# Passive and active suicidal ideation among left-behind children in rural China: An evaluation of intrapersonal and interpersonal vulnerability and resilience

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## Abstract

**Objective:** Although theoretical conceptualizations of suicide hold that passive and active suicidal ideation are etiologically distinct, existing research observing this distinction is modest, with most prior studies focusing exclusively on active ideation. Understanding processes associated with passive ideation is clinically important insofar as passive ideation may precede active ideation, and thus serve as an earlier intervention target prior to potential onset of suicidal behavior. We aimed to evaluate intrapersonal and interpersonal vulnerability and resilience factors for passive ideation and differentiating passive from active ideation.

**Method:** Left-behind adolescents in rural China (n = 371) were assessed for passive and active ideation, depressive symptoms, rumination, grit, peer support, and peer victimization.

**Results:** Overall, 15.9% of the sample endorsed passive ideation without active ideation, and 17.8% endorsed active ideation. In multivariate analyses, rumination and grit differentiated left-behind children with passive ideation from those with no ideation. Depressive symptom severity predicted active ideation among adolescents with passive ideation.

**Conclusions:** The current findings suggest that rumination and grit may characterize passive ideation. Although passive and active ideation may differ modestly in vulnerability and resilience factors, depressive symptoms may be important to monitor among those with passive ideation and have not yet experience active ideation.

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## Introduction

Suicide remains one of the leading causes of death worldwide (Lozano et al., 2012; World Health Organization, 2014). This public health issue is of particular concern in the case of adolescents, as it is the second leading cause of death globally in this age group (World Health Organization, 2018). Early intervention with at-risk youth is important, given that suicidal behavior often follows an increasingly severe course in adolescence and early adulthood (Goldston et al., 2015). Understanding precursors to adolescent suicidal behavior holds promise for advancing early identification of at-risk individuals and for identifying potential targets for these intervention efforts.

Suicidal ideation has been recognized as one of the three leading risk factors for suicide (Franklin et al., 2017). Clarifying markers of risk for suicidal ideation may therefore be of value for informing early intervention prior to progression to suicidal behavior. Suicidal ideation ranges from passive ideation (i.e., a desire for death) to active ideation (i.e., a desire to kill oneself). Although several recent theoretical models of suicide feature an etiological distinction between these two forms of suicidal ideation (Klonsky et al., 2016; Van Orden et al., 2010), the body of research observing this distinction is relatively modest, and much of the suicide literature to date has focused exclusively on active ideation (Liu, Bettis, et al., 2020). This limitation of the literature, and the general paucity of studies of passive ideation, are important for several reasons. First, elucidating characteristics differentiating between the absence of ideation and passive ideation, as well as between passive and active ideation, may yield two distinct and actionable transition points for intervention in the potential progression to suicidal behavior. Second, there is some preliminary evidence in a recent meta-analytic review to suggest that passive ideation may be potentially comparable to active ideation in conferring risk for suicidal behavior (Liu, Bettis, et al., 2020). Indeed, across two head-to-head comparisons, passive and active ideation did not differ in their ability to predict suicide attempts, with a small pooled effect observed for these comparisons. This finding underscores the clinical importance of understanding potential markers of passive ideation prior to the potential emergence of active ideation.

Across the few existing studies of suicidal ideation in youth, depression has received the most attention as a correlate of passive ideation, with generally large effects reported for this association (e.g., Handley et al., 2019; Nrugham et al., 2008; Yoder et al., 2008). Other than depression, few potential correlates have received attention in more than one or two studies, the only exceptions being age and sex with effect sizes ranging from small to small-to-medium for the former (Estrada et al., 2019; Liu et al., 2006; Yoder et al., 2008) and small to medium for the latter (Alaimo et al., 2002; Deykin & Buka, 1994; Estrada et al., 2019; Fu-I & Wang, 2008; Kienhorst et al., 1990). As for research directly comparing passive and active ideation in youth, to date there has been only one study (Liu et al., 2006), which found modest differences between the two forms of ideation in terms of depression.

A useful organizational framework for conceptualizing potential candidates for studying passive ideation in youth and differentiating it from active ideation is in terms of vulnerability versus resilience and intrapersonal versus interpersonal factors. Among intrapersonal vulnerability theories that have featured prominently in suicide research are

cognitive vulnerability models (Abramson et al., 2000; Miranda et al., 2008; Wenzel & Beck, 2008). A cognitive vulnerability that has received increasing attention in relation to suicidal ideation is rumination, the tendency to perseverative on feelings of distress and the potential causes and consequences of this distress (Miranda et al., 2008; Nolen-Hoeksema et al., 2008). Although there is reasonably strong support for an association between ruminative brooding and suicidal ideation (Rogers & Joiner, 2017), only one study to date has examined this association in youth (Burke et al., 2016) and none differentiating between passive and active ideation.

As for interpersonal vulnerabilities, one of direct relevance to youth is peer victimization, especially considering that adolescence is a period of heightened sensitivity to social evaluation and criticism from peers (Somerville, 2013). Its relation to suicidal ideation may be explained in part by the interpersonal theory of suicide (Van Orden et al., 2010), according to which peer victimization may lead to feelings of thwarted belongingness, which in turn may lead to passive ideation. Only one study has assessed peer victimization in relation to passive ideation (Undheim, 2013), and evaluations of whether peer victimization accurately discriminates between passive ideation and active ideation have yet to be conducted.

Resilience factors have generally received less attention than vulnerability factors in suicide research. In some ways an interpersonal resilience factor that is an exception to this is social support (Johnson et al., 2011), which has been theorized to relate to suicide risk with social support is low (Williams, 2001). Most studies in this area, however, have focused on adults and social support as a broad construct, with studies in youth being much rarer and sometimes operationalized in terms of attachment with caregivers. Whether developmentally relevant resilience in the form of peer support may account for passive ideation in youth and differentiate it from active ideation remains uncertain.

Also unclear but an intriguing candidate intrapersonal resilience factor is grit, the tendency to be driven by passion and to persevere for long-term goals (Duckworth & Seligman, 2017). Grit may be related to suicidal ideation within Baumeister's (1990) conceptualization of suicide as a desire to escape when confronted with failures relative to standards and expectations. Insofar as individuals high in grit are able to persevere despite these setbacks, they may be resilient to the development of suicidal thoughts. Several studies have supported this possibility (Blalock et al., 2015; Marie et al., 2019; White et al., 2017). Again, to what degree this resilience factor may account for passive ideation and underlie differences between passive and active ideation in youth has yet to be subject to empirical investigation.

Beyond studies with youth, the broader literature is characterized by several important limitations. In particular, very few studies evaluating predictors of passive ideation have disambiguated it from active ideation. That is, a considerable majority of studies assessed passive ideation irrespective of the co-occurrence of active ideation. It is therefore impossible to ascertain in these studies the degree to which any observed association with passive ideation is better accounted for by the potential confounding presence of active ideation. Furthermore, as noted above, there is a dearth of studies with head-to-head comparisons of passive and active ideation. Although studies of predictors differentiating

active ideation from the absence of ideation are of clear clinical importance, direct comparisons of passive and active ideation are needed because of the potential for research in this area eventually to result in tailored intervention strategies according to form of suicidal ideation in the potential course to suicidal behavior.

A significant challenge for studying suicidal ideation in adolescents is that its point prevalence in the general population is quite low. Indeed, across all age groups, the point prevalence of passive ideation in epidemiological studies has been found to be 2.3% (Liu, Bettis, et al., 2020). As for active ideation, in one epidemiological study of adolescents (Husky et al., 2012), its 12-month prevalence was 3.6%, and it could be reasonably assumed that its point prevalence would be even lower. Consequently, large samples are often required to arrive at reliable estimates of the relation between suicidal ideation and its predictors. Another strategy to address the challenge that the low point prevalence rate of suicidal ideation poses is to draw from at-risk populations, in which suicidal ideation naturally occurs at a higher rate. This approach has clinical value as well, as youth in these populations are the ones in particular need of the development of effective clinical intervention strategies.

One such population is left-behind children, defined as children and adolescents who have one or both parents leave home for at least six months to obtain work as migrant workers financially to support their family (Wang et al., 2019). This phenomenon is global in scale; almost one in seven individuals worldwide is a migrant worker, and although no reliable estimates are currently available for the number of left-behind children in the world, this number is believed to be in the hundreds of millions (Fellmeth et al., 2018). China accounts for a sizable share of the world's left-behind children. Indeed, more than a third of children in rural China qualify as left-behind (61 million; Yuan & Wang, 2016). Left-behind children in China have been found to be more vulnerable to a variety of negative mental health outcomes (Qin & Albin, 2010), including suicidal ideation (Fellmeth et al., 2018). Considering the modest financial resources, as well as limited access to parental and mental health support systems available to left-behind children in rural China, the need is all the more pressing in this population to identify early markers of risk for passive ideation, prior to its emergence, and of active ideation prior to the potential transition from passive ideation. Preventive measures taken prior to the emergence of passive ideation and subsequent active ideation may forestall the need for costly and scarce acute treatment resources (e.g., inpatient care for severe suicidal ideation or suicide attempts).

The current cross-sectional study aimed to provide the first empirical investigation of predictors differentiating passive ideation from non-ideation and active ideation from passive ideation in a large, at-risk sample of left-behind children in rural China. It also attempted to address several aforementioned limitations in the literature, providing direct comparisons between the absence of any suicidal ideation and passive ideation without active ideation (i.e., "pure" passive ideation), as well as between passive and active ideation. Moreover, the current study substantively expanded upon the modest set of predictors considered in prior studies. That is, it provided an examination of vulnerability and resilience factors, across intrapersonal and interpersonal domains, respectively, with the goal of generating a diverse set of candidates for future investigation as potential prospective predictors of

passive and active ideation, as well as eventual targets for clinical intervention. Specifically, it hypothesized that cognitive vulnerability in the form of rumination may serve as an intrapersonal marker of risk of passive ideation and distinguishing it from active ideation. It similarly hypothesized that peer victimization as an interpersonal vulnerability factor, as well as grit and peer social support as intrapersonal and interpersonal resilience factors, respectively, would predict the presence of passive ideation and differentiate it from active ideation. Each of these vulnerability and resilience factors, it is worth noting, has hitherto been unexamined in relation to passive ideation.

## Methods

### Participants

Prospective participants (n = 878) were recruited from two junior public high schools (with a pooled approximate student population of 1,500) in Zhengzhou City, Henan Province, China. Henan is a large rural province of China that has a large population of migrant workers and left-behind children (Liu, Liu, et al., 2020). Only students who met criteria for left-behind status (i.e., at least one parent away from home for at least six months; Wang et al., 2019) were included in the current study (n = 371).[1] Of these students, 61.46% were separated from at least their mother, 92.99% from at least their father, and 54.45% from both parents. Data was collected at July 2019. The average age was 15.19 years ($SD = 1.45$, range = 12-18), and 63.07% were female. This study was approved by the IRB at the institution in which this research was conducted.

### Measures

**Suicidal ideation.—**The *Passive and Active Suicidal Ideation Scale (PASIS)* is a self-report measure with 15 items assessing both passive and active suicidal ideation over the past two-week period. Examples of items assessing passive ideation included *"I wished I were dead"* and *"I wished I could go to sleep and never wake up."* Example items for active ideation included *"I thought about killing myself"* and *"I thought about the ways I could kill myself."* Response options were on a six-point Likert scale and ranged from 0 = *"Not in the past two weeks"* to 5 = *"Several times every day."* Higher scores indicated more intense suicidal ideation. Internal consistency in the current sample was high (Cronbach's $\alpha = .98$).[2] For the purposes of conducting head-to-head comparisons for "pure" passive ideation relative to no suicidal ideation and active ideation, respectively, participants were categorized based on scores on this measure such that: (i) endorsement of any active ideation items resulted in being classified as having active ideation; (ii) endorsement of any passive ideation items but no active ideation resulted in being classified as having "pure" passive

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[1]These 371 participants do not include seven participants who had missing data, which were submitted to listwise deletion.
[2]Although not the focus of the current study, data for thwarted belongingness and perceived burdensomeness as measured with the 10-item version of the Interpersonal Needs Questionnaire (INQ; Bryan et al., 2010; Hill et al., 2015) were collected with the study participants. Both thwarted belongingness ($r = .35$, $p < .001$) and perceived burdensomeness ($r = .61$, $p < .001$) were highly correlated with the PASIS, supporting the convergent validity of this latter measure. Supportive of divergent validity, the PASIS was correlated with acquired capability for suicide ($r = .13$, $p < .05$) as measured with the Acquired Capability for Suicide – Fearless About Death (ACSS-FAD; Ribeiro et al., 2014), but significantly less so than the correlation for the PASIS and thwarted belongingness ($z = 3.17$, $p < .01$) and perceived burdensomeness ($z = 7.74$, $p < .001$), respectively. This pattern of findings for the PASIS in relation to the INQ and ACSS-FAD is consistent with the interpersonal theory of suicide (Van Orden et al., 2010), according to which suicidal ideation is associated with thwarted belongingness and perceived burdensomeness rather than acquired capability for suicide.

ideation; and (iii) negative response for all suicidal ideation items was required to be classified as having no suicidal ideation.

**Depressive symptoms.—**The *Patient Reported Outcomes Measurement Information System (PROMIS) Pediatric Short Form – Depressive Symptoms 8a version 2.0* (Pilkonis et al., 2011; Quinn et al., 2014) is an eight-item self-report measure assessing depressive symptoms over the past seven days. Each item is answered on a five-point Likert scale ranging from 1 = *"Never"* to 5 = *"Almost always."* Responses were summed such that higher scores reflected greater current depressive symptom severity. This measure exhibited high internal consistency in the current sample (Cronbach's $\alpha$ = .93). The eight-item PROMIS Depression measure has been found to demonstrate sensitivity to a wider range of depressive symptom severity as well as greater measurement precision than other commonly used measures of depressive symptoms (Olino et al., 2013).

**Intrapersonal vulnerability.—**The *Ruminative Responses Scale – Ruminative brooding subscale* (RRS; Treynor et al., 2003) provides an assessment of depressive rumination. The brooding subscale consisted of five items assessing the tendency to dwell on negative mood and the consequences of this mood. Item responses are on a four-point Likert scale ranging from 1 = *"Almost never"* to 4 = *"Almost always."* Higher scores reflected greater ruminative tendencies. This measure had high internal consistency in the current sample (Cronbach's $\alpha$ = 0.85). Ruminative brooding based on the original measure of this construct (Treynor et al., 2003) has been frequently studied in Chinese samples (Lei et al., 2017), including in adolescents (Lian et al., 2021).[3]

**Intrapersonal resilience.—**The *short Grit Scale* (Duckworth et al., 2007; Duckworth & Quinn, 2009) is an eight-item scale that assesses the tendency to persevere and orient toward long-term goals. Responses are on a five-point Likert scale from 1 = *"Not like me at all"* to 5 = *"Very much like me."* Higher scores were indicative of greater grit. The scale demonstrated high internal consistency in the current sample (Cronbach's $\alpha$ = .80). Support for the construct validity and criterion validity of this measure has been found in Chinese adolescents (Li et al., 2018). Furthermore, this measure has been previously used with Chinese left-behind children, in whom it was found to be positively associated with academic engagement (Lan & Moscardino, 2019).

**Interpersonal vulnerability.—**The experience of being bullied was assessed through a three-item measure (Chang et al., 2019) derived from previous research on peer victimization (Ding et al., 2015; Kochenderfer & Ladd, 1996). Participants were asked whether classmates or friends had "hit them," "purposely excluded them from other peer groups," or "spread a false rumor about them." Response choices ranged from 0 (*"Never"*) to 5 ("*Yes, every day during the past month*"). Higher scores on this scale were reflective of greater experiences of being bullied. Internal consistency for this measure was high in the current sample (Cronbach's $\alpha$ = .74). This measure has also been found to be positive associated with future depressive symptoms (Chang et al., 2019).

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[3]Also supportive of its convergent validity, brooding was found to be highly correlated with depressive symptoms in the current sample (r = .52 in Table 2).

**Interpersonal resilience.**—The *Patient Reported Outcomes Measurement Information System (PROMIS) Pediatric Short Form – Peer Relationships 8a version 2.0* (DeWalt et al., 2013) is an eight-item self-report measure assessing the quality of peer relationships in the past seven days, including closeness, attention, and helpfulness. Each item is rated on a five-point Likert scale from 1 (*"Never"*) to 5 (*"Almost always"*). Higher scores indicated better peer relationships. Internal consistency in the current sample was high for this measure (Cronbach's $\alpha$ = .92). This measure has demonstrated adequate psychometric characteristics in a large sample of youth (DeWalt et al., 2013).

### Data analysis

A series of Spearman correlation analyses was conducted in order to examine whether study covariates (i.e., age, sex, depressive symptoms), as well as intrapersonal and interpersonal risk and resiliency factors, differentiated between adolescents without suicidal ideation and those with "pure" passive ideation. A follow-up multivariate logistic regression was then conducted, including all study covariates, and those risk and resiliency factors found to be significant at the univariate level as predictors. That is, candidate predictors for passive ideation were evaluated among adolescents with no active ideation.

Similarly, a series of Spearman correlations, followed by a multivariate logistic regression, were conducted in order to examine the same set of covariates and intrapersonal and interpersonal risk and resiliency factors in distinguishing between adolescents with "pure" passive ideation and those with active ideation. Here, candidate predictors for active ideation were evaluated among adolescents with passive ideation.

## Results

All predictors (and depressive symptoms) were assessed for skewness and kurtosis. With the exception of the peer victimization variable (skewness = 2.13; kurtosis = 5.12), all had reasonably normal distributions (skewness < .54; kurtosis < .38). A square-root transformation of the peer victimization variable led to acceptable improvements (skewness = .80 and kurtosis = −.48). This transformed peer victimization variable, however, yielded essentially identical results as did the original non-transformed equivalent. Similarly, when outliers for individual variables were treated with winsorization, the results remained essentially unchanged compared to when the original non-winsorized equivalents were used. The original variables were therefore retained in all analyses.

Descriptive statistics for all study variables are presented in Table 1. Of the 371 adolescents sampled, approximately 15.90% (n = 59) endorsed current "pure" passive ideation (without active ideation), while 17.79% (n = 66) endorsed current active ideation. At the univariate level, Spearman correlations indicated that while neither age nor sex differentiated between adolescents without suicidal ideation and those with passive ideation, depressive symptoms, rumination, grit, peer victimization, and peer support each significantly differentiated between groups in expected directions, with small to medium-to-large effects (see Table 2). A follow-up multivariate logistic regression indicated that after covarying for age, sex, and depressive symptoms, rumination and grit were the only variables that remained significant in predicting passive ideation among adolescents without active ideation. (Table

3) Rumination was associated with a greater passive ideation and grit was associated with a lower passive ideation, both with small effect sizes (The Office of Assistant Secretary for Planning and Evaluation & The Office of Human Services Policy, 2014).

An identical series of analyses was conducted in order to examine whether the aforementioned variables differentiated between adolescents with "pure" passive ideation and those with active ideation. At the univariate level, Spearman correlations indicated that whereas sex did not differentiate between adolescents with these forms of suicidal ideation, age did differentiate (albeit, with a small effect), such that younger adolescents were more likely to endorse active ideation than older adolescents (Table 2). Further, univariate Spearman correlations indicated that depressive symptoms, rumination, grit, and peer support also differentiated between adolescents with passive versus active ideation, with small to medium effects. However, no differences were observed between adolescents with passive versus active ideation in levels of peer victimization. A follow-up multivariate logistic regression indicated that after age, sex, and depressive symptoms were covaried, rumination, grit, and peer support were no longer predicted active ideation among adolescents with passive ideation (Table 3); other than age, only depressive symptoms remained significant predictors in this multivariate model.

## Discussion

The present study evaluated intrapersonal and interpersonal vulnerability and resilience factors in relation to passive and active ideation, respectively, in youth. It builds on prior research by employing head-to-head comparisons with passive ideation unconfounded by the co-occurrence of active ideation (i.e., "pure" passive ideation). Additionally, this study focused on a large, high-risk sample, youth whose parents leave the home for extended periods for employment (i.e., left-behind children). Given the considerable global health burden of psychological distress experienced by left-behind children (Fellmeth et al., 2018), enhancing our understanding of risk and prospective targets for intervention in this population has potential to reduce disease burden and suicide risk for millions of youth and their families.

We observed several notable findings. First, the prevalence of current suicidal ideation in the sample was quite high, with 33.7% of adolescents experiencing at least one form of suicidal ideation at the time of assessment. For context, the rate of active ideation in the most recent U.S. Youth Risk Behavior Survey (YRBS), 2017, was 17.2% (Centers for Disease Control and Prevention, 2018), a 12-month prevalence rate that is comparable to that for *current* (i.e., past two-week) active ideation within the current sample (17.8%). Collectively, these findings underscore the extent to which left-behind children are a particularly at-risk population (Fellmeth et al., 2018).

In multivariate analyses, rumination was a significant predictor of passive ideation, a finding consistent with prior theoretical and empirical work (Miranda & Nolen-Hoeksema, 2007; O'Connor & Nock, 2014; Tucker et al., 2013). Additionally, a prior study found rumination to at least partially mediate the relation between negative life events and suicidal ideation (Chan et al., 2009). When adolescents experience negative life events, such as a parent

leaving the home for an extended period, ruminating on these experiences may lead to suicidal ideation. As for the contrasting absence of a significant finding for rumination in the multivariate analysis for active ideation, we caution against interpreting this finding as indicating that rumination does not predict suicidal ideation. Rather, when taken together with the prior studies associating rumination with suicidal ideation, our finding that it may not differentiate between passive and active ideation suggests that it may be a factor in the onset of suicidal ideation in general, but not for the transition from passive to active ideation.

As for resilience factors, grit was a predictor of passive ideation. This is in line with prior work that has found individuals who experienced negative life events were less likely to report suicidal ideation four weeks later when they had higher levels of grit (Blalock et al., 2015; Pennings et al., 2015; White et al., 2017). However, grit also did not differentiate passive from active ideation. Collectively, our results suggest that once youth do begin to experience passive ideation, grit may no longer help to protect them from active ideation. If these findings are replicated in prospective studies, it may therefore be of particular importance for early prevention efforts to focus on increasing grit when it is potentially most effective, prior to the onset of any suicidal ideation, as implementing such intervention strategies after passive ideation onset may yield diminishing therapeutic returns.

The general finding in the multivariate model of active ideation among individuals with passive ideation that none of the candidate vulnerability and resilience factors uniquely differentiated between these two forms of suicidal ideation is in line with that of a recent meta-analysis (Liu, Bettis, et al., 2020). However, depressive symptom severity was found significantly to predict active ideation, and thus may be key for understanding the progression from passive to active ideation.

Regarding the absence of significant associations for peer support in the multivariate models, it is worth noting that there is some evidence that it is also not longitudinally predictive of suicide-related outcomes in youth, namely depression (Auerbach et al., 2011; Stice et al., 2004). In contrast, there is some evidence that parental support may be more predictive of depression (Stice et al., 2004). It would not be unreasonable to consider whether such may similarly be the case for suicidal ideation. Such a possibility may be particularly relevant to Chinese adolescents, given that in many Asian cultures, great value is placed on the family and thus familial relationships serve as the primary source of influence and support for many Asian youth (Pomerantz & Wang, 2009). Furthermore, although peer relationships certainly still hold value in Asian cultures, their influence relative to parents' may be more modest in Asian relative to Western cultures. Such a possibility speaks to the need to move beyond examinations of social support as a general construct in studies of suicide, toward more fine-grained assessments of this construct, not least because the potential for familial relationships to be of greater relevance than peer ones to suicide risk may lead to higher risk in left-behind children. If this possibility is supported, it would speak to the importance of grandparents within traditional multi-generational households to mitigate risk associated with the long-term separation from parents that these children experience. Finally, it would also be important to consider in future work whether source-specific forms of social support may be better conceptualized as a moderator of risk for suicidal ideation (Johnson et al., 2011).

Although peer victimization predicted passive ideation and differentiated it from active ideation in bivariate analyses, it was no longer a significant predictor of these outcomes in multivariate analyses, suggesting that other variables may have better accounted for these outcomes. It is possible that other variables included in the multivariate models may have functioned as mediators of the association between peer victimization and the outcomes of interest, specifically certain significant predictors in the final multivariate models, rumination in the case of differentiating between no suicidal ideation and passive ideation, and depressive symptoms in the case of discriminating between passive and active ideation. Consistent with this possibility, rumination was found to have a medium bivariate correlation (Cohen, 1988) with peer victimization in the subsample for predicting passive ideation. Similarly, depressive symptoms were found to have a medium bivariate correlation with peer victimization in the subsample for distinguishing active from passive ideation. These findings are also consistent with prior longitudinal studies finding peer victimization to be associated with subsequent rumination (Barchia & Bussey, 2010; Padilla Paredes & Calvete, 2014) and depression (Arora et al., 2020; Bond et al., 2001; Hamilton et al., 2015), respectively. Given general cautions against mediational analyses with cross-sectional data (Maxwell & Cole, 2007; Winer et al., 2016), however, it was not possible to evaluate these potential mediational relationships in the current study and they therefore await future investigation.

The current study it is not without limitations. First, it was cross-sectional. Additional longitudinal research would allow for examining the temporal transition from no suicidal ideation to passive ideation (i.e., onset of suicidal ideation) and from passive ideation to more active forms of suicidal ideation. Longitudinal studies are also necessary for establishing the temporality for the vulnerability and resilience factors considered in the current study in relation to passive and active ideation. Longitudinal studies may also provide an opportunity for testing potential mediational models, such as the aforementioned possibility that rumination and depression may serve as mediators between the peer support and peer victimization, respectively, and the suicidal ideation outcomes variables. Additionally, the current study did not assess the degree to which these left-behind children have access to support at home. The absence of a parent could partially be buffered by stable caregiving from grandparents or other close relatives. This is especially the case in Chinese culture where it is typical to have multigenerational households. Future research assessing family structure and the quality of caregiving by other members of the family is therefore warranted and remain generally understudied in this population (Fellmeth et al., 2018).

The base rate of suicidal ideation in the general population of youth is low. A strength of the present study is therefore examination of suicidal ideation in an at-risk population, that of left-behind children. That said, it is not yet known whether current findings would replicate in other at-risk populations (e.g., psychiatrically hospitalized youth). Additional studies with such populations are needed to clarify the generalizability of the current findings.

## Conclusions

The current study provided valuable evidence regarding risk and resilience factors for passive ideation in China's left-behind children. A particular strength of this work was

evaluation of predictors that disambiguate pure passive ideation from active ideation. Rumination and grit differentiated youth who did not endorse suicidal ideation from those who endorsed passive ideation. Only depressive symptom severity differentiated active from passive ideation. If supported in future longitudinal studies, efforts to prevent passive ideation in this population may be most successful when maladaptive ruminative processes are targeted, and grit is fostered, and monitoring depressive symptoms may be important for preventive efforts aimed at thwarting the progression of suicidal ideation from passive to active ideation. Finally, future research providing fine-grained evaluations of different sources of social support (e.g., familial versus peer) may be particularly informative for suicide prevention efforts with left-behind children.

## Acknowledgements

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**Table 1.**

Descriptive statistics for study variables

| Variable | Mean (SD) | Range |
|---|---|---|
| Suicidal ideation | 5.35 (12.89) | 0 – 75 |
| Depressive symptoms | 20.22 (6.53) | 8 – 40 |
| Rumination | 10.67 (3.49) | 5 – 20 |
| Grit | 25.18 (6.10) | 8 – 40 |
| Peer victimization | 1.62 (2.52) | 0 – 15 |
| Peer support | 28.54 (6.20) | 8 – 40 |

**Table 2.**

Correlations between study variables

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | PSI |
|---|---|---|---|---|---|---|---|---|
| 1. Sex (female) | – | <.01 | .13* | .03 | –.06 | –.07 | –.03 | .09 |
| 2. Age | –.11 | – | .10 | .14* | –.12* | –.03 | <.01 | .07 |
| 3. Depressive symptoms | –.02 | .04 | – | .52*** | –.47*** | .41*** | –.42*** | .32*** |
| 4. Rumination | <.01 | .24** | .37*** | – | –.38*** | .32*** | –.25*** | .41*** |
| 5. Grit | –.14 | –.13 | –.47*** | –.20* | – | –.29*** | .31*** | –.27*** |
| 6. Peer victimization | –.18* | –.04 | .32*** | .12 | –.19* | – | –.35*** | .19** |
| 7. Peer support | .01 | –.01 | –.44*** | –.11 | .27** | –.31*** | – | –.15* |
| ASI | .07 | –.18* | .32*** | .21* | –.23** | .13 | –.18* | – |

Note: Values above the diagonal (n = 305) represent correlations with passive suicidal ideation (PSI) among adolescents with no active ideation (ASI). Values below the diagonal (n = 125) represent correlations with ASI among adolescents with PSI.

*
$p < 0.05$

**
$p < 0.01$

***
$p < 0.001$

**Table 3.**

Multivariate predictors of passive and active suicidal ideation

| Variables | "Pure" Passive Suicidal Ideation[a] | | Active Suicidal Ideation[b] | |
|---|---|---|---|---|
| | OR (95% CI) | p | OR (95% CI) | p |
| Sex (Female) | 1.46 (0.71 – 3.01) | .30 | 1.37 (0.55 – 3.43) | .51 |
| Age | 0.92 (0.73 – 1.17) | .49 | 0.67 (0.50 – 0.90) | <.01 |
| Depressive symptoms | 1.08 (0.99 – 1.17) | .09 | 1.10 (1.00 – 1.20)[c] | .04 |
| Rumination | 1.32 (1.16 – 1.49) | <.001 | 1.15 (0.99 – 1.32) | .06 |
| Grit | 0.92 (0.86 – 0.99) | .02 | 0.95 (0.87 – 1.03) | .18 |
| Peer victimization | 1.05 (0.91 – 1.21) | .53 | — | — |
| Peer support | 1.02 (0.95 – 1.09) | .66 | 0.99 (0.92 – 1.07) | .88 |

Note: Each column represents a separate multivariate logistic regression model.

[a] Analysis was conducted of passive suicidal ideation among adolescents with no active ideation (n = 305); Nagelkerke $R^2$ = .32

[b] Analysis was conducted of active suicidal ideation among adolescents with passive ideation (n = 125); Nagelkerke $R^2$ = .21

[c] The lower end of the confidence interval was rounded down but exceeded 1.00.