



# Bullying victimization and depression in Chinese children: A moderated mediation model of resilience and mindfulness



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## ABSTRACT

Studies have revealed that bullying victimization was a risk factor for symptoms of depression, however, less is known about the underlying processes that may mediate or moderate this relationship. This study examined the mediating effect of resilience and moderating effect of mindfulness in the relation between bullying victimization and symptoms of depression. 448 Chinese children in grade 3 to grade 6 were recruited to complete the revised Bully/Victim Questionnaire, the Chinese version of Center for Epidemiologic Studies Depression Scale for Children, the Child and Youth Resilience Measure, as well as the Child and Adolescent Mindfulness Measure. Results showed that resilience partially mediated the relation between bullying victimization and depressive symptoms. Besides, both the effect of bullying victimization on depressive symptoms and the mediating effect of resilience were moderated by mindfulness, and both of the two effects were stronger for children with low mindfulness. The present study can contribute to a better understanding of how and when bullying victimization increases the risk of depression. It suggests that early intervention concerning diminishing negative effects of bullying victimization may start with increasing individual resilience and mindfulness.

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## 1. Introduction

Bullying is a life-span problem, but it is most commonly associated with schooldays (Smith, 1997). Nowadays, bullying victimization has been a serious social issue. Although estimates vary by types of bullying victimization, geographic locations, and ways in which bullying is defined and measured, 15%–30% of youth experience bullying victimization in general (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014; Maynard, Vaughn, Salas-Wright, & Vaughn, 2016). Bullying victimization would bring about significantly negative impacts on physical and psychological health of youth, such as headaches, nausea, fatigue, sleeping problems, self-injurious behaviors and loneliness (Gini & Pozzoli, 2009; Povedano, Cava, Monreal, Varela, & Musitu, 2015; van Geel, Goemans, & Vedder, 2015; van Geel, Goemans, & Vedder, 2016). Depressive symptoms is one of the major undesirable outcomes of bullying victimization (Sweeting, Young, West, & Der, 2006; Luk, Wang, & Simons-Morton, 2010; Garnefski & Kraaij, 2014; Stapinski, Araya, Heron, Montgomery, & Stallard, 2015). Research revealed that bullying victimization not only exerted an immediate effect, but also had a delayed effect on symptoms of depression (Stapinski et al., 2015). A

longitudinal study demonstrated that the effect of bullying victimization on depressive symptoms even persisted into adulthood (Copeland, Wolke, Angold, & Costello, 2013). In addition, symptoms of depression induced by bullying victimization often in turn increases risk of substance use and suicidal ideation (Luk et al., 2010; Reed, Nugent, & Cooper, 2015). Despite the robust association between bullying victimization and depressive symptoms, however, the underlying mediating mechanism (i.e., how bullying victimization influences depression) and moderating mechanism (i.e., when the mediating process is most potent) have not caught much research attention, especially among school children. Answers to these questions could contribute to a better understanding of how and when bullying victimization leads to depressive symptoms, and how to carry out targeted early intervention to buffer the deleterious effect of bullying victimization.

### 1.1. The mediating role of resilience

Resilience refers to a person's ability and resource to cope with stress (Connor & Davidson, 2003). Individuals with high level of resilience may adapt to the noxious environment flexibly and resourcefully (Chi et al., 2016). A meta-analysis study revealed that resilience was positively correlated with positive affect and life satisfaction and negatively correlated with negative affect, anxiety and depression (Hu, Zhang, & Wang, 2015). Other studies demonstrated that resilience had positive effect on individual adjustment and well-being (Liu, Zhao, Tian, Zou, & Li, 2015; Bajaj & Pande, 2016). Besides, resilience

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has been proved to be an important protector for individuals from depression (Edward, 2005). It could also serve as a mediator in the relation between independent variables (such as positive affect and negative affect) and symptoms of depression (Loh, Schutte, & Thorsteinsson, 2014).

On the other hand, although some researchers consider resilience as a personality trait (Connor & Davidson, 2003), others regard it as a complex process involving the interactive dynamics of inborn traits and external environment (Fergus & Zimmerman, 2005; Masten & Narayan, 2012). Namely, resilience could also be considered as a state of being which would be influenced by situational factors. A cross-lagged regression analysis indicated that perceived stigmatization negatively predicted the level of resilience (Chi et al., 2016). Other studies found that positive life events positively predicted resilience (Sarubin et al., 2015), while negative life events negatively predicted resilience (Liu et al., 2015). Children are in a constant process of growth and development. It would be especially true that resilience of children is more likely to be influenced by situational factors or life events such as bullying victimization. Bullying victimization might undermine resilience, and low resilience in turn could lead to depressive symptoms. Thus, bullying victimization might influence depressive symptoms indirectly via the mediating role of resilience.

### 1.2. The moderating role of mindfulness

Although bullying victimization may influence resilience and depression, the influence may not be the same in different individuals. The organism-environment interaction model (Lerner, Lerner, Almerigi, & Theokas, 2006) proposes that not all individuals are equally influenced by the same environment, and it is the dynamics of individual and context interactions that contribute to individuals' psychological and social adaptation. Additionally, the diathesis-stress model of depression also proposes that individuals with different traits will respond differently to stress or negative experiences (Monroe & Simons, 1991). Therefore, it is important to explore the personality traits which can weaken the negative effect of bullying victimization.

Mindfulness refers to a state of being aware of ongoing physical, cognitive and psychological experience in a non-judgmental, accepting, and self-empathetic manner (Kabat-Zinn, 2003; Brown, Ryan, & Creswell, 2007). It is also considered as a psychological trait that refers to the tendency to be mindful in daily life (Brown & Ryan, 2003; Brown et al., 2007). Studies revealed that mindfulness could positively predict positive affect, self-esteem, resilience and life satisfaction (Brown & Ryan, 2003; Pepping, O'Donovan, & Davis, 2013; Bajaj & Pande, 2016; Bajaj, Robins, & Pande, 2016). Besides, paying much attention to the past or future when dealing with stressors could be related to feelings of depression and anxiety, while higher mindfulness could make individuals less engrossed by negative feelings and thoughts (Kabat-Zinn, 2003; Bajaj et al., 2016). Moreover, mindfulness was found to moderate the undesirable effect of negative factors on physical and mental health. For instance, a study showed that mindfulness could diminish the effect of psychological distress on cortisol awakening response (Daubenmier, Hayden, Chang, & Epel, 2014). Another research demonstrated that mindfulness could buffer the risk of insecure attachment on symptoms of depression, anxiety and stress (Davis, Morris, & Drake, 2016). Therefore, it could be inferred that as a positive personality trait, mindfulness may also play a risk-buffer role in the association between bullying victimization and its undesirable consequences. Specifically, both the relation between bullying victimization and depression and the relation between bullying victimization and resilience may be moderated by mindfulness. Moreover, if resilience mediates the relation between bullying victimization and depression, and mindfulness moderates the relation between bullying victimization and resilience simultaneously, the mediating role of mindfulness would be moderated by mindfulness.

### 1.3. The present study

To sum up, the present study aimed at examining whether the relation between bullying victimization and symptoms of depression in children was mediated by resilience, and whether the effect of bullying victimization on depressive symptoms and the mediating effect of resilience were moderated by mindfulness. The specific hypotheses examined were as follows, and the integrated model proposed was outlined in Fig. 1.

**Hypothesis 1.** Resilience would mediate the relationship between bullying victimization and children depression.

**Hypothesis 2.** Mindfulness would moderate the relationship between bullying victimization and children depression.

**Hypothesis 3.** Mindfulness would moderate the mediating effect of resilience in the relationship between bullying victimization and children depression.

## 2. Methods

### 2.1. Participants and procedure

Participants were recruited from one primary school in central China. Convenience sampling was used to randomly choose two classes in each grade from 3rd grade to 6th grade. The authenticity, independence and integral nature of all answers as well as the confidentiality of the information collected were emphasized to all participants by well-trained psychology graduate students. A total of 448 children between 9 and 13 years ( $M_{age} = 10.82$ ,  $SD_{age} = 0.75$ , 45.31% girls) participated in the present study after informed consent was obtained from the school and their parents. Questionnaires were completed during class under the supervision of a researcher and a teacher.

### 2.2. Measurements

#### 2.2.1. Bullying victimization

One item from the revised Olweus (1996) was used to measure the global intensity of bullying victimization. Children answered the item ("How often have you been bullied at school during the past couple months") on a five-point scale (1 = not at all, 5 = several times a week). Higher scores indicate more bullying victimization. Measuring bullying victimization with one item could also be seen in previous studies (Noble, Sornberger, Toste, Heath, & McLouth, 2011; Eaton et al., 2012).

#### 2.2.2. Depression

Depression was assessed by the Chinese version of Center for Epidemiologic Studies Depression Scale for Children (CES-DC) which has

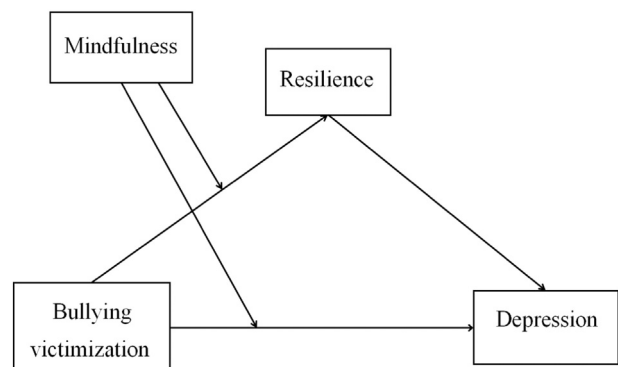


Fig. 1. Conceptual model.

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