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Stress and Coping in Adolescents: A Review of the Literature



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ABSTRACT

Background: Stress and coping in adolescents are very underdeveloped fields of study. When an individual experiences high levels of stress, the body can no longer maintain a state of equilibrium, thus affecting one's ability to cope. The stressors that are most predominant within the adolescent population include stressors related to socioeconomic status, finances, academics, and relationships with both peers and parents. **Purpose:** The aim of this paper is to define stress and explore the challenges that adolescents face when dealing with stress. The population studied is adolescents, thus the articles reviewed in this paper are focused on the adolescent population. **Method:** Multiple peer-reviewed journals, books, and dissertations were analyzed to gather data about stress and coping in adolescents. **Findings:** The observed characteristics, symptoms, and behaviors of a patient living with academic stress related to an unsupportive home environment included suicidal ideation, self-harm, and ineffective coping. Literature supports the use of mindfulness-based therapies, cognitive behavioral therapies, and dialectic behavioral therapy within the adolescent population. **Conclusion:** It is crucial that the professional nurse assesses current stressors, support systems, and the adolescent's perceived control over the present stressors. This understanding allows the professional nurse to develop interventions with the adolescent that will facilitate effective, lifelong coping strategies. These strategies will also prevent potential lifelong medical complications that are associated with experiencing increased stress at a younger age.

INTRODUCTION

Stress is defined as “the imprecise response of the body to any demand for change” [1]. The Centers for Disease Control and Prevention (CDC) propagated that stress can be either positive or negative [2]. Stress can be positive when it enhances an individual's focus and encourages skill development. Stress is considered negative when it is prolonged or impacts an individual's ability to function [2]. When an individual experience high levels of stress, the body can no longer maintain a state of equilibrium, thus affecting one's ability to cope [1]. Within today's society, adolescents face an abundance of stressors. Some of the stressors this age group experiences include financial difficulties, academic performance, social status, opinions of peers, romantic relationships, and relationships with parents [1]. If an individual does not have adequate coping skills, this can lead to many negative health outcomes. The purpose of this paper is to explore the challenges that adolescents encounter when dealing with stress and coping. Research question: What challenges do adolescents face when dealing with stress and coping?

BACKGROUND

Strategies of adolescent girls and boys for coping with school-related stress is becoming an issue of increasing concern regarding adolescent health [3]. Research studies have identified gender differences associated with coping with school-related stress between boys and girls. Boys are more relaxed about school demands and focus more on living in the present. Girls worry more about their future and academic achievement [3]. School-related stress forced girls to focus on their school work, while boys allowed themselves to focus on leisure activities. Awareness of gender perspectives is important to consider when implementing health promotion initiatives in schools [3].

CASE STUDY

One of the patients encountered in the psychiatric unit was a 15-year-old female who was admitted for attempted suicide. She stated that she was experiencing extreme academic distress, as well as living in a single parent lead, unsupportive home. The patient rated her stress level as an 8 out of 10 (with 10 being the worst) during the assessment. During the conversation, the patient was very fidgety and was unable to sit still. She avoided eye contact, was sweating, and stated, “*I just don't want to live like this anymore.*” Her appearance was disheveled with wrinkled clothes and uncombed hair. The patient also commented that she

had trouble both falling asleep and staying asleep at night. When asked if she experiences any changes in her physical health, she stated, *“I get stomachaches all the time, and sometimes my heart beats really fast and weird.”* The nursing diagnosis for this adolescent would be ineffective coping related to academic distress and unsupportive home life as evidenced by suicidal ideation and a reported stress level of 8 out of 10 with 10 being the worst.

CHARACTERISTICS, SYMPTOMS, AND BEHAVIORS

When an individual experiences stress, the entire body is affected and undergoes systemic changes. Headaches, backaches, insomnia, and changes in appetite are all associated with stress [4]. The immune system is also negatively impacted when one is stressed. The immune response is decreased, thus increasing an individual's susceptibility to both infections and inflammation. Stress can also lead to an increased heart rate and digestive problems, which are two of the physical symptoms identified by the adolescent encountered on the psychiatric unit [4]. If an individual experiences stress that is prolonged, it can lead to long-term negative health outcomes, including ischemic heart disease, cancer, diabetes, asthma, and premature death [5].

Adolescents who experience difficulties coping can also display many behaviors that can be detrimental to one's overall state of health. It was determined that adolescent students who are academically achieving are at an increased risk for experiencing suicidal thoughts because of academia related pressure [6]. Another behavior that can be impacted by poor coping skills in adolescence is sexual behavior. In a study, adolescents with poor coping skills were more likely to use risky sexual behavior as a stress reducing mechanism during young adulthood [7]. Adolescents facing numerous stressors are also at an increased risk of developing mental health problems such as adjustment disorder, anxiety, and depression [6].

THE LITERATURE REVIEW

Using the keywords *adolescents, mental illness, nursing interventions, stress and coping*, sources from the disciplines of nursing, medicine, education, and psychology were examined for the review of the literature on the concept of stress and coping in adolescents. Several relevant databases were searched which include: The Cumulative Index to Nursing and Applied Health Literature (CINAHL®), Clinical Key, and the medical index (MEDLINE®). The literature review included information from both theoretical and research-based sources. A wide range of articles, books, and a dissertation were included to provide a comprehensive review of the literature on the concept of stress and coping in adolescents.

In a study outlining relationships between adolescent stress, depressive symptoms, and sexually risky behavior in young adulthood, found a significant direct relationship between stressful life events in adolescence and sexually risky behaviors in young adulthood [7]. Another study indicated suicidal ideation among adolescents having academic difficulty. This study determined that adolescents who were performing well in school experienced greater amounts of academic-related stress than adolescents experiencing academic difficulty [6]. The students who were doing well in school also experienced an increased number of suicidal ideations due to their higher stress levels. This study highlighted that adolescents have numerous sources of stressors within their lives and that all sources need to be identified to provide the best support [6].

One study addressed the abundance of stressors present within the lives of adolescents [1]. The stressors that are most predominant within the adolescent population include stressors related to socioeconomic status, finances, academics, and relationships with both peers and parents. The coping mechanisms that are most frequently used by adolescents are avoidance and distraction [1].

Another study focused on the concept of stress coping and mental health among adolescents using multi-dimensional stress-coping model with a group of adolescents [8]. This study points out the importance of peer bonding, social capital as a positive developmental resource for adolescents. Peer bonding, directly and indirectly, affects subjective well-being, suicidal ideation, and has a significantly positive relation with self-worth. There is a negative correlation with self-deprecation, behavioral and emotional focus coping [8].

Perceived stressors and the manifestations differ based on an individual's culture. Individuals of Asian descent are likely to suppress their emotions when compared to European Americans. East Asian cultures exercise emotional restraint over the emotional display to accommodate the needs of others and promote collective harmony. In contrast, Euro-American ethnic groups are socialized to emphasize independence in the assertion of the autonomous self, including open expression of internal states [9]. Various cultures interpret stress differently [4]. Western European and North American cultures tend to have a psychophysiological view of stress. Other cultures like Asians, Africans, and Central Americans tend to experience distress in somatic terms through physical expressions [4].

Negative outcomes are associated with toxic stress [5]. Serotonin is a beneficial neurotransmitter when an individual experiences stress [10]. Stress and coping in adolescents are multifactorial in nature, and the ability of the adolescent to successfully cope with life stressors depends on individual characteristics as well as differences. These differences such as gender, ability to regulate the emotional response, ability to implement effective coping strategies, environmental factors, and social support all influence the adolescent's ability to cope with stress [3]. The stressors that are most predominant within the adolescent population include stressors related to socioeconomic status, finances, academics and relationships with both peers and parents [1]. Perceived stressors and the manifestations differ based on an individual's culture [9].

PSYCHOPATHOLOGY

When an individual experiences stress, the body's stress response is activated, thus allowing one to deal with the increased stress. When an individual experiences tolerable stress, the body responds with short term, systemic changes, and then returns to a state of homeostasis [5]. When one encounters a stressor, the body sends a signal to the amygdala, which perceives the stress as a threat. The sympatho-adrenomedullary axis is then activated, and it causes the release of norepinephrine and epinephrine. These catecholamines activate the fight-or-flight response, which leads to increased blood pressure, respiratory rate, heart rate, and the production of glucose [5].

In addition to activating the sympatho-adrenomedullary axis, the amygdala also activates the hypothalamic-pituitary-adrenal axis. The activation of this axis increases the release of corticotropin-releasing hormone (CRH), arginine vasopressor, and adrenocorticotrophic

hormone. This in turn leads to the secretion of glucocorticoids from the adrenal cortex. If the stressful stimulus is only short term and not severe, allostasis will occur and the body will return to the state of homeostasis [5].

When an individual experiences prolonged periods of stress or the stress response is activated often, this can lead the stress response becoming maladaptive, which is termed toxic stress. The stress response is dysregulated in an individual that is experiencing toxic stress; the body's ability to control both the sympatho-adrenomedullary and hypothalamic-pituitary-adrenal axes. The prolonged activation of the stress response that is associated with toxic stress leads to alterations in the amounts of hormones and neurotransmitters that are associated with stress [5].

Toxic stress is harmful during adolescence because the brain is still developing during this time. The toxic stress experienced can cause an individual to have impaired functioning within the nervous, endocrine, and immune systems. Toxic stress causes anatomical alterations in the prefrontal cortex, amygdala, and hippocampus. Toxic stress also chronically activates the hypothalamic-pituitary-adrenal axis, thus leading to “increased CRH levels, lower morning cortisol levels, and elevated afternoon cortisol levels” [5]. The immune system is also negatively impacted, which increases an individual's susceptibility to both infections and inflammation.

Within the research regarding stress, it has been highlighted that serotonin might play a protective role and assist an individual with coping. Serotonin in the function of the brain is to enhance adaptive responses to adverse conditions via two pathways. The passive coping pathway improves stress tolerance, and the active coping pathway is associated with heightened brain plasticity; this allows one to overcome sources of stress by changing the outlook and behavior related to the stress [10].

INTERVENTION AND OUTCOME CRITERIA

As a healthcare provider, it is crucial that one assess current stressors, support system, and perceived control of their stress and/or situation. Adolescents with poor coping skills are at an increased risk of partaking in risky sexual behaviors in young adulthood [7]. It is very important for the healthcare provider to communicate with adolescent patients regarding sexual activity and assist them in identifying high-risk behaviors (see Figure 1).

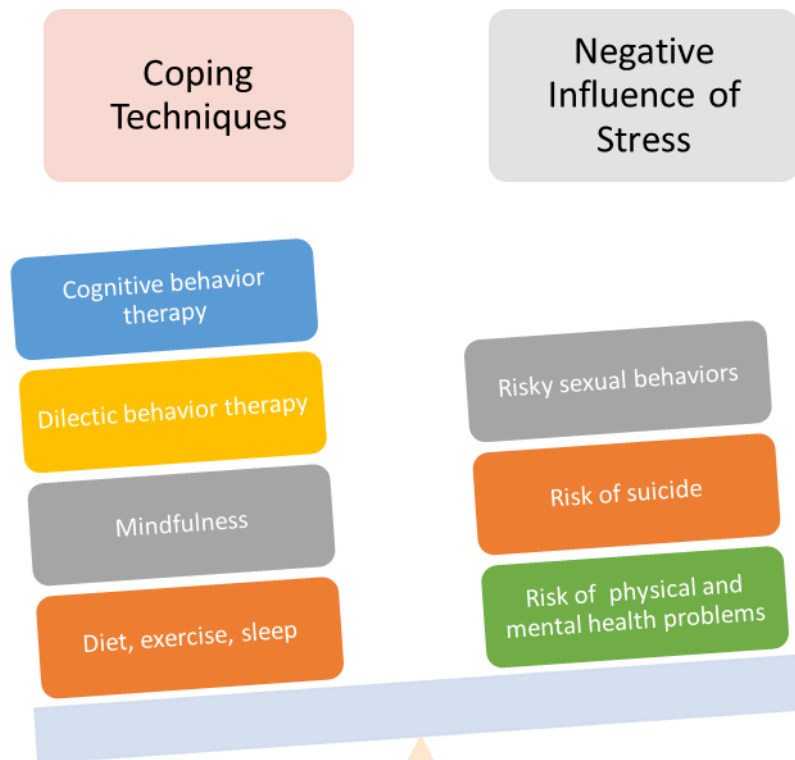


Figure 1. Stress and Coping in Adolescents

The short-term nursing interventions would be to interrupt the stress response and implement positive coping strategies to avoid the progression of ineffective coping towards mental illness and sequelae. The role of mindfulness in reducing the adverse effects of childhood stress and trauma can lead to a reduction in long-term disease and disability. Using mindfulness-based interventions such as yoga, group therapy, and art therapy can have outcomes including decreased anxiety, rumination, school-related stress, depressive symptoms, like suicidal ideations, self-harm, and decreased post-traumatic symptoms [11].

As illustrated in Figure 1, cognitive and behavioral interventions in addictive disorders can be easily translated to the adolescent population. Helpful cognitive behavioral therapy (CBT) addresses negative automatic thoughts and behaviors through an alternate thinking process, which includes mechanisms of mindfulness and coping skills training. Dialectic behavior therapy (DBT) involves practices that enhance awareness and acceptance of healthy coping behaviors. Cultural adaptations of therapeutic programs developed in western cultures are important. Family and significant others are an integral part of the CBT and DBT treatment programs [12].

Mindfulness-based stress reduction (MBSR) for mental health in youth within a hospitalized setting [13]. It was highlighted that MBSR was effective on both internalizing problems and adaptive skills. MBSR was found to be helpful for adolescents to assist in the development of future coping skills to combat stress in all aspects of their lives [13].

In 1967, psychiatrists Holmes and Rahe developed the Social Readjustment Scale. This life-change scale measures positive or negative life events. Each life-change event is assigned a weight depending on its severity. For example, the death of a child was rated significantly higher than attending college. The purpose of the scale was to assess the person's vulnerability to stress-related disorders [4].

Effective stress busters include getting seven to nine hours of sleep, as well as going to sleep at an earlier time [4]. It was highlighted that sleeping later in the morning is not helpful and can disrupt body rhythms. Another way to decrease stress is to get roughly 20 minutes of moderate-intensity aerobic activity per day. Exercise reduces both acute and chronic stress; It decreases muscle tension and increases endorphin levels. It is recommended that an individual exercise at least 3 hours before bedtime to prevent sleep disruption [4].

Another suggestion to reduce stress is to reduce total caffeine intake to no more than 4 cups per day. Consuming too much caffeine can lead to insomnia, nervousness, restlessness, irritability, stomach upset, rapid heartbeat, muscle tremors, and shakiness. Another effective stress-reducing technique is to listen to music. Music promotes relaxation and can improve an individual's respiratory rate. Music is especially beneficial in the older adult population; It can decrease both agitation and confusion. Another stress reduction technique is interacting with pets. Pets oftentimes bring joy, which can assist an individual to decrease stress and work. Massages are also a great way for one to reduce stress. Massages can slow the heart rate, relax the body, and improve alertness by reducing anxiety [4].

The nurse should communicate with the patient regarding any coping strategies that the patient uses and deems as helpful. The nurse should also recommend new coping strategies such as music, massage, and exercise. The nurse should also provide education to the patient regarding MBSR and provide the patient with a list of resources within the community. The patient should also be provided with information and resources regarding CBT and DBT if it is believed that these interventions would be able to help the patient cope with stress.

The outcome for stress and coping would be to verbally demonstrate the ability to cope effectively with stated stressors [4]. A proper nursing intervention would be to have the patient verbalize at least two coping strategies that she can use the next time she is feeling stressed. The nurse should also encourage the patient to identify her support systems and state her perceived control over the stressors. Purposeful evaluation of the patient's feelings towards perceived stressors can facilitate effective coping. The outcomes would be met if the patient was able to identify two stress-reducing techniques, her support system, and state her perceived control. Another way to determine if these interventions were effective is to have the patient rate her stress again using the same scale as before.

CONCLUSION

No matter the health care professional role, it should be recognized that the nurse, family physician, social worker, or psychiatrist, assisting the adolescent population with stress and coping is an extremely important topic. The adolescent's gender, culture, and age affect the primary, secondary, and tertiary health prevention and promotion given to patients within the psychiatric health continuum. As outlined in this paper, stress can be a positive or negative influence on the body. Adolescents face an abundance of stressors early in life. If an individual has negative coping skills during adolescence, this ineffective coping can lead to negative health outcomes. The physical signs and symptoms of stress along with long term effects of stress are highlighted. Adolescents who are experiencing high levels of stress might participate in risky sexual behavior, increased risk of developing mental health problems and are also at risk for suicidal ideations and long-term medical problems. There are also cultural variances regarding stress manifestations.

A literature review was completed to outline current studies related to stress in adolescents and some coping techniques such as cognitive behavioral therapy, dialectic behavioral therapy. Nursing interventions and desired outcomes were explored. Interrupting stress response and developing positive coping strategies such as mindfulness, eating a healthy diet, regular exercise, and adequate amounts of sleep are all recommended to combat life stressors. Verbal demonstrations of effective coping with stressors, identifying support systems, and perceived control over stressors are the outcomes nurses try to achieve. Further research is needed in identifying adolescent population-specific stressors and detecting additional stress-reducing techniques.

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