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The relationship between childhood physical abuse and suicidal ideation among Chinese university students: Possible moderators

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Abstract

This study examined the relationship between childhood physical abuse and adolescent suicidal ideation in Hong Kong, China. Emotional competence and resilience were investigated as possible moderators of the relationship between physical abuse and suicidal ideation. A cross-sectional survey using convenience sampling was conducted and a total of 268 valid self-administered questionnaires were completed by the participating university students. The results indicate that physical abuse in childhood is significantly associated with greater suicidal ideation among young people at university. Higher levels of emotional competence and resilience are shown to moderate the relationship between physical abuse and suicidal ideation. To decrease Chinese adolescent suicidal ideation arising out of childhood physical abuse, preventative measures are suggested; these involve enhancing adolescents' emotional competence and resilience by providing training for children and young people who are at risk. The results also suggest that there should be programs that encourage adolescents with a history of childhood physical abuse to join training groups to enhance their emotional competence and resilience in the context of Chinese communities.

Keywords: Chinese students; Emotional competence; Resilience; Suicidal ideation; Childhood physical abuse

In Chinese Hong Kong society, suicide is the leading cause of death in adolescents aged 15 to 24 (Yip et al., 2004). Some studies have indicated that the prevalence of suicidal ideation among young people in Hong Kong is as high as 39–52% (Lai & McBride-Chang, 2001; Stewart, Lam, Betson, & Chung, 1999). Suicidal ideation usually precedes a suicidal act (Lam et al., 2004; Stewart et al., 1999; Yip et al., 2004), and is also predictive of future suicide attempts (Gould & Kramer, 2001).

1. Child abuse and suicidal ideation

Although some researchers have not found a causal connection between childhood physical abuse and adolescent suicidal ideation (Anderson, Tiro, Price, Bender, & Kaslow, 2002), some international studies have indicated that childhood physical abuse is related to adult suicidal behavior (Glowinski et al., 2001; McHolm, MacMillan, & Jamieson, 2003; Roy, 2003). Childhood physical abuse has been defined as “... the intentional use of physical force against a child that results in – or has a high likelihood of resulting in – harm for the child's health, survival, development, or dignity. This includes hitting, beating, kicking, shaking, biting, strangling, scalding, burning, poisoning, and suffocating.” (Butchart, Phinney Harvey, Kahane, Mian, & Furniss, 2006). Childhood maltreatment has been shown to be related to some mental-health problems (including mood and anxiety disorders), substance abuse, and self-harm, as well as to suicidal ideation. In a study of 776 adolescents and young adults conducted by Brown, Cohen, Johnson, and Smailes (1999), the findings indicated that those with a history of childhood abuse were three times more likely to become depressed or suicidal than those who did not have such experiences. Indeed, suicidal ideation is strongly associated with a history of childhood physical abuse (McHolm et al., 2003). A study conducted in the UK, which involved >55,000 participants, indicated an inter-relationship between childhood physical and sexual abuse, and suicidal ideation (Bruffaerts et al., 2010).

In relation to the prevalence of childhood physical abuse in China, meta-analysis of 47 studies on the subject (including data from Hong Kong and Taiwan) indicated that the prevalence of childhood physical abuse was estimated at 36.6% (Ji & Finkelhor, 2015). There was also a much lower rate of child physical abuse in Hong Kong than in Mainland China; the rate of minor assault was 8.5% in the Hong Kong student sample and 22.5% in the mainland student sample. Such a result indicated cultural differences between Chinese people in the three areas used within the study and people from Hong Kong. Parents in Hong Kong are more exposed to western culture and adopt a more westernized parenting practice, while Mainland parents maintain a relatively traditional parenting practice characterized by the corporal punishment of their children.

In Hong Kong, research has indicated that adolescents who experience physical maltreatment in childhood are disadvantaged in health-related indices such as somatic illness and substance abuse (Lau et al., 2005), and self-report more anxiety and overall stress (Lau, Liu, Cheung, & Wong, 1999). One local study also indicated a significant relationship between self-injury, substance abuse, lower self-esteem, and adolescents' experiences of corporal punishment in childhood (Lau, Chan, Lam, Choi, & Lai, 2003). This study served as part of the motivation for the present study. We deemed it important to understand these phenomena better in contemporary Chinese Hong Kong society, because patterns of physical child abuse in Hong Kong are different from those in Western cultures. For example, child abuse occurs at a later age locally than in the West (Lau et al., 2003). This could be because Chinese parents are more concerned about their children's academic performance than their Western counterparts (Chao, 1996). They also have higher expectations regarding their children's behavior, as "face-saving" is very important in Chinese culture (Russell, Crockett, & Chao, 2010). In addition, a more traditional Chinese perspective would consider corporal punishment that

involved only mild injury as rather commonplace (Lau et al., 1999). All this being so, there is a possibility that the effects of childhood physical abuse in a Chinese population, and the possible moderators, are different from those more frequently noted in the West.

1.1. Factors that moderate suicidal ideation

Both international and local studies suggest a relationship between childhood experiences of physical abuse and suicidal ideation in adolescents and young adults. However, very few of these studies have investigated factors that moderate the relationship between the two. A range of factors — such as emotional competence, optimism, and social support — may have a buffering effect on suicidal ideation (Cha & Nock, 2009). Psychological buffers — such as higher degrees of life satisfaction, good self-esteem, positive perceptions of family cohesion, and social support — have also been identified as possible moderators for university students (Chioqueta & Stiles, 2007). The current study thus examines the moderating effects of emotional competence and resilience in a sample of Chinese university students in Hong Kong.

1.1.1. Emotional competence

People with higher levels of emotional competence have been found to be more willing to seek help from professionals and to have less suicidal ideation (Ciarrochi & Deane, 2001). Emotional competence is defined as the ability to articulate emotions and manage one's own emotions, as well as others' emotions, in acceptable ways (Ciarrochi, Chan, & Caputi, 2000; Ciarrochi, Deane, & Anderson, 2000). Emotionally competent people are more cheerful (Shek & Ma, 2013), ventilate their emotions positively, and are more able to manage and express their emotions in a socially acceptable manner. They are able to use adaptive strategies to cope with life's adversities and can cope better with their emotions in situations

of conflict (Lau, 2006; Shek & Ma, 2013). They are more capable of perceiving and recognizing their own emotions and those of others, of understanding their own emotions, and of managing others' emotions, and are less prone to depression and suicidal ideation (Kalafat, 1997). Research on suicidal ideation in Chinese university students has also indicated the possible moderating effects of emotional competence on suicidal ideation that is related to their perceptions of negative family functioning (Kwok, 2014). However, there is a lack of research in Chinese populations on the moderating effects of emotional competence on suicidal ideation related to previous experiences of physical abuse.

1.1.2. Resilience

Studies of the concept of resilience have helped identify protective factors (ones that protect a person against behaving undesirably in the face of adversity), rather than focusing on the risk factors of a person (Lee, 2006). Focusing on a person's strengths and the positive characteristics of adolescents has enhanced the understanding of effective interventions that build on an adolescent's strengths (Everall, Altrows, & Paulson, 2006). Resilience is defined in terms of the perceptions, beliefs, or abilities that provide individuals with a buffer against the deleterious impacts of risk (Johnson, Gooding, Wood, & Tarrier, 2010a; Johnson et al., 2010b; Osman et al., 2004; Rutter, Freedenthal, & Osman, 2008). Resilience is also considered to be a stable personality trait or an ability that a person needs to protect oneself against risk and adversity (Everall et al., 2006). It is also defined as the capacity of a person to adapt well to stressful events and life changes (Lee, 2006). Adolescents with higher levels of resilience have a stronger internal locus of control (Dumont & Provost, 1999): they do not give up easily, are more optimistic, have a sense of purpose through having life goals, and are hopeful about their future (Howard & Johnson, 2000). They are deemed more stress-resistant

and less vulnerable (Tlapek et al., 2016; Garmezy, 1994) and possess more protective factors, such as a better ability to adapt to risky or stressful situations (Richardson, 2002).

Furthermore, resilient adolescents have more positive self-concepts and higher self-esteem than those adolescents who are more stressed when facing adversity (Dumont & Provost, 1999). They have also been found to be more competent in interpersonal communication (a trait which is evident in their sense of humor, flexibility, and easygoing temperament) than those who are more stressed when facing adversity. In addition, a study on substance abuse patients who had experiences of childhood trauma (such as physical abuse in childhood) found that those who had attempted suicide had significantly lower resilience than those who had not attempted suicide (Roy, Carli, & Sarchiapone, 2011). In addition, the same study found that prisoners who had experienced childhood trauma and had attempted suicide got significantly lower scores in resilience than those who were in similar circumstances but had not attempted suicide.

The aims of the present study are to examine the relationship between child physical abuse, emotional competence, resilience, and suicidal ideation among Chinese university students in Hong Kong. The hypotheses are:

- H1. Childhood physical abuse is positively associated with suicidal ideation among Chinese university students.
- H2. Emotional competence moderates the relationship between childhood physical abuse and suicidal ideation among Chinese university students.
- H3. Resilience moderates the relationship between childhood physical abuse and suicidal ideation among Chinese university students.

2. Method

2.1. Procedures and participants

The sample came from a cohort of university students recruited in Hong Kong. Using convenience sampling, we successfully approached local university students who were taking part-time evening bachelor's and master's social sciences courses (including social work, psychology, and counseling courses) at the City University of Hong Kong. A total of 268 questionnaires were collected within a period of one month. The participants were asked to complete consent forms before they completed the questionnaires anonymously in a classroom setting. It was also stressed to the participants that participation was entirely voluntary, and non-participation would result in no adverse consequences. The objectives of the study and the confidentiality issues were explained both on the consent form and by the research assistants who were present during the in-class data collection sessions. It took about 40 min to complete the questionnaire. The research was approved by the Ethical Review Committee of the City University of Hong Kong.

2.1.1. Sociodemographic data

Of the 268 participants, 25.8% were male and the rest were female (Table 1). The respondents' ages ranged from 19 to 57, the mean age being 25.9. About 44% of the participants had religious beliefs. Most were single (81.3%) and most of their parents were married (84.5%). Regarding the participants' parents' employment, 58.9% of the fathers and 43.2% of the mothers had a full-time job. Regarding monthly household incomes, 45.6% of the participants had household income of HKD 30,000 or above; another 45.6% were in the range of HKD 10,000 to 30,000; and the remainder (8.4%) were below HKD 10,000.

Table 1
Demographic data of respondents.

		(N = 268)
		n (%)
Gender	Male	69 (25.8)
	Female	199 (74.2)
Age	Mean (s.d.)	25.9 (6.9)
Years of residence in Hong Kong	Mean (s.d.)	23.3 (8.8)
Religious beliefs	Yes	118 (44)
	No	150 (56)
Marital status	Single	218 (81.3)
	Married	50 (18.7)
	Other	2 (12.50)
Employment status		
	Father	
	Full time	158 (58.9)
	Other	110 (41.1)
	Mother	
	Full time	116 (43.2)
	Other	152 (56.8)
Monthly household income (in HK dollars)	5000 or below	4 (1.5)
	5001 to 10,000	18 (6.7)
	10,001 to 30,000	120 (44.8)
	30,001 to 60,000	90 (33.6)
	60,001 or above	29 (10.8)
	No response	7 (2.6)

2.2. Measures used

2.2.1. Emotional competence and resilience

The Emotional Competence and Resilience subscales in the abridged version of the Chinese Positive Youth Development Scale (CPYDS; Shek, Siu, & Lee, 2007) were used to measure the strength of different aspects of positive youth development in the participants. The abridged CPYDS extracts 44 items out of the original 90-item CPYDS and measures 15 domains of positive youth development. The participants were asked to rate the extent to which they agreed with statements concerning emotional competence and resilience (scored on a 6-point Likert scale, with 1 = *strongly disagree* and 6 = *strongly agree*). Averaging the item scores in a domain yielded a positive-youth-development domain score, with higher scores indicating higher agreement in that particular domain. The CPYDS demonstrated good construct validity in the scores' positive relationships with scores for life satisfaction and thriving, and the scores' negative relationship with scores for high-risk behavior (Shek et al., 2007). The emotional competence subscale of CPYDS includes six items with questions such

as, “when I am angry, I can rationally describe my feelings” and “when I have conflict with others, I can manage my emotion.” The Resilience subscale of CPYDS also includes six items with questions such as, “when I face difficulty, I will not give up easily,” and “when I face adversity, I remain optimistic.” The Emotional Competence and Resilience subscales of CPYDS demonstrated internal reliability, with Cronbach's alpha being 0.61 and 0.81, respectively, in the current study.

2.2.2. Childhood physical abuse

The Physical Aggression subscale of the well-regarded Childhood Trauma Questionnaire (CTQ), developed by Wright et al. (2001), was used to measure the childhood physical abusive behavior of the parents, as reported by the participants. Sample questions such as, “I got hit so hard by someone in my family that I had to see a doctor or go to the hospital” and “I was punished with a belt, a board, a cord, or some other hard object” were asked in the questionnaire. There are five items in the Physical Aggression subscale. The participants were asked to respond (on a 5-point Likert scale) to statements regarding the frequency of occurrence of different types of physically abusive behavior (with 1 = *never* and 5 = *very often*). The reliability of the Physical Aggression subscale in the current study was excellent ($\alpha = 0.88$).

2.2.3. Suicidal ideation

The 13-item Suicidal Ideation subscale (C-SIS) of the Suicidal Risk Scale for Hong Kong Students (Tse, Bagley, & Yau, 2002) was used to assess the suicidal ideation of our participants. Questions such as, “I think being dead may be better than what I am experiencing now” and “I really want to put an end to all this so that I don't have to continue to bear the pain” were asked in the questionnaire. The participants were asked to indicate,

using a 4 point Likert scale, the extent of their agreement to a number of statements (with 1 = *strongly disagree* and 4= *strongly agree*). A higher (averaged) score was taken as indicating a higher level of suicidal ideation. The adequacy of psychometric properties was tested (see Tse et al., 2002). The reliability of the scale was excellent ($\alpha = 0.91$).

2.2.4. Data analyses

t-Test was performed to measure any statistically significant differences in demographic variables between the group of respondents who had experienced physical abuse and the group of respondents who had not experienced physical abuse. Regression analysis was then applied to consider whether physical aggression correlated to suicidal ideation. In order to find out whether emotional competence and resilience moderated the prediction paths between the two independent variables and suicidal ideation, we analyzed moderation models, with levels of physical aggression as independent variables, using an SPSS macro (Hayes, 2009) operation for conducting moderation analyses. One independent variable and one moderator, together with their product term, were entered in each of the moderation models. This helped to visualize the conditional, direct effects of physical aggression on suicidal ideation through testing the interaction between the moderator and childhood physical abuse. The range groups were determined as the mean of the moderator and plus and minus one standard deviation from the moderators.

3. Results

A series of *t*-tests were performed to consider any statistically significant differences between those who have experience of childhood physical abuse and those who do not. The result indicated no statistically significant difference in demographic variables between the groups. Regression analysis was then applied to consider whether physical aggression correlated to suicidal ideation. This analysis indicated that physical aggression significantly and positively correlated with suicidal ideation ($t(1) = 5.39, p < 0.00$). For moderation analysis, Table 2 shows the results of the moderation analyses with physical aggression as the independent variable. In the first model, emotional competence was examined as a moderator of the relationship between childhood physical abuse and suicidal ideation. Childhood physical abuse and emotional competence were entered in the first step of the regression analysis. In the second step of the regression analysis, the interaction term between emotional competence and physical aggression was entered, and it explained a significant increase in the variance in suicidal ideation ($R^2 = 0.11, F = 11.17, p < 0.001$). Thus, emotional competence was a significant moderator of the relationship between physical aggression and suicidal ideation. Students of the high emotional-competence group had lower suicidal ideation than their counterparts with lower emotional competence when the level of physical aggression was low; the difference vanished as the level of physical aggression went up (Fig. 1).

Table 2
Regression analyses of the moderation model with physical aggression as the independent variable ($N = 268$).

	b	SE	t	F	R^2
Moderator: EC				11.17	0.11***
PA	-0.20	0.26	-0.76		
EC	-0.17	0.09	-1.99*		
PA × EC	0.10	0.06	1.71^		
Moderator: RE				32.98	0.27***
PA	0.84	0.26	3.30**		
RE	-0.06	0.08	-0.65		
PA × RE	-0.14	0.06	-2.54*		
Moderator: EC_RE				17.44	0.17***
PA	-0.22	0.04	4.94***		
EC_RE	-0.09	0.02	-4.54***		
PA × EC_RE	-0.01	0.04	-0.47^		

PA = physical aggression, EC = emotional competence, RE = resilience, EC_RE = coping competence.

*** $p < 0.001$.

** $p < 0.01$.

* $p < 0.05$.

^ $p < 0.10$.

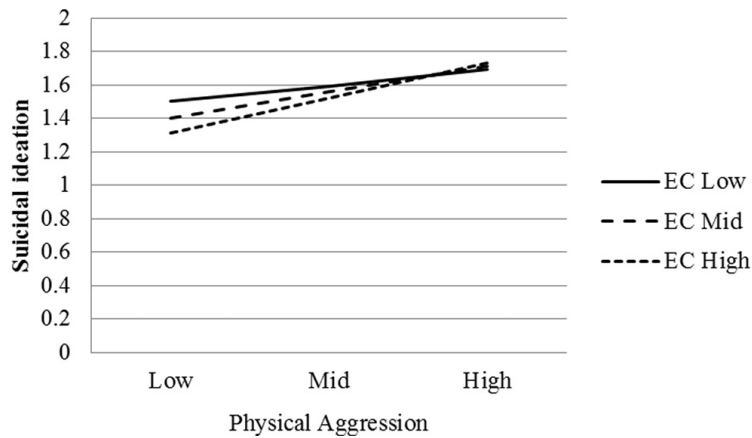


Fig. 1. Visualization of the conditional effect of physical aggression on suicidal ideation with emotional competence as the moderator.

EC = emotional competence. Range of EC: Low = 3.49, Mid = 4.45, High = 5.41. Range of Physical Aggression: Low = 0.74, Mid = 1.36, High = 1.97.

The second model examined resilience as a moderator between physical aggression and suicidal ideation. Physical aggression and resilience were entered in the first step of regression analysis and two variables were included: physical aggression and resilience.

These variables accounted for a significant amount of variance in suicidal ideation, ($R^2 = 0.27$, $F = 32.98$, $p < 0.001$). Mean-centered physical aggression and resilience were used in order to reduce collinearity between the interaction and main effect (Aiken & West, 1991).

The conditional effect of physical aggression on suicidal ideation under the significant moderating effect of resilience is shown in Fig. 2. Students of the high resilience group had lower suicidal ideation than their counterparts with lower resilience when the level of physical aggression was low; the difference increased as the level of physical aggression went up.

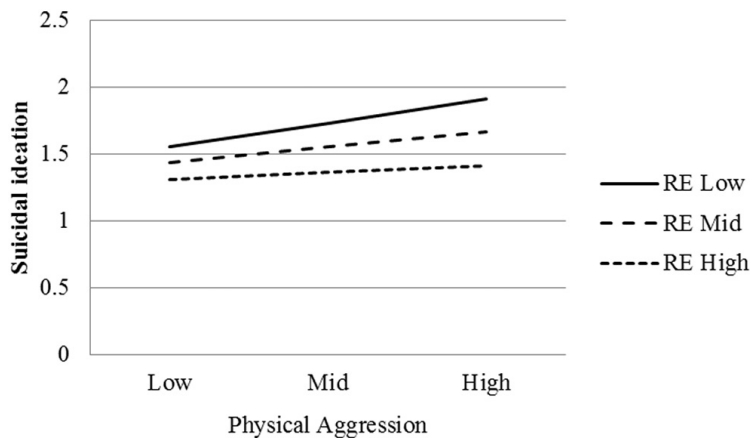


Fig. 2. Visualization of the conditional effect of physical aggression on suicidal ideation with resilience as the moderator.

RE = resilience. Range of RE: Low = 3.94, Mid = 4.70, High = 5.45. Range of Physical Aggression: Low = 0.74, Mid = 1.36, High = 1.97.

An additional model combining emotional competence and resilience was performed.

Pearson's correlation was performed to identify correlation between the scale of resilience and emotional competence. The result indicated a high correlation between the two scales, ($r = 0.32, n = 268, p = 0.000$), and we proposed to combine the two variables together to form an additional model. The result indicated that students with a high coping competence (i.e. emotional competence and resilience together) had lower suicidal ideation than those with a lower level of coping competence, ($R^2 = 0.17, F = 17.44, p < 0.001$) (Fig. 3).

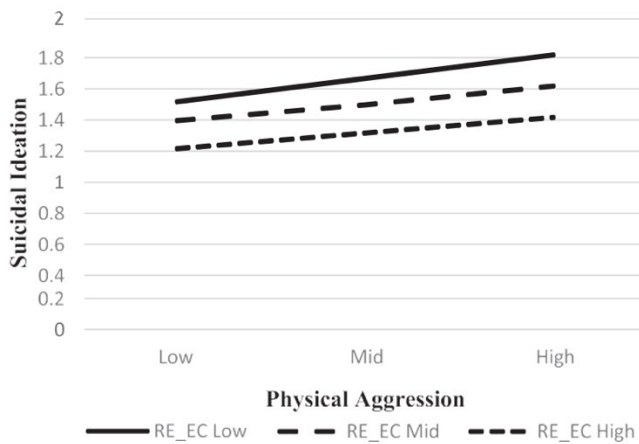


Fig. 3. Visualization of the conditional effect of physical aggression on suicidal ideation with coping competence as the moderator.

RE_EC = coping competence (emotional competence and resilience).

4. Discussion

4.1. Physical child abuse and suicidal ideation

The present study indicates a relationship between physical child abuse and suicidal ideation in the university participants, hence the hypothesis is supported. This finding is, in general, consistent with previous findings that childhood physical abuse in the Chinese population is significantly related to adolescents' suicidal ideation (Kwok, Chai, & He, 2013). It is also consistent with international findings that childhood physical abuse is related to adult suicide attempts in a community sample (Harford, Yi, & Grant, 2014) and in college students (Bryan, McNaughton-Cassill, Osman, & Hernandez, 2013) as well as in offenders who have suffered physical aggression (Swogger, You, Cashman-Brown, & Conner, 2011). Childhood physical abuse may lead to lower self-esteem and psychological damage to adolescents, which may in turn lead to suicidal ideation in future (Thompson et al., 2012). It has been suggested in other studies that the Chinese population demonstrates a more tolerant attitude toward child abuse, which may cause hopelessness (Kwok & Shek, 2010) and more psychological damage, leading to suicidal thoughts (Kwok et al., 2013).

4.2. Emotional competence and suicidal ideation

The present study has gone a step further in supporting Hypothesis 2: that a person with a higher level of emotional competence would demonstrate a lower level of suicidal ideation resulting from experience of physical abuse in childhood. This finding is broadly consistent with previous findings that those who are more emotionally competent are able to counteract suicidal ideation that has resulted from childhood physical abuse. The finding is also consistent with previous findings that university students with a high level of emotional competence report less suicidal ideation (Kwok, 2014). Individuals with higher emotional competence report less hopelessness and better management of stress. A high level of

emotional competence has been shown to create a buffer against depression, which is one of the major risk factors for suicidal ideation (Ciarrochi et al., 2000; Ciarrochi et al., 2000). In addition, people with high emotional competence tend to have a better regulation of their mood (Shackman & Pollak, 2014). This may affect their ability to create friendships and relationships with others, which helps them to gain essential support from their social circle and in turn protects them against suicidal ideation. With regard to the Chinese population, studies have indicated that Chinese students with a high level of emotional competence are able to use more appropriate coping strategies when facing adversity. This can also enhance their psychological well-being (Chan, 2003). Furthermore, people with a high level of emotional competence are also more sensitive to others' emotions, which can lead to better relationships with others (Hirsch & Barton, 2011). This helps to create a buffer against emotional distress; thus people with a high level of emotional competence have more resilience in coping with suicidal thoughts. On the other hand, this study yielded the interesting finding that a higher level of emotional competence was able to moderate the relationship between lower levels of childhood physical abuse and suicidal ideation but not that between higher levels of childhood physical abuse and suicidal ideation. This may be because those who suffer from a high level of physical abuse may have such a high level of trauma that it cannot be easily managed even with a high level of emotional competence.

4.3. Resilience and suicidal ideation

The result shows that resilience moderates the relationship between childhood physical abuse and suicidal ideation, thus supporting Hypothesis 3. The participants with a higher level of resilience reported less suicidal ideation than those who had a lower level of resilience. Although participants with higher levels of childhood physical abuse reported higher suicidal ideation, those with high resilience have lower suicidal ideation even when facing a high

level of childhood physical abuse. This is because the participants who responded with higher resilience considered themselves able to face adversity in a more positive manner than those with a lower score in this measurement. Thus, resilience helps to reduce the adverse effect of childhood physical abuse on suicidal ideation. This result is also consistent with previous findings that higher levels of emotional self-efficacy provide a buffer between adolescents and suicidal ideation (Valois, Zullig, & Hunter, 2015). Self-efficacy has been broadly defined in the literature as an element of resilience in young people. The present result is also consistent with a previous study in this area that found that higher resilience was associated with less suicidal ideation among young people (Cleverley & Kidd, 2011).

4.4. Implications for possible intervention

Given the findings, clinicians and social workers should be aware of the possibility that young people who have experienced physical child abuse are at a high risk of having suicidal ideation. They also need to be aware of the negative effects of childhood physical abuse on adult development, such as the possibility of self-harming behavior in adolescents who have suffered from childhood physical abuse (Lau et al., 2003). Clinicians and social workers need to pay more attention to such possibilities and the subsequent negative consequences of self-harm and suicide attempts when working with clients with these backgrounds. In addition, the present study also indicates the possibility that promoting emotional competence in adolescents could be a promising design for suicide-prevention programs. For example, supporting adolescents to be more emotionally competent, more able to recognize others' emotions, and better able to express their emotions positively may help to prevent adolescents from having suicidal thoughts. Adolescents would benefit from being emotionally more competent when facing their life's difficulties. They would also benefit from having a more positive attitude toward adversity in their lives. One program that promoted these methods

was PATHs; part of the program was aimed at enhancing the participants' emotional competence within the curriculum, in secondary school settings (Domitrovich, Cortes, & Greenberg, 2007). In addition, helping students to have better resilience may also help to prevent adolescents from having suicidal thoughts. These programs could be launched in schools to provide universal prevention. For those who have a history of childhood physical abuse, help could also be provided when they are in adolescence. This could be in the form of specific training in emotional competence and resilience. At the level of individual intervention, social workers should also be aware of the need for young people, who have a history of childhood physical abuse, to become emotionally competent. They should encourage these clients to participate in programs and activities that could enhance their resilience; such programs and activities should be included in their intervention plans.

4.5. Limitations

The present study identifies a moderating effect of emotional competence and resilience in the relationship between suicidal thoughts and physical abuse in childhood, but the study suffers from the limitation of the sample only consisting of undergraduates studying social sciences. Since the data came from a particular group of the Chinese population, it is not possible to generalize the findings to the population at large. The present findings also relied heavily on self-reported measures; therefore, the accuracy of the data may be called into question. In addition, retrospective data was requested (the students themselves reported on their childhood experiences), there may have been a recall bias when participants recalled their experiences. There is another possibility that the socially desirable response may have been recorded rather than what they had actually experienced – participants may have replied in a more positive way in the study. Furthermore, the present study used university students as a sample; subsequently, this eliminated young adults who were not able to become

university students due to their continuing struggles with the trauma of having experienced childhood physical abuse. This study has the limitation of not including these samples. Another weakness of this study was the relatively small r^2 in the moderation analysis. This indicated that although there was a statistically significant relationship of emotional competence and resilience to moderate child physical abuse, the relationship was weak. This study could be augmented if other sources of data could be collected. Using qualitative interviews to augment the data used in this study would have provided more validity to the findings. Furthermore, the study suffered from the limitation of the sample size being fairly small. This affects the generalizability of the findings to the general population. Future work should focus on replicating the present findings using clinical samples. Future research should identify other positive constructs (such as gratitude, hope, and optimism) that may also be moderators of the relationship between suicidal ideation and childhood physical abuse in Chinese adolescents. Nevertheless, the findings of the present study do add to our understanding that, in Chinese adolescents who have been physically abused in childhood, emotional competence and resilience may act to reduce the suicidal ideation associated with physical abuse in childhood. The findings of this study also have the implication that training to enhance emotional competence and resilience could help to reduce suicidal ideation in adolescents who have a history of being physically abused in childhood.

5. Conclusion

This study enhances the understanding of how childhood physical abuse is related to adult suicidal ideation in the Chinese population. Additionally, it has demonstrated that emotional competence, resilience, and coping competence among participants may moderate the relationship between childhood physical abuse and adult suicidal ideation. This indicates that, in future, suicide prevention programs may have a promise of success by including training in

emotional competence and resilience. Nevertheless, since the study was cross-sectional and with university students as participants, caution is needed in interpreting the data. Future research could have more participants, from a wider community or event clinical samples; longitudinal studies would also enhance the understanding of the phenomena.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Anderson, P. L., Tiro, J. A., Price, A. W., Bender, M. A., & Kaslow, N. J. (2002). Additive impact of childhood emotional, physical, and sexual abuse on suicide attempts among low-income African American women. *Suicide and Life-threatening Behavior, 32*(2), 131–138. <http://dx.doi.org/10.1521/suli.32.2.131.24405>.
- Brown, J., Cohen, P., Johnson, J. F., & Smailes, E. M. (1999). Childhood abuse and neglect: Specificity of effects on adolescent and young adult depression and suicidality. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*(12), 1490–1496. <http://dx.doi.org/10.1097/00004583-199912000-00009>.
- Bruffaerts, R., Demyttenaere, K., Borges, G., Haro, J. M., Chiu, W. T., Hwang, I., ... Nock, M. K. (2010). Childhood adversities as risk factors of onset and persistence of suicidal behaviour. *The British Journal of Psychiatry, 197*, 20–27. <http://dx.doi.org/10.1192/bjp.bp.109.074716>.
- Bryan, C. J., McNaughton-Cassill, M., Osman, A., & Hernandez, A. M. (2013). The associations of physical and sexual assault with suicide risk in nonclinical military and undergraduate samples. *Suicide and Life-threatening Behavior, 43*(2), 223–234.
- Butchart, A., Phinney Harvey, A., Kahane, T., Mian, M., & Furniss, T. (2006). *Preventing child maltreatment: A guide to action and generating evidence*. Geneva: World Health Organization and International Society for Prevention of Child Abuse and Neglect.
- Cha, C. B., & Nock, M. K. (2009). Emotional intelligence is a protective factor for suicidal behavior. *Journal of the American Academy of Child and Adolescent Psychiatry, 48*(4), 422–430. <http://dx.doi.org/10.1097/CHI.0b013e3181984f44>.

- Chan, D. (2003). Dimensions of emotional intelligence and their relationships with social coping among gifted adolescents in Hong Kong. *Journal of Youth and Adolescence*, 32, 409–418.
- Chao, R. K. (1996). Chinese and European American mothers' beliefs about the role of parenting in children's school success. *Journal of Cross-Cultural Psychology*, 27(4), 403–423.
- Chioqueta, A. P., & Stiles, T. C. (2007). The relationship between psychological buffers, hopelessness, and suicidal ideation: Identification of protective factors. *Crisis*, 28(2), 67–73. <http://dx.doi.org/10.1027/0227-5910.28.2.67>.
- Ciarrochi, J. V., Chan, A. Y., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. *Personality and Individual Differences*, 28(3), 539–561. [http://dx.doi.org/10.1016/S0191-8869\(99\)00119-1](http://dx.doi.org/10.1016/S0191-8869(99)00119-1).
- Ciarrochi, J. V., & Deane, F. P. (2001). Emotional competence and willingness to seek help from professional and nonprofessional sources. *British Journal of Guidance and Counselling*, 29(2), 233–246. <http://dx.doi.org/10.1080/0306980020047157>.
- Ciarrochi, J. V., Deane, F. P., & Anderson, S. (2000). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences*, 32, 197–209. [http://dx.doi.org/10.1016/S0191-8869\(01\)00012-5](http://dx.doi.org/10.1016/S0191-8869(01)00012-5).
- Cleverley, K., & Kidd, S. A. (2011). Resilience and suicidality among homeless youth. *Journal of Adolescence*, 34(5), 1049–1054.
- Domitrovich, C. E., Cortes, R. C., & Greenberg, M. T. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool “PATHS” curriculum. *The Journal of Primary Prevention*, 28(2), 67–91.

- Dumont, M., & Provost, M. A. (1999). Resilience in adolescents: Protective role of social support, coping strategies, self-esteem, and social activities on experience of stress and depression. *Journal of Youth and Adolescence*, *28*(3), 343–363.
- Everall, R. D., Altrows, K. J., & Paulson, B. L. (2006). Creating a future: A study of resilience in suicidal female adolescents. *Journal of Counseling & Development*, *84*(4), 461–470.
- Garnezy, N. (1994). Reflections and commentary on risk, resilience, and development. In R. Haggerty, (Ed.), *Stress, Risk and Resilience in Children and Adolescents: processes, mechanisms and interventions*. New York: Cambridge University Press.
- Glowinski, A. L., Bucholz, K. K., Nelson, E. C., Fu, Q., Madden, P., Reich, W., & Heath, A. C. (2001). Suicide attempts in an adolescent female twin sample. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*(11), 1300–1307. <http://dx.doi.org/10.1097/00004583-200111000-00010>.
- Gould, S. M., & Kramer, R. A. (2001). Youth suicide prevention. *Suicide and Life-threatening Behavior*, *31*, 6–31.
- Harford, T. C., Yi, H. Y., & Grant, B. F. (2014). Associations between childhood abuse and interpersonal aggression and suicide attempt among US adults in a national study. *Child Abuse & Neglect*, *38*(8), 1389–1398. <http://dx.doi.org/10.1016/j.chiabu.2014.02.011>.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, *76*, 408–420.
- Hirsch, J. K., & Barton, A. L. (2011). Positive social support, negative social exchanges, and suicidal behavior in college students. *Journal of American College Health*, *59*(5), 393–398.

- Howard, S., & Johnson, B. (2000). What makes the difference? Children and teachers talk about resilient outcomes for children' at risk'. *Educational studies*, 26(3), 321–337. <http://dx.doi.org/10.1080/03055690050137132>.
- Ji, K., & Finkelhor, D. (2015). A meta-analysis of child physical abuse prevalence in China. *Child Abuse & Neglect*, 43, 61–72.
- Johnson, J., Gooding, P., Wood, A. M., & Tarrrier, N. (2010a). Resilience as positive coping appraisals: Testing the schematic appraisals model of suicide (SAMS). *Behaviour Research and Therapy*, 48, 179–186.
- Johnson, J., Gooding, P. A., Wood, A. M., Taylor, P. J., Pratt, D., & Tarrrier, N. (2010b). Resilience to suicidal ideation in psychosis: Positive self-appraisals buffer the impact of hopelessness. *Behaviour Research and Therapy*, 48(9), 883–889. <http://dx.doi.org/10.1010/j.brat.2010.05.2013>.
- Kalafat, J. (1997). The prevention of youth suicide. In R. P. Weissberg, T. P. Gulotta, B. A. Ryan, & G. R. Adams (Eds.), *Healthy children 2010: Enhancing children's wellness* (pp. 175–213). Thousand Oaks, CA: Sage.
- Kwok, S. Y. (2014). The moderating role of emotional competence in suicidal ideation among Chinese university students. *Journal of Advanced Nursing*, 70(4), 843–854. <http://dx.doi.org/10.1111/jan.12246>.
- Kwok, S. Y., Chai, W., & He, X. (2013). Child abuse and suicidal ideation among adolescents in China. *Child Abuse & Neglect*, 37(11), 986–996. <http://dx.doi.org/10.1016/j.chiabu.2013.06.006>.
- Kwok, S. Y. L., & Shek, D. T. (2010). Personal and family correlates of suicidal ideation among Chinese adolescents in Hong Kong. *Social Indicators Research*, 95(3), 407–419. <http://dx.doi.org/10.1007/s11205-009-9528-4>.

- Lai, K. W., & McBride-Chang, C. (2001). Suicidal ideation, parenting style, and family climate among Hong Kong adolescents. *International Journal of Psychology, 36*(2), 81–87. <http://dx.doi.org/10.1080/00207590042000065>.
- Lam, T. H., Stewart, S. M., Yip, P. S., Leung, G. M., Ho, L. M., Ho, S. Y., & Lee, P. W. (2004). Suicidality and cultural values among Hong Kong adolescents. *Social Science & Medicine, 58*(3), 487–498. <http://dx.doi.org/10.1521/suli.34.3.284.42772>.
- Lau, J. T., Kim, J. H., Tsui, H. Y., Cheung, A., Lau, M., & Yu, A. (2005). The relationship between physical maltreatment and substance use among adolescents: A survey of 95,788 adolescents in Hong Kong. *Journal of Adolescent Health, 37*(2), 110–119. <http://dx.doi.org/10.1016/j.jadohealth.2004.08.005>.
- Lau, J. T. F., Chan, K. K., Lam, P. K. W., Choi, P. Y. W., & Lai, K. Y. C. (2003). Psychological correlates of physical abuse in Hong Kong Chinese adolescents. *Child Abuse & Neglect, 27*(1), 63–75. [http://dx.doi.org/10.1016/S0145-2134\(02\)00507-0](http://dx.doi.org/10.1016/S0145-2134(02)00507-0).
- Lau, J. T. F., Choi, P. Y. W., Lai, K. Y. C., Osborne, D. W., Hoh, Y. C., Chan, & Wong, C. K. (1999). *A new instrument for large-scale screening of potentially “at-risk” secondary school students in Hong Kong*. Hong Kong, China: The Chinese University of Hong Kong.
- Lau, J. T. F., Liu, J. L. Y., Cheung, J. C. K., & Wong, A. C. K. (1999). Prevalence and correlates of physical abuse in Hong Kong Chinese adolescents: A population-based approach. *Child Abuse and Neglect, 23*(6), 549–557. [http://dx.doi.org/10.1016/S0145-2134\(99\)00029-0](http://dx.doi.org/10.1016/S0145-2134(99)00029-0).
- Lau, P. S. (2006). Emotional competence as a positive youth development construct: Conceptual bases and implications for curriculum development. *International Journal of Adolescent Medicine and Health, 18*(3), 355–362. <http://dx.doi.org/10.1515/IJAMH.2006.18.3.355>.

- Lee, T. Y. (2006). Resilience as a positive youth development construct: Conceptual bases and implications for curriculum development. *International Journal of Adolescent Medicine and Health, 18*(3), 475–482.
- McHolm, A. E., MacMillan, H. L., & Jamieson, E. (2003). The relationship between childhood physical abuse and suicidality among depressed women: Results from a community sample. *The American Journal of Psychiatry, 160*(5), 933–938. Retrieved from <http://search.proquest.com/docview/220473863?accountid=10134>.
- Osman, A., Gutierrez, P. M., Muehlenkamp, J. J., Dix-Richardson, F., Barrios, F. X., & Kopper, B. A. (2004). Suicide resilience inventory-25: Development and preliminary psychometric properties. *Psychological Reports, 94*, 1349–1360.
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*(3), 307–321.
- Roy, A. (2003). Distal risk factors for suicidal behavior in alcoholics: Replications and new findings. *Journal of Affective Disorders, 77*, 267–271. [http://dx.doi.org/10.1016/S0165-0327\(02\)00173-8](http://dx.doi.org/10.1016/S0165-0327(02)00173-8).
- Roy, A., Carli, V., & Sarchiapone, M. (2011). Resilience mitigates the suicide risk associated with childhood trauma. *Journal of Affective Disorders, 133*(3), 591–594. <http://dx.doi.org/10.1016/j.jad.2011.05.006>.
- Russell, S. T., Crockett, L. J., & Chao, R. K. (2010). Introduction, Asian American parenting and parent-adolescent relationships. In S. T. Russell, L. J. Crockett, & R. K. Chao (Eds.), *Advancing responsible adolescent development* (pp. 1–16). London, UK: Springer.
- Rutter, P. A., Freedenthal, S., & Osman, A. (2008). Assessing protection from suicidal risk: Psychometric properties of the suicide resilience inventory. *Death Studies, 32*, 142–153.

- Shackman, J. E., & Pollak, S. D. (2014). Impact of physical maltreatment on the regulation of negative affect and aggression. *Development and Psychopathology*, 26(4pt.1), 1021–1033.
- Shek, D. T., Siu, A. M., & Lee, T. Y. (2007). The Chinese positive youth development scale: A validation study. *Research on Social Work Practice*, 17(3), 380–391.
- Shek, D. T. L., & Ma, C. M. S. (2013). Objective outcome evaluation of the project P.A.T.H.S.: Longitudinal study based on indicators of positive youth development. In D. T. L. Shek, & R. Sun (Eds.), *Development and valuation of positive adolescent training through holistic social program* (pp. 69–84). Springer.
- Stewart, S. M., Lam, T. H., Betson, C., & Chung, S. F. (1999). Suicide ideation and its relationship to depressed mood in a community sample of adolescents in Hong Kong. *Suicide and Life-threatening Behavior*, 29, 227–240.
- Swogger, M. T., You, S., Cashman-Brown, S., & Conner, K. R. (2011). Childhood physical abuse, aggression, and suicide attempts among criminal offenders. *Psychiatry Research*, 185(3), 363–367.
- 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.
- Tlapek, S. M., Auslander, W., Edmond, T., Gerke, D., Schrag, R. V., & Threlfall, J. (2016). The moderating role of resiliency on the negative effects of childhood abuse for adolescent girls involved in child welfare. *Children and Youth Services Review*, 73(2017), 437–444.
- Tse, J. W. L., Bagley, C., & Yau, M. L. (2002). The suicidal risk scale for Hong Kong students. In J. W. L. Tse, & C. Bagley (Eds.), *Suicidal behaviour, bereavement and death education in Chinese adolescents* (pp. 62–110). Aldershot, UK: Ashgate.

Valois, R. F., Zullig, K. J., & Hunter, A. A. (2015). Association between adolescent suicide ideation, suicide attempts and emotional self-efficacy. *Journal of Child and Family Studies, 24*(2), 237–248.

Wright, K. D., Asmundson, G. J., McCreary, D. R., Scher, C., Hami, S., & Stein, M. B. (2001). Factorial validity of the childhood trauma questionnaire in men and women. *Depression and Anxiety, 13*(4), 179–183.

Yip, P. S. F., Liu, K. Y., Lam, T. H., Stewart, S. M., Chen, E., & Fan, S. (2004). Suicidality among high school students in Hong Kong, SAR. *Suicide & Life-Threatening Behavior, 34*(3), 284–297. Retrieved from <http://search.proquest.com/docview/224871813?accountid=10134>.