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Abstract

The major aim of the first-year study was to translate two instruments into Chinese and to establish adequate reliability and validity through a pilot study. Two well-established English versions of instruments were translated into Chinese language. They are Children's Community Living Skills Scale (CCLSS), and the Cognitive Triad for Children (CTI-C). The self-control skills have been found to be very important for predicting and preventing adolescent depression. The Self-Control Schedule (SCS) although has Chinese version available in Taiwan, its psychometric properties hasn't tested in adolescent sample in Taiwan.

The empirical data for the first year study were obtained from a school-based sample of 1000 adolescents from 2 middle schools, and 3 high schools in Taipei city. The estimate of internal consistency (Cronbach's alpha) for the CTI-C, the SCS, and the CCLSS were .89, .77, and .84, respectively. Construct validity of the SCS was supported with significant correlations with measures of depression (r = -.37) and adaptive functioning (r = .45). Construct validity of the CTI-C was supported with significant correlations with measures of depression (r = -.43) and adaptive functioning (r = .267). Construct validity of the CCLSS was supported with significant correlations with measures of depression (r = -.234) and learned resourcefulness (r = .24). All the correlations were significant at p <. 05 level. The findings from this pilot study suggest that the CTI-C, the SCS, and the CCLSS are valid and reliable instruments for measuring Adolescents' cognitive triad, self-control skills, and adaptive functioning.

Key Words: psychometric property, self-control skills, cognitive triad, adaptive functioning

Background

Early identification of adolescent depression in Taiwan is very important for preventing long-term disability or suicide. Studies have found many factors can be used in predicting and preventing adolescent depression. Among these predictors, cognitive triad, learned resourcefulness and adaptive functioning have been found to be closely related to adolescent depression. However, Chinese version of Instruments used to measure these predictors hasn't available in Taiwan. The major aims of the first year study will be to translate three English versions of the study instruments into Chinese language and to test them a sample of Taiwanese youth population. Through a pilot study, reliability and validity of these instruments will be evaluated. These instruments include the Cognitive Triad Inventory for Children (CTI-C), the Self-Control Schedule (SCS), and Children's Community Living Skills Schedule (CCLSS).

Literature Review

Adolescent depression is a prototype of adolescent maladaptation (Seiffge-Krenke, 1995) and is a major factor in the lives of many adolescents (Adams & Adams, 1996). It is increasingly apparent that depression in adolescence is surprisingly more common than previously considered (Goodyer, 1995; Lewinsohn et. al., 1998). They estimate that approximately 28% of adolescents will have experienced a major depressive episode by age nineteen. Recent studies have shown that greater than 20 % of adolescents in the general population have emotional problems and one-third of adolescents attending psychiatric clinics suffered from depression (Fleming et al., 1993). Prevalence rates for depression among adolescents range from 2.3% to 25% (Bird et al., 1988; McGee et al., 1990; Lewinsohn et al., 1993). In Taiwan, the adolescent population (12-18 years of age) accounted for the 10% of total population (Ministry of the Interior, R.O.C., 1998). Chou (1996) used the CES-D to investigate the depressive tendency of adolescents in Taiwan. He found that 27.1% of the adolescent population suffered from mild depression; 12.8% of them suffered from moderate depression; and 9.2% of them suffered from severe depression. Similarly, Jen (2002) studied a sample of adolescents whose ages ranging from 15 to 18 years old and found that 36.2% of the students had mild depression and 28 % of them had moderate depression. Studies suggest that adolescent depression predicts further difficulties in school delinquency, substance abuse, criminal behavior, marital problems, and unemployment status (Newcomb & Bentler, 1988).

In addition to the impact of depression on school-aged children and adolescents, adaptive functioning is a second important indicator of mental health. Rudolph, Lambert, Clark, and Kurlakowsky (2001) claimed that impaired adaptive functioning during school-aged childhood and adolescence might endanger developmental achievement that is important for future growth; therefore, it is vital to identify the determinants of children and adolescents' maladaptation to understand long-term mental health outcomes.

Rosenbaum (1988) stated that individuals who have a high level of learned resourcefulness have the ability to maintain good health behaviors, and lack of resourcefulness plays a major role in the etiology of depression (Warheit, 1979). The impact of negative automatic thoughts on children and adolescent depression has been well documented. For example, Ruberu (2000) has indicated that children and adolescents who reported greater depression also reported more negative cognitions and automatic thoughts.

Methods

A pilot study with a cross-sectional, non-experimental, and correlational design was used to test three translated instruments in a sample of school-based adolescents

in Taipei in order to evaluate and establish these instruments' psychometric properties. A sample of 1000 community-based adolescents was recruited using cluster-sampling method from middle schools and high schools in Taipei for this pilot study. Instruments used in this study included the following:

The Cognitive Triad for Children (CTI-C)

The Cognitive Triad for Children (CTI-C) will be used to measure the child's automatic thoughts (Kaslow, Stark, Printz, Livingston, & Tsai, 1992). The CTI-C is a downward extension of the CTI (Beckham et al., 1986). This 36-item instrument measures children's automatic thoughts, which reflect their views of self, the world, and the future. These beliefs are believed to be related to depression (Beck, 1967). Each subscale includes 12 items. Each item describes a specific belief about the self, the world, or the future. The child will be asked to give three possible response alternatives (yes, maybe, or no) for each item to specify whether he or she is or is not presently thinking each of these thoughts. Half the items are worded in a positive way and half are phrased in a negative direction**.** The possible range of the total CTI-C scale is 72 points. Higher scores represent more positive thought patterns. Internal consistency of the CTI-C was estimated in 132 children grades 4 through 7. The coefficient alpha was reported as .92 (Kaslow et al.). Significant correlations with the Coopersmith Self-Esteem Inventory for Children (Coopersmith, 1967) and the Hopelessness Scale for Children (Kazdin, et al., 1986) were found to demonstrate concurrent validity.

Zauszniewski, Panitrat, and Youngblut (1999) explored reliability and validity of the CTI-C in this sample of 122 school-aged children**.** They found that internal consistency of the total score was .82 (total scale). For subscales involving the views of self, world, and future, the internal consistency ranged from .54 to .76. Confirmatory factor analysis showed that items included in the CTI-C reflected three dimensions of the self rather than the three components of the negative cognitive triad.

The Children's Community Living Skills Scale (CCLSS)

Children's Adaptive Functioning (represented by community living skills) was measured by the modified version of the adult instrument entitled Community Living Skills Scale (CLSS) (Zauszniewski et al., 2002). Thus, the Children's Community Living Skills Scale (CCLSS) is a 34-item instrument rating personal care, socialization and relationships with others, and leisure activities. Subjects indicate the frequency with which they carry out each function on a 3-point Likert-type scale, ranging from "hardly ever" to "almost always." A higher composite score indicates higher levels of daily functioning. The CCLSS as a whole showed good reliability coefficients with a Cronbach's alpha .82 (Zauszniewski, personal communication, 2002).

Construct validity demonstrated significant correlations at the $p < .001$ level with depression (- .57) and with resourcefulness (.46) (Zauszniewski, personal communication, 2002) in this study sample.

The Self-Control Schedule (SCS)

The instrument used to assess learned resourcefulness was the Self-Control Schedule (SCS) (Rosenbaum, 1980a). This is a self-report instrument aimed at assessing individual tendencies to utilize self-control skills to solve behavioral problems. The schedule includes four categories: (1) the use of cognition and self-instruction to cope with emotional and physiological responses, (2) application of problem-solving strategies, (3) ability to delay immediate gratification, and (4) a general belief in one's ability to self-regulate internal events (Rosenbaum, 1990b). The schedule consists of 36 items rated on a 6-point scale that indicates the extent to which the subjects evaluate the item as characteristic of themselves. Response options on the SCS vary on a 6-point Likert scale ranging from 5 = very characteristic of me, extremely descriptive to 0 = very uncharacteristic of me, extremely nondescriptive. High scores on the SCS indicate greater resourcefulness. The reliability and validity of this scale have been well established (Rosenbaum, 1980; 1990). The internal consistency coefficient of the scale for the primary study was .83 (Zauszniewski et al., 2002). The SCS strongly correlated to locus of control, religious orientation, and manifest anxiety in young and middle age adults, which shows construct validity of the measure (Richards, 1985).

Results

Sample Characteristics

This sample of 907 school-based adolescents, ages 12 to 19 years, was selected from two junior high schools and three senior high schools in Taipei. The mean age of the adolescents was 15.60 (SD = 1.41). Approximately 64.8 % these students are in senior high school with 36.2% of them were junior high school students. Among these students, 56.3% them were boys and 43.3 % of them were girls. Sixty-one percentages of them had intact family with mothers and fathers. The majority of these students had fathers with high schools degree (25.3%), college degree (18.1%), and university degree (20.5%). The majority of these students had mothers with high schools degree (31.1%), college degree (19.3%), and university degree (21.8%). The mean number of sibling was 1.38. About 36.7 of the students had family income ranged from 20000 to 59999 while 25.5% of them had family income ranged from 60000 to 99999.

Reliability Estimates

The CTI-C

To evaluate the reliability of the CTI-C, internal consistency reliabilities of each

subscale and the total scale were computed using coefficient alpha. The Cronbach Alpha coefficient for the total scale was .89. The Cronbach Alpha coefficients for the subscales ranged from .43 to .83.

The SCS

Although Rosenbaum identified conceptual dimensions for the SCS, he suggested that the SCS doesn't have subscales (Rosenbaum, 1980). He cautions researchers not to use subscale scores and to use the total score of the SCS because the dimensions are inter-related conceptually and factor analyses across different samples vary widely. Therefore, internal consistency reliabilities of the total scale were computed using coefficient alpha to evaluate the reliability of the SCS. The Cronbach Alpha coefficient for the total scale was .77, which has reached suggested acceptable value .70.

The CCLSS

The Cronbach Alpha coefficient for the total scale was .84, which has also reached suggested acceptable value .70.

Validity Estimates

1. Content Validity

A stepwise process proposed by Brislin to guide translation of instruments was used in the first year study. The purposes of the steps are to ensure an appropriate and equivalent meaning of words and expressions (Hall, Wilson, & Frankenfield, 2003). The steps are described as the follows: 1) selection of short and simple languages; 2) use of competent translators who are familiar with the study issues; 3) use of two bilingual translators. One of the translators is responsible for translating from the English language and another one is responsible for translating back to the Chinese language without having seen the first version; and 4) use of a refinement group for both translation and back translation. A refinement group made complete agreement on 100% per cent of the items.

2. Construct Validity

The CTI-C

Construct validity was supported with significant correlations of the CTIC with measures of depression (-.43, $p < .05$) and adaptive functioning (.267, $p < .05$) and learned resourcefulness (.254, $p < .05$). As found by Zauszniewski et al., confirmatory factor analysis showed that items included in the CTI-C reflected three dimensions of the self rather than the three components of the negative cognitive triad.

The SCS

Construct validity was supported with significant correlations of the SCS with measures of depression (-.22, $p < .05$) and adaptive functioning (.24, $p < .05$) and cognitive triad (.254, $p < .05$).

The CCLSS

Construct validity was supported with significant correlations of the CCLSS with measures of depression (-.234, $p < .05$) and learned resourcefulness (.24, $p < .05$) and cognitive triad (.267, $p < .05$).

Discussion

Results showed that these three Chinese versions of instruments have proper reliability and validity that can be used in the second year study to further explore the determinants of adolescent depression and adaptive functioning.

Self-Assessment

As predicted, these three instruments demonstrated proper reliability and validity. The subjects recruited was also met the expected number. In addition to be used in the second year study, the instruments will contribute very importantly in Taiwan for investing adolescents' mental health. The principal investigator is now preparing manuscript to publish these valuable results and plans to cooperate with other professional disciplines to recruit different adolescent sample (e.g., adolescents with cancer) to explore mental health problems.