Developing a Model for the Role of Religiosity and Self-Efficacy in the Ability to Bounce Back among Adolescents: Ex Post Facto Research

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Abstract: Resilience relates to the strength that increases one’s ability to withstand adversity and also the ability to bounce back. Resilience also protects well-being under stressful circumstances; and implies ability to resist, effective coping, recover from and succeed in the face of adverse life experiences. This paper tests empirically the model of resilience and the importance of religiosity and self-efficacy in developing the ability to bounce back among adolescents using structural equation modeling (SEM). The adolescents’ conception of resilience measures dimensions such as active skills, future orientation, risk taking and independence while religiosity is examined through one’s ability to cope and involve in religious activities. Self-efficacy is a unidimensional construct. A total of 600 adolescents from the east-coast of states of Peninsular Malaysia were involved in this ex post facto study. Using Resiliency Belief Scales, Religiosity Scale and Coppell’s Self-Efficacy Scale, a well-fitting model was generated with $\chi^2$/df = 1.048; GFI = .968; CFI = .998; TLI = .998; RMSEA = .009. The direction and magnitude of the factor loadings were substantial and statistically significant. The results suggest that the model fits with the sample of data used. Religiosity and self-efficacy explain 86% of the variance in resilience.

Keywords: Structural equation modeling • Self-perception • Religiosity • Resilience

INTRODUCTION

Adolescents are usually categorized as the vulnerable or at-risk group in society because their behavior tends to be easily influenced by the environment they live in. In an attempt to make such transition, many may fail due to their inability to withstand the real life overwhelming challenges. Resilience should be established among adolescents because it can protect them against health risk behaviors such as suicide ideation or attempts [1]. According to [2], the major health risks facing the estimated 34 million adolescents in the U.S. today are traceable to psychosocial, behavioral and economic factors [1]. In 2006, Malaysian government has approved additional expenses of RM6.1 million per year to handle social problems, especially among adolescents [3].

However, literature reviews have given more emphasis on risk factors compared to factors that contribute strengths [4]. By focusing on strength or resilience, we can recognize the potential each individual has. Furthermore, resilience can function as innate drives to achieve self-actualization, capacity to bounce back, increased motivational energy to grow, potential buffer to stress, recover from adversity and sustainable development among adolescents.

Virtue, meaning, well-being and resilience are the four pillars of positive psychology [5]. Resilience is developmental and consist a balance between stress and the ability to cope with environment [6]. Resilience is a multidimensional concept and there is no consensus regarding operational definitions of resilience. Resilience finds its theoretical and empirical roots in the developmental psychopathology literature on vulnerability to stress [7]. Resilience is the capacity for and outcome of adjustment in spite of challenging or threatening circumstances. Therefore, resilience is the positive pole of the vulnerability-resilience continuum [5]. Resilience is seen as an internal factor which is highly influenced by the environmental factors and the individual’s developmental process [8].

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Religion involves knowledge, traditional practice and formality [9]. Factors such as self-efficacy and religiosity may be related to individual’s ability to establish resilience against health risk behaviors [1, 10-12]. Religiosity is inversely related to thoughts of suicide among adolescents [13]. Some studies have identified religiosity as a protective influence against high-risk behavior in adolescents and associated with lower levels of depression and hopelessness [1, 13]. To date, religiosity is believed to be an important factor which helps to heighten one’s internal strength or ability to deal with hardships and misfortunes such as trauma, divorce, lost of jobs and physical disability [14].

Bandura coined the term self-efficacy, which is a first step toward establishing resilience against risk taking behavior [1]. Self-efficacy is the sense of personal control and mastery one has over one’s situation that involves judgments of personal capability [15]. Low self-efficacy is associated with a condition called learned helplessness, a psychological state that one will stop trying to change the situation [16]. Self-efficacy also allows one to deal better with uncertainty and conflict [15].

This study focused on adolescents because as individuals age from childhood to adulthood, they pass through a critical period during which the characteristics of maturity, cognitive skills, coping skills and relationships develop.

- The main purposes of this study are to develop a model of resilience and to examine whether religiosity and self-efficacy contribute to resilience of adolescents. The objectives of this study are:
  - To establish the reliability and validity of Resilience Belief Scale (RBS), Religiosity Scale (RS) and Coppell’s Self-Efficacy Scale (CSES)
  - To examine causal relationship between religiosity and self-efficacy and develop a model of resilience among adolescents.

**MATERIAL AND METHOD**

This study involved a total sample of 600 adolescents from the east-coast of Peninsular Malaysia, representing 39% male and 61% female sample (disproportionate stratified random sampling was applied). In a preliminary study, 308 sample was divided into two groups: 160 and 148 respectively, for cross-validation analysis. To further validate the likelihood of the hypothesized model, a second confirmatory factor analysis was applied on the data collected from 148 sample. Approved letter from Ministry of Education and State Department of Education were attached with the questionnaire. The questionnaire was group administered to the students during their regular class hours with permission from their school principals and teachers. The participants were given brief description of the research project and the process of informed consent was done.

Three instruments used in this study are Religiosity Scale and Resilience Belief Scale and Coppell’s Self-Efficacy Scale. Religiosity Scale (RS) was developed by [17]. This five-point response scale consists of 8 items that measure religious involvement and religious coping. Coppell’s Self-Efficacy Scale (CSES) was developed by Coppell and adapted from [18]. The CSES consists of 13 items and unidimensional with five-point response scale.

Resiliency Belief Scale (RBS) based on Mrazek & Mrazek, 1987 and was developed by Jew, 1997 (as cited in [19]). The scale consists of 45 items. Conceptualization of RBS is based on three factors; active skills, future orientation, risk taking and independence. The sample was required to indicate their beliefs and conceptions of the resilience assessment of RBS on a six-point response scale. Using back to back translation procedure, the three instruments were translated from English to Malay by two experts in English and Malay languages.

**RESULTS**

The main task in this model testing procedure is to determine the goodness of fit between the hypothesized model and the sample data. To arrive at the conclusion, a confirmatory factor analysis (CFA) was conducted on the hypothesized structural model using Analysis of Moment Structure (AMOS) version 7. Assessment of the measurement model involved confirmatory factor analysis (CFA) [20]. CFA assessed the reliability and validity of the individual items and the overall measurement model. The program adopted maximum likelihood estimation to generate estimates in the measurement model.

Confirmation of the overall fit of the measurement model using CFA was obtained from the Maximum Likelihood estimation, Chi-Square ($\chi^2$) statistics produced by AMOS and various other goodness-of-fit criteria. To validate the likelihood of the hypothesized model, cross-validation was applied on the data collected from 308 samples in a preliminary study. The results of this analysis show the well-fitting model (Table 1).
Table 1: Measures of Goodness of Fit based on Confirmatory Factor Analysis (CFA) (N_1=160; N_2=148)

<table>
<thead>
<tr>
<th>Latent</th>
<th>χ^2/df</th>
<th>GFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resilience</td>
<td>1.47</td>
<td>.90</td>
<td>.94</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>1.53</td>
<td>.95</td>
<td>.92</td>
<td>.06</td>
</tr>
<tr>
<td>Religiosity</td>
<td>2.29</td>
<td>.99</td>
<td>.99</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>1.58</td>
<td>.99</td>
<td>.99</td>
<td>.06</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>2.20</td>
<td>.96</td>
<td>.94</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>2.12</td>
<td>.96</td>
<td>.94</td>
<td>.08</td>
</tr>
</tbody>
</table>

In the analysis of CFA, all items of resilience, religiosity and self-efficacy have non-zero loadings to all factors. The direction and magnitude of the factor loadings for the maximum likelihood estimation were substantial and statistically significant (p<.001). The model was free from offending estimates and the internal consistency estimates satisfied the standard deemed necessary in scale construction.

Furthermore, analysis of the 66 items in the full measurement model showed the regression weight of significant relationships and non-zero loadings. The covariances were between .3 and .8 which means there was no multicollinearity. Based on fit indices, the full measurement model was accepted to be the base line model for developing structural model of resilience (Figure 1).

The overall fit of the 66-item measurement model is summarized in Figure 2. Figure 2 shows that analysis of the items resulted in a well-fitting model (χ^2/df = 1.048; GFI=.968; CFI=.998; TLI=.998; RMSEA =.009). Therefore, the above results show that all items loaded significantly and it is a well-fitted model of adolescents in Malaysian context. The goodness-of-fit results indicate the hypothesized model is consistent with the data; religiosity and self-efficacy contribute strongly to resilience in this model (R^2 =.86). Furthermore, religiosity and self-efficacy showed positive causal relationship (β=.44). The goodness-of-fit results indicate the hypothesized model is consistent with the data in the population [20].

The root mean square error of approximation (RMSEA=.009) indicated a well fitted hypothesized model. Root Mean Square Error of Approximation (RMSEA) has been recognized as one of the most informative criteria in covariance structure modeling. The RMSEA takes into account the error of approximation in the population [20]. Values less than .05 indicate good fit and values as high as .08 represent reasonable errors of approximation in the population. Both fit indicators, the GFI and CFI exceeded the threshold of .90, the standard deemed important for model fit [20]. Although a value of >.90 was originally considered representative of a well-fitting model, a revised cutoff value close to .95 has recently been accepted [20].

**DISCUSSION AND CONCLUSION**

The model explains the concept of mechanisms that protect human beings from psychological risks associated with adversity. Religiosity and self-efficacy explain 86% of variance in resilience. In other words, the variation of
86% shows that religiosity and self-efficacy strongly contribute to resilience in this age span. This study set out with the aim of assessing the importance of religion and the judgment of personal capability or self-perception in building resilience for sustainable development among adolescents. Religion is important for resilience; find a means for expressing your spiritual needs. This can be in the form of a mosque, a fellowship support group, or an outing with friends who have similar beliefs. Religiosity and self-efficacy are important for the human spirit and ability to bounce back in the face of adversity. The findings lend support to the claim that religion and self-efficacy are important for resilience. It helps in times of crisis and stress. It also provides coherence, faith, purpose, stability and a positive attitude.

This study produces results which are consistent with the finding of other previous studies on religiosity, self-efficacy and resilience [19, 1, 14, 21, 22]. However, in the past, psychologists such as Sigmund Freud, did not pay much attention to the possible crucial role of religiosity in human development [22]. Positive psychology emphasizes human strength and potential, as much interest in building the best things in life as in repairing the worst. Thus, one of the four pillars in the positive psychology is resilience.

Resilience is relevant to invulnerable adolescents who obtained psychological health despite experiencing psychological distress. The results of the present study forward evidence for construct validity for religiosity, self-efficacy and resilience. Furthermore, all instruments demonstrated evidence of internal consistency reliability. The findings also show that the RBS, RS and CSES are reliable and valid measures to be employed in assessing resilience, religiosity and self-efficacy among Malaysian adolescents. Evidently, the current study which made use of RBS, RS and CSES in Malay version yields consistent findings with previous studies which used the English version of the measures.

RS represent Resilience, RE represent Religiosity, SE represent Self-Efficacy, e1 - e23 represent error variances.

In conclusion, resilience concerns the capacity to bounce back and recover from adversity [23]. Resilience is not easily accomplished by people who have psychological disorders but someone suffering from stress and depression can certainly benefit from strengthening resilience. This study contributes to a greater understanding of the social and cultural foundations of resilience, shedding light on resilience building and the promotion of human sustainability. This study also has implications for educational and psychological practices, especially in building strength and potential of adolescents. Since the 66-item structure yields a valid and reliable structural model, the conception scale is therefore, useful in conducting diagnostic assessment of resilience, religiosity and self-efficacy among adolescents in Malaysia. The findings of this study forward evidence that religiosity and self-efficacy can help to foster resilience in adolescence. This research contributes to a greater understanding of resilience building, the promotion of psychosocial health of Malaysian adolescence which are crucial for sustainable development of adolescence. Future research should examine whether the present findings generalize to other samples and settings.

REFERENCES


