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The psychometric properties of the Clance Impostor Scale

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Abstract

The Clance Impostor Phenomenon Scale was designed to measure the concept that individuals are successful by external standards but have an illusion of personal incompetence. The scale assesses components of the phenomenon such as ideas about self-doubt and achieving success by chance. Psychometric properties of the scale were examined based on a sample of engineering college students. Internal consistency reliability and construct validity via confirmatory factor analysis were examined. The scale scores had satisfactory internal consistency reliability. Confirmatory factor analysis revealed that the original theoretical model may be problematic and the factor structure requires additional consideration. Implications and future directions are discussed.

Keywords: Impostor phenomenon; College students; Success; Retention

1. Introduction

The Impostor Phenomenon (Clance & Imes, 1978; IP) encompasses the notion that persons attribute their successes to such things as interpersonal skill and luck, rather than their intellectual

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ability. Introduced to explain why successful persons, particularly women, have the illusion of personal incompetence, the construct has been used to examine depression, social anxiety, self-monitoring (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995), achievement orientation (King & Cooley, 1995; Ross, Stewart, Mugge, & Fultz, 2001), fear of failure and success (Fried-Buchalter, 1992, 1997; Thompson, Foreman, & Martin, 2000), and self-handicapping and parenting styles (Want & Kleitman, 2006). Persons with high levels of the IP tend to negate evidence that contradicts their beliefs that they are unintelligent, such as earning advanced degrees, scholastic honors, high test scores, praise and recognition. That is, these persons consider themselves to be impostors and are fearful that others will discover they are not intelligent (Clance & Imes, 1978).

The IP is relevant to the higher education environment, as it may negatively impact students in a variety of ways (King & Cooley, 1995). Students with imposter feelings could panic, and, despite having ability and interest, change majors or drop out of school (Felder, 1988). This phenomenon may be related to self-efficacy (Antoine, Hutchison, & Follman, 2006), the degree of confidence in one's ability to perform a designated task. Self-efficacy correlates strongly with interest, performance, and retention in science, technology, engineering, and mathematics (STEM) fields (Hackett, 1995; Hackett, Betz, Casas, & Rocha-Singh, 1992; Lent, Lopez, & Bieschke, 1991, 1993). Considering that female engineering and computer science alumni rank self-efficacy as "the most important element for professional success and advancement" (Robinson & Reilly, 1993), the potential implications of a lack of self-efficacy, as well as the existence of the imposter phenomenon, are serious. High levels of self-doubt and feelings of incompetence could result in a decline of performance and persistence in higher education and STEM areas in particular.

Within STEM areas, the IP has been hypothesized to be common among engineering students (Felder, 1988). This is significant given undergraduate enrollment in STEM fields are stagnant or dropping; moreover, attrition rates in these fields are high, women and ethnic minorities remain underrepresented, and students are dissatisfied with the quality of their education (Seymour & Hewitt, 1997). The degree to which the IP influences the recruitment, achievement, and retention of STEM students is unknown, as limited evidence exists on the topic.

Personality variables (e.g., IP) may fit well in models of student success as they may serve as background or input variables (Berger & Milem, 1999; Tinto, 1975, 1993). However, successful inclusion of such variables in these models requires psychometric evidence for the instruments used to measure the constructs. The validity of these models relies, in part, on how consistent and accurate the constructs are measured. There is a lack of empirical research evaluating the psychometric properties of IP scales despite interest and use of the construct (e.g., Want & Kleitman, 2006).

The Clance Impostor Phenomenon Scale (CIPS, Clance, 1985) was developed to assess self-reported levels of the concept that individuals are successful by external standards but have an illusion of personal incompetence. The CIPS may overcome problems associated with other instruments (e.g., Chrisman et al., 1995), as it was specifically developed to address concerns with the Harvey Impostor Phenomenon Scale (HIPS; Harvey, 1981) which was considered to have negative language and not differentiate impostors from non-impostors. The CIPS, a 5-point scale with response options ranging from 5 (*strongly agree*) to 1 (*strongly disagree*), measures three facets of IP. The CIPS contains 20 items that comprise (a) *Fake*, (b) *Discount*, and (c) *Luck* subscales. *Fake* items assess self-doubt and concerns about intelligence and ability. *Discount* items assess the thoughts about the inability to acknowledge good performance and praise for such performance.