



# What does it mean to be alone? An analysis of interpretations of solitude among adolescents and adults

Meghan E. Borg<sup>1</sup> · Teena Willoughby<sup>1</sup>

Accepted: 25 January 2022 / Published online: 28 January 2022

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2022

## Introduction

Spending time alone becomes more prevalent and enjoyable during adolescence and into adulthood (Borg & Willoughby, 2021; Corsano et al., 2006; Larson, 1990). Interpretations of what it means to be alone may vary across developmental periods. For example, adolescence and early adulthood are times when forming meaningful peer relationships are important (Bowker et al., 2021; Schnitker, 2007), and thus being alone may be conflated with *feeling* alone if existing relationships are inadequate. Further, experiences with being alone are complex and can be experienced in different ways (e.g., being alone may be a positive experience but may become negative if it is done too often; Coplan et al., 2021). Research has investigated whether children can distinguish among concepts related to being alone (i.e., loneliness, solitude, aloneness; Galanaki, 2004), and has qualitatively assessed participants' attitudes toward feeling alone (e.g., Hemberg et al., 2021; see Achterbergh et al., 2020 and Mansfield et al., 2021 for reviews); however, studies have not specifically asked participants to report what being alone means to them. The goal of the current study was to use qualitative data to explore three research questions: (1) How do adolescents and adults interpret being alone? (2) Do these interpretations of being alone differ between the samples? (3) Do these interpretations differ across age and sex within each sample?

## Method

### Participants

The adolescent sample comprised of 645 participants ( $M_{\text{age}} = 14.55$ ,  $SD = 1.74$ , range = 11 to 19 years, 50.2% female), and the adult sample comprised of 444 participants ( $M_{\text{age}} = 36.90$  years,  $SD = 13.84$ , range = 18–83 years, 69% female, 0.5% other). Both samples completed separate online surveys. See Appendix for socio-demographic information for both samples. Both studies were approved by the University Research Ethics Board. Missing data for age and sex in the adult sample ( $n = 6$ , 1.4%) were imputed using the expectation–maximization (EM) algorithm with all study variables included in the analyses to avoid the biased parameter estimates that can occur with pairwise or listwise deletion (Schafer & Graham, 2002). There were no missing data for age and sex in the adolescent sample.

### Measures

Age and sex were reported in both samples. Participants in both samples were asked to provide an open-ended response to the following prompt: “Please provide a description of what being alone means to you. Your description can be as short or as long as you would like”. Responses were coded using an inductive approach to thematic analysis. The process of thematic analysis was conducted as outlined by Braun and Clarke (2006).

### Data Analysis

Ambiguous responses were removed ( $n_{\text{adolescent}} = 20$ ,  $n_{\text{adult}} = 3$ ). Inter-rater reliability for 30% of responses was good for both the adolescent and adult samples (weighted Cohen's kappa = 0.917 and 0.868, respectively). Discrepancies were discussed between researchers until agreement was reached. The remaining responses were coded by

✉ Meghan E. Borg  
mb13hz@brocku.ca

<sup>1</sup> Department of Psychology, Brock University, 1812 Sir Isaac Brock Way, St. Catharines, ON L2S 3A1, Canada

one researcher (the first author) based on an agreed upon dichotomous nominal scale for each theme (0 = *theme not referenced in response*, 1 = *theme referenced in response*). Responses were coded under multiple themes if applicable.

## Results

Across both samples, four themes emerged. See Table 1 for descriptions of each theme, and examples and prevalence of responses in both samples. Crosstab analyses were conducted to assess differences in prevalence of each theme across samples. Binary logistic regressions were included to assess whether age and sex were associated with each theme within each sample. A Bonferroni correction was applied when assessing the significance of each model ( $p = 0.013$ ).

The chi-squares for the loneliness and negative themes were significant ( $\chi^2(1, N = 1066) = 8.63, p = 0.003$  and  $\chi^2(1, N = 1066) = 8.51, p = 0.004$ , respectively). Adolescents described being alone as loneliness less often than expected compared to adults who described being alone as loneliness more often than expected. Adolescents also described being alone as negative more often than expected compared to adults who described being alone as negative less often than expected. The chi-squares for physical separation and positive themes were non-significant ( $ps > 0.013$ ).

The logistic regression models for loneliness were significant in both samples ( $ps < 0.013$ ). Being female (OR = 1.49,  $p = 0.015$ ) and higher age (OR = 1.10,  $p = 0.049$ ) in the adolescent sample, and lower age (OR = 0.971,  $p < 0.001$ ) in the adult sample were associated with describing being alone as loneliness. The regression model for physical separation was significant in the adolescent sample only ( $p < 0.013$ ), such that being male (OR = 0.669,  $p = 0.018$ ) and lower age (OR = 0.883,  $p = 0.012$ ) were associated with describing being alone as physical separation. See Table 2 for parameter estimates. The regression models for positive experience and negative experience were non-significant for both samples ( $ps > 0.013$ ).

## Discussion

The current study explored interpretations of being alone among adolescents and adults, whether these interpretations differed between these samples, and whether interpretations differed within each sample in relation to age and sex. Four themes emerged, indicating that there are distinct interpretations of being alone.

Age differences that emerged in interpreting being alone as loneliness appear to support past research that loneliness peaks in late adolescence (and often early adulthood), likely because there is considerable emphasis placed on social

relationships (Child & Lawton, 2019). Thus, interpreting being alone as *feeling alone* may be more prominent during this time. Adolescents described being alone as negative more often than expected compared to adults, however, this may be due to adolescents reporting that being alone is “boring”. Sex differences support past research that female adolescents may be more susceptible to feeling lonely (Martel, 2013) and thus interpret being alone this way, compared to males who may interpret being alone more objectively (i.e., as physical separation).

The current study empirically explored the ways in which adolescents and adults interpret being alone using qualitative data and a large sample size. The current study used two different samples, which limited analyses to concurrent associations. Data collection took place during the coronavirus-19 pandemic, which may have affected how participants interpreted being alone (though participants made very few references to the pandemic in their responses). Nonetheless, findings suggest that interpretations of being alone are complex and highly variable among adolescents and adults and should be considered in order to better understand the implications of being alone.

## Appendix

### Socio-Demographic and Survey Characteristics

#### Adolescent Sample

The participants in the adolescent sample were students involved in a larger longitudinal study of health-risk behaviours among elementary and high school students. Given that the question about what it means to be alone was only included in the fifth wave of the larger longitudinal study, only that wave of the data is analyzed here. Participants were enrolled in several schools in Ontario, Canada, and were surveyed annually, beginning in 2017. Parent reports indicated that 69.3% of adolescents were White, 18% were Black, 1.6% were Asian, 3.9% were Hispanic, 0.3% were Indigenous, and 6.7% were Mixed (0.3% preferred not to answer). Parental education level was used as a proxy for socioeconomic status, and the prevalence was 7.8% for a professional or advanced degree, 25% for an undergraduate degree, 58.3% for an associate degree or diploma, 7.1% for some college, university, or technical diploma, and 1.9% for a high school diploma.

Students in the adolescent sample earlier were invited to participate in the study during visits to their school. Due to restrictions related to the coronavirus-19 pandemic, the wave of the survey used in the current study was administered online through Qualtrics from March–June, 2021. The entire survey took approximately one hour to

**Table 1** Examples of coded responses from adolescent and adult samples

Theme name and definition	Examples of coded responses from adolescent sample (N = 625)	Examples of coded responses from adult sample (N = 441)
Physical separation ( $n_{\text{adolescent responses}} = 213$ , 27.8%; $n_{\text{adult}} = 177$ , 31.3%) Reference to being physically apart from other people	<p>“By myself in a home.” (age 12)</p> <p>“Being in a room in your house alone even though other people in [sic] the house” (age 12)</p> <p>“Being alone to me means that you don’t have anyone around you are in a quiet space.” (age 12)</p> <p>“for me it could mean, being home alone, alone in your room [sic], feeling alone.”<sup>b</sup> (age 12)</p> <p>“My description of being alone is sitting in my room playing on my phone, switch or laptop and not talking to anyone.” (age 13)</p> <p>“Means nobody is around me at a time” (age 14)</p> <p>“Having no one around you, physically or otherwise”<sup>b</sup> (age 15)</p> <p>“Being alone means no one else is around. Or people are around but they leave you alone” (age 15)</p> <p>“being the only person in an area, or having no friends”<sup>b</sup> (age 17)</p> <p>“You feel like your [sic] alone even tho [sic] your [sic] not or there is physically being alone where no one is around you”<sup>b</sup> (age 17)</p>	<p>“Being alone either means physical isolation for extended periods of time. Or maintained emotional distance from those around you.”<sup>b</sup> (age 21)</p> <p>“Being alone means spending time alone even though you live with another person.” (age 31)</p> <p>“Lack of physical contact.” (age 32)</p> <p>“generally alone in a physical sense, but also includes [sic] emotionally”<sup>b</sup> (age 33)</p> <p>“Being alone is being apart from others.” (age 38)</p> <p>“Nobody in my personal space, only myself in the house. No one to speak to.” (age 39)</p> <p>“Alone means to be physically alone. To be alone does not mean being lonely.” (age 44)</p> <p>“I usually equate being alone as being by myself at home.” (age 50)</p> <p>“Being alone means being in a room indoors by myself, or if outdoors then not being around people I know” (age 50)</p> <p>“being alone means having no one physically around, and people being busy in their day to day lives so you can’t / don’t want to disturb them.”<sup>b</sup> (age 54)</p>

**Table 1** (continued)

Theme name and definition	Examples of coded responses from adolescent sample (N=625)	Examples of coded responses from adult sample (N=441)
Loneliness ( $n_{\text{adolescent responses}} = 269, 35.1\%$ ; $n_{\text{adult responses}} = 230, 40.7\%$ ) Reference to feeling alone (e.g., lonely, no one to confide in), and/or an absence of social connection (e.g., no friends or family)	<p>“Not having a support system.” (age 12)</p> <p>“Being alone (In my opinion) means feeling that the world is against you and you have no allies, friends or family who are willing to help you.” (age 12)</p> <p>“Being alone is having no one to help you when you need help, when you feel ‘alone’ doesn’t necessarily mean you don’t have anyone it means no one understands you and that you feel alone.” (age 13)</p> <p>“Alone physically is nobody around you but alone mentally means that you feel like you have no one.” (age 13)</p> <p>“Being alone can be exhausting or calming. Being alone around people and feeling as though they don’t see you is exhausting. But sometimes you need that moment of loneliness to reset. Being alone is like one leaf left on a tree in fall. You watch as the other leaves fall down and you can’t seem to budge. At one point, you accept the fact it will take time to fall. The winter comes along, and the snow covers up all those leaves. Then you fall and now you are laying on top of a pile of snow. Everyone passes by, giving you no second thought. But you accept it. Then you blow away and find yourself in a new group of leaves. You accept it. But now you are new. The lonely process was a reset to begin a new day.” (age 13)</p> <p>“I think being alone doesn’t mean physically being alone. I believe its more of a sub conscious feeling that can easily get stuck in your head and stay there. For example you may have friends and family etc. But that doesn’t mean you don’t feel lonely. It more means you have support that you don’t realize is there for you, because all you can think about is not having anyone. No matter how strong of a relationship, there are always people to help, but it can be really difficult to realize this sometimes because of your negative thoughts or feelings.” (age 13)</p> <p>“Being alone is that feeling of having no one to talk to about exciting, important and sad things when you need to.” (age 14)</p> <p>“No one is around or there for you. You feel scared, cold and empty. Your mind is your only friend, you feel lost. One of the worst feelings in my opinion.” (age 14)</p> <p>“‘alone’ is different for everyone, personally, being alone has 2 definitions to me; 1. being physically alone (no one around you) 2. being mentally/emotionally alone number 2 is basically—even when you’re in a room full of people, you feel empty, hell, even if someone interacts with you, you’re numb, surrounded by people but none of them want to hear you, no matter how much they tell you they’re ‘here for you.’” (age 15)</p> <p>“Sometimes ‘being alone’ consists of having time by my self to relax or decompress in the literal sense of being alone. However, there are times where ‘being alone’ is a feeling rather than a literal situation. I can feel the most alone when in a room of people. These people may not be close to me or may not understand me, making me feel as though I am not there or that I am by my self.” (age 17)</p>	<p>“Being alone means having no one in your life meaning friends or family etc., or just feeling that this is the case even if it is not.” (age 21)</p> <p>“Being alone for me means feeling alone, so whenever I miss social interactions.” (age 25)</p> <p>“to me as a mother of two being alone isnt just about your surroundings, but its also how you feel, with my partner around and two children i still feel very alone mentally at time [sic].” (age 25)</p> <p>“It gives me time to do something I enjoy doing, and to recharge. But too much of it can be boring and lonely.” (age 30)</p> <p>“Being alone to me can mean being physically alone without the company of anyone else, but it can also mean being surrounded by people or company but feeling mentally/emotionally alone.” (age 33)</p> <p>“No contact with anyone. No conversation or contact. Loneliness.” (age 37)</p> <p>“I have issues with depression, so being alone can mean anything from being on my own to being in a crowded room. I think, no matter what, there will always be times when I feel alone in my own mind.” (age 39)</p> <p>“Being alone is more of a feeling rather than a physical state i.e. you can be around lots of people but still feel alone” (age 41)</p> <p>“Being alone means to me living an isolated life with not much social interaction with other people, as well as a limited number of friends and family members.” (age 46)</p> <p>“When my wife is out shopping or at the hairdressers. We are seldom apart as we tend to do everything together. I do not like being on my own and miss her even for brief periods.” (age 77)</p>

**Table 1** (continued)

Theme name and definition	Examples of coded responses from adolescent sample ( $N=625$ )	Examples of coded responses from adult sample ( $N=441$ )
Positive experience ( $n_{\text{adolescent responses}} = 234$ , 30.5%, $n_{\text{adult responses}} = 142$ , 25.1%) Reference to positive aspects of experiencing being alone (e.g., quiet thinking, relaxation)	<p>"Being alone is being in your room reading or listening to music." (age 12)</p> <p>"It makes me feel sad or unneeded but there are also good scenarios [sic] for being alone." (age 12)</p> <p>"Being alone is a sort of 'quiet time' when I can gather my thoughts and think to myself about things that are going on in my life. It is a time when I can reflect upon what is going on within my head" (age 14)</p> <p>"Being alone to me is like almost a break from going out all day and doing stuff." (age 14)</p> <p>"Being alone can be relaxing and a good time to think to yourself." (age 15)</p> <p>"To me it means that I can be free without having to worry about people judging me." (age 15)</p> <p>"Being alone to me is kind of a lifestyle I suppose. It's like a getaway where I feel the most like myself" (age 16)</p> <p>"Being alone is very important to me, I feel empowered. I feel as though I can get everything done, most times. In other cases, it is the worst, I feel sad, insecure and truly alone. Being alone to don't feel [sic] me means I'm all by myself, but sometimes when I'm physically alone, I don't feel emotionally alone, but other times I do." (age 16)</p> <p>"It means that sometimes you need the peace and quiet but it could also be lonely." (age 16)</p> <p>"I generally enjoy being alone. I like the saying 'my life is a cake, and the people in it are the cherry on top'. I love my friends, but through the pandemic I have learned how to enjoy my own company. I am happy with my work, hobbies and interests. I don't rely on anyone for happiness, but I am grateful and happy that I have people in my life that care about me." (age 18)</p> <p>"Being alone is time spent by yourself to focus on what you want and expect from life, a time to identify your goals and aspirations and to be the best person you can be." (age 18)</p>	<p>"Being alone means that I have space and time for myself. It means I can be my truest, most peaceful self. It isn't that I dislike others, but that I appreciate the company of my soul." (age 18)</p> <p>"I often enjoy being alone. I have time to think and focus on myself and my goals. It is relaxing to be removed from social contact from time to time." (age 19)</p> <p>"I very much enjoy socialising and I am a very confident, outgoing person. However, this can become tiring so I really value having my alone time to be able to relax and reflect." (age 22)</p> <p>"Ideally, having time to myself and getting to focus on things I want to do. Being alone in nature especially is something I deeply value, but I also relish living alone (no one's mess to clean but mine!). I have always been quite solitary and enjoy my time alone, but I do also love spending time with people and can get lonely at times. I don't think that "being alone" and "lonely" are synonymous, however. Over the course of the pandemic, being alone has started to show some unsavoury sides, it is almost too easy to be alone now and that means that the idea of being with people is not as inviting as it used to be. Sometimes it feels I have gone too far into my shell and it's difficult to get back out. I do still enjoy being alone most of the time, but in normal circumstances I do need that balance of spending time with people." (age 29)</p> <p>"Solitude is not the absence of company, but the moment when our soul is free to speak to us and help us decide what to do with our life." (age 30)</p> <p>"Being alone is my preferred way of spending time and relaxing. Most of my hobbies are solitary activities (reading, embroidery, smoking). I am generally very solitary so being alone is very important and desirable to me." (age 33)</p> <p>"Being alone is a time for me to recharge my batteries, relax and feel comfortable." (age 36)</p> <p>"Being alone means wearing comfortable clothes, getting plenty of rest, not wearing any makeup, spending more time playing with my cat, exploring more hobbies for introverts and loners (e.g. crafts, cooking, online classes, reading), watching more TV than usual, spending time reflecting on the past." (age 38)</p> <p>"Sometimes being alone is comforting. You can also be alone in a crowded room... it's a funny emotion." (age 40)</p> <p>"I relish being alone—it affords me the opportunity to have some quality 'me-time'. Being alone does not equate to being lonely to me, I really enjoy it!" (age 47)</p>

**Table 1** (continued)

Theme name and definition	Examples of coded responses from adolescent sample (N=625)	Examples of coded responses from adult sample (N=441)
Negative experience ( $n_{\text{adolescent responses}} = 50, 6.5\%$ ; $n_{\text{adult responses}} = 16, 2.8\%$ ) Reference to negative aspects of being alone that does not include physical separation, loneliness, or positive experience	<p>“feeling sad.” (age 12)</p> <p>“Being alone can have its ups and its downs I feel like being alone is peaceful, calming, fun and also sometimes boring. I almost always feel upset or sad because once I have done everything there is to do I become bored.” (age 13)</p> <p>“It’s great to have some downtime to relax yourself and make sure that you are mentally stable but sometimes to much of it can be harmful to yourself and your mental health.” (age 14)</p> <p>“Being alone means nothingness. Sadness. Darkness. Being alone is my worst fear.” (age 15)</p> <p>“Being alone makes me feel free. But I can only be alone for a certain time.” (age 15)</p> <p>“Mostly boring, though i spent most of my time alone in my room watching youtube, so i feel safe at the same time.” (age 16)</p> <p>“Boring” (age 16)</p> <p>“Being alone, to me, depends on what mood im in. if im in a bad mood, i would rather be alone but it can also upset me. when im in a good mood, being by myself, might bring my mood down” (age 17)</p> <p>“Being alone is terrifying but is also freedom.” (age 17)</p>	<p>“Feeling no motivation.” (age 25)</p> <p>“Being alone, to me, has taken on a little more negative a connotation in recent time. Generally I see being alone as an opportunity to spend time with yourself and be with your thoughts, but at the moment, because it’s enforced, I’m associating it with lacking something, i.e. being alone to be lacking opportunity or option to be otherwise. I expect this will change in time” (age 26)</p> <p>“Being in a space by myself, for any given amount of time. Though that phrasing provides some negative connotations for my mind, it does not always have to be a bad thing.” (age 29)</p> <p>“That’s very philosophical, you can’t analyse it in a few sentences. In a few words, to not feel fulfilled.” (age 28)</p> <p>“Being alone is an opportunity to think and charge batteries for the next social event. Unfortunately, it is also a time where you can overthink about tiny stuff and become a bit depressed about it” (age 28)</p> <p>“I think being alone is different to being lonely to me. Being alone most of the time feels calm, relaxing and gives me the ability to recharge. But sometimes if I’m not in a good headspace then being alone means feeling sad and overthinking or feeling anxious.” (age 28)</p> <p>“It is an intermediate state between not being alone. It can be healthy to have time alone. But too much is not so healthy.” (age 39)</p> <p>“Depends on the moment and the circumstance. I enjoy being alone, but being forced to be alone over the last months proved to be harder than I thought it would be.” (age 42)</p> <p>“Normally I don’t mind being alone ... but I have found the pandemic particularly difficult ... as many of my colleagues have too” (age 53)</p> <p>“Feeling empty at times, but at others mild euphoria in the feeling of independence” (age 58)</p>

*Note.* Subscripts indicate that a response also was coded under another theme (e.g., a response under the physical separation theme with a subscript b indicates that this response also was coded under the loneliness theme); a = physical separation, b = loneliness, c = positive experience, d = negative experience. The total number of responses is greater than the size of each sample because some responses were coded under multiple categories. Percentages for each theme indicate valid percentages

**Table 2** Parameter estimates for significant logistic regressions in the adolescent and adult samples

							95% CI for Exp(B)			
		B	Std. Error	Wald	Df	p-value	Exp(B)	Lower	Upper	
Adolescents	Physical separation	Sex	-.403	.171	5.560	1	.018*	.669	.478	.934
		Age	-.125	.050	6.277	1	.012*	.883	.801	.973
	Loneliness	Sex	.397	.163	5.934	1	.015*	1.487	1.081	2.047
		Age	.092	.047	3.868	1	.049*	1.097	1.000	1.202
Adults	Loneliness	Sex	-.259	.210	1.514	1	.219	.772	.511	1.166
		Age	-.029	.007	16.330	1	<.001**	.971	.958	.985

Note. \*  $p < .05$ , \*\*  $p < .01$ . CI=Confidence interval

complete. Students received \$30 as compensation for their completion of the survey. Parents provided informed consent and participants provided informed assent before completing the survey. The survey was developed by the second author. This study was approved by the University Research Ethics Board.

### Adult Sample

The participants in the adult sample were adults from the United Kingdom who were recruited to participate in an online survey through Prolific, an online data collection platform. The majority of participants reported their nationality as European (89.6%). Others reported their nationality as Asian (4.3%), African (2.0%), South American (0.7%), Australian (0.5%), North American (0.2%), and 1.6% preferred not to answer. Participants reported their highest level of education completed as a proxy for socioeconomic status, and the prevalence was 52% completed some college, university, or apprenticeship, 3% completed a college/apprenticeship or technical diploma, 25% finished high school, and less than 1% did not finish high school.

Participants in the adult sample volunteered to complete the online survey through their personal Prolific accounts. Participants indicated informed consent online before beginning the survey. The entire survey took approximately 20–30 minutes to complete. Data was collected in April, 2021. All participants who provided the correct completion code were compensated with €2.50. The survey was developed by the first and second authors. This study was approved by the University Research Ethics Board.

**Authors' Contributions** Both authors contributed to designing the statistical analyses and writing the manuscript, with M.E.B taking the lead role. Both authors have read and approved the final manuscript.

**Funding** This study was supported by a grant from the Canadian Institutes of Health Research to Teena Willoughby.

### Declarations

**Data Sharing Declaration** This manuscript's data will not be deposited.

**Ethical Approval** This study has ethics approval from Brock University (REB 16–080 and REB 20–200).

**Informed Consent** In the adolescent sample, all participants' parents provided written consent and participants provided written assent. In the adult sample, all participants provided written consent.

**Competing Interests** The authors have no competing interests to declare that are relevant to the content of this article.

### References

- Achterbergh, L., Pitman, A., Birken, M., Pearce, E., Sno, H., & Johnson, S. (2020). The experience of loneliness among young people with depression: A qualitative meta-synthesis of the literature. *BMC Psychiatry*, 20(1), 415. <https://doi.org/10.1186/s12888-020-02818-3>.
- Borg, M. E., & Willoughby, T. (2021). A latent class examination of affinity for aloneness in late adolescence and emerging adulthood. *Social Development*. <https://doi.org/10.1111/sode.12564>.
- Bowker, J. C., White, H. I., & Etkin, R. G. (2021). Social withdrawal during adolescence. *The Handbook of Solitude*, pp. 133–145. <https://doi.org/10.1002/9781119576457.ch10>.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>.
- Child, S. T., & Lawton, L. (2019). Loneliness and social isolation among young and late middle-age adults: Associations with personal networks and social participation. *Aging & Mental Health*, 23(2), 196–204. <https://doi.org/10.1080/13607863.2017.1399345>.
- Coplan, R. J., Hipson, W. E., & Bowker, J. C. (2021). Social withdrawal and aloneness in adolescence: Examining the implications of too much and not enough solitude. *Journal of Youth and Adolescence*. <https://doi.org/10.1007/s10964-020-01365-0>.
- Corsano, P., Majorano, M., & Champretavy, L. (2006). Psychological well-being in adolescence: the contribution of interpersonal relations and experience of being alone. *Adolescence*, 41(162), 341–353. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/16981621>.
- Galanaki, E. (2004). Are children able to distinguish among the concepts of aloneness, loneliness, and solitude? *International Journal*

- of Behavioral Development, 28(5), 435–443. <https://doi.org/10.1080/01650250444000153>.
- Hemberg, J., Korzhina, Y., Groundstroem, H., Östman, L., Nyström, L., & Nyman-Kurkiala, P. (2021). Loneliness – two sides to the story: Adolescents' lived experiences. *International Journal of Adolescence and Youth*, 26(1), 41–56. <https://doi.org/10.1080/02673843.2021.1883075>.
- Larson, R. W. (1990). The solitary side of life: An examination of the time people spend alone from childhood to old age. *Developmental Review*, 10(2), 155–183. [https://doi.org/10.1016/0273-2297\(90\)90008-R](https://doi.org/10.1016/0273-2297(90)90008-R).
- Mansfield, L., Victor, C., Meads, C., Daykin, N., Tomlinson, A., Lane, J., ... Golding, A. (2021). A conceptual review of loneliness in adults: Qualitative evidence synthesis. *International Journal of Environmental Research and Public Health*, 18(21). <https://doi.org/10.3390/ijerph182111522>.
- Martel, M. M. (2013). Sexual selection and sex differences in the prevalence of developmental psychopathology: Childhood externalizing and adolescent internalizing disorders. *Psychological Bulletin*, 139(6), 1221–1259.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7(2), 147–177. <https://doi.org/10.1037/1082-989X.7.2.147>.
- Schnittker, J. (2007). Look (closely) at all the lonely people: Age and the social psychology of social support. *Journal of Aging and Health*, 19(4), 659–682. <https://doi.org/10.1177/0898264307301178>.

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.