

The Adversity Response Profile for Chinese University Students

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Adversity response is fundamental to dealing with adversity. The final version of the ARP-CUS contains 24 items across five subscales for assessing students' responses to adversity, including control, attribution, reach, endurance, and transcendence. Overall, ARP-CUS demonstrates satisfactory psychometric properties for quantifying the adversity quotient of Chinese university students.

Keywords: adversity response profile ; adversity quotient ; scale re-development

1. Introduction

The adversity quotient (AQ) is an assessment of “how well a person can withstand adversity and his/her ability to surmount any crisis” ^[1]. The importance of the adversity response is such that the AQ has been claimed to be comparable with other personal quotients (e.g., Intellectual Quotient; Emotional Quotient; Spiritual Quotient) ^{[2][3]}, and has attracted increasing interest among researchers and practitioners across a range of cultures ^{[4][5][6][7]}. It is also an appropriate but understudied area for studies of Chinese university students. China has a tertiary population of 41,830,000 students in 2738 universities ^[8]. Past studies have shown that Chinese university students suffer from a variety of hardships and adversities, both at university, and in society more generally, because of low self-control and lack of self-awareness ^{[6][9]}. This suggests that university students' AQ should be a fruitful area for further research in China. One significant hurdle faced by researchers in this field is a lack of appropriate instruments for assessing students' AQ ^[10]. Most response to adversity studies in the Chinese context has used the adversity quotient scale (AQS) ^[11], a translated version of the original Adversity Response Profile (ARP) developed by Stoltz ^[12]. In this context, the translated scale has two potential weaknesses. Firstly, as the AQS originates from Western culture, it might not cover aspects of adversity response that are unique to Eastern culture. For example, the Malaysian Youth Adversity Quotient Instrument (MY-AQi) emphasized elements appropriate in the Malaysian context (e.g., political and technological elements), although its development was also based on Stoltz's AQ theory ^[13]. In terms of the Chinese population, Confucianism and Taoism are two predominant elements that influence Chinese culture, affecting how the Chinese interpret adversity situations and respond to them ^[14]. Cheng reported that a suffering experience can be perceived as a disaster but can also be interpreted as an opportunity for harmony and self-transcendence by the Chinese ^[15]. Regarding Chinese students, the ethic of self-cultivation and self-transcendence play a crucial role when they assess and handle college stressors ^[16]. Secondly, the AQS was developed initially for individuals in workplace environments. As adversity response is context-dependent ^[1] and the adversities faced by students and working persons are potentially different, some items in the AQS might not be directly applicable to learning environments (see more details in [Section 1.2](#)). To address these methodological gaps, the current study aims to re-develop an instrument based on the ARP and AQS to assess the adversity response of Chinese university students. The new tool would extend the application of the original AQ scales to be: (1) more culturally sensitive, and (2) more appropriate for students in learning contexts.

2. Adversity Quotient

AQ is an indicator assessing how one withstands, overcomes or deals with the adversities of one's life ^{[1][12]}. The AQ concept draws insights from several branches of human and social sciences, including cognitive psychology (control and mastery of one's life), psychoneuroimmunology (immune function), and neurophysiology (the science of the brain). In Stoltz's framework, adversity response consists of five major sub-constructs, named CO₂RE, representing Control, Origin, Ownership, Reach, and Endurance. Control refers to the sense of control toward adversity situations and individual responses. Origin refers to the source of the problem. Ownership concerns taking responsibility in adversity situations. Reach refers to how far adversity would influence one's life. Endurance refers to how long the hardship and its causes might endure ^[12].

In parallel with theoretical arguments, past empirical studies have indicated that AQ has close links with motivation, mental stress, perseverance, learning, and response to changes [7][17][18]. In the field of education, AQ plays a crucial role, being correlated positively with achievement motivation and academic performance [9][19][20][21][22]. For instance, the achievement motivation of college nursing students could be predicted by their AQ [9]. AQ correlated positively with motivation to succeed and achievement motivation ($r = 0.34, p < 0.01$), and negatively with motivation to avoid failure ($r = -0.37, p < 0.01$) for financially poor college students [22]. Students with higher levels of AQ performed better in learning English [21] and mathematics [23], as well as leadership skills [24].

3. Instruments Assessing Adversity Quotient

The Adversity Response Profile (ARP) was developed by Stoltz [1]. This 40-item instrument assesses five AQ dimensions: C (control), O₂ (origin and ownership), R (reach), and E (endurance). It also exists as a 20-item short form with just 20 adversity scenarios [1]. Li and Chen translated the ARP into Chinese and renamed it the Adversity Quotient Scale (AQS). They examined its reliability and validity with a data set from 606 Chinese students across primary school, secondary school, and university. Cronbach's alpha values ranged from 0.71 to 0.81 for the subscales, and test-retest reliability values ranged from 0.73 to 0.79 for the five sub-constructs. However, some indicators of the fit statistics (GFI (the goodness of fit index), AGFI (the adjusted goodness fit index), and NNFI (non-normed fit Index)) in CFA (confirmatory factor analysis) were not satisfactory ($\chi^2 (590) = 1848.21$, GFI = 0.85, AGFI = 0.84, NNFI = 0.75), indicating this tool needed further improvement for use with Chinese students [11].

The unsatisfactory CFA results for the Chinese AQS might be attributed to two conceptual limitations associated with the scale. Firstly, it does not consider the influence of culture, which significantly impacts the types of adversities experienced, the resources available to deal with adversities, the perception of adversities, coping strategies, and adaptation outcomes [25][26]. In Western cultures, cultivating rigidity and avoiding helplessness are essential elements in responding to adversity by emphasizing control of, and then improving the adversity situation [1][12]. In contrast, accepting adversity is a unique but essential value in Eastern cultures [27]. People in Chinese society value harmonious social relationships and usually consider adversity as "suffering" determined by fate [26]. Generally, individuals either accept adversity honestly from the perspective of Confucianism [28] or accept adversity with a peaceful mind from the philosophy of Taoism [29]. Because of the belief that people need to repay the debts of their previous life, acceptance of adversities might be regarded as a necessity and self-cultivation. Transcendence is a sense of positive acceptance of adversity situations. It refers to affinity towards, rather than alienation from, situations of adversity; advocating for taking advantage of adversity actively instead of running away. In other words, it refers to beliefs of self-acceptance, i.e., various suffering has already been determined by fate, and those tough times are beneficial to life. Past studies have demonstrated similar cultural differences in related variables, such as coping. Some studies identified transcendence as a unique coping mechanism for athletes in Eastern culture. This is not surprising as coping styles are argued to be closely related to AQ [30][31]; individuals with high AQ would choose positive coping styles, while individuals with low AQ would adopt negative coping styles [12].

Secondly, the original ARP items were developed for workplace environments and, therefore, might not be relevant to the situation of learning: some items (e.g., To hold your position, you must be repositioned; You were demoted or punished) are not suitable in student contexts.

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