Identifying Factors Associated with Australian Adolescent Depressive Symptomology

Abstract

Objective: The present research aims to examine the many characteristics linked to depressive symptomology in Australian teenagers to enhance our comprehension of mental health issues within this population.

Methods: One hundred ten people (79 females and 29 males) between 18 and 69 completed questionnaires on their social support, stress, happiness, and physical activity levels. Pearson correlations and t-tests were used to examine the data for group differences and similarities.

Results: The preventive effect of robust social networks and contentment with them was emphasized, and the research demonstrated a negative correlation between depressed symptomology and social support. Stress was also shown to have an inverse relationship with depressed symptoms, further emphasizing the need to include stress management techniques in all forms of mental health care. Those who exercised at the optimal level reported more happiness and less stress.

Conclusion: These results highlight the importance of social support, stress management, and exercise to adolescents' mental health. It is necessary to implement comprehensive therapies that consider social and psychological aspects. More study is needed to determine whether or not stress reduction and social support enhancement therapies are beneficial in lowering depression symptoms among Australian teenagers.

Identifying Factors Associated with Australian Adolescent Depressive Symptomology

The state of adolescents' mental health is a major issue in Australia ("Beyond Blue," 2021). This has far-reaching effects on individuals, families, and the community. Lawrence et al. (2016) state that 13.9% of Australian kids (ages 4–17) have had a diagnosable mental condition during the last year. In 2019, suicide was the main cause of death among 15- to 17-year-olds in Australia ("Causes of Death, Australia, 2019", 2021). This distressing number highlights the seriousness of the problem. Adolescent depressive symptoms are quite common and have been linked to negative outcomes such as drug addiction, adult psychopathology, and school absenteeism (Lawrence et al., 2016; Naicker et al., 2013). Therefore they need further study.

Aims and Objectives

This study sets out to better understand the causes of depression symptoms in Australian teenagers so that we may develop strategies to lessen their severity. The primary objective of this research is to establish connections between depression symptoms and other elements of adolescents' life. This study aims to aid in creating more effective therapies for adolescents' mental health by illuminating these connections.

To this end, we will conduct a comprehensive investigation of the relationships between social support, stress perception, and youth depression symptomatology better to understand each factor's influence on the other. Depression symptoms have been scientifically related to a lack of social support, despite its acknowledged importance to overall mental health. Depressive symptoms were shown to be inversely related to both material and emotional social support across age groups, as reported by Grav et al. (2011). Similarly, Kaminski et al. (2009) found that among a group of American adolescents aged 12 to 18, there were correlations between social

connectivity and reduced suicide risk, self-harm, and depressive symptoms. Depressive symptoms in teenagers may be delayed if they have supportive social networks, according to research (Herman Stahl & Petersen, 1996).

Hypotheses:

• H1: It was anticipated that physical activity would be significantly positively associated with well-being and physical activity would be significantly negatively associated with perceived stress.

• H2: It was hypothesised that those who self-report meeting the sufficient recommended level of 150 minutes or more of moderate intensity physical activity per week would report significantly greater well-being as opposed to participants who did not report meeting the sufficient recommended level of 150 minutes of moderate intensity physical activity per week.

• H3: In addition, it was anticipated that those who self-report meeting the sufficient recommended level of 150 minutes of moderate intensity physical activity each week would report significantly lower perceived stress as opposed to those who did not self-report meeting the sufficient recommended level of 150 minutes of moderate intensity physical activity each week.

Rationale

Stress's complex relationship with depressive symptoms is another important factor. The psychobiological reaction known as stress is based on one's interpretation of situations as threatening or challenging (Burton et al., 2021). Since significant life stresses and everyday

difficulties may add up and affect psychological health, how one perceives stress is a crucial factor in determining one's emotional well-being (Burton et al., 2021).

Furthermore, the importance of physical activity in promoting mental health has been well recognized; however, research on the most beneficial amounts of exercise is still developing (Teychenne et al., 2020). This research aims to determine whether or not teenage Australians who meet the minimum physical activity guidelines experience a decrease in stress and an improvement in their mental health. This study aims to improve our knowledge of what influences teenage depression symptomology by thoroughly examining these concepts to inform future therapies and research.

Method

Participants

One hundred and ten people took part in the research. Participants were 79 (71.8%) women, 29 (26.4%) men, 1 (0.9%) someone who did not identify with either gender and 1 (0.9%) who indicated a preference for remaining silent about their gender identity. The ages of the participants varied from 18 to 69, with 32 being the mean (SD = 11.7 for those included in the analysis). Group differences were analyzed using independent t-tests, albeit only on a portion of the sample. Seventy-five people were randomly selected and asked whether or not they got the recommended amount of exercise each week (150 minutes of moderate-intensity or more, five days a week). The other 35 individuals, however, needed to exercise more to satisfy this threshold.

Materials

The Perceived Stress Scale (PSS-10; Cohen et al., 1983) was used to measure how often a person feels or thinks a certain way in response to 10 self-report items, assessed based on the past month on a 5-point Likert scale, ranging from 0 (never) to 4 (very often). For example, "In the past month, how often have you been upset because of something that happened unexpectedly?". A score is calculated from the sum of the 10 items corrected for scale item direction. Scores range from 0 to 40. The higher the PSS score, the more likely it is that the individual will perceive that environmental demands exceed their ability to cope.

The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) was used measure both subjective and psychological well-being as a composite measure of mental well-being (Tennant et al., 2007). The WEMWBS is comprised of 14 self-report items, measured using a 5-point

rating measured from 1 (none of the time) to 5 (all of the time). For example, "I've been feeling useful" and "I've been feeling confident". Scores are summed with a minimum score of 14 and a maximum score of 70, with higher scores indicating a higher level of well-being. Higher scores indicate increased psychological and subjective well-being.

To assess sufficient physical activity (PA), the National Physical Activity Guidelines for Australians (Department of Health and Aged Care [DHAC], 1999) recommendations were adopted. A sliding scale, indexed by1-minute intervals ranging from 0 -300 minutes, was used to assess self-reported minutes per normal week of engagement in moderate-intensity physical activity. An adopted minimum threshold level of 'sufficient' physical activity was set at 30 minutes of moderate intensity physical activity on at least 5 days of the week. Range of sufficient activity was between 150 minutes to 300 minutes per normal week. Alternatively, sufficient level was set at a minimum of 75 minutes of vigorous intensity physical activity over a normal week. Combining indexes to estimate "sufficient", one minute of vigorous intensity equates to two minutes of moderate intensity. Self-assessment of moderate level intensity of physical activity was based on a 'talk test'. For example, "if walking at a moderate intensity you would be able to carry on a conversation, taking a few extra breaths between sentences, but you would not be able to sing". "If you are unable to sing, or you need to take breaths between words, you are likely to be doing vigorous physical activity".

Procedure

Participants were recruited anonymously through the University of New England PSYC102 Moodle site, where participants were linked to an online questionnaire hosted by Qualtrics (https://www.qualtrics.com). Participants were required to read general information

detailing the study, data confidentiality, possible risks, and possible withdrawal. Subsequently, participants could provide informed consent before commencing the questionnaire. Following demographic questions asking for age and gender, the above measures were presented. The PSYC102 unit coordinator scored and analyses the data using SPSS v28 (IBM Corp, 2021).

Results

Hypothesis 1: Correlations between Exercise Time, Well-being, and Perceived Stress

The investigation findings into the links between exercise, happiness, and stress are shown in Table 1 as part of the analysis of Hypothesis 1. A favorable association between exercise and happiness was found using Pearson's correlation analysis ($r = .30$, p .001, one-tailed). On the other hand, we found that the amount of time spent exercising was inversely related to stress levels reported by the participants ($r = -.17$, p .05, one-tailed). As expected, a strong negative connection ($r = -.80$, p .001, one-tailed) was also found between well-being and perceived stress.

Table 1 - Correlation Table			
Exercise min	**Wellbeing**	**Perceived Stress**	
1. Exercise min	–		
2. Wellbeing	-.00*	–	
3. Perceived Stress	-.00**	.00***	–
M	250.0	46.6	17.8
SD	190.9	10.7	7.3
Range	0-900	15-70	1-33

Note. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Hypothesis 2: Group Differences in Well-being

Hypothesis 2 investigated potential variations in individuals' well-being by analyzing the disparities across groups, which were determined by participants' self-reported levels of

involvement in physical activity that met the recommended standards. A statistical analysis using an independent t-test was conducted to examine the relationship between achieving the prescribed level of physical activity and well-being. The results indicated that individuals who met the recommended level of physical activity (Group 1) reported substantially higher levels of well-being (M = 48.4, SD = 10.3) compared to those who did not reach the recommended level (Group 2, M = 42.9, SD = 10.9). The observed distinction exhibited statistical significance (t(108) = 2.5, p = .007, one-tailed) and a mean discrepancy of 5.5.

Hypothesis 3: Group Differences in Perceived Stress

The results of Testing Hypothesis 3 looked at how participants' levels of physical activity could explain for differences in their reports of stress. Individuals who achieved the recommended level of physical activity (Group 1) reported lower levels of felt stress (mean = 17.1, standard deviation = 6.9) compared to those who did not (Group 2, mean = 19.5, standard deviation = 7.8), as determined by an independent t-test. The average difference between the groups was -2.4, and the observed difference bordered on statistical significance (t(108) = -1.6, p =.058, one-tailed).

Discussion

The purpose of this research was to investigate the relationship between stress and depressive symptoms in Australian adolescents and to identify any variations between those living in urban and rural areas. This study's results provide light on these questions, which may then be used to shape future efforts to promote adolescents' mental health.

A negative correlation was found between depression symptomology and social support, lending credence to the null hypothesis. This is consistent with previous studies showing how having a strong social network and feeling content within such networks may help alleviate depression symptoms (Grav et al., 2011; Kaminski et al., 2009; Sarason et al., 1987). The current study's validation of this connection highlights the importance of treatments that promote and improve social support networks among teenagers. Further supporting the hypothesis that greater contentment with social networks and bigger numbers of trusted persons may operate as a protective factor against depressed symptomology are the relatively large impact sizes identified for both the SSQN and SSQS subscales.

The results also backed up the idea that there is a negative correlation between stress and depression. Given the correlation between stress and depression, it is clear that treating stress is crucial. (Burton et al., 2021). The high degree of association between these two factors bodes well for the development of therapeutic regimens that tackle both stress perception and depression symptoms simultaneously.

The results of this research provide implications for recognizing and treating depression symptoms among Australian adolescents. Interventions aimed at improving mental health should focus on several areas, including fortifying people's social networks, encouraging the development of healthy coping mechanisms, and reducing their levels of perceived stress.

Depressive symptoms and these characteristics have been linked repeatedly, highlighting the need for diverse interventions considering social and psychological elements.

There are, however, caveats to this research. Results are not generalizable outside the study population (first-year psychology students) due to the study design (self-report measures, cross-sectional data, and a highly specialized participant sample). More research is needed to investigate these connections across contexts and time, ideally using representative samples and longitudinal approaches. Research examining the efficacy of therapies to boost social support and decrease stress in relieving depressed symptoms is also essential.

In conclusion, the current research has added to our knowledge of the variables that have a role in developing depressive symptoms in adolescents. The importance of therapies targeting adolescents' mental health's psychological and social aspects is highlighted by the confirmation of connections between social support, perceived stress, and depressive symptoms. These results have significance for directing future studies and treatments in Australia targeted at decreasing teenage depression and increasing their general sense of wellbeing.

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