

The Validation and Reliability of the Arabic Effort-Reward Imbalance Model Questionnaire: A Cross-Sectional Study among University Students in Jordan

Authors : Mahmoud M. AbuAlSamen, Tamam El-Elimat

Abstract : Amid the economic crisis in Jordan, the Jordanian government has opted for a knowledge economy where education is promoted as a mean for economic development. University education usually comes at the expense of study-related stress that may adversely impact the health of students. Since stress is a latent variable that is difficult to measure, a valid tool should be used in doing so. The effort-reward imbalance (ERI) is a model used as a measurement tool for occupational stress. The model was built on the notion of reciprocity, which relates 'effort' to 'reward' through the mediating 'over-commitment'. Reciprocity assumes equilibrium between both effort and reward, where 'high' effort is adequately compensated with 'high' reward. When this equilibrium is violated (i.e., high effort with low reward), this may elicit negative emotions and stress, which have been correlated to adverse health conditions. The theory of ERI was established in many different parts of the world, and associations with chronic diseases and the health of workers were explored at length. While much of the effort-reward imbalance was investigated in work conditions, there has been a growing interest in understanding the validity of the ERI model when applied to other social settings such as schools and universities. The ERI questionnaire was developed in Arabic recently to measure ERI among high school teachers. However, little information is available on the validity of the ERI questionnaire in university students. A cross-sectional study was conducted on 833 students in Jordan to measure the validity and reliability of the ERI questionnaire in Arabic among university students. Reliability, as measured by Cronbach's alpha of the effort, reward, and overcommitment scales, was 0.73, 0.76, and 0.69, respectively, suggesting satisfactory reliability. The factorial structure was explored using principal axis factoring. The results fitted a five-solution model where both the effort and overcommitment were uni-dimensional while the reward scale was three-dimensional with its factors, namely being 'support', 'esteem', and 'security'. The solution explained 56% of the variance in the data. The established ERI theory was replicated with excellent validity in this study. The effort-reward ratio in university students was 1.19, which suggests a slight degree of failed reciprocity. The study also investigated the association of effort, reward, overcommitment, and ERI with participants' demographic factors and self-reported health. ERI was found to be significantly associated with absenteeism ($p < 0.0001$), past history of failed courses ($p=0.03$), and poor academic performance ($p < 0.001$). Moreover, ERI was found to be associated with poor self-reported health among university students ($p=0.01$). In conclusion, the Arabic ERI questionnaire is reliable and valid for use in measuring effort-reward imbalance in university students in Jordan. The results of this research are important in informing higher education policy in Jordan.

Keywords : effort-reward imbalance, factor analysis, validity, self-reported health

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