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AUTHOR Spirito, Anthony; And Others
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ABSTRACT

Persons with acute and chronic illnesses must frequently respond to a number of illness-related tasks and stressors. Changes in an individual's coping style over the course of an illness, however, are rarely studied. Most coping inventories are too long to be practical for the necessary repeated administration. A study was undertaken to develop a brief coping scale for use with children and adolescents with chronic illnesses. KIDCOPE, a brief coping checklist comprised of 10 items, was developed which covered problem-solving, distraction, social support, social withdrawal, cognitive restructuring, self-criticism, blaming others, emotional expression, wishful thinking, and resignation. Four samples of "normal" adolescents (total N=364) and one clinical sample of adolescent suicide attempters (N=25) participated in reliability and validity studies. The results revealed that the highest correlations were obtained when subjects rated the same personal stressors 3 days apart, lower correlations were obtained when ratings were 1 week apart, and lowest correlations were obtained over 10 weeks with different stressors. These findings suggest that coping is a process measure with only minimal consistency within individuals over time. Validity studies revealed moderate to high correlations between the Coping Strategies Inventory and the KIDCOPE. (NB)

# Coping in Children and Adolescents: Development of a Brief Scale

Anthony Spirito, Lori J. Stark, Connie Williams

Rhode Island Hospital/Brown University Program in Medicine



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## INTRODUCTION

Persons with acute and chronic illnesses are confronted with a number of illness-specific tasks and stressors to which they must frequently respond. However, studies which examine changes in coping within individual's over the course of an illness or differences in coping style across different illness-related stressors are rare. One impediment to further investigations of coping is the fact that most current coping inventories (e.g., The Ways of Coping) are quite long. This hinders patient acceptance of repeated administration. Some brief interview measures of coping (e.g., Kaloupek, White, & Wong, 1984) and card sort strategies (Viney & Westbrook, 1984) have been described in the coping literature with adults. Stone & Neale (1984) have also developed an open-ended daily coping measure which taps eight classes of coping strategies. Subjects are asked if they use any of the eight categories in coping with a recently encountered stressor. If a category is employed, a description of the particular thought and/or behavior used is then elicited from the subject. Such an approach is a promising means of assessing daily variation in the use of coping strategies. The purpose of the present study was to develop a brief coping scale similar to Stone & Neale's for use with children and adolescents. Such an instrument should allow greater opportunities to examine the process of coping among children with chronic illness. In addition, it was hoped that development of such a brief checklist would also facilitate clinicians' assessment of coping in a more systematic fashion among medically ill children.

## Scale Development

A brief coping checklist comprised of ten items covering commonly identified categories of coping was developed. The categories represented include problem-solving, distraction, social support, social withdrawal, cognitive restructuring, self-criticism, blaming others, emotional expression, wishful thinking, and resignation.

In order to evaluate the psychometric properties of the scale, four samples of "normal" adolescents (N=60, 90, 72, 142) and one clinical sample of adolescent suicide attempters (N=25) were enrolled in a series of reliability and validity studies. Since the checklist includes only one item for each coping category, demonstrating the reliability of each category is particularly difficult. Coping, as conceptualized here, is a process measure, therefore, strategies may change across temporal, situational, and personal appraisal factors. Consequently, a number of reliability studies were conducted to determine the consistency of responses across time and across varied versus similar situations.

The results of these reliability studies are presented below. Tables 1-4 present the Pearson test-retest correlations of the KIDCOPE administered either 3 days (Table 1) or 7 days (Table 2) or 10 weeks (Table 3) apart. In each of these assessments the correlations between responses to the KIDCOPE are based on an individually identified stressor by the adolescent, both initially and again on the retest. The data presented in Table 4 are test-retest correlations for the KIDCOPE administered

2 weeks apart using a script describing a standard stressor (conflict with parents) hypothesized to be commonly faced by adolescents.

The validity of the KIDCOPE was assessed via comparisons with previously standardized measures of coping, the Coping Strategies Inventory (CSI), and Adolescent-Coping Orientation for Problem Experiences Inventory (ACOPE). The results of these correlational analyses are presented in Tables 5 and 6. All measures for the validity analyses were completed based on a personally chosen stressor except for Table 8 which presents data from responses to the standard stressor as described above. Table 5 presents the Pearson correlations between the respective subscales of the Coping Strategies Inventory and the KIDCOPE. The item of the KIDCOPE expected to tap each dimension of the CSI is underlined. A similar analysis is presented in Table 6 for the KIDCOPE items and respective dimensions of the (ACOPE). Table 7 presents the responses to the KIDCOPE items for "normals" versus suicide attempters. Finally, Table 8 presents the sex differences in responses to the KIDCOPE.

## RESULTS/DISCUSSION

As one would expect, when examining the temporal dimension of coping, the highest correlations were obtained when subjects rated the same personal stressors three days apart (Table 1; range = .56 to .75) and somewhat lower correlations were obtained when the same personal stressor was rated one week apart (Table 2; range = .41 to .83, with one exception, .07 on blaming others). Also, as predicted, the lowest correlations were obtained over 10 weeks with different, personal stressors (range= .15 to .43). These latter findings would fit with the assumption that coping is a process measure with only minimal consistency within individuals over time.

In order to examine consistency of coping strategies across similar situations over time, scripts of two standard stressors (grounding by parents secondary to two different problems) were devised. Table 4 shows moderate correlations in the use of coping strategies across these two situations. This was true for most of the KIDCOPE items, with some notable exceptions on social withdrawal (r=.04) and wishful thinking (r=.08). These variable findings may be related to the different ways in which persons may appraise situations despite our attempts to develop similar stressors.

Preliminary findings from the validity studies also are promising. As expected, the correlations between the Coping Strategies Inventory and the KIDCOPE, in particular, were moderate to high, thus suggesting that a single item may be able to efficiently tap a coping strategy. Selected differences in coping strategies between suicide attempters and controls, also provides some support for the validity of this brief coping checklist.

Table 1.

Test-Retest Reliability with the Same Personal Stressor 3 Days Apart (N=60)

| | Kidcope Items | Frequency* | Efficacy** | |
|---|---|---|---|---|
| 1 | Distraction | .64 | .45 | |
| 2 | Social Withdrawal | .64 | .54 | |
| 3 | Cognitive restructuring | .60 | .61 | |
| 4 | Self-criticism | .69 | .25 | (NS) |
| 5 | Blaming others | .66 | .71 | |
| 6 | Problem solving | .72 | .74 | |
| 7 | Emotional expression | .56 | .69 | |
| 8 | Wishful Thinking | .75 | .30 | (NS) |
| 9 | Social Support | .63 | .58 | |
| 10 | Resignation | .57 | .51 | |

NS = nonsignificant; all other correlations were statistically significant at $p<.05$ (Bonferroni corrected)

*Refers to correlation between how often respondent used this strategy at Time 1 with how often at Time 2.

**Refers to correlation of respondent's report of how helpful a particular strategy was across Time 1 and Time 2.

Table 2

Test-Retest Reliability with the Same Personal Stressor 1 Week Apart (N=42)

| Kidcope | | Frequency | Efficacy |
|---|---|---|---|
| Item | 1 | .49* | .50* |
| | 2 | .70* | .20 |
| | 3 | .42 | .01 |
| | 4 | .83* | .26 |
| | 5 | .07 | .15 |
| | 6 | .41 | .40 |
| | 7 | .64* | .30 |
| | 8 | .57* | .04 |
| | 9 | .41 | .30 |
| | 10 | .50* | .20 |

*p<.05 (Bonferroni corrected)

Table 3.

Test-Retest Reliability

Over 10 Weeks With Different Personal Stressors (N=142)

| Kidcope | | Frequency | Efficacy |
|---|---|---|---|
| Item | 1 | .28* | .34* |
| | 2 | .30* | .27* |
| | 3 | .17 | .24* |
| | 4 | .15 | .28* |
| | 5 | .23 | .07 |
| | 6 | .27* | .30* |
| | 7 | .43* | .34* |
| | 8 | .21 | .24* |
| | 9 | .43* | .34* |
| | 10 | .18 | .12 |

*p<.05 (Bonferroni corrected)

Table 4.

Test-retest Reliability:

Similar Standard Stressors Two Weeks Apart (N=34)

| Kidcope | | Frequency | Efficacy |
|---|---|---|---|
| Item | 1 | .21 | .21 |
| | 2 | .04 | .39 |
| | 3 | .47 | .30 |
| | 4 | .46 | .55 |
| | 5 | .37 | .58 |
| | 6 | .32 | .52 |
| | 7 | .31 | .52 |
| | 8 | .08 | .48 |
| | 9 | .56 | .54 |
| | 10 | .13 | .55 |

Table 5.

Correlation Matrix: Coping Strategies Inventory and Kidcope (N=42)

| | KIDCOPE ITEMS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Problem Solving | .04 | .11 | .30 | -.08 | .16 | .46 | -.0 | -.03 | .02 | -.22 |
| Cognitive Restructuring | -.20 | .01 | .58* | -.16 | .05 | .21 | -.15 | -.14 | .16 | -.22 |
| Express Emotions | -.16 | -.01 | -.15 | .33 | .05 | .28 | .55* | .46 | .15 | -.20 |
| Social Support | -.09 | -.50 | .13 | -.10 | .07 | .26 | .14 | .08 | .55 | -.43 |
| Problem Guidance | .33 | .30 | .15 | .34 | .13 | -.14 | .20 | .10 | -.12 | .34 |
| Wishful Thinking | .12 | .13 | -.07 | .47 | .07 | .19 | .48 | .63* | .13 | .11 |
| Self-criticism | -.03 | .33 | -.04 | .77* | .13 | .15 | .12 | .47 | -.14 | .18 |
| Social Withdrawal | .14 | .73* | -.10 | .39 | .02 | -.01 | .33 | .25 | -.37 | .29 |
| Problem-Focused Engagement | -.08 | .07 | .47 | -.13 | .11 | .38 | -.08 | -.09 | .10 | -.24 |
| Emotion-Focused Engagement | -.14 | -.31 | .01 | .12 | .06 | .31 | .37 | .28 | .41 | -.37 |
| Problem-Focused Disengagement | .27 | .21 | -.01 | .49 | .09 | .05 | .41 | .47 | .06 | .26 |
| Emotion-Focused Disengagement | .06 | .60* | -.08 | .68* | .09 | .08 | .44 | .42 | -.29 | .27 |
| Engagement | -.15 | -.16 | .34 | -.02 | .13 | .48 | .19 | .12 | .35 | -.42 |
| Disengagement | .16 | .49 | -.05 | .67* | .10 | .07 | .48 | .49 | -.16 | .30 |

*p<.05 (Bonferroni corrected)
Underlined items indicate correlations hypothesized to be highest between two scales.
KIDCOPE Item Key: 1=distraction, 2=social withdrawal, 3=cognitive restructuring, 4=self-criticism, 5=blame others, 6=problem solving, 7=emotional expression, 8=wishful thinking, 9=social support, 10=resignation.

Table 6.

Correlation Matrix: ACOPE and Kidcope (N=49)

| | KIDCOPE ITEMS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Ventilating feelings | .01 | -.18 | -.07 | -.11 | .39 | -.10 | .50* | .28 | .22 | .01 |
| Seeking diversions | .62* | .40 | .16 | -.07 | .05 | -.09 | -.08 | .43* | -.38 | .35 |
| Developing self-reliance | -.22 | -.16 | .22 | -.07 | -.14 | .34 | .01 | -.17 | -.14 | -.01 |
| Developing social support | -.10 | -.37 | .08 | .01 | .47* | .06 | .30 | -.16 | .48* | -.39 |
| Solving family problems | -.22 | -.15 | .20 | -.19 | .06 | -.11 | .36 | -.07 | .64* | -.28 |
| Avoiding problems | .28 | .18 | -.02 | -.04 | .26 | -.24 | -.03 | .18 | -.42* | .17 |
| Seeking spiritual support | -.09 | -.25 | .01 | -.03 | .06 | .12 | .29 | .02 | .51* | -.31 |
| Investing in close friends | .03 | -.03 | .11 | -.09 | .11 | -.01 | .09 | .03 | .31 | -.27 |
| Seeking professional support | -.08 | -.08 | -.18 | -.23 | -.05 | .24 | .24 | -.15 | .24 | -.25 |
| Engaging in a demanding activity | -.08 | -.20 | .12 | .20 | .08 | .13 | .24 | .15 | .14 | .12 |
| Being humorous | .05 | -.13 | .19 | -.04 | .10 | .02 | .21 | .13 | .08 | .03 |
| Relaxing | .45* | .14 | .08 | -.11 | -.02 | -.04 | -.05 | .33 | -.34 | .19 |

*p<.05 (Bonferroni corrected)
Underlined items indicate correlations hypothesized (positive or negative) to be highest between two scales.
KIDCOPE Item Key: 1=distraction, 2=social withdrawal, 3=cognitive restructuring, 4=self-criticism, 5=blaming others, 6=problem solving, 7=emotional expression, 8=wishful thinking, 9=social support, 10=resignation.

Table 7. KIDCOPE responses of normals (N=38) to a standard stressor (grounding by parents) and adolescent suicide attempters (N=17) to personalized stressor which contributed to suicide attempt.

| | | Frequency | | Efficacy | |
|---|---|---|---|---|---|
| KIDCOPE | | Normals | Suicide Attempters | Normals | Suicide Attempters |
| Item | 1 | 39% | 50% | 24% | 6% |
| | 2 | 31% | 75%* | 21% | 25% |
| | 3 | 51% | 19%* | 26% | 6% |
| | 4 | 31% | 37% | 16% | 13% |
| | 5 | 35% | 35% | 14% | 31% |
| | 6 | 53% | 44% | 34% | 19% |
| | 7 | 56% | 56% | 38% | 25% |
| | 8 | 74% | 69% | 13% | 6% |
| | 9 | 59% | 38% | 49% | 25%* |
| | 10 | 45% | 31% | 26% | 19% |

Percentages refer to those adolescents reporting they used the strategy "a lot of the time" or "almost all the time".

*p<.02 T-test on mean score of each KIDCOPE item across two groups.

Table 8.

Differences in Frequency and Efficacy of Coping Strategies Utilized for a Standard Stressor (Grounding by Parents)

Males (N=31) and Females (N=44)

| KIDCOPE | | Frequency | | Efficacy | |
|---|---|---|---|---|---|
| | | Males | Females | Males | Females |
| Item | 1 | 51% | 35% | 37% | 15% |
| | 2 | 40% | 28% | 25% | 23% |
| | 3 | 47% | 58% | 33% | 33% |
| | 4 | 58% | 20% | 35% | 10% |
| | 5 | 31% | 40% | 21% | 18% |
| | 6 | 56% | 54% | 60% | 35% |
| | 7 | 42% | 59% | 31% | 40% |
| | 8 | 65% | 67% | 33% | 6% |
| | 9 | 44% | 64% | 26% | 61% |
| | 10 | 38% | 35% | 27% | 23% |

Percentages refer to those adolescents reporting they used the strategy "a lot of the time" or "almost all the time" (Frequency) and those reporting it was "pretty much" or "very much" helpful (Efficacy).

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