Psychosocial predictors and outcomes of loneliness trajectories from childhood to early adolescence☆

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ABSTRACT

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Using latent class growth analysis, we were interested in investigating how experiences of loneliness emerge in distinct developmental patterns over the course of middle childhood and adolescence (NICHD Study of Early Child Care, $N = 832$). Second, we examined the role of demographic, mental health, and behavioral variables in association with these discrete patterns of loneliness. Loneliness was measured at 3 time points: age 9, age 11, and age 15. Results indicated five discrete trajectories of loneliness from middle childhood to adolescence. Most children exhibited a stable and low level of loneliness over time. The remaining children were split among moderate increasing, high increasing, decreasing, and chronic loneliness groups. Ethnicity, income, age 7 social skills, age 7 depression, and age 7 aggression were associated with trajectory membership. In addition, the loneliness trajectories predicted self-reports of social skills deficits, depression, aggression, and suicidal ideation at age 15.

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Loneliness represents a subjective state of distress between actual and perceived relationships (Peplau & Perlman, 1982). Most people experience some level of loneliness during their lifetime; it is thus considered a normal developmental process (Sippola & Bukowski, 1999). Although common, loneliness serves as an important interpersonal risk factor in the earlier years of life. Indeed, loneliness interferes with an innate human need for belongingness (Heinrich & Gullone, 2006; Joiner, 2005). The purpose of the current study was two-fold. First, we were interested in investigating how experiences of loneliness emerge in distinct developmental patterns over the course of middle childhood and adolescence. Once we established these developmental trajectories of loneliness, we examined the role of demographic variables (ethnicity, socioeconomic status, sex), mental health variables, and behavioral variables in association with these discrete patterns of loneliness. Specifically, we expected that demographic variables, depression, aggression, and social skills deficits would predispose individuals to membership of loneliness trajectories. We also anticipated that trajectory membership would lead to increases in certain outcomes, including depression, suicidality, aggression, and social skills deficits.

Developmental patterns of loneliness

Loneliness is a significant and common part of both childhood and adolescence, and very young children can understand what it means to be lonely (Cassidy & Asher, 1992; Parkhurst & Hopmeyer, 1999). However, empirical research on age-related changes in loneliness suggests that levels of loneliness are not stable. For instance, loneliness seems to be more prevalent in the first two decades of life (Heinrich & Gullone, 2006). However, the evidence regarding prevalence of loneliness during childhood and adolescence appear contradictory. Some researchers have argued that loneliness is a function of adolescence and does not exist in childhood (Cassidy & Berlin, 1999). Heinrich and Gullone (2006) concluded that loneliness rates are highest in adolescence, and, in a large cross-sectional study of Australians, Hawthorne (2008) found loneliness to peak between the ages of 15 and 30. Brennan (1982), on the other hand, claimed that significant differences in loneliness rates across childhood and adolescent age groups do not exist. One study comparing second, fourth, and sixth graders found that the younger participants (i.e. second graders) reported the highest perceived loneliness scores (Luftig, 1987). Yet another study found that children between seven and twelve years old experience generally low levels of loneliness (Bartels, Cacioppo, Hudziak, & Boomsma, 2008). These conflicting findings reflect comparison of mean level differences, and they assume that all children follow the same age-related pattern of changes in loneliness. Recent empirical evidence, however, suggests that not all children follow the same age-related pattern.

Jobe-Shields, Cohen, and Parra (2011) modeled patterns of loneliness in a sample of children across third, fourth, and fifth grades. Results suggested that children in this study followed one of three loneliness trajectories. The majority of children displayed stable low levels of loneliness. Another group representing almost one-quarter of the sample displayed increases in loneliness rates across time. Finally, a smaller percentage of children decreased in levels of loneliness over time. While the current analyses concerning identification of trajectories of loneliness across middle childhood and adolescence are exploratory, we do expect distinct patterns similar to those of Jobe-Shields et al. (2011) to emerge. In particular, we anticipate that a large group of participants will experience low levels of loneliness over time. In addition, we expect that smaller percentages of participants will experience increasing changes in loneliness or decreasing changes in loneliness across time.

Demographic characteristics

Several studies have found that loneliness and its correlates do not differ across ethnic groups (Brennan & Auslander, 1979; Jones, Carpenter, & Quintana, 1985; Page & Cole, 1991). Other researchers, however, have found that ethnic minority status increases loneliness due to the effects of discrimination (King & Merchant, 2008; Van Bergen et al., 2008). In regards to socioeconomic status, Fischer and Phillips (1982) found that those who have lower income and less education are more isolated from supportive peers and family. Finally, research on gender difference and loneliness is mixed. In adolescence, some researchers claim that females report more loneliness (Brennan, 1982; Brennan & Auslander, 1979; Hawthorne, 2008) while others claim that males do (Rich, Kirkpatrick-Smith, Bonner, & Jans, 1992). Still other researchers report no significant differences in loneliness between males and females (Koenig & Abrams, 1999; Marcoen, Goossens, & Caes, 1987). Heinrich and Gullone (2006) hypothesize that gender differences may be the result of methodological issues. Females are more likely than males to endorse questions on measures that use the word "lonely" or "loneliness." Measures that do not explicitly use these words tend not to result in gender differences. Based on the above evidence, we hypothesize that children from lower income homes and children who are ethnic minorities will report more loneliness over time. Given the contradictory finding regarding gender and loneliness, we will take an exploratory approach when analyzing the link between gender and loneliness.

Depression

Associations between loneliness and internalizing mental health problems are well documented (Brage, Meredith, & Woodward, 1993; Hawthorne, 2008; Heinrich & Gullone, 2006; Qualter, Brown, Munn, & Rotenberg, 2010). In particular, high levels of loneliness have been associated with depression in children and adolescents (e.g. Koenig & Abrams, 1999; Mahon, Yarcheski, Yarcheski, Cannella, & Hanks, 2006). Mahon et al. (2006) conducted a meta-analysis of 95 studies on adolescent loneliness conducted between 1980 and 2004. This analysis resulted in large effect sizes for the link between loneliness and several psychosocial factors, including depression. Longitudinal studies support the predictive link between childhood loneliness and later depression (Qualter et al., 2010).

Suicidality

Suicide is another mental health problem that has been studied in association with loneliness (Borowsky, Ireland, & Resnick, 2001; Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007; Joiner & Rudd, 1996). A study using an adolescent sample documented a strong association between loneliness and suicide attempt in the past year and lifetime suicide attempts (Page et al., 2006). In addition, a longitudinal study found that increases in loneliness from middle childhood to adolescence indirectly predicted both suicidal thoughts and self-harming behaviors (Jones, Schinka, van Dulmen, Bossarte, & Swahn, 2011). Based on these results and in particular the work of Jones et al., we expect that participants who report higher or increasing levels of loneliness across time will be more likely to endorse both suicidal ideation and suicide attempts.