.35***	.18**	–	−.11	.01	−.17**	.16**	.21***	−.01
NPO	−.17**	−.55***	.32***	−.09	−.19**	.00	−.23***	–	.29***	.52***	.13*	−.02	.10
ICS	−.03	−.38***	.22**	−.03	−.06	.05	−.06	.28***	–	.50***	.15*	.05	.19**
AS	−.17**	−.70***	.37***	−.11	−.24***	.09	−.28***	.49***	.39***	–	.06	−.15*	.22***
RPS	.08	.38***	−.04	.10	.08	−.04	.10	.28***	.27***	.13*	–	.48***	
	−.01												
PPO	.15*	.65***	−.14*	.12	.20**	−.03	.18**	−.05	.11	−.16*	.47***	–	−.09
PA	−.14*	−.20**	.27***	−.12	−.14*	−.02	−.13*	.16*	.09	.19**	−.02	−.07	–

Note. Correlation for the male participants is shown in the top right corner ($n = 276$); while that for the female participants is shown in the bottom left corner ($n = 251$). EC = Emotional Competence, SPS = Social Problem-Solving, SI = Suicidal Ideation, Sub-scales of EC (UE = Utilization of Emotions, SME = Self- Management of Emotions, EM = Empathy), Sub-scales of SPS (SS Social Skills, NPO = Negative Problem Orientation, ICS = Impulsiveness/Carelessness Style, AS = Avoidance Style, RPS = Rational Problem-Solving, PPO = Positive Problem Orientation), PA = Physical Abuse
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 4
Comparison of studied variables across gender ($n = 527$).

	Mean (SD)		t
	Male ($n = 276$)	Female ($n = 251$)	
EC	3.96 (.57)	3.98 (.46)	−.51
SPS	2.47 (.49)	2.55 (.43)	−1.94
SI	1.74 (.65)	1.65 (.62)	1.51
UE	3.89 (.79)	3.90 (.69)	−.13
SME	4.13 (.75)	4.08 (.65)	.70
EM	3.64 (.87)	3.64 (.81)	−.05
SS	4.16 (.71)	4.29 (.59)	−2.21*
NPO	1.38 (.82)	1.39 (.79)	−.08
ICS	1.34 (.84)	1.11 (.75)	3.40**
AS	1.01 (.79)	.79 (.69)	3.53***
RPS	1.92 (.94)	1.91 (.88)	.11
PPO	2.08 (.92)	2.02 (.86)	.78

Note. EC = Emotional Competence, SPS = Social Problem-Solving, SI = Suicidal Ideation, Sub-scales of EC (UE = Utilization of Emotions, SME = Self-Management of Emotions, EM = Empathy), Sub-scales of SPS (SS Social Skills, NPO = Negative Problem Orientation, ICS = Impulsiveness/Carelessness Style, AS = Avoidance Style, RPS = Rational Problem-Solving, PPO = Positive Problem Orientation)

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 5
Models to test the possible moderator effect in the relationship between physical abuse and adolescent suicidal ideation ($n = 527$).

	Model 1: EM as moderator			Model 2: RPS as moderator		
	˘	t	1R^2	˘	t	1R^2
Block 1: Demographics			.01			.01
Age	−.01	−.16		−.01	−.16	
Marital status	.03	.66		.03	.66	
Gender	−.06	−1.45		−.06	−1.45	
Religious belief	.01	.30		.01	.30	
Block 2: Physical abuse	.30***	7.05	.09***	.30***	7.05	.09***
Block 3: Moderating variables			.00***			.01***
EM	−.04	−1.03				
RPS				−.09*	−2.15	
Block 4: Interaction terms			.01***			.01***
EM × Physical abuse	.08ˆ	1.78				
RPS × Physical abuse				−.08*	−2.00	

Note. EM = Empathy, RPS = Rational Problem-Solving.

* $p < .05$.

*** $p < .001$.

ˆ $p = .05$.

Table 6
Models to test the possible moderator effect in the relationship between physical abuse and adolescent suicidal ideation for different gender ($n = 527$).

Model 1: EM as moderator	Male ($n = 276$)			Female ($n = 251$)		
	˘	t	1R^2	˘	t	1R^2
Block 1: Demographics			.01			.00
Age	−.03	−.51		.02	.37	
Marital status	.07	1.11		−.02	−.32	
Religious belief	−.01	−.19		.04	.63	
Block 2: Physical abuse	.32***	5.47	.10***	.28***	4.46	.08**
Block 3: Moderating variables			.00***			.00**
EM	−.05	−.77		−.05	−.82	
Block 4: Interaction terms			.00***			.02***
EM × Physical abuse	.03	.51		.14*	2.15	

Model 2: RPS as moderator	Male ($n = 276$)			Female ($n = 251$)		
	˘	t	1R^2	˘	t	1R^2
Block 1: Demographics			.01			.00
Age	−.03	−.51		.02	.37	
Marital status	.07	1.11		−.02	−.32	
Religious belief	−.01	−.19		.04	.63	
Block 2: Physical abuse	.32***	5.47	.10***	.28***	4.46	.08**
Block 3: Moderating variables			.02***			.00**
RPS	−.13*	−2.32		−.03	−.43	
Block 4: Interaction terms			.00***			.01**
RPS × Physical abuse	−.05	−.82		−.12ˆ	−1.92	

Note. EM = Empathy, RPS = Rational Problem-Solving.

* $p < .05$.

** $p < .01$.

*** $p < .001$.
^ $p = .05$.

Results

With regard to gender, females were found to have significantly higher scores in social skills ($t = -2.21$, $p < .05$), and males scored higher in impulsiveness/carelessness style ($t = 3.40$, $p < .001$) and avoidance style ($t = 3.53$, $p < .01$), as shown in Table 4. No significant differences were found between males and females for all other variables. In the hierarchical regression analysis predicting suicidal ideation using the overall sample, physical abuse was found to be positively and significantly related to suicidal ideation with demographics being controlled, as shown in Table 5. Among all the emotional competence and social problem-solving subscales tested, empathy and rational problem-solving yielded significance or marginal significance in their interaction with physical abuse in predicting suicidal ideation (for empathy, ˇ = .08, $t = 1.78$, $p = .05$; for rational problem-solving, ˇ = −.08, $t = -2.00$, $p < .05$), with demographics, physical abuse, and the moderating variable in the model being controlled.

As shown in Fig. 1a, the participants who reported physical abuse encounters scored lower in suicidal ideation when their score in rational problem-solving was high. The score in suicidal ideation was higher in groups with lower rational problem-solving scores. The three lines showing different levels of rational problem-solving scores merged for the participants who did not report encounters of physical abuse. In the case of empathy (Figure 1b), participants who did not report encounters of physical abuse scored the lowest in suicidal ideation among the group with the highest empathy score. The score in suicidal ideation was higher in groups with medium and low empathy scores. However, the suicidal ideation score increased from low to high empathy groups for respondents who reported encounters of physical abuse.

The hierarchical regression analyses conducted separately for different genders to predict suicidal ideation with empathy and rational problem-solving as moderators indicated that physical abuse was a significant predictor of suicidal ideation in the models of both genders (for the male subsample, ˇ = .32, $t = 5.47$, $p < .001$; for the female subsample, ˇ = .28, $t = 4.46$, $p < .01$) (Table 6). Rational problem-solving significantly predicted suicidal ideation in the male subsample with demographics and physical abuse being controlled (ˇ = -.13, $t = -2.32$, $p < .05$), but not in the female subsample (ˇ = −.03, $t = -.43$, ns). In the models with empathy as the moderator, the interaction term empathy × physical abuse showed significance in the female subsample (ˇ = .14, $t = 2.15$, $p < .05$) in Block 4 but not in the male subsample (ˇ = .03, $t = .51$, ns). In the models with rational problem-solving as the moderator, the interaction term rational problem-solving × physical maltreatment showed marginal significance in the female subsample (ˇ = −.12, $t = -1.92$, $p = .05$) in Block 4, but the interaction was not significant in the male subsample (ˇ = −.05, $t = -.82$, ns). The pattern of interaction for the female subsample was similar to that of the overall sample, as shown in Figs. 2a and b.

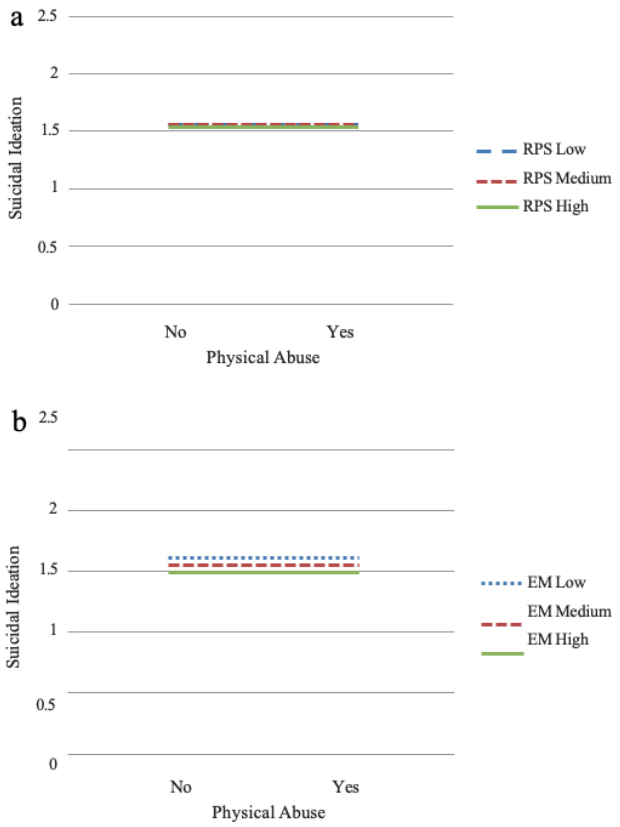

Fig. 1. (a) The interaction effect of Rational Problem-Solving (RPS) and Physical Abuse on Adolescent Suicidal Ideation. (b) The interaction effect of Empathy (EM) and Physical Abuse on Adolescent Suicidal Ideation.

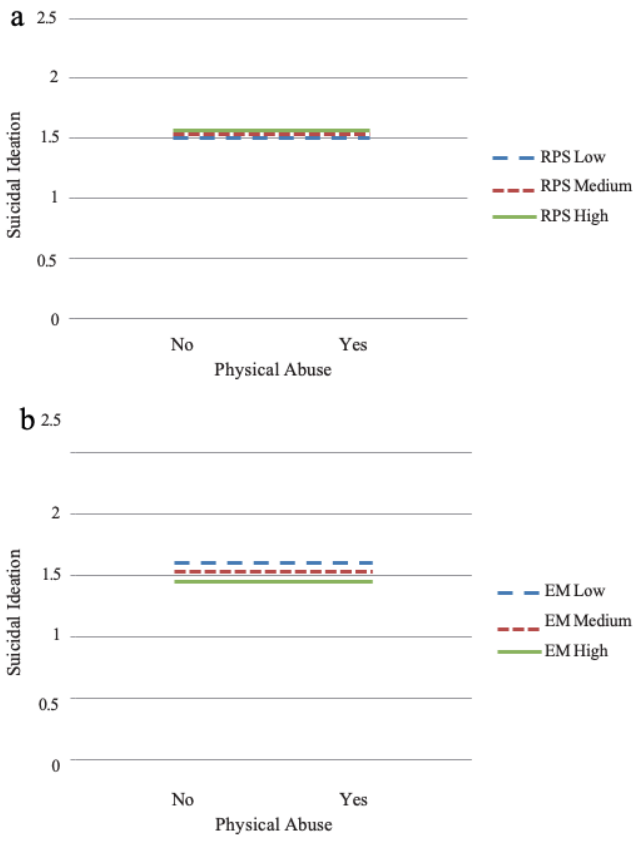

Fig. 2. (a) The interaction effect of Rational Problem-Solving (RPS) and Physical Abuse on Female Suicidal Ideation. (b) The interaction effect of Empathy (EM) and Physical Abuse on Female Suicidal Ideation.

Discussion

Physical abuse was found to be significantly and positively related to suicidal ideation in both males and females; Hypothesis 1 is thus supported. This finding is in line with the findings of previous studies (Miller et al., 2013; Thompson et al., 2012). As stated earlier, traditional Chinese culture supports authoritarian parenting; physical punishment is considered a means to "educate and discipline" to which children cannot object (Qiao, 2007). Besides, China lacks a legal or social protective system for abused children. Many Chinese regard their children as their private properties and resist outside intervention (Qiao & Chan, 2005). Being submissive to harsh parental discipline, physically abused adolescents may feel helpless, hopeless, shameful, and stressful, which may all contribute to suicidal ideation.

Emotional competence was not found to be significantly associated with suicidal ideation for both male and female adolescents; thus, Hypothesis 2 is not supported. This result may be explained by the less important role given to emotional competence in alleviating mental health problems for the Chinese under normal and general circumstances. The Chinese have become used to suppressing their emotions during daily encounters. Management and utilization of emotions may be ineffective for them, so even high emotional competence may not have an impact on suicidal ideation.

As a sub-scale of social problem-solving, rational problem-solving was found to be significantly and negatively associated with suicidal ideation for males but not for females. Hence, Hypothesis 3 is partially supported. Males with higher rational problem-solving abilities have lower suicidal ideation and are independent of the stress encountered. In the problem solving processes of identification of problems, generation of alternative solutions, assessment of the pros and cons of solutions, males may be able to formulate more

appropriate solutions to solve problems effectively (Siu, 2003). Subsequently, suicidal ideation under normal situations is reduced.

Meanwhile, empathy, a sub-scale of emotional competence, and rational problem-solving were found to be significant and marginally significant moderators in the relationship between physical abuse and suicidal ideation in females, respectively, but not in males. Hypotheses 4 and 5 are thus partially supported. A previous study demonstrated that strategies for cognitive-emotion regulation explain more variances in depression scores under high stress in females than in males (Xiao, Huang, Ling, Liu, & Zhu, 2009). Frye and Goodman (2000) also showed that social problem-solving moderates the relationship between life stress and depression among adolescent girls. Females tend to accept physical abuse more easily because of their subservient and submissive characters (Ekblad & Olweus, 1986). They may rationalize abusive acts and detach themselves from negative experiences (Frye & Goodman, 2000). Therefore, rational problem-solving is only effective for females in conjunction with adverse situations but not under normal circumstances.

Interestingly, females with higher empathy and who reported being physically abused by their parents have higher suicidal ideation. This finding is in line with that of a previous study that revealed a more significant association between stress and reported suicidal ideation among people high in emotional perception (i.e., empathy) when compared with others (Ciarrochi et al., 2002). When female adolescents are sensitive and empathetic toward their parents despite abuse, they may perceive the presence of justifications and may thus formulate excuses for their parents' abusive behaviors (Hester, He, & Tian, 2009). Females may blame themselves for committing misbehaviors and may regard themselves as deserving to be punished; hence, their suicidal ideation increases.

Males tend to take physical abuse as a serious insult given that males are supposed to be models to other family members and will become heads of the family in the future. Males are supposed to continue the family link, take over the family business, and care for their parents. Owing to filial piety, males are supposed to be responsible and accountable for their own misdeeds and support their parents in difficult circumstances through self-sacrifice (Tang, 1998). Hence, they are expected to be strictly obedient to their parents. Chinese parental expectations on sons are higher than those on daughters, and boys are not supposed to rebel or oppose their parents' strict discipline (Tang, 1998). The enormous sense of responsibility may generate feelings of ambivalence, shamefulness, and guilt that render any positive assets ineffective. Physical abuse is detrimental to the physical and mental health of males (Meyerson, Long, Miranda, & Marx, 2002; Thompson, Kingree, & Desai, 2004). They may feel overwhelmed but tend to suppress their painful, hopeless, and helpless feelings because they are taught to be strong and not to express their feelings even under great stress. A Chinese proverb says "boys are not supposed to cry even when bleeding." Therefore, empathy or rational problem-solving cannot have any significant impact on suicidal ideation under these traumatic situations.

Implications

Given that physical abuse is detrimental to adolescents, the development and expansion of a comprehensive legal reporting system that protects children and supports widespread changes in parenting attitudes and practices are necessary. Professionals such as doctors, teachers, social workers, and neighbors in the community can be educated to help identify child abuse cases in families in the early stage. Changing the attitude of parents toward the concept of physical abuse is necessary. The awareness of parents on the long-term impact of physical abuse on children's development can be increased. Parents can be guided with regard to

appropriate parenting attitudes, knowledge, and skills e.g., through active listening, reflection of feelings and thinking, reasoning and explaining, mutual discussion. Parents can be made aware that physical abuse is not a proper means to educate, discipline, or build resilience in children. Children are not private properties and do not deserve any kind of improper treatment; they should be treated and respected as unique individuals with rights and privileges.

Enhancement of rational problem-solving skills may help alleviate adolescent suicidal ideation. A pilot prevention program, including problem-solving skills training, was found to be effective in helping children aged 8–12 generate positive coping thoughts and high quality solutions to problems while reducing their internalizing and externalizing symptoms (Raviv & Wadsworth, 2010). Another program for adolescents called "Best of Coping" that incorporates problem-solving skill guidance was shown to increase the use of adaptive coping strategies and decrease the use of maladaptive coping strategies, leading to improvement in symptomatology (Carter, 2010). The program "Personal Adolescent Training through Holistic Social Programs" that includes problem solving and resilience training was shown to be effective in reducing the negative behaviors of secondary school students in Hong Kong (Shek & Sun, 2010). Hence, workshops and programs may be organized to teach adolescents rational problem-solving skills, comprising problem definition and formulation, generation of alternative solutions, decision making, and solution implementation and verification.

Limitations

The present study has its limitations. First, considering that the study adopted convenience sampling of secondary school students in Shanghai, the findings cannot be generalized to the broader school population or rural areas that have different characteristics from urban areas in

China. If possible, stratified random sampling in more provinces in China may be adopted in future studies. Second, the measures developed in Western countries were adopted in the present study. Although the measures were validated with the Chinese population in Hong Kong, they may not be applicable to all provinces in China because China is a big country with high diversity. Further validation of the measures in China is necessary. Third, only self-administered questionnaires were utilized to collect the retrospective responses of adolescents. Social desirability may affect the validity of the responses. Comparisons among different informants, such as the parents and other family members of the adolescents, are suggested for future studies. Multiple methods of data collection, such as individual or focus group interviews, may provide more comprehensive and accurate results. Fourth, this study is a cross-sectional survey; hence, causal relationships cannot be implied. Future studies should incorporate a longitudinal study to delineate the causal factors of adolescent suicidal ideation. Fifth, several other school or societal variables (e.g., peer relationship, impact of mass media) may also affect suicidal ideation. Future research can incorporate the impact of these factors as well. Sixth, the moderating effects of empathy and rational problem-solving on female adolescent suicidal ideation are weak, and the results have to be interpreted with caution. Future research on different effects of these factors in both clinical and non-clinical samples, in consideration of the differences between males and females, is necessary. Despite these limitations, the current study uncovers the moderating roles of emotional competence and social problem-solving in the relationship between physical abuse and adolescent suicidal ideation.

References

Baldry, A. C., & Winkel, F. W. (2003). Direct and vicarious victimization at school and at home as risk factors for suicidal cognition among Italian adolescents. *Journal of Adolescence*, *26*(6), 703–716.

Bond, M. (1993). Emotions and their expression in Chinese culture. *Journal of Nonverbal Behavior*, *17*, 245–262.

Blum, R., Sudhinaraset, M., & Emerson, M. R. (2012). Youth at risk: Suicidal thoughts and attempts in Vietnam, China, and Taiwan. *Journal of Adolescent Health*, *50*(3), S37–S44.

Brezo, J., Paris, J., Vitaro, F., Hébert, M., Tremblay, R. E., & Turecki, G. (2008). Predicting suicide attempts in young adults with histories of childhood abuse. *British Journal of Psychiatry*, *193*(2), 134–139.

Calvete, E., & Carden˜oso, O. (2005). Gender differences in cognitive vulnerability to depression and behavior problems in adolescents. *Journal of Abnormal Child Psychology*, *33*(2), 179–192.

Carter, A. (2010). *Evaluating the best of coping program: Enhancing coping skills in adolescents* (PhD dissertation). University of Windsor.

Centre for Disease Control and Prevention. (2011). *Adolescent suicide in China*. Retrieved from http://www.chinacdc.cn/jkzt/mxfcrjbhsh/zs/wgzskgjgy/200509/W020130219372225041587.pdf

Cha, C. B., & Nock, M. K. (2009). Emotional intelligence is a protective factor for suicidal behavior. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*(4), 422–430.

Chan, D. W. (2003). Dimensions of emotional intelligence and their relationships with social coping among gifted adolescents in Hong Kong. *Journal of Youth and Adolescence*, *32*(6), 409–418.

Chan, K. L. (2011). Children exposed to child maltreatment and intimate partner violence: A study of co-occurrence among Hong Kong Chinese families. *Child Abuse & Neglect*, *35*(7), 532–542.

Chan, D. W. (2005). Self-perceived creativity, family hardiness and emotional intelligence of Chinese gifted students in Hong Kong. *Journal of Secondary Gifted Education*, *16*, 47–56.

Chen, G. M., & Starosta, W. J. (1997). Chinese conflict management and resolution: Overview and implications. *Intercultural Communication Studies*, *7*, 1–16. Chen, J., Ma, Y., & Liang, Y. (2008). A retrospective survey of childhood corporal punishment and emotional maltreatment by their parents in students. *Chinese Mental Health Journal*, *22*(12), 922–927.

Chen, P. C., Lee, L. K., Wong, K. C., & Kaur, J. (2005). Factors relating to adolescent suicidal behavior: A cross-sectional Malaysian school survey. *Journal of Adolescent Health*, *37*(4), 337.e11–337.e16.

Chen, Z., Fu, L., Peng, Y., Cai, R., & Zhou, S. (2011). The relationship among childhood abuse, parenting styles, and antisocial personality disorder tendency. *Chinese Journal of Clinical Psychology*, *19*(2), 212–214.

Cheng, Y., Tao, M., Riley, L., Kann, L., Ye, L., Tian, X., & Chen, D. (2009). Protective factors relating to decreased risks of adolescent suicidal behaviour. *Child: Care, Health and Development*, *35*(3), 313–322.

Ciarrochi, J., Dean, F. P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Difference*, *32*, 197–209.

Davis, S. K., & Humphrey, N. (2012). Emotional intelligence as a moderator of stressor–mental health relations in adolescence: Evidence for specificity. *Personality and Individual Differences*, *52*(1), 100–105.

Dixon, W. A., Heppner, P. P., & Anderson, W. P. (1991). Problem-solving appraisal, stress, hopelessness, and suicide ideation in a college population. *Journal of Counseling Psychology*, *38*(1), 51.

Dour, H. J., Cha, C. B., & Nock, M. K. (2011). Evidence for an emotion-cognition interaction in the statistical prediction of suicide attempts. *Behaviour Research and Therapy*, *49*, 294–298.

D'Zurilla, T. J., & Maydeu-Olivares, A. (1995). Conceptual and methodological issues in social problem-solving assessment. *Behavior Therapy*, *26*(3), 409–432. D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (1996). *Manual for the Social Problem-solving Inventory-Revised (SPSI-R)*. Multi-Health Systems: North Tonawanda, NY.

Ekblad, S., & Olweus, D. (1986). Applicability of Olweu's aggression inventory in a sample of Chinese primary school children. *Aggressive Behavior*, *12*(5), 315–325.

Eskin, M., Ertekin, K., Dereboy, C., & Demirkiran, F. (2007). Risk factors for and protective factors against adolescent suicidal behavior in Turkey. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *28*(3), 131.

Esposito, C. L., & Clum, G. A. (2002). Social support and problem-solving as moderators of the relationship between childhood abuse and suicidality: Applications to a delinquent population. *Journal of Traumatic Stress*, *15*(2), 137–146.

Fremouw, W., Callahan, T. Y., & Jody, K. (1993). Adolescent suicidal risk: Psychological, problem-solving, and environmental factors. *Suicide & Life-Threatening Behavior*, *23*(1), 46–54.

Friedman, R., Chi, S. C., & Liu, L. A. (2006). An expectancy model of Chinese–American differences in conflict-avoiding. *Journal of International Business Studies*, *37*(1), 76–91.

Frye, A. A., & Goodman, S. H. (2000). Which social problem-solving components buffer depression in adolescent girls? *Cognitive Therapy and Research*, *24*(6), 637–650.

Garcia, J., Adams, J., Friedman, L., & East, P. (2002). Links between past abuse, suicide ideation, and sexual orientation among San Diego college students. *Journal of American College Health*, *51*(1), 9–14.

Garrosa, E., Moreno-Jiménez, B., Rodríguez-Mun˜oz, A., & Rodríguez-Carvajal, R. (2011). Role stress and personal resources in nursing: A cross-sectional study of burnout and engagement. *International Journal of Nursing Studies*, *48*(4), 479–489.

Grover, K. E., Green, K. L., Pettit, J. W., Monteith, L. L., Garza, M. J., & Venta, A. (2009). Problem-solving moderates the effects of life event stress and chronic stress on suicidal behaviors in adolescence. *Journal of Clinical Psychology*, *65*(12), 1281–1290.

Hester, M., He, J., & Tian, L. (2009). Girls' and boys' experiences and perceptions of parental discipline and punishment while growing up in China and England. *Child Abuse Review*, *18*(6), 401–413.

Hirsch, J. K., Chang, E. C., & Jeglic, E. L. (2012). Social problem-solving and suicidal behavior: Ethnic differences in the moderating effects of loneliness and life stress. *Archives of Suicide Research*, *16*(4), 303–315. http://dx.doi.org/10.1080/13811118.2013.722054

Hsu, F. (1971). Eros, affect and pao. In F. Hsu (Ed.), *Kinship and Culture* (pp. 439–475). Chicago, IL: Aldine.

Jacobson, C. M., Marrocco, F., Kleinman, M., & Gould, M. S. (2010). Restrictive emotionality, depressive symptoms, and suicidal thoughts and behaviors among high school students. *Journal of Youth and Adolescence*, 1–10. http://dx.doi.org/10.1007/s10964-010-9573-y

Kaplan, S. J., Pelcovitz, D., Salzinger, S., Mandel, F., Weiner, M., & Labruna, V. (1999). Adolescent physical abuse and risk for suicidal behaviors. *Journal of Interpersonal Violence*, *14*(9), 976–988.

Khurana, A., & Romer, D. (2012). Modeling the distinct pathways of influence of coping strategies on youth suicidal ideation: A National Longitudinal Study. *Prevention Science*, *13*(6), 644–654.

Kirkbride, P. S., Tang, S. F., & Westwood, R. I. (1991). Chinese conflict preferences and negotiating behaviour: Cultural and psychological influences. *Organization studies*, *12*(3), 365–386.

Klineberg, O. (1983). Emotional expression in Chinese literature. *Journal of Abnormal and Social Psychology*, *33*, 517–520.

Kwok, S. Y. C. L., & Shek, D. T. L. (2010). Cognitive, emotive, and cognitive-behavioral correlates of suicidal ideation among Chinese adolescents in Hong Kong. *Scientific World Journal*, *10*, 366–379.

Kwok, S. Y. C. L. (2011). Perceived family functioning and suicidal ideation: Hopelessness as mediator or moderator. *Nursing Research*, *60*(6), 422–429. Kwok, S. Y. C. L. (2014). The moderating role of emotional competence in suicidal ideation among Chinese university students. *Journal of Advanced Nursing*, *70*(4), 843–854.

Linehan, M. M. (1981). *Suicidal behaviors questionnaire* (Unpublished inventory). Seattle, Washington: University of Washington.

Labelle, R., Breton, J.-J., Pouliot, L., Dufresne, M.-J., & Berthiaume, C. (2013). Cognitive correlates of serious suicidal ideation in a community sample of adolescents. *Journal of Affective Disorder*, *145*, 370–377.

Leung, P., Wong, W., Chen, W. Q., & Tang, C. (2008). Prevalence and determinants of child maltreatment among high school students in Southern China: A large scale school based survey. *Child and Adolescent Psychiatry and Mental Health*, http://dx.doi.org/10.1186/1753-2000-2-27

Liu, X., Sun, Z., & Yang, Y. (2008). Parent-reported suicidal behavior and correlates among adolescents in China. *Journal of affective disorders*, *105*(1), 73–80.

Ma, Y., Chen, J., Xiao, W., Wang, F., & Zhang, M. (2011). Parents' self-reporting of child physical maltreatment in Yuncheng City, China. *Child Abuse & Neglect*, *35*(8), 592–600.

Meyerson, L. A., Long, P. J., Miranda, R., Jr., & Marx, B. P. (2002). The influence of childhood sexual abuse, physical abuse, family environment, and gender on the psychological adjustment of adolescents. *Child Abuse & Neglect*, *26*(4), 387–405.

Miller, A. B., Esposito-Smythers, C., Weismoore, J. T., & Renshaw, K. D. (2013). The relation between child maltreatment and adolescent suicidal behavior: A systematic review and critical examination of the literature. *Clinical Child and Family Psychology Review*, *16*(2), 146–172.

Phillips, R. P., Li, X. Y., & Zhang, Y. P. (2002). Suicide rates in China, 1995–1999. *Lancet*, *359*(9309), 835–840.

Priester, M. J., & Clum, G. A. (1993). Perceived problem-solving ability as a predictor of depression, hopelessness, and suicide ideation in a college population. *Journal of Counseling Psychology*, *40*(1), 79.

Poon, W.-T., & Lau, S. (1999). Coping with failure: Relationship with self-concept discrepancy and attributional style. *Journal of Social Psychology*, *139*(5), 639–653.

Qiao, D. P., & Chan, Y. C. (2005). Child abuse in China: A yet-to-be-acknowledged 'social problem' in the Chinese Mainland. *Child & Family Social Work*, *10*(1), 21–27.

Qiao, D. P. (2007). *Conceptions of physical child abuse in China: Listening to children and their parents on parental child battering in Beijing*. Hung Hom: The Hong Kong Polytechnic University.

Qiao, D. P., & Chan, Y. C. (2008). Myths of child abuse in china: Findings based on a qualitative study in Beijing. *China Journal of Social Work*, *1*, 266–278. Rajappa, K., Gallagher, M., & Miranda, R. (2011). Emotion dysregulation and vulnerability to suicidal ideation and attempts. *Cognitive Therapy and Research*, http://dx.doi.org/10.1007/s10608-011-9419-2

Raviv, T., & Wadsworth, M. E. (2010). The efficacy of a pilot prevention program for children and caregivers coping with economic strain. *Cognitive Therapy and Research*, *34*(3), 216–228.

Sadhan, D., & Soma, H. (2011). Does students' emotional intelligence play role in their suicidal ideation? *Indian Journal of Community Psychology*, *7*(1), 190–197.

Schutte, N., Malouff, J., Hall, L., Haggerty, D., Cooper, J., Golden, C., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Difference*, *25*, 167–177.

Seligman, M. E., & Csikszentmihalyi, M. (2000). *Positive psychology: An introduction* (Vol. 55, No. 1) American Psychological Association.

Shek, D. T., & Sun, R. C. (2010). Effectiveness of the tier 1 program of project PATHS: Findings based on three years of program implementation. *Scientific World Journal*, *10*, 1509–1519.

Silverman, A. B., Reinherz, H. Z., & Giaconia, R. M. (1996). The long-term sequelae of child and adolescent abuse: A longitudinal community study. *Child Abuse & Neglect*, *20*(8), 709–723.

Siu, A. M. (2003). *Interpersonal Competence, Family Functioning, and Parent-Adolescent Conflicts* (PhD dissertation). The Chinese University of Hong Kong. Siu, A. M., & Shek, D. T. (2005). The Chinese version of the social problem-solving inventory: Some initial results on reliability and validity. *Journal of Clinical Psychology*, *61*(3), 347–360.

Speckens, A. E., & Hawton, K. (2005). Social problem-solving in adolescents with suicidal behavior: A systematic review. *Suicide and Life-Threatening Behavior*, *35*(4), 365–387.

Stewart, S. M., Kennard, B. D., Lee, P. W. H., Mayes, T., Hughes, C., & Emslie, G. (2005). Hopelessness and suicidal ideation among adolescents in two cultures. *Journal of Child Psychology and Psychiatry*, *46*, 364.

Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the parent–child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect*, *22*(4), 249–270.

Suldo, S. M., & Huebner, E. S. (2004). Does life satisfaction moderate the effects of stressful life events on psychopathological behavior during adolescence? *School Psychology Quarterly*, *19*(2), 93.

Tang, S. K. (1998). The rate of physical child abuse in Chinese families: A community survey in Hong Kong. *Child Abuse & Neglect*, *22*(5), 381–391.

Tamás, Z., Kovacs, M., Gentzler, A. L., Tepper, P., Gadoros, J., Kiss, E., Kapornai, K., & Vetró, A. (2007). The relations of temperament and emotion self-regulation with suicidal behaviors in a clinical sample of depressed children in Hungary. *Journal of Abnormal Child Psychology*, *35*, 640–652.

Thompson, M. P., Kingree, J. B., & Desai, S. (2004). Gender differences in long-term health consequences of physical abuse of children: Data from a nationally representative survey. *American Journal of Public Health*, *94*(4), 599–604.

Thompson, A., Mazza, J., Herting, R., Randell, P., & Eggert, L. (2005). The mediating roles of anxiety, depression, and hopelessness on adolescent suicidal behaviors. *Suicide and Life-threatening Behavior*, *35*, 14–34.

Thompson, R., Proctor, L. J., English, D. J., Dubowitz, H., Narasimhan, S., & Everson, M. D. (2012). Suicidal ideation in adolescence: Examining the role of recent adverse experiences. *Journal of adolescence*, *35*(1), 175–186.

Tse, J. W., & Bagley, C. (2002). *Suicidal behaviour, bereavement and death education in Chinese adolescents*. Aldershot: Ashgate Publishing Limited.

Wang, R. H., Lai, H. J., Hsu, H. Y., & Hsu, M. T. (2011). Risk and protective factors for suicidal ideation among Taiwanese adolescents. *Nursing Research*, *60*(6), 413–421.

Whitson, S., & El-Sheikh, M. (2003). Marital conflict and health: Processes and protective factors. *Aggression and Violent Behavior*, *8*(3), 283–312.

Wong, W. C., Leung, P. W., Tang, C. S., Chen, W. Q., Lee, A., & Ling, D. C. (2009). To unfold a hidden epidemic: Prevalence of child maltreatment and its health implications among high school students in Guangzhou, China. *Child Abuse & Neglect*, *33*(7), 441–450.

Xiao, J., Huang, R., Ling, Y., Liu, Z., Zhu, X., & Yao, S. (2009). Gender differences of the cognitive emotion regulation strategies in senior high schools students. *Chinese Mental Health Journal*, *23*(9), 67–673.

Xing, X. Y., Tao, F. B., Wan, Y. H., Xing, C., Qi, X. Y., Hao, J. H., & Huang, L. (2010). Family factors associated with suicide attempts among Chinese adolescent students: A national cross-sectional survey. *Journal of Adolescent Health*, *46*(6), 592–599.

Yang, D., Han, W., Shao, C., & Su, X. (2013). Surveillance for self-injury and suicide among middle school students in Beijing Tongzhou District during 2008–2012. *Chinese Journal of School Health*, *34*(11), 1351–1353.

Zhang, J., Li, N., Tu, X. M., Xiao, S., & Jia, C. (2011). Risk factors for rural young suicide in China: A case–control study. *Journal of Affective Disorders*, *129*(1), 244–251.

Zhang, J. S., Shen, L. X., & Gao, N. (2008). The revision and application of the revision of the Early Adolescent Temperament Questionnaire. *Chinese Journal of Mental Health*, *22*(6), 439–443.

Zhang, Y., Zhang, Y., Yang, H., & Zhang, Y. (2010). Mediation of parent attachment between childhood abuse and adolescents depression. *Chinese Journal of Clinical Psychology*, *18*(6), 760–762.