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Resiliency predicts academic performance of Lebanese adolescents over demographic variables and hope

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ABSTRACT

This paper aims at investigating resiliency factors (sense of mastery, sense of relatedness, and emotional reactivity), and hope as predictors of academic performance, while controlling for gender, tuition fees, and age. Differences in resiliency factors across gender and tuition fees were also explored. Participants were 599 Lebanese adolescents (330 female), ranging from ages 11 to 19. Resiliency factors predicted academic performance over gender, tuition fees, and hope, and played a more important role in the academic performance of middle/late than early adolescence. Gender differences were found in emotional reactivity (marginal) and sense of relatedness, with females scoring higher than males in both cases. Finally, adolescents with low tuition fees scored lower than those with middle tuition fees on emotional reactivity and marginally lower than those with high tuition fees on sense of relatedness. The relevance of these findings to resiliency among adolescents is discussed, along with implications and recommendations for future research and educational practice.

1. Introduction

Resiliency, as the perceived ability to "bounce back" in the face of adversity, has led to a wealth of research attempting to identify the personality attributes that contribute to positive behavioral outcomes despite adversity (Masten, Morison, Pellegrini, & Tellegen, 1990; Smith, Epstein, Ortiz, Christopher, & Tooley, 2013). Research has demonstrated that internal mechanisms and processes could help individuals overcome negative life events, promote healthy adjustment, and enhance positive development (e.g., Prince-Embury, 2011). These mechanisms become essential in educational contexts, where students need to cope with academic challenges and sometimes peer-pressure.

Because of the inherent overlap and confusion surrounding the concepts of resiliency and resilience, a conceptual and methodological distinction is necessary. The broader term resilience is an umbrella construct used by researchers in the literature to refer to interactive personal and environmental factors that contribute to positive outcomes in the face of challenge and lead to adaptation and development (Flouri, Hickey, Mavroveli, & Hurry, 2011; Luthar, Cicchetti, & Becker, 2000). Many researchers have pointed out that the interactional nature of resilience complicates the assessment process, which should involve collecting data from multiple sources (e.g., home, school) through a variety of methods (parent and teacher ratting scales, clinical reports, interviews, self-reports; Naglieri, LeBuffe, & Ross, 2013). Resiliency (also referred to as *ego resiliency*; Luthar, 2006), refers to a specific compilation of individual dispositions that are protective factors against adversity (Prince-Embury, 2011), thus, the appropriate operationalization of the construct is through typical performance measures. In sum, while resiliency is a compilation of personality characteristics (Luthar & Zelazo, 2003), resilience is a dynamic construct dependent on context, invulnerability, and the ability of effective adaptation to a changing environment (Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003).

Prince-Embury's (2007) model of resiliency is an attempt to systematically integrate the traits that have been empirically linked to the resiliency construct. The model proposes three dimensions, namely sense of mastery, sense of relatedness, and emotional reactivity. Sense of mastery refers to optimism, self-efficacy, and adaptability (Prince-Embury, 2011) while sense of relatedness is defined as the ability to trust, seek social comfort, and tolerate differences. Lastly, emotional reactivity is a risk factor and refers to the "arousability or the threshold of tolerance that exists prior to the occurrence of adverse events" (Prince-Embury, 2011, p. 675).

According to this model, high resiliency is characterized by high sense of mastery, high sense of relatedness, and low emotional reactivity according to Prince-Embury and Steer (2010). Emotional reactivity affects children's level of recovery from an adverse situation and hence defines their ability to redirect emotional excitability (Prince-Embury, 2011). The ability to regulate emotions is an indicator of successful developmental outcome for both children and adolescents. In contrast, a high sense of emotional reactivity is associated with behavioral maladjustment and is considered a vulnerability factor in need of intervention (Prince-Embury, 2014).

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High sense of mastery has been linked to increased self-efficacy and motivation (Bandura, 1977), which in turn have been recognized as key variables in educational interventions based on resiliency aiming to develop academic competence among adolescents of different age groups (Masten & Obradovic, 2006; Masten & Coatworth, 1998). Similarly, high sense of relatedness is an indicator of social connectedness, and has been found to promote resiliency by serving as a protective factor against adversity. Relatedness reflects a form of social resourcefulness in relationships (Werner & Smith, 1982; Prince-Embury, 2014).

2. Resiliency and hope

Hope and resiliency appear to be theoretically connected in that individuals with high hope will persist when faced with a blocked pathway by pursuing the desired goal through alternative routes (Rand, 2009). Researchers have argued that the former is an essential component of the latter (Bandura, 1977) and the constructs correlated moderately in a study conducted by Collins (2009). Hope and resilience have been also linked in the context of organizational commitment, and this relation can be explained by both of their contributions to positive psychology (Youssef & Luthans, 2007). Nevertheless, some researchers have pointed out the differences between the two constructs. For instance, it is believed that hope best applies to obstacles that one can approach with a plan while, resilience involves flexibility and adaptation when faced with adversity (Coutu, 2002). Also, according to the previously presented model of resiliency (Prince-Embury, 2011), resiliency involves relational and emotional components that are not necessarily part of the construct of hope.

Hope is linked with better outcomes for both children and adolescents in many realms (e.g., academics; Snyder et al., 1997) and better coping skills (e.g., Irving, Snyder, & Crowson, 1998). It is also linked with flexible and positive thoughts (Snyder & McCullough, 2000), as well as more positive evaluations of stressful occurrences (Affleck & Tennen, 1996). Those who have high levels of hope tend to view stressors as challenges to be met as opposed to threats, and are thus better able to cope with both stressful events and negative feelings.

In sum, the association between resiliency and hope needs to be systematically investigated using a multifactorial approach to resiliency to shed light on the possible overlap between the constructs. Additionally, research is needed to demonstrate the predictive power of resiliency over hope.

3. Resiliency and hope as predictors of academic performance

Much research effort has focused on identifying the factors that inhibit or promote academic success (Gutman & Midgley, 2000; Maddox & Prinz, 2003; Snyder, Lopez, Shorey, Rand, & Feldman, 2003). Evidence indicates that academic performance is mediated by cognitive ability (Christina & Latham, 2004; Higgins, Peterson, Pihl, & Lee, 2007), but also non-cognitive factors such as personality traits (e.g. Sanchez-Ruiz, El Khoury, Saade, & Slikhanian, in press, Sanchez-Ruiz, Mavroveli, & Poullis, 2012), and other emotional dispositions such as neuroticism, which is linked to stress and anxiety during exams (Furnham & Monsen, 2009; Trapmann, Hell, Hirn, & Schuler, 2007), trait emotional intelligence (e.g. Mavroveli & Sanchez-Ruiz, 2011, Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, in press) and resiliency (Donohoe, Topping, & Hannah, 2012; Prince-Embury, 2011).

Hope may play a role in the functioning of adolescents and children in academic settings (Day, Hanson, Maltby, Proctor, & Wood, 2010). This is fundamental to achieving academic success because it facilitates students' coping with potential impediments (Snyder et al., 2002). Snyder defined hope as the "process of thinking about one's goals, along with the motivation to move toward those goals (agency) and the ways to achieve those goals (pathways)" (as cited in Snyder et al., 2002). Snyder's research has suggested that hope is imperative for goal-directed behavior such as academic performance (as cited in Ciarrochi, Heaven, & Davies, 2007) and the construct has been linked to higher results on achievement tests for primary school students (Jackson, Weiss, Lundquist, & Hooper, 2003; Snyder et al., 1997) and higher overall academic performance for high school students and undergraduates (Chang, 1998; Curry, Snyder, Cook, Ruby, & Rehm, 1997; Snyder et al., 1991; Snyder et al., 2002). Rand (2009) suggested that hope indirectly affects academic performance with goal-specific expectancy mediating the relationship. A tentative explanation for this is that higher levels of trait hope bring about greater expectations and self-efficacy, which can in turn result in higher levels of performance.

The contribution of resiliency factors to academic performance is similar to that of hope in the sense that it is also linked to self-efficacy (sense of mastery), but the two other resiliency traits of low emotional reactivity and high sense of relatedness can also buffer the effect of external risk factors on the child's general functioning at school as well as facilitate successful coping with academic demands. There is some evidence of these contributions from studies conducted in different regions of the world. Furrer and Skinner (2003) found that sense of relatedness was vital in the academic performance of pre-teens among a sample of students from Idaho. In a study of undocumented Latino students, resilient students had significantly higher academic performance (as assessed by GPA), number of academic awards, and number of advanced courses (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009). To our knowledge, resiliency has not been empirically investigated in relation to academic performance in the Arab world, though it has been researched in qualitative studies elsewhere. In a study conducted by Dass-Brailsford (2005), high-achieving South African students attributed their academic success to a sense of self-efficacy, which was characterized by self-confidence and belief in their ability to direct their future.

4. Factors related to resiliency and academic performance

Research indicates that resiliency is higher in females than in males (e.g., McGloin & Widom, 2001), which might be explained by their tendency to cope with stress by seeking social support and utilizing social resources made available to them (Frydenberg & Lewis, 1993), while males tend to cope with stress by physical means, such as exercising (Frydenberg & Lewis, 1993). However, female gender along with low socioeconomic status has been found to be negatively associated with resiliency factors in some studies (e.g., Mendelson, Kubzansky, Datta, & Buka, 2013), which has been referred to as the *double jeopardy* theory. In addition, studies have shown that females self-report a greater tendency to experience negative emotions, such as rumination and anxiety (e.g., Costa, Terracciano, & McCrae, 2001) as well as internalizing symptoms linked to specific stressors (Grant et al., 2006). Moreover, females typically report higher social competence and interpersonal caregiving or taking (Luthar, Doernberger, & Zigles, 1993). These findings have been replicated in a similar study on adolescents conducted in Lebanon by Tayara (2012).

While resiliency strengths function as personal defenses against the effects of adverse factors on development, those very strengths are influenced by environmental characteristics. Most *at*-risk children are those who live in conditions of socio-economic deprivation (Dass-Brailsford, 2005). Many of the developmental problems experienced by children and adolescents are attributed to stress that comes from growing up in a low socioeconomic environment (Bradley & Bradley & Corwyn, 2002). Low socioeconomic status is also associated with family instability, less social support, less cognitive stimulation, and poor schooling (Evans, 2004). Conversely, high socioeconomic status has been related to higher levels of life satisfaction, optimism, self-esteem and academic performance in Lebanese university students (Ayyash-Abdo & Sanchez-Ruiz, 2012).

For example, Canadian teenagers coming from a low socioeconomic status were less likely to aspire to attend university and achieve higher education degrees (Krahn & Taylor, 2005). In a study analyzing hope as