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REVIEW ARTICLE

Loneliness During the School Years: How It Affects Learning and How Schools Can Help*

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ABSTRACT

BACKGROUND: Substantial evidence links loneliness to poor academic outcomes and poor employment prospects. Schools have been shown to be places that mitigate or aggravate loneliness, suggesting a need to consider how schools can better support youth experiencing loneliness.

METHODS: We conducted a narrative review on loneliness in childhood and adolescence to examine the literature on how loneliness changes over the school years and how it influences learning. We also examined whether there were increases in loneliness because of the COVID-19 pandemic and associated school closures, and whether schools can be places for loneliness interventions/prevention.

FINDINGS: Studies describe how loneliness becomes more prevalent during the adolescent years and why that is the case. Loneliness is associated with poor academic outcomes and poor health behaviors that impact learning or turn students away from education. Research shows that loneliness increased during the COVID-19 pandemic. Evidence suggests that creating positive social classroom environments, where teacher and classmate support are available, is crucial in combatting youth loneliness.

CONCLUSIONS: Adaptations to the school climate can be made to meet the needs of all students, reducing loneliness. Investigation of the impacts of school-based loneliness prevention/intervention is crucial.

Keywords: adolescence; youth; loneliness; academic achievement; learning; school climate.

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Researchers, professional associations, and the media have become more interested in loneliness in recent years.[1] It has received even more attention during the COVID-19 pandemic due to social distancing rules, with many businesses, schools, and workplaces closed.[2] The attention has been on trying to understand the individual, interpersonal, and contextual causes, the consequences of loneliness, and the ways people overcome it. And, while most empirical work explores the phenomenon of loneliness at only 1 or 2 of these levels of the socio-ecological model,[3] there is a need to integrate our understanding of loneliness to determine how these levels interact with one another. In this narrative review, we fill that gap in the literature, detailing what is known about loneliness among children and adolescents, providing the reader with a broad, comprehensive, up-to-date summation of the topic area. We examine how loneliness changes over the school years, how it profoundly impacts learning, and whether there have been increases in loneliness because of the COVID-19 pandemic and associated lockdowns and school closures. We also explore how school settings can enable increases in loneliness but show how they can also be places of intervention.

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METHODS

Information used to write this paper was collected from searches of electronic databases (EBSCO, Science Direct, Web of Science, Google Scholar), searches of the references and citation tracking of retrieved literature, and through author expertise in the area of loneliness, social connection, and education. Searches took place in March 2020 and the authors kept track of new publications across 2021, updating the review as necessary.

FINDINGS AND DISCUSSION

What Is Loneliness?

In their work, Favotto et al.[4] reviewed the current definitions of loneliness and summarize loneliness as ''the feeling that results from the absence of a social life that one desires, including a perceived discrepancy between the social contacts one has in relation to what they crave, an increase in their need for social connection that is not met, or a subjective feeling of isolation regardless of surrounding social opportunities'' (2019, p. 1). Thus, loneliness is thought to occur when a person thinks their interpersonal relationships are insufficient in some way.[5] It could be that they are unhappy with the number of social contacts they have, with the closeness and quality of their social relationship, or that their need for social connection is unmet. Loneliness is a subjective experience, accompanied by painful or negative emotions.[6] In interviews, children and adolescents describe loneliness as a painful and sad experience that is often accompanied by a perceived lack of belongingness or connectedness to their peers.[7-12] Thus, their descriptions of loneliness match those of adults.[13] The negative feelings that accompany the experience of loneliness are thought to encourage social reconnection to satisfy our need to belong (otherwise known as the reaffiliation motive[14]). Not all individuals under all circumstances will seek social interaction when they experience loneliness, but the suggestion is that when working effectively, the reaffiliation motive means that loneliness should lead to successful reconnection.[14] When successful at motivating us to reconnect, loneliness is thought to be a part of healthy human development, with no serious impacts on health and wellbeing,[15] although there appears to be impacts on educational outcomes, which we discuss below. This type of loneliness is generally referred to as transient loneliness.

Evidence suggests that, while loneliness is often transitory for most people,[14] for others, it can trigger thoughts and behaviors that are counterproductive to the reaffiliation motive, leading to prolonged feelings of loneliness.[14] In their descriptions of prolonged experiences of loneliness, adolescents talk about having no one, or feeling like nobody cares about them; youth are hopeless that the situation will improve.[13] Such deep pessimism might explain why loneliness is linked to suicide ideation, self-harm, and suicide attempts as a way of coping with the negative emotions.[6,10,12,13]

The difference between loneliness and aloneness. Loneliness is not the same as being alone (aloneness/solitude). In contrast to loneliness, aloneness is an objective state: it is about having no one else around and can be measured by the number of contacts, amount of time alone, and number of conversations with others. Aloneness is often referred to as social isolation, occurring when we cannot exchange information with others.[16] During adolescence, aloneness is neither viewed negatively nor positively[16] and is often used to reflect on social relationships.[13]

The Prevalence of Loneliness Across the School Years

Loneliness is experienced more frequently during adolescence and emerging adulthood (ie, aged 11-24 years) than during childhood, adulthood, and older adulthood.[17-34] Available evidence shows that the percentage of youth reporting feeling lonely ''very often'' or ''always'' is less than 5% of children at 8 years of age[20] and between 3% and 16.3% of adolescents ages 11 to 15 years[6,21-29]; in the United Kingdom, 9% of 14 year olds responded ''true'' to ''I feel lonely,''[6] and 10% of those aged 16 to 24 years reported feeling lonely often or always, compared to 4%-6% of all other age groups.[19] In work that examines trends in loneliness during adolescence using population data from several years, 15 year olds were more likely to report loneliness than 13 and 11 year olds, and 13 year olds were more likely to report loneliness than 11 year olds.[21,35] This suggests that loneliness becomes more of an issue as peer social relationships become more important to youth. In recent work using data from the 2018 Program for International Student Assessment (PISA) loneliness rates among 15 years olds varied significantly across the world, being highest in the Dominican Republic (28.2%) and lowest in the Netherlands (7.5%), with school and national culture making an important contribution to those differences in prevalence rate.[36] It is unknown whether these statistics represent youth experiencing transient or chronic loneliness, but a handful of longitudinal studies suggest that between 3% and 22% of youth experience prolonged loneliness from childhood through to late adolescence/early adulthood.[37] There is also some evidence suggesting that the prevalence of loneliness among adolescents has been increasing since 2010, with some scholars suggesting this increase is due to an increased use of social media[38] although the latter is hugely debated.[39] Other authors have not found this growth in loneliness among youth,[40]

and argued that school and country level changes should be considered when exploring rates of change in loneliness.

Loneliness during the COVID-19 pandemic. In the 2 previous coronavirus epidemics, SARS-CoV and MERS-CoV, there were significant increases in mental illness and decreases in well-being among adolescents.[41] We have seen those same effects during the COVID-19 pandemic, with government mandated social restrictions, including school closures, linked to increases in poor mental health among youth.[42-44] While there are few papers that have explored loneliness among youth during the COVID-19 pandemic, those studies currently published show increases in loneliness for many adolescents[45-50] and children.[51] In England, eg, 43% of children and adolescents indicated that they felt lonely ''often'' or ''always'' during the first official English lockdown[45] compared to 10% pre-COVID.[6] We do not know whether these changes translate to prolonged loneliness, although the evidence from Australia is that loneliness returned to pre-lockdown levels for most youth when they returned to school.[49] There appear to be some children and adolescents more at risk of sustained impacts from the COVID-19 pandemic, including loneliness.[46] For example, children and adolescents living in households experiencing financial insecurity, and/or where a parent experiences a mental health disorder, are more likely to have mental health problems that appear to have been exacerbated by the pandemic.[42] Loneliness specifically appears to be linked to pre-COVID-19 reports of mental ill-health, but has also been found to have a direct impact on the reporting of depression and anxiety during the COVID-19 pandemic.[52]

The Potential Consequences of Loneliness for School and Health Outcomes

Loneliness is a force for downward mobility,[53] with young adults who report higher levels of loneliness obtaining lower educational attainment by age 18 years compared to their peers who report lower levels of loneliness. They are also more likely to be out of work and education. Those experiencing prolonged loneliness from childhood through to late adolescence appear to be particularly at risk,[54] although transitory experiences of loneliness have been shown to contribute to negative attitudes toward school from early on[55-57] and worse academic achievement.[56-58] Youth reporting loneliness are also more likely to drop out of school at the age of 16 years.[59] Substantial empirical evidence shows that school bullying and loneliness are linked,[60] with the negative relationship between bullying and academic performance being stronger when adolescents reported loneliness.[61] Loneliness links to poor sleep quality during adolescence,[13,62-64] which, given the importance of sleep for brain development, cognitive function, and mood, might be partly responsible for the link between loneliness and academic performance.

Loneliness is also associated with poorer health and health-compromising behaviors, which increase the likelihood that youth will be away from school due to ill-health. Evidence shows that children and adolescents reporting loneliness experience more somatic complaints (headaches, backache, and stomach-ache) than children and adolescents who report less frequent loneliness,[63,65,66] and have higher instances of depressive symptoms and a higher frequency of visits to the doctor.[65] Adolescents reporting higher loneliness are also more likely to engage in substance abuse than youth reporting lower levels of loneliness.[66,67] It is possible that some young people self-medicate, using substances to cope with the negative feelings of loneliness, but loneliness may also make young people more susceptible to peer influence, engaging in substance abuse to gain peer acceptance.[26] Loneliness has also been linked to other health compromising behaviors, including reduced physical activity,[68] over-eating,[69] and unprotected sexual activity.[25] Increasing levels of loneliness have been found to relate to an increased risk of mortality and morbidity,[70-72] with loneliness during childhood and adolescence having an accumulative effect on the risk of developing cardiovascular disease in adulthood.[71] According to theories of prolonged loneliness, loneliness impacts health through over-activation of physiological systems that would normally encourage social reconnections.[72,73] Dysregulation of those systems (eg, hypothalamic-pituitary-adrenocortical axis) contributes to inflammatory processes that are partly responsible for hypertension and coronary heart disease. Loneliness also effects the restorative behaviors/processes via disturbed sleep,[63] which means the body does not repair, maintain, recover, and enhance physiological systems.

Loneliness also has implications for mental health outcomes. Previous research has suggested loneliness to have bidirectional relationships with both depression and social anxiety.[74,75] Those bidirectional relationships, whereby loneliness can impact psychological health and well-being, while in the reverse direction, psychological factors can impact the experience of loneliness, appear to be consistent throughout childhood and adolescence.[76] The experiences of dissatisfaction with one's social relationships, that occur when experiencing loneliness can give rise to more widespread dissatisfaction with life more generally, resulting in depressive symptomology.[74] Conversely, disruptions to social relationships that commonly occur when an individual experiences depression can lead to loneliness.[77] A recent meta-analysis[78] shows that loneliness may be a significant predictor of suicidal

ideation and behavior, with that relationship mediated by depression. That association was predominantly found in female populations, and in age groups previously identified to experience a higher prevalence of loneliness (16 to 20 years and over 58 years).[78] Meltzer et al.[79] suggest that loneliness increases the odds of having social anxiety disorder, more so than it increases the odds of depression and obsessive-compulsive disorder. Research attributes the link between loneliness and social anxiety to fears of negative evaluation, experiences of social isolation and rejection, and emotional dysregulation.[80-82] Congruently, in randomized controlled trials (RCT) of cognitive behavioral group therapy and mindfulness-based stress reduction, greater reductions in participants' social anxiety from pre- to post-treatment predicted greater reductions in loneliness, and vice versa.[82]

IMPLICATIONS FOR SCHOOL HEALTH POLICY, PRACTICE, AND EQUITY

Who Are the Lonely Students?

There are a range of risk factors for loneliness among youth that operate across multiple levels of the socioecological model. Generally, the literature focuses on individual risk factors, including the students' mental health and socioeconomic characteristics.[83] Loneliness is explained by some school factors relating to the school that the adolescent attends.[36,84,85] That suggests policies that combat loneliness within schools might be easier to implement than policies directed at reducing more family or experience-related risk factors of loneliness.

School climate has been shown to be important for understanding loneliness.[36,84] Jefferson et al.[36] showed that the school factors of disciplinary climate, teacher support, teacher interest, peer competition and cooperation, the amount of victimization, and discrimination are important in understanding student loneliness. Changing school environments so that they are inclusive and more cooperative is key to decreasing the experiences of loneliness among students. Teachers are crucial to that change, with supportive, interested, nondiscriminative teachers enabling youth to consult them.[84] A school climate that encourages cooperation between students can further mitigate loneliness.

There are certain individual characteristics of the student that are also related to loneliness and those can be targeted in focused intervention work within schools. They include the number of school changes the student had experienced, fear of failing, and resilience[36] and immigrant status.[86] Policies that directly address these issues are likely to have an impact on reports of student loneliness. Fear of failure and lower resilience, like lower self-esteem, contribute to a belief that loneliness is unchangeable and cannot be remedied,[14] suggesting interventions that challenge such cognitions and build self-worth are likely to be effective. For those that are moving to a new school and for first generation immigrants, special attention and providing opportunities for connection with other students should be priorities. Such foci might include group work activities, space to socialize, and whole class projects that acknowledges and celebrates similarities and differences.

Young people with marginalized identities are more likely to feel lonely compared to those who are not marginalized.[87] Research has found loneliness to be more prevalent in ethnic minorities,[88,89] individuals with mental illness,[90,91] sexual and gender minorities,[92,93] individuals facing homelessness and poverty,[94] physical disability,[95] autism and 'alternative' identities[96] compared to general populations. Possible explanations for increased loneliness in individuals with marginalized identities include a lack of financial resources to be able to engage in social activities and being socially excluded due to prejudice and discrimination towards their identities.[97,98] Discrimination and prejudice may also prevent people from reaching out for help with their feelings of loneliness. In the case of mental illness, it may deter people from seeking help for their mental health problem.[99] Further, experiences of discrimination can contribute to individuals being unwilling to form new relationships or invest in existing ones due to low confidence or lack of trust. Creating schools that are inclusive of difference means that those with marginalized identities should feel more accepted by teachers and other students. Given the consistent finding that school-based bullying is linked directly to increases in loneliness,[57,61,100] with feelings of loneliness lasting into adulthood, well after peer victimization ends,[60] there is a real need to create inclusive school environments that have zero tolerance for bullying.

School-Based Program for Loneliness

Loneliness impacts the health and educational outcomes of youth, but there are few actions taken by schools and teachers to mitigate those effects. That is the case, despite some of the variance in child and adolescent loneliness being attributable to the school and its social environment.[36] Recent work has drawn attention to the fact that research on the key drivers of loneliness and currently available interventions for youth have focused on different risk factors, including school-based risk factors, and individual skills-based factors that can be taught in schools.[83] In 2021, Eccles and Qualter[101] conducted the first systematic review and meta-analysis on the interventions for youth. They showed that loneliness interventions for youth, thus far, have focused on either social and emotion skills (both separately and combined), increased social interaction, enhancing social support, and psychological therapy. Those foci are directly linked to drivers

of loneliness at the intrapersonal and interpersonal levels. They should help young people build meaningful relationships, cope with negative feelings, and improve their sense of connection. They are ideal as school-based interventions because they help students manage the negative emotions that accompany loneliness, but also provide opportunities to engage with other students. Recent successful interventions, evaluated using the robust Randomized controlled trial technique, have reduced loneliness among adolescents by focusing on building social and emotional skills to help young people manage their negative emotional experiences[35] and provide support which young people can access when feeling lonely.[102] This suggests that having the chance to develop social and emotional skills needed to manage the negative experience of loneliness, knowing where to access help, and having opportunities to develop new friendships and practice the skills needed to maintain social connection are important for improving loneliness in young people.

While such interventions are effective,[35,101,102] we argue that changing school climates so that students and teachers provide support to one another, are interested in each other, and are nondiscriminatory, will create spaces for connection, which will reduce loneliness. School climates that value different types of social skills and that encourage cooperation and support between students and teachers are crucial for fighting loneliness. Enabling factors for a positive school environment are teacher and classmate support and an inclusive and protective school community. Following the COVID-19 pandemic and the reopening of schools, students will need those protective and inclusive environments more than ever.

Such school-based approaches will need to be developed jointly with local students to take into account the specificities of each setting, including school facilities and constraints, as well as the composition of the student and teaching body. This engaged approach is likely to ensure buy-in from the students, which is essential for the success of any intervention.[103] In addition, such involvement will, in itself, contribute to the students' development, increasing awareness of and understanding of different social needs and ways of being social. It will produce students that are both fit to belong and ready to facilitate belonging.[103] These approaches will also need to be tested, with careful consideration given to the type of evidence that is most appropriate in each case, to ensure that they produce change where it is needed and for all that need it. This includes students in minority groups, from ethnic and racial minorities, to those with disabilities and poor mental health. Finally, any new approach needs to be developed with openness to the need for adjustments and continued monitoring through time.

Conclusions

Loneliness is a common experience during adolescence, but it is not without serious consequence. Our review of the literature indicates the long-lasting and negative impact loneliness can have on health, education, and future employment prospects. Young people spend much of their time at school with their peers and those environments can mitigate or heighten loneliness. Schools, then, seem to be an important context in which loneliness can be lessened. While previous loneliness interventions focusing on individual characteristics are effective (ie, by improving social and emotional skills), the environment in which loneliness occurs should not be ignored. School climate plays an important role in loneliness and adaptations to the school climate can be made to meet the needs of all students, consequently reducing loneliness. In particular, promoting an inclusive, nondiscriminatory school climate where different types of social skills are valued, and cooperation and support are encouraged between students and teachers is pivotal. The development of such school-based approaches should involve local students and consider each school's specific context and circumstances to ensure intervention success. We need to investigate the impacts of school-based approaches that target loneliness, with consideration to the school's specific needs and context.

Human Subjects Approval Statement

Preparation of this paper did not involve primary research or data collection involving human subjects, and therefore, no institutional review board examination or approval was required.

Conflict of Interest

All authors declare that they have no conflicts of interest or declare all financial and non-financial conflicts.

AUTHOR CONTRIBUTIONS

Rebecca Jefferson: Conceptualization (supporting); writing—original draft (lead); writing—review & editing (supporting). Manuela Barreto: Conceptualization (equal); funding acquisition (equal); supervision (equal); writing—original draft (supporting); writing—review & editing (supporting). Lily Verity: Conceptualization (supporting); writing—original draft (supporting); writing—review & editing (supporting). Pamela Qualter: Conceptualization (equal); funding Acquisition (equal); supervision (equal); writing—original draft (supporting); writing—review & editing (lead).

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