CONSTRUCT VALIDITY OF THE ADOLESCENT RESILIENCE SCALE

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Summary.—The aim of this study was to assess the construct validity of the Adolescent Resilience Scale which measures the psychological features of resilient individuals. Research involving this scale, the Negative Life Events Scale, and the General Health Questionnaire was conducted with a group of 207 Japanese undergraduate students (104 men and 103 women; M age = 20.2 yr., SD = .9). A cluster analysis for the Negative Life Events Scale and General Health Questionnaire yielded three clusters: (1) mentally healthy with little experience of Negative Life Events, (2) poorer mental health with many experiences of Negative Life Events, (3) mentally healthy despite many experiences of Negative Life Events. These three groups were defined as (1) Well Adjusted, (2) Vulnerable, and (3) Resilient, respectively. Mean differences in scores on the Adolescent Resilience Scale among the three groups were subjected to one-way analysis of variance. The mean scores of both the Well Adjusted and Resilient groups were higher than that of the Vulnerable group, and therefore support the construct validity of the Adolescent Resilience Scale.

Individual development is a dynamic process, involving hardships and crises. This is certainly true in modern society where we meet many difficult challenges from many factors such as crime and accidents, natural disasters, social unrest, and financial problems. It is therefore essential to cope with these negative events to attain a state of personal well-being.

Lately in the field of psychology and psychiatry, a concept called “resilience” has received increasing attention. Resilience is defined as “the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best, & Garmezy, 1990). This study focuses on measurement of resilience during adolescence. Significant changes occur in the individual’s psychological and social development during this stage. It is reasonable to assume that many difficulties or adversities are associated with these changes. Resilience is a key factor in the process of overcoming and adapting to negative events. Takahira (1998) indicated that young people such as undergraduate students might experience a number of events that are difficult or painful in their daily lives.

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Oshio, Nakaya, Kaneko, and Nagamine (2002) reviewed key earlier studies regarding resilience and internal psychological features (e.g., Rutter & Quinton, 1984; Bandura, 1989; Wolin & Wolin, 1993; Eisenberg, Guthrie, Fabes, Reiser, Murphy, Holgren, Maszk, & Losoya, 1997; Kumpfer, 1999) and developed the Adolescent Resilience Scale to measure the psychological features of resilient individuals. The scale was designed for Japanese youth, comprising 21 items and three factors: Novelty Seeking, Emotional Regulation, and Positive Future Orientation. The present study was designed to assess the construct validity of the Adolescent Resilience Scale. It would be reasonable to postulate that resilient (young) individuals are able to maintain mental health, without deterioration, even after experiencing painful life events. Hence, in this study, scores on the Adolescent Resilience Scale were subjected to cluster analysis. Mean scores of the clusters were compared along with scores on general health and negative life events.

**Method**

**Participants**

The target group consisted of 207 undergraduate students in Aichi prefecture, Japan. It was composed of 104 men and 103 women. Their ages ranged from 19 to 23 years (M = 20.2).

**Measures**

The Adolescent Resilience Scale, as developed by Oshio, et al. (2002), was employed. The scale consists of 21 items and three factors: Novelty Seeking, Emotional Regulation, and Positive Future Orientation. Respondents were asked to choose a rating scale using anchors of 5 = Definitely yes and 1 = Definitely no. According to Oshio, et al. (2002), the coefficients alpha for the scale and subscales were for the Total score .85, Novelty Seeking .79, Emotional Regulation .77, and Positive Future Orientation .81.

The Negative Life Events Scale was simplified by extracting 30 items from Takahira's Scale of Life Events in Interpersonal and Achievement Domains for Undergraduate Students (1998), and that set was employed. This scale taps the negative life events that could be experienced by Japanese undergraduate students in their daily lives. Respondents were asked to make a forced choice between 1 = Yes, experienced event in the past 3 mo. and 0 = No, had not been experienced.

The General Health Questionnaire, as simplified by extracting 28 items from the translated version of the General Health Questionnaire by Nakagawa and Daibo (1985), was employed. A 4-point Likert scale was used, with higher points on responses which indicated poorer health.
RESULTS AND DISCUSSION

Intercorrelations Among Variables

The total score on the Adolescent Resilience Scale was obtained by calculating the mean of the 21-item scores. Similarly, subscale scores were obtained by calculating the mean item scores of each factor. The Negative Life Events Scale score was calculated as the total number of negative experiences within the past 3 mo. The General Health Questionnaire score was obtained by calculating the mean of the scores on 28 items.

Table 1 shows the Pearson product-moment correlation coefficients among all variables. There were significant positive intercorrelations among all factors of the Adolescent Resilience Scale. Resilience scores did not show intercorrelations with Negative Life Events. Resilience scores showed a significant negative intercorrelation with those on the General Health Questionnaire. There was a significant positive intercorrelation between Negative Life Events and General Health Questionnaire.

The Formation of Adjustment Groups

Conducting Ward’s cluster analysis on respondents using Negative Life Events and General Health Questionnaire as variables, three clusters were identified with the criterion of 0.1 as the increase in the sum of squares within the cluster.

Means of Negative Life Events and General Health Questionnaire among observed clusters were studied by one-way analysis of variance. The results showed scores for Negative Life Events and General Health Questionnaire were significantly different between clusters ($F_{2,204} = 100.77; F_{2,204} = 176.02, p < .001$). Effect sizes between clusters were as follows: for Negative Life Events between the first and second clusters, $d = 1.62$; between second and third clusters, $d = 0.49$; between first and third clusters, $d = 3.13$; General Health Questionnaire, between first and second clusters, $d = 2.63$; between second and third clusters, $d = 2.74$; between first and third clusters, $d = .15$. A multiple comparison test employing Tukey’s HSD ($p = .05$) yielded the fol-
lowing results: Negative Life Events, Third cluster > Second cluster > First cluster; General Health Questionnaire, Second cluster > Third cluster > First cluster. Therefore, the clusters (Adjustment Groups) were named Well Adjusted (First cluster), Vulnerable (Second cluster), and Resilient (Third cluster) (see Table 2).

The Adolescent Resilience Scale Score Among Groups

The mean differences in the Resilience scores between Adjustment Groups were studied by a one-way analysis of variance. There were significant differences for all Resilience means between groups (see Table 2). Effect sizes between clusters were as follows: ARS total score, between Well Adjusted and Vulnerable, \( d = .80 \); between Vulnerable and Resilient, \( d = .74 \); between Well Adjusted and Resilient, \( d = .02 \); Novelty Seeking, between Well Adjusted and Vulnerable, \( d = .43 \); between Vulnerable and Resilient, \( d = .34 \); between Well Adjusted and Resilient, \( d = .07 \); Emotional Regulation, between Well Adjusted and Vulnerable, \( d = .77 \); between Vulnerable and Resilient, \( d = .88 \); between Well Adjusted and Resilient, \( d = .05 \); Positive Future Orientation, between Well Adjusted and Vulnerable, \( d = .49 \); between Vulnerable and Resilient, \( d = .39 \); between Well Adjusted and Resilient, \( d = .04 \). Multiple comparison tests employing the Tukey HSD \( (p = .05) \) gave the following order of differences: ARS total score, Well Adjusted > Resilient > Vulnerable; Novelty Seeking, Well Adjusted > Vulnerable; Emotional Regulation, Well Adjusted > Resilient > Vulnerable; Positive Future Orientation, Well Adjusted > Vulnerable.

Conclusion

The results showed that the Adolescent Resilience Scale score for the
Well Adjusted group and the Resilient group were higher than those of the Vulnerable group. This indicates that the scale correctly reflects the psychological features of individuals who show resilience after facing Negative Life Events. Therefore, the construct validity is supported. Further study would be necessary to identify the psychological recovery process of the individuals who have the psychological features indicated by the Adolescent Resilience Scale.

REFERENCES


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APPENDIX

ITEM CONTENT OF THE ADOLESCENT RESILIENCE SCALE

Novelty Seeking
- I seek new challenges.
- I like new or intriguing things.
- I think I have a high level of interest and curiosity.
- I like to find out about things.
- I think difficulties form a part of life's valuable experiences.
- I don't like to do unfamiliar things.
- I find it bothersome to start new activities.

Emotional Regulation
- I think I can control my emotions.
- I can stay calm in tough circumstances.
- I make an effort to always stay calm.
- I think I have perseverance.
- I find it difficult not to dwell on a negative experience.*
- I cannot endure adversity.*
- My behavior varies with my daily moods.*
- I lose interest quickly.*
- I have difficulty in controlling my anger.*

Positive Future Orientation
- I am sure that good things will happen in the future.
- I think I have a bright future.
- I feel positive about my future.
- I have a clear goal for the future.
- I am striving towards my future goal.

*Reverse-scored items.