The Reciprocal Relationship Between Depression and Sleep Disturbance Among People in Different Age Groups

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Abstract. Depression and sleep disturbance are both factors that affect people's health worldwide. Depression and sleep disturbance can lead to health impairments. This article briefly reviews studies regarding depression, sleep disturbance, and different age groups. This article focuses on the reciprocal relationship between depression and sleep disturbance among young and old adults. The causes of depression are various and differ between young and old adults. Young adults often experience depression because of the drastic shift as they first undergo adulthood. Old adults experience depression because of the helplessness brought by aging. The two age groups experience depression mainly because of the sudden change in life. Late-life depression is characterized by being underdiagnosed and untreated because late-life depression is often comorbid with other medical conditions. Therefore, depression in the elderly is easily mistaken for a normal aging medical illness. Depression and sleep disturbance are highly associated, but the types of sleep disturbance shown in different age groups are different. Studies also suggest a reciprocal relationship between depression and sleep disturbance. Depression could cause sleep disturbance, and sleep disturbance could be a risk factor for depression.

Keywords: Sleep disturbance, depression, young adults, mental health.

1. Introduction

In the last few decades, depression has become the most prevalent mental disorder around the world, particularly among adults, with an estimated 5% of adults worldwide reporting depression [1]. Depression is the primary contributor to the global disease burden [1]. Depression is characterized by more than just persistent melancholy or a lack of interest. It is frequently accompanied by other illnesses that impact mental and physical health. The causes of depression are complex. Social, psychological, and biological factors all play a role in the development of depression, and these factors vary across age groups and within individuals. The causes of early-life depression in young adults differ from those of depression in elderly adults. Young adults frequently develop depression as a result of drastic changes in their physical appearance and social environment following adolescence [2]. In contrast, older individuals frequently develop depression along with other medical conditions, such as cognitive impairments. Also, learned helplessness is a factor in late-life depression, as older individuals experience a loss of control over their lives as their social standing changes with age [3]. In general, younger individuals report a higher depression rate than their older counterparts [4]. Low depression cognition among older patients may be one of the factors contributing to the distinct difference in depression rates between young and elderly individuals. Less than half of elderly patients residing in hospitals and other long-term care facilities who are diagnosed with depression are recognized as depressive, according to research [3]. Additionally, elderly patients experience more severe symptoms due to the additional medical conditions they already have. Younger adults are more likely to experience irritability and remorse, whereas adults are more likely to demonstrate agitation and somatic symptoms [4]. Sleep disturbance like depression is a health problem that troubles a lot of people. According to the Institute of Medicine (US) Committee, an estimated 50 to 70 million Americans suffer from sleep disturbance [5]. Sleep is an important element of people's lives, just like other biological needs of humans. It occupies 20%-40% time of one day in a human's life [6]. However, sleep is a thing that occupies almost one-third of people's lives. Sleep disturbance does not have enough attention compared to other health problems due to its lack of awareness. Sleep

disturbance can cause a lot of health problems, such as cardiovascular disease, diabetes, and obesity [6]. Sleep is also an important emotion regulation. Thus, problems related to sleep, such as bad sleep quality and short sleep duration, could be a risk factor for mental health problems [7].

Depression and sleep disturbance show a reciprocal relationship in different age groups of people. This article aims to discuss the relationship between depression and sleep disturbance in young adults and old adults.

2. Method

A literature review of previous studies focusing on the relationship between depression and sleep in young and old adults was conducted. The following related search terms and their derivatives were entered into the database Google Scholar: "depression," "anxiety," "sleep disturbance," "sleep quality," "young people," "old people," and "aging." Studies were selected if they (i) contain empirical data, (ii) have been published after 2000, and (iii) include analysis of the relationship between depression and sleep specific to either young people or old people. It should be noted that all the studies focusing on depression in adolescence were excluded. The literature review focused on the comparison and contrast of the relationship between depression and sleep disturbance, specifically between young adults and old people.

3. Literature Review

3.1. Prevalence of Depression Among Young and Old Adults

The worldwide depression rate of older adults, defined as people who are 60 years old and older, is approximately 28.4% [8]. Depression can lead to a variety of impairments in basic functioning, particularly sleep disturbances, in the elderly. As a factor that affects lifespan, depression is, however, underdiagnosed and untreated for older people in current care settings [1]. The depression rate among older adults is lower than that of younger adults, but older adults have significantly lower depression recognition compared to younger adults [3]. Because late-life depression often overlaps with other medical illnesses, it is easy for people to perceive depressive symptoms as the symptoms of other late-life illnesses. According to a study conducted studying the depression of older adults in six nursing homes in New York, it is found that despite a high depression rate among nursing home residents, only 37 %–45 % of those who are diagnosed with depression are recognized by the staff in nursing homes [9]. In contrast to young adults, older adults are more reluctant to acknowledge their depressive mood because of the stigma of depression and their need for help with mood disorders [10].

3.2. Different Causes of Depression Between Young and Old People

The depressive symptoms shown by early-life and late-life depression are different. Young adults are more likely to be irritable and anxious, while older adults experience more severe symptoms such as agitation and other somatic illnesses [2, 4]. The reason for such differences is the different causes of early-life and late-life depression.

3.2.1 Stress

The abrupt changes from adolescence to adulthood are the primary cause of early-life depression. Exposure to new social environments and relationships, such as shifts from high school to college or separation from home, can be stressful for young people who are first adapting to life as adults [11]. Academic stress is another major cause of depression in young adults. Young adults, as college students, are likely to worry about academic performance because of their fear of being unable to adjust to the demands of school, which causes failure to achieve academic excellence [11]. In a systematic review examining the prevalence of depression among Iranian college students, approximately 33% of 9,743 students are reported to have depression [12]. Late-life crises are the

most common cause of depression in older adults, as they experience the loss of social identity and the uncontrollability of their lives [3]. Additionally, learned helplessness contributes to late-life depression. As a result of aging, older adults often face circumstances where they feel helpless because of physical illness and other uncontrollable factors [3]. The similarity of causes of depression for young and old adults is the stress they get from drastic changes in their lives. However, the stress they experience is very different because young and old adults experience different life changes based on their age.

3.2.2 Medical Condition

Depression could be developed in the occurrence of other medical diseases. Medical illness often has a high comorbidity with depression, especially chronic diseases [13]. Medical illness forces patients to face the ultimate questions of their mortality. Disadvantages brought by medical illnesses such as function disability, chronic pain, and disconnection with society contribute to the development of depression [13]. Depression in people with medical illness sometimes involves self-harm and suicidal ideation. In Drus and Pincus' study, 25.2% of patients with general medical illness experience suicidal ideation [13]. Different types of diseases might cause different levels of depression. For example, patients with cancer report four times more suicidal ideation thant hose with other diseases. Depression comorbid with medical illness happens more often in old adults since they are more likely to be sick as a result of aging [3]. However, young adults suffering from serious medical illnesses could also have the same effect [13].

3.3. Reciprocal Relationshio between Sleep and Depression

3.3.1 The Impact of Depression on Sleep

Sleep disturbance is the most common symptom of depression. Several sleep disturbances, such as insomnia, fatigue, and hypersomnia, have a strong correlation with depression [14]. Peterson and Benca's study suggests that the high degree of overlap between major depression and insomnia symptoms indicates a common neurobiology between these two disorders [15]. Meanwhile, depression is associated with sleep disturbances in both age groups of people, but the types of sleep disturbances demonstrated by young and old adults are different. According to Ware and Morewitz's study, younger depressed adults experience initial insomnia more than difficulty maintaining sleep (DMS) and early morning awakening (EMA), whereas older depressed patients experience more DMS and EMA than initial insomnia [16]. Later research, however, proves that DMS and EMA are characteristics of aging but not the outcome symptoms of depression, which explains why young and older adults experience different rates of sleep disturbance [17].

3.3.2 The Influence of Sleep on Depression

Also, there could be a reciprocal relationship between depression and sleep. On the one hand, depression acts as a factor in sleep disturbance. People with depression are more likely to experience sleep disturbances than those without depression [15]. On the other hand, sleep disturbances can act as a factor in depression as well. Jaussent et al.'s study also demonstrates that sleep disturbances are a risk factor for the development of depression in the elderly population [18]. Kaneita et al.'s study also suggested that people who get less than seven hours of sleep are more likely to develop depression than people who get more sleep [19].

4. Implications

This literature review suggests that more attention should be put on old adults to increase the late-life depression recognition rate. Special techniques should be utilized to diagnose depressive old patients. When old patients experience symptoms of depression that can also be interpreted as aging medical conditions, deeper investigation should be carried out for diagnosis. The staff in the nursing homes should also be required to have basic abilities to detect and distinguish medical illness and depression in old adults to better help them deal with mental problems. Most old patients experience

depression because of the uncontrollability of their lives due to weakened health and physical conditions. Therefore, special care and help need to be carried out to prevent learned helplessness in old adults. Putting in efforts to reduce the stigma of asking for help for older adults is also necessary. A lot of old people feel ashamed to ask for professional help for their problems, especially mental problems. If implanting the ideas encourages them to seek assistance in daily life, the old patients with depression who need help could get treated in time. For young adults, especially college students, schools should pay more attention to students' first year of school, where they experience transitions from high schools to universities. Schools should provide experienced mental mentors for students to talk to when they need help. Education on depression awareness and prevention should be promoted by the schools. Building the right mindset toward classwork and grades is also important to young adults. Parents should also work on educating their children to prepare for the changes from teenagers to young adults. Additionally, sleep disturbances may be a factor in detecting future depression. If depression becomes predictable, diagnosis and treatment can be carried out ahead of time to prevent the following depression and the health problems carried by depression. Also, it may mean that treatment for sleep disturbance could be used as treatment for depression as well. However, this causation between sleep disturbance and depression is not supported by enough studies, but sleep disturbance could still be used as a way to self-monitor one's depression.

5. Conclusion

Early-life and late-life depression differ primarily because of their different causes, which are shaped by the characteristics of the lives of young adults and older adults, respectively. Young adults develop depression mainly because of the sudden shift they experience in their surroundings as their positions change from teenagers to adults. Old adults develop depression mainly because they feel helpless as their lives become uncontrollable as they age. Late-life depression is characterized by low recognition because old adults with depression often have other medical illnesses as well, which makes it easy to mistake the symptoms of depression for other illnesses symptoms. Depression and sleep disturbance have been shown to have a high correlation as they have similar neurobiology. It is also proven that sleep disturbances may be a risk factor for depression. These findings suggest that more focus should be placed on older depressed people and that more methods should be employed when diagnosing older patients in order to prevent low depression recognition. For young college students, schools should provide assistance in helping them adapt to the new environment. Additionally, sleep disturbances may be utilized as a predictor of depression in order to prevent depression. However, this implication is not supported by sufficient research. To confirm it, additional research is necessary to confirm the actual reciprocal relationship between depression and sleep disturbance.

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