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Adolescent interpersonal relationships, social support and loneliness in high schools: Mediation effect and gender differences

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ABSTRACT

The purpose of this study was to explore the associations between the qualities of different types of relationships in school, social support and loneliness in adolescence. Using a sample ($N = 1674$) of adolescent students randomly selected from middle schools, we found boys' loneliness was influenced by the qualities of opposite-sex, teacher–student and same-sex relationships, whereas girls' loneliness was only influenced by same-sex relationships. Additionally, social support mediated the association between same-sex relationships and teacher–student relationships, and loneliness. Further, the quality of same-sex relationships showed stronger association with boys' loneliness than girls'. Finally, the quality of same-sex relationships showed the strongest association with boys' loneliness comparing with opposite-sex relationships and teacher–student relationships. These findings are discussed to illuminate the possible mechanisms by which interpersonal relationships could influence loneliness. In future research, causal relationships and other influencing factors on loneliness should be examined.

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Loneliness is a common unpleasant experience resulting from deficiencies in a person's social relations in either quality or quantity (Perlman and Peplau, 1984), which is prevalent during adolescence (Goossens, 2006; Hawthorne, 2008). It has been well established that adolescent individuals have to cope with a number of poignant developmental challenges (Laursen and Hartl, 2013), of which the two most important are establishing intimate social relationships and developing concepts of the self (Sippola and Bukowski, 1999). But these two developmental tasks are conflicting, and the contradiction between separating the self as unique from others and increasing need for wanting intimacy with others gives rise to a high risk for loneliness (Sippola and Bukowski, 1999). As a consequence, almost 80 percent of adolescents constantly feel lonely (Hawkley and Cacioppo, 2010), and numerous studies have suggested that the prevalence of loneliness reaches a peak in early adolescence (Heinrich and Gullone, 2006; Roekel et al., 2010).

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Loneliness has negative influences on adolescents' mental health and their behaviors (Heinrich and Gullone, 2006). The sharp increase in loneliness during adolescence is associated with lower global life satisfaction (Kapıkıran, 2013), poorer academic performance (Benner, 2011), poorer adjustment (Larson, 1999), higher school dropout rates (Asher and Paquette, 2003), poorer health practices (Stickley et al., 2014), lower self-esteem (Vanhalst et al., 2013), fewer health-promoting behaviors (Lasgaard et al., 2011) and more severe internet addiction (Huan et al., 2014; Özdemir et al., 2014). Additionally, serious loneliness could precipitate a greater crisis for adolescents (Harris et al., 2013; Hawkley and Cacioppo, 2010; Qualter et al., 2013), such as depression (Ladd and Ettekal, 2013), anxiety (Lasgaard et al., 2011), social phobia (Schinka et al., 2013) and suicide (Dulmen and Goossens, 2013), resulting in a greater burden to family and society (Heinrich and Gullone, 2006), as well as to social resources (e.g., greater use of the health care system (Geller et al., 1999)). As a consequence, chronic loneliness has a vital influence on adolescents' emotional (Qualter et al., 2010; Schinka et al., 2012; Vanhalst et al., 2012), mental and physical well-being (Harris et al., 2013; Vanhalst et al., 2013), and on their behavior (Schinka et al., 2013). Therefore, it is very important to further study adolescents' loneliness and its related protective factors.

Previous studies have demonstrated that social support and interpersonal relationships are two important predictors of adolescents' loneliness (Bowker and Spencer, 2010; Eldeleklioğlu, 2008; Merz and Jak, 2013). For example, there is clear evidence that social support is negatively correlated with loneliness (Kong and You, 2013), and decreased social support is strongly linked to increased feelings of loneliness in adolescence (Hudson et al., 2000; Kapıkıran, 2013). In addition, the negative correlation between interpersonal relationships and loneliness is also quite robust (Cheng and Furnham, 2002), and research has suggested that poor-quality interpersonal relationships are closely linked to loneliness (Vanhalst et al., 2014).

Furthermore, the predictors mentioned above may be manifested differently depending on gender. Therefore, another important issue is the patterns of the correlations between interpersonal relationships, social support and loneliness may be different in different sex groups. Previous studies have shown that the focus of interpersonal relationships is different for girls and boys: girls tend to establish dyadic relationships and value intimacy, self-disclosure, and emotional support, while boys prefer to develop relationships with larger groups, involving companionship and joint activity (Gabriel and Gardner, 1999; Maccoby, 1990). As for social support and loneliness, there are also significant differences between boys and girls. For example, Salomon and Strobel (1997) found that girls looked for social support more readily and got more emotional support than boys. In addition, Stokes and Levin (1986) found that different standards were used to evaluate the feeling of loneliness in different sex groups: boys tend to use group-oriented criteria, whereas girls tend to value the quality of dyadic relationships.

Although prior studies have established associations between the quality of interpersonal relationships, social support and loneliness (e.g., Bowker and Spencer, 2010; Eldeleklioğlu, 2008; Merz and Jak, 2013), few studies have focused on the individual effects of different types of interpersonal relationships on social support and on loneliness, the role of social support in the association between the quality of different types of interpersonal relationships and loneliness, as well as the topic of whether the associations between the quality of various types of interpersonal relationships, social support and loneliness are consistent across gender.

It is important to explore the above patterns of relationships for the following two reasons: firstly, if we know the possible factors that mediate the association between interpersonal relationships and loneliness for boys and girls separately, we can target these factors in future interventions when reducing loneliness in different sex groups; secondly, it is not clear how different types of interpersonal relationships influence loneliness in adolescence and whether there exists any gender differences in the relationship between loneliness and its related protective factors. Therefore, examining this possible mediation mechanism in different groups could greatly contribute to the body of knowledge in this area.

Based on the above arguments, the main emphasis of the current study is placed on examining the associations between the quality of various types of interpersonal relationships in school settings (i.e., opposite-sex relationships, same-sex relationships and teacher–student relationships), social support and loneliness. The purposes of the present study are as follows.

Firstly, we will explore the mediating effect of social support on the association between the quality of different types of interpersonal relationships and loneliness. Secondly, we will examine the gender difference in the patterns of the associations between the quality of various types of interpersonal relationships, social support and loneliness. Finally, we will examine whether the individual effects of different types of interpersonal relationships on social support and loneliness are consistent across gender.

In the following paragraphs, we first introduce our theoretical framework, from which we derived hypotheses regarding the associations between the quality of interpersonal relationships, social support, loneliness, and gender.

1. Theoretical framework and hypothesis development

1.1. The quality of interpersonal relationships and loneliness

Interpersonal relationships can be defined as the patterns of emotion, thought and behavior when individuals interact with others (Plutchik, 1997). Prior studies have demonstrated the bi-directional association between the quality of interpersonal relationships and loneliness (Stensland et al., 2014; Woodhouse et al., 2012). On one hand, the quality of interpersonal relationships is strongly associated with loneliness during adolescence (Cheng and Furnham, 2002; Woodhouse et al., 2012).