

# Adverse Effects of Loneliness on Students

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**Abstract.** As a common emotion, loneliness is usually defined as the emotion produced when people do not meet the expectations of interpersonal relationships, which is mainly measured by the UCLA Loneliness Scale. The main theories of loneliness are social needs theory and cognitive processing theory. The former holds that loneliness is a response to unsatisfied social needs, while the latter refers to that loneliness arises because individuals are dissatisfied with the perceived interpersonal relationship. The harm of loneliness to students is mainly reflected in the study, interpersonal relationships, and negative emotion, which will lead to academic procrastination, decreased sense of achievement in learning, decreased social skills, anxiety, and depression. In the future, it is necessary to develop a more objective measurement of loneliness, find out its general mechanism, and conduct intervention research on more student groups.

**Keywords:** Loneliness, Students, Adverse Effects.

## 1. Introduction

Defined as a painful emotion or encounter, loneliness occurs when people's needs for intimacy are not fully met or their social network does not match their preferences in quantity or attribute (Perlman & Peplau, 1981). It's not objective and cannot be evaluated by something objective. In other words, loneliness is not a concept the same as being alone. A person who is often in a social state and talks with different people all day may be very lonely at heart. On the contrary, one who often walks alone is not necessarily psychologically lonely. Loneliness, as a neutral emotion, can bring psychological benefits and disadvantages to people. Moderate loneliness can provide inner quietness, self-concern, and self-reflection. However, loneliness can also lead to a range of hazards such as depression (Cacioppo et al., 2006; Cacioppo et al., 2010; VanderWeele et al., 2011), excessive drinking (Akerlind & Hornquist, 1992), aggressive behavior, social fear, and anxiety (Cacioppo et al., 2014; Ernst & Cacioppo, 1999; Kearns et al., 2014). Lasting loneliness can even lead to physical diseases such as Alzheimer's disease (Wilson et al., 2007).

In China, the study of loneliness, a specific psychological emotion, has only been carried out in the 21st century, while foreign scientists have begun to explore this field since the 1970s. Bountiful achievements have been made in the international research on loneliness from all aspects. However, scientists' research on loneliness mostly focuses on the elderly. Research shows the elderly tend to have serious loneliness, which is mostly influenced by economic satisfaction, living status (whether they live alone or not), and residence location (Chow, Wong & Choi, 2021). However, these studies are too limited to a certain group. In other words, the current research on loneliness in academia does not cover all groups of people. At present, the research on students' loneliness is not the majority, but loneliness has many adverse effects on students, such as learning (Feng et al., 2020), social interaction (Moeller & Seehuus, 2019), and personal emotion (Beata Dziedzic et al., 2021). Because students are in weakness such as young age, low mental maturity, and social experience insufficiency, they need more attention.

Students' period should be a one of rich and sensitive psychology, and loneliness may have a great impact on their study, interpersonal relationship, and emotion. Therefore, it is necessary to explore the influence of loneliness on students. According to this phenomenon, this paper will first state the measurement of loneliness and explain the related theories of loneliness, and then summarize its various influences on senior high school students. Finally, the existing research will be summarized to put forward the prospect of future research.

## 2. Measurement of Loneliness

The University of California and Los Angeles Loneliness Scale (UCLA-LS), the most widely used loneliness measurement tool for loneliness research, has been iterated in three versions. Russell compiled the first edition of the UCLA Loneliness Scale in 1978 (Russell et al., 1978), which mainly covers 20 topics to evaluate individual loneliness by self-evaluation. However, its defect is that all the questions are too simplex, that is, they all adopt negative wording, which is easy for the subjects to generate systematic reaction bias.

In view of this defect, Russell and his team carried out the first iteration in 1980, changing the original 20 negative wording topics in the first edition into 10 positive wording topics and 10 negative wording topics. This new scale is the revised version of the UCLA Loneliness Scale (R-UCLA). Compared with the first edition, R-UCLA reduces systemic response bias and enhances discrimination validity (Russell et al., 1980). However, R-UCLA is not perfect and its main problem is internal inconsistency, that is, different factor structures affecting loneliness exist.

In order to improve R-UCLA, Russell and others developed the third generation UCLA Loneliness Scale in 1996, that is, UCLA-3. Revising the self-assessment topic wording again based on the previous one to avoid confusion and deviation, UCLA-3 also revised them to 9 positive wording topics and 11 negative wording topics. This version of the UCLA Loneliness Scale has the advantages of low systematic bias, high internal consistency, test-retest reliability, and discrimination validity (Russell, 1996). The scoring method of the scale is that the subjects score the questions subjectively on the questionnaire whose questions are mainly about the frequency of certain emotions and the options are mainly divided into four grades, namely, 1. Never 2. Rarely 3. Sometimes 4. Always. Subjects only need to fill in the numbers corresponding to the frequency on the horizontal line after the question. Meanwhile, the scoring rule is to add the scores of questions. As for questions marked with asterisks, the scores should be reversed (i.e., 1=4, 2=3, 3=2, 4=1) and then the scores of each item should be added. The higher the score, the higher the loneliness.

## 3. The Theory of Loneliness

### 3.1 Social Needs Theory

Social needs theory points out that human beings need to own basic social needs, that is, people need to communicate with others and be cared for by others. This sense of belonging and identity originated from social interaction is necessary for human beings. If it is lacking, it will lead to loneliness (Terrell-Deutsch, 1999).

Weiss (1987) divides loneliness into two aspects, including emotional loneliness and social loneliness. Emotional loneliness is defined as the individual does not feel care and understanding from social interaction or fails to have an intimate and comfortable interpersonal relationship. Generally speaking, people with emotional loneliness tend to rely more on the feedback from external interpersonal relationships, that is, they are passive and expect to have emotions and belonging directly through the outside world in interpersonal relationships. As for high school students, emotional loneliness mainly comes from friendship insufficiency, which makes them anxious and lonely because they don't have suitable groups and friends with a loss and emptiness.

Social loneliness refers to being socially involved, that is, feeling out of place. In other words, even if you are in a group, you can still realize that you don't belong to it. People with unique hobbies and styles are more likely to feel socially lonely because they are different from the public. High school students with social loneliness generally try to integrate into the group deliberately, such as trying the common hobby of the group. Even though they may not like it, they still do it intentionally to please the group.

### 3.2 Cognitive Processing Theory

Cognitive processing theory puts forward that loneliness stems from the gap between the expectation of interpersonal relationships and the present situation, which means people are dissatisfied with the present interpersonal relationship and think that it can be changed to meet their ideals (Terrell-Deutsch, 1999). Different from social needs theory, cognitive processing theory pays more attention to the cognitive component of loneliness than the emotional component. In other words, in comparison with the real social situation, it more focuses on the subjective cognition of loneliness, that is, its own evaluation of the social relationship. Therefore, everyone's measurement of loneliness varies from person to person in cognitive processing theory.

Cognitive processing theory also shows the individual's measurement of loneliness, that is, the evaluation of interpersonal relationships is influenced by many aspects, which is mainly by his own social experience and the observation of others' social interactions. Specifically, high school students may feel lonely in theoretically warm social groups, and may also feel comfortable and satisfied in dissociated interpersonal relationships. It depends on the cognitive system shaped by one's own experience and observation of others.

In a word, although these two theories are different in perspective, we can sum up the following two aspects. Firstly, loneliness is a subjective feeling rather than an objective factor. Secondly, loneliness stems from the dissatisfaction of individuals.

## 4. Adverse Effects of Loneliness

### 4.1 Effects of Loneliness on Learning

Loneliness is intertwined with students' learning. First of all, there is a significant relationship between loneliness and students' academic achievements. Yu Guoliang et al. (2000) concluded in the study of primary school students in grade 4 to grade 6 that students with poor academic performance have more loneliness, while students with better academic performance have less loneliness. Besides, regarding the sense of learning accomplishment, Zhang Lianyun's research (2013) shows that a significant negative correlation exists between the sense of learning accomplishment and loneliness, that is, the lower the sense of learning accomplishment, the more the loneliness. Moreover, according to Lei Mingge's (2021) research on the relationship between perceived social support, loneliness, and learning burnout of rural left-behind junior high school students, there is a vital positive correlation between loneliness and learning burnout, that is, the more the loneliness, the more learning burnout. Therefore, reducing and using students' loneliness can alleviate and predict their learning burnout respectively. As for academic procrastination and self-efficacy, Feng et al. (2020) believed that loneliness is positively correlated with academic procrastination and negatively correlated with self-efficacy. In addition, loneliness plays a partial intermediary role between academic procrastination and academic self-efficacy, which also has an important negative predictive effect on academic self-efficacy.

### 4.2 Effects of Loneliness on Interpersonal Relationships

Loneliness also has an impact on students' social relationships. According to (Moeller & Seehuus, 2019), loneliness plays an intermediary role between social interaction and anxiety. Specifically, participants with higher social expressiveness had less loneliness in his experiment, while those with more loneliness had more anxiety. At the same time, social sensitivity is also related to loneliness. People with higher social sensitivity usually show more loneliness. As far as social control is concerned, the more social control, the less loneliness. Moreover, with the development of the Internet, loneliness is considered a crucial factor leading to social networking and Internet addiction (Bozoglan et al., 2013). Research by McKenna et al. (2002) shows that people with more loneliness tend to socialize online than face-to-face. Of course, excessive use of social media will also increase loneliness (van den Eijnden et al., 2008), because social media fails to generate interaction as

sufficient as face-to-face connections (Sherman et al., 2013). In terms of macroscopic interpersonal relationships, loneliness is negatively correlated with the interpersonal ability (Rotenberg & Hymel, 1999) with a significant negative predictive effect on interpersonal ability (Knowles et al., 2015). Because people with more loneliness are prone to be alone to avoid social scenes and social relationships establishment, thus lack social exercise and obstacles to improve interpersonal relationships.

### **4.3 Effects of Loneliness on Negative Emotions**

Loneliness can lead to negative emotions for senior high school students, the most important of which is depression. Beata Dziejczak et al. (2021) found in a study of Polish high school students that depression and loneliness symptoms exist in a large proportion of students with a positive correlation between loneliness and depression. A study conducted by Polish writers Dymowska and Nowicka Sauer (2015) based on the Primary Care Assessment Questionnaire for Mental Disorders shows that 25.7% of 18-year-olds have depression and loneliness can also lead to anxiety. Moeller & Seehuus confirmed that people with more loneliness have more anxiety.

## **5. Summary and Prospect**

This paper mainly summarizes the measurement of loneliness, expounds on the theory of loneliness, and explores its adverse effects on students. It is found that loneliness is negatively correlated with students' academic achievement, learning accomplishment, self-efficacy, social control, and interpersonal ability, while positively correlated with learning burnout, academic procrastination, anxiety, and depression. In addition, the objectification of loneliness measurement, influence mechanism, and targeted intervention research still need further discussion.

### **5.1 Measurement Needs to be Objective**

At present, the measurement of loneliness mainly focuses on subjective questionnaire measurement. But the most important problem is that it has social approval effect on the subjective questionnaire method. In other areas, it has been found that there are significant differences between the indicators obtained by the questionnaire method and the objective experimental method. For example, two methods exist in the study of sleep quality, such as subjective PSQI and objective PSG. Therefore, the measurement of loneliness should be further developed (Buysse et al., 2008).

### **5.2 Influence Mechanism needs to be Proved**

There is no reasonable and acceptable comprehensive explanation for the influence mechanism of loneliness currently. Although a corresponding explanation for each adverse effect exists, there is no comprehensive theoretical model that can explain the mechanism of multiple adverse effects of loneliness at the same time. General theoretical models exist widely in other fields. For example, researchers explain that the general attack model of individual aggression can be used to explain all the factors that affect aggression (Anderson & Bushman, 2002). Therefore, we also need a similar comprehensive explanation for loneliness.

Some theories may explain the influence mechanism of loneliness. According to the Construal Level Theory, the intimacy of the interpersonal relationship is characterized by psychological distance (Trope et al., 2007). Psychological distance refers to individuals taking themselves as reference points, perceiving things in time and space dimensions, and judging the probability of occurrence. Expanding along four dimensions, mental distance forms temporal distance, spatial distance, social distance, and hypothetical (Trope et al., 2007). In the influence mechanism of loneliness and interpersonal relationship, the Construal Level Theory may provide a feasible explanation, that is, people with more loneliness have a longer psychological distance from others and less intimacy, which reduces their interpersonal relationship ability and produces a series of consequences such as social anxiety.

### 5.3 Targeted Intervention Studies

At present, the main intervention means for loneliness is group counseling, that is, the subjects will organize activities in a way of gathering together so that the subjects can alleviate their loneliness. The functions of group psychological counseling are very extensive, including education function, development function, prevention function, and therapeutic effect of group psychological counseling. Due to the requirement of the number of participants in group psychological counseling, this kind of intervention is mainly aimed at college students. The main research results are also reflected in college students, while its effect on primary and secondary school students is still unclear. It can be seen that group psychological counseling should be carried out more widely in the diversity of research objects. Apart from clinical intervention research, there are no abundant ways to intervene against loneliness according to individual nature. Because of the charging nature of psychological counseling, students receive limited help and treatment from psychological counseling. Meanwhile, the unclear effect needs to be discussed. Therefore, we should make more efforts to develop intervention research on loneliness.

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