EFFECTS OF PSYCHOSOCIAL FACTORS AND PEFR RECORDING METHODS ON ADHERENCE TO SELF-MONITORING AMONG ADULT ASTHMATICS

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Background: Self-monitoring behaviors of peak expiratory flow rate (PEFR) and asthma symptoms are essential for early detection of asthma exacerbation and attack. Adherence to such behaviors is likely to be influenced by one's knowledge about asthma and other psychosocial factors.

Purpose: The purpose of this study is to determine the impact of asthma knowledge and selected psychosocial factors on adherence to self-monitoring behaviors, which can influence improvement of clinical outcomes. Thus, the specific aims of this prospective, repeated measures study are to: (1) determine the impact of asthma knowledge and selected psychosocial factors (asthma self-efficacy, and perceived satisfaction with social support) on adherence to self-monitoring behaviors; (2) examine whether adherence to PEFR and symptom self-monitoring behaviors mediates the impact of asthma knowledge and psychosocial factors on clinical outcomes (lung function and asthma symptom severity); and (3) evaluate two different methods of peak flow recording methods on adherence to self-monitoring behaviors and asthma symptoms among adult asthmatics.

Method: Based on Self-Regulation Model and Self-Cognitive Theory, seventy-four participants will be randomly assigned into two groups, either graphic or non-graphic charting groups of PEFR. Participants are to complete standardized questionnaires for asthma knowledge and psychosocial factors three times (at first clinic visit, at 1 month and 3 months after first visit). Also, participants will be asked to record PEFR and asthma symptoms daily using asthma diaries for 3 months. Data analyses will be performed using multiple linear regressions for best predictive model and repeated measures analysis of variance (ANOVA) to compare two different recording methods.

Result and Discussion: Higher asthma knowledge, higher perceived satisfaction of social support, and higher self-efficacy may predict better adherence to self-monitoring behaviors, which in turn lead to better lung function (PEFR) and asthma symptoms. In addition, two different recording methods of PEFR may lead to different levels of adherence since graphic charting is likely to provide the immediate feedback of the trend of lung function over time whereas other method is not. The results obtained from this study are expected to provide insight to the development of an effective asthma education intervention that enhances self-monitoring behaviors for improved asthma management.