

Corrigendum

Seeger, F. (2019). *Development and Validation of the Eustress Questionnaire* (Master's thesis, University of Twente).

21.08.2022

Within the published master's thesis a highly relevant reference regarding eustress is missing. Hence, I would like to acknowledge the work by O'Sullivan (2011), who was the first to develop a scale to measure eustress in the context of academia. I would like to apologize for the oversight. Moreover, it was noted that the scale construction of the Eustress Questionnaire was formulated too vaguely and could have been explained in more detail by also mentioning the underlying literature.

The following are the relevant sections of the paper with amendments highlighted in italics:

Abstract

Background. Stress experiences are unavoidably in our everyday-life. Within research and press, stress is considered negative and its negative effects are exceedingly emphasized. The positive response to stress, called eustress, is much less researched. Eustress is a healthy, positive and constructive response to stressful events and can improve performance, health and well-being. Empirical research and a suitable scale to assess eustress are *rare*. The objective of this research was to develop and validate the Eustress Questionnaire (EQ) that can be used for empirical research. Therefore, the psychometric properties factorial structure, internal consistency and convergent and discriminant validity were examined.

Conclusion. The EQ displays a short and reliable measurement instrument to assess general eustress and provides a substantial starting point for empirical research on eustress. Some support was found for the construct validity of the EQ but additional research is needed to further examine its psychometric properties and improve the scale.

Introduction

Page 5: It is important to mention that these suggestions and anticipations of eustress and its' positive effects of research used in this study are often grounded on non-empirical research. Therefore, existing literature on eustress should be critically reviewed. For example, Hargrove et al. (2015) provide associations and conceptualizes the human resource development (HRD) eustress model on basis of existing organizational stress literature. Other studies formulated associations only on basis of related constructs such as stress-related growth (Crum et al., 2013), challenge stressors (Quick et al., 2014) or occupational stress (La Fevre et al., 2013). Moreover, some research formulated associations with eustress on basis of more general stress theories such as the holistic stress model (Nelson & Simmons, 2007; Nelson & Simmons, 2011; Hargrove et al., 2013) or the challenge hindrance framework (Hargrove et al., 2013). *An exception is the study by O'Sullivan (2011). She developed a scale to assess academic eustress among undergraduates, and examined the associations between eustress, hope, self-efficacy and life satisfaction in an academic sample. She found that eustress is a significant predictor of life satisfaction and correlates positively with hope and self-efficacy.*

To conclude, research on eustress *still* lacks empirical evidence to allow speaking about significant correlations and suggested associations are too vague and need to be tested. *The only scale to measure eustress measured academic eustress (O'Sullivan, 2011).* Therefore, the development of a scale to measure eustress in a *general sample* is important and will facilitate empirical research.

Method

Scale construction

Initial development of the items involved a literature review, review of related questionnaires, such as the perceived stress scale (Cohen, Kamarck & Mermelstein, 1994), the Stress Appraisal measure (Peacock & Wong, 1990), the Connor-Davidson Resilience scale (Conner & Davidson, 2003) and the eustress scale (O'Sullivan, 2011) and a brain-storm session with different researchers. Based on the literature, two researchers constructed a set of criteria (Appendix A) to eliminate items that seemed to be too similar to other items or which seemed to not measure eustress (face validity). This discussion and elimination-process led to a remaining number of 34 items which were considered in the data-analysis. To answer the questions, respondents indicated how often they experienced a presented situation. Items were rated on a six-point Likert scale (1 = never, 2 = almost never, 3 = sometimes, 4 = often, 5 = almost always, 6 = always). A sample item is 'In the last month, how often have you felt that stress enhanced your performance and productivity?'. Exploratory factor analysis was used to test different factor solutions and analyze factor loadings to determine the number of items and the factor structure

Discussion

pp 17-18: The aim of this research was to develop a scale to quantitatively measure eustress in a *general sample* and assess its' psychometric properties, factor structure, internal consistency, and discriminant and convergent validity. As a result, the Eustress Questionnaire (EQ) was developed, which consists of nine items that can be rated on a six-point Likert scale. This research contributes to existing research about eustress by offering a *validated scale* to measure eustress. As a result, the current research *contributes to the research attempting to empirically measure eustress*. Moreover, results of the current research add to findings of previous research of Nelson & Simmons (2011), by showing a significant correlation between eustress and emotional well-being *and to the research of O'Sullivan (2011), by showing a significant positive correlation between eustress and self-efficacy*.

p. 18: The analysis of the Pearson's correlations revealed a small positive correlation between the new eustress questionnaire and a measure of emotional well-being. This result is in line with assumptions of previous research stating that eustress seems to be positively associated with positive emotions as hope, goodwill, vigor and satisfaction (Nelson & Simmons, 2011; O'Sullivan, 2011). Additionally, a small positive correlation was found between a measure of general self-efficacy and the new eustress questionnaire. This is in line *with resarch findings of O'Sullivan (2011)* and suggestions of Bandura (1995) who stated that individuals with higher self-efficacy are more likely to react motivated to stressful situations and view stressors as a challenge rather than a threat. Therefore, small evidence was found for the convergent validity of the scale.

Literature accordingly added to the references of the published master's thesis:

Cohen, S., Kamarck, T., & Mermelstein, R. (1994). Perceived stress scale. *Measuring stress: A guide for health and social scientists*, 10(2), 1-2.

Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and anxiety*, 18(2), 76-82.

O'Sullivan, G. (2011). The relationship between hope, eustress, self-efficacy, and life satisfaction among undergraduates. *Social indicators research*, 101(1), 155-172.

Peacock, E. J., & Wong, P. T. (1990). The stress appraisal measure (SAM): A multidimensional approach to cognitive appraisal. *Stress medicine*, 6(3), 227-236.