

# Responses to Stress among East Malaysian Students: Psychometric Properties of the Responses to Stress Questionnaire

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## Abstract

**Background:** Academic stress is part of a student's life. Chronic stress may result in mental health problems, affecting the adolescent's well-being in adulthood. However, not all types of stress result in a negative effect. Therefore, understanding how adolescents adapt to academic stress can lay the groundwork for preventive interventions. The Response to Stress Questionnaire (RSQ) for academic problems centred on a multidimensional model of responses to stress. However, it has not been tested among Malaysians. Thus, this study aimed to validate the questionnaire among Malaysians.

**Methods:** The questionnaire was translated into the Malay language using forward and backward translation. Data were collected via self-administered questionnaires at a secondary school in Kuching. A validity test was conducted using face and content validation by subject matter experts, and construct validation was performed using exploratory factor analysis (EFA). A reliability test was conducted by checking Cronbach's alpha.

**Results:** Results showed that the questionnaire has good validity and reliability. The EFA resulted in only three dimensions of responses to stress among Malaysian adolescents in contrast to the five dimensions in the original RSQ for academic problems. The Cronbach's alpha showed good reliability of the questionnaire.

**Conclusion:** The questionnaire measuring responses to stress was valid and reliable in assessing the responses of adolescents to academic stress.

**Keywords:** adolescent, mental health, psychological distress, adaptation

## Introduction

Academic-related stress remains a critical problem for all students. The education system has loaded students with various pressures, such as extensive curriculum, examination anxiety, neck-to-neck competitions and expectations and pressure from parents and teachers that add tons to their problems. Adolescents are the budding future of a nation. Studies about adolescents' experiences and how they respond to, ponder about and handle stressful events (academic stress) can lay the groundwork for preventive

interventions. These interventions are designed to help adolescents avoid stressful conditions, modify their way of appraising stress, find useful social resources or improve their adaptive coping capability (1, 2). The impact of ongoing stress, particularly academic-related stress, on adolescents' well-being remains underexplored. Understanding why students use a certain coping strategy is crucial to health education, especially at the stage of adolescence when they are developing habits that can influence their future lifestyle choices (3).

Different researchers characterised coping differently. Certain researchers viewed coping as goal-directed efforts (problem-focused coping) aimed either at resolving the stressor and its environment or alleviating the negative feelings that emerge as a consequence of stress (emotion-focused coping) (4). Another perspective viewed primary and secondary voluntary coping strategies as directed at preserving, enhancing or modifying control over the situation and oneself to alter stressful events and adapting to existing circumstances, respectively, and referred to relinquished control as the absence of any coping effort (5). Skinner and Wellborn's motivational model of psychological control and coping centred on simple human desires for competency, autonomy and relatedness (6). According to Skinner (7), coping includes voluntary and involuntary reactions to cope with threats to competency, autonomy and relatedness. In contrast, Eisenberg et al. characterised coping as a subgroup of the larger group of self-control (8). They distinguished coping into three self-control aspects: i) efforts to control the condition (e.g. problem-focused coping); ii) efforts to control feelings directly (e.g. emotion-focused coping) and iii) efforts to control emotionally driven behaviour (e.g. behaviour control) (8). Compas et al. (9–11) viewed coping as one facet of a larger set of processes performed when dealing with stress. They suggested that stress reactions can be observed alongside two distinct dimensions: voluntary against involuntary and engagement against disengagement.

Readily available questionnaires on coping with stress were created for grown-ups, children and teenagers with minimal or no adjustment. No agreement has been reached regarding the stress coping dimensions that best distinguish various coping skills used by children and adolescents (12). The most common coping dimensions described were problem-focused as opposed to emotion-focused coping, primary against secondary coping and engagement set against disengagement coping. These dimensions had been applied in various studies on child and adolescent coping, adding to the confusion and difficulty in incorporating findings across studies (12). Nonetheless, a review on coping instruments used in numerous studies had concluded that coping in childhood and adolescence is multidimensional (12).

The Response to Stress Questionnaire (RSQ) centres on the multidimensional model of responses to stress and highlights the significance of evaluating various reactions to stress, involving voluntary (controlled coping response) and involuntary responses (automatic response) (12). The primary component in this model distinguishes between voluntary and involuntary responses to stress. Voluntary coping refers to efforts made within one's deliberate consciousness and is targeted at managing one's thinking, behaviour, emotion or physiological reactions to stressful events. In contrast, involuntary coping refers to responses that may or may not be within one's conscious awareness, for example intrusive thoughts, rumination, emotional numbing and emotional and physiological arousal (12). Then, voluntary and involuntary responses to stress are further divided into subsequent aspects of engagement with or disengagement from the source of stress (12). Engagement coping refers to reactions targeted at the stressor, whereas disengagement coping aims at avoiding the stressor. As voluntary stress coping strategies are goal-oriented, they can be divided further into primary (directed at changing the stressor or its situation or one's emotional response to the source of stress) and secondary voluntary coping strategies (aimed at adapting to the stressor). However, only engagement coping strategies were found to differ in terms of primary versus secondary voluntary responses. This finding could be due to the difficulty in asserting primary control through disengagement coping responses (12).

The RSQ was created to develop and evaluate children's and adolescents' responses to specific stress, such as academic stress, social stress and family conflict. To expedite the recollection of memory and increase the reliability, the RSQ can assist respondents to relate to specific stressful occurrences which are the aim of coping attempts (12). Thus, this research used the RSQ for academic problems research to examine the coping mechanisms of adolescents for academic stress. However, a validated RSQ for academic problems is currently not available in the Malay language. Thus, this research was conducted to validate the RSQ for academic problems among adolescents attending secondary school in Kuching Division.