
CONSTRUCT VALIDITY AND RELIABILITY OF AN ADOLESCENT'S COPING STRATEGY INSTRUMENT

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ABSTRACT

The study aims to determine the validity and reliability of the Coping Strategy instrument for assessing adolescents' stress coping strategies. A total of 100 11th grade students in three Muhammadiyah senior high schools in Yogyakarta were involved, recruited using stratified sampling technique. The Coping Strategy instrument proposed in this study consisted of 9 items with seven alternative answers. The items were arranged following Coping Strategy aspects, namely problem-focused coping and emotion-focused coping. The collected data were then analyzed using the Smart PLS 3.28 program using the Second Order Confirmatory Factor Analysis. The analysis result showed that the aspects and indicators employed in the proposed construct were valid and reliable. The most dominant aspect in reflecting on Coping Strategy is problem-focused coping. The results of the study indicates that the development of the Coping Strategy instrument in adolescents in this study is acceptable as the applied theory is consistent with empirical data obtained from the participants. The result of this study can be used by school counselors to explore adolescents' coping strategies.

Keywords: emotion-focused coping, problem-focused coping, adolescent coping strategies

INTRODUCTION

Adolescence is a tense developmental stage. Adolescents in this stage experience various physical, cognitive, psychological, and social transformations transitioning from childhood into the adult phase. This stage is commonly viewed as the onset of puberty and social autonomy, starting from the age of 10

years to 19 years (Steinberg, 2019). Compared to other developmental stages, adolescence requires a more complex adaptation process to adjust and respond to changes in life (e.g., begin to play social roles in family and society, adhere to social values, design the future education and career plan, establish positive friendships, solve problems

independently, and discover identity) (Steinberg, 2015). In this phase, adolescents are reported to experience stress and anxiety (Herres, 2015), which is described as the period of storm and stress by Hall (1904). This phase is an important period that shapes their maturity. Hence, adequate coping skills are required (Eschenbeck et al., 2018). This study aims to provide an overview of the conceptualization and measurement of coping skills in adolescents. This study is expected to advance the theory of adolescent development and the development of coping strategies.

Over the last few decades, the concept of coping skill has attracted the interest of many scholars. This concept was the main focus of Lazarus and Folkman's study in the 20th century. Lazarus and Folkman (1984) use the term Coping to describe the cognitive and behavioral efforts individuals exhibit to manage stress. It is not an individual trait but a continuous process carried out consciously or unconsciously to regulate emotions, manipulate stress-triggering situations, and maintain mental health (Montero, et al., 2014; Pascual, et al., 2016). Skinner et al. (2003) propose four hundred coping strategies categorized into two strategies, namely problem-focused coping and emotion-focused coping strategies.

Observation and interviews with adolescents in Yogyakarta City reveal various problems faced by adolescents. Therefore school counselors need to assess students' coping skills in order to provide appropriate guidance and counseling services for students to develop their coping skills. In this regard, a valid and reliable coping instrument is needed.

The development of coping skill instruments in this study refers to Lazarus and Folkman's concepts. The proposed conceptual framework consists of problem-focused and emotion-focused coping strategies. This study mainly aims to develop a valid and reliable coping strategy instrument for exploring adolescents stress-coping skills. The results of this study can be used by school counselors to measure adolescents' stress-coping strategies.

RESEARCH METHOD

This study involved several schools Yogyakarta City, SMA Muhammadiyah 4 Yogyakarta (35 students), SMA Muhammadiyah 5 Yogyakarta (32 students), and SMA Muhammadiyah 6 Yogyakarta (33 students). In total, 100 students were recruited using the stratified random sampling technique. The coping strategy instrument developed in this study consisted of 9 items with seven alternative responses, namely: 1) very low, 2) low, 3) fairly low, 4) moderate, 5) fairly, 6) high, and 7) very high. The data were analyzed using Second-Order Confirmatory Factor Analysis to test the outer model. Smart PLS 3.2.8 was used. The validity was tested by determining the convergent validity and discriminant validity, while the reliability was tested using Cronbach's Alpha and composite reliability.

RESULT AND DISCUSSIONS

The result of outer model analysis using Smart PLS 3.2.8 is presented in the following figure:

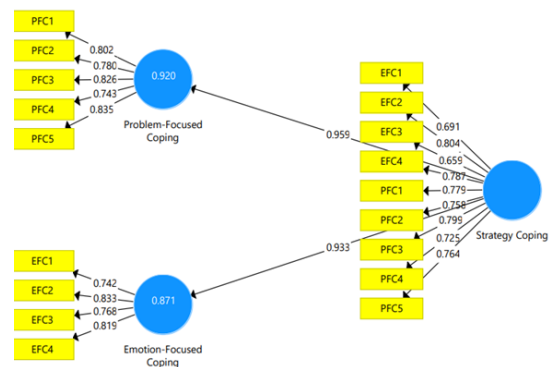


Figure 1.
Outer Model Output

The results of the convergent validity test were seen from the value of the loading factor and Average Variance Extracted (AVE). The rule used in this test is the loading factor and the AVE at least has a value > 0.5 . Based on the results of the analysis, it is found that the loading factor value from variable to aspect and from aspect to indicator has a value of > 0.5 . While the AVE value for each aspect is 0.637 and 0.626. This means that each aspect

has a strong enough validation to explain the latent construct. The results of the convergent validity test can be seen in table 1, table 2 and table 3.

Table 1
Factor Loadings of Coping Aspects

Coping strategy aspect	Factor Loading	Description
<i>Problem-Focused Coping</i>	0,959	Valid
<i>Emotion-Focused Coping</i>	0,933	Valid

Table 2
Factor Loadings of-Indicator

Indicator	Factor Loading	Description
PFC1	0,802	Valid
PFC2	0,780	Valid
PFC3	0,826	Valid
PFC4	0,743	Valid
PFC5	0,835	Valid
EFC1	0,742	Valid
EFC2	0,833	Valid
EFC3	0,768	Valid
EFC4	0,819	Valid

Table 3
AVE Value of the Construct

Aspect	AVE	Description
<i>Problem-Focused Coping</i>	0,637	Valid
<i>Emotion-Focused Coping</i>	0,626	Valid

The results of the discriminant validity test can be seen by comparing the AVE root values in each aspect. The rule used is that the AVE value in each aspect must be greater than the r^2 value of the other aspects. Based on the results of the analysis, the results of the AVE roots in each aspect were higher than the AVE roots in other aspects, meaning that the discriminant validity criteria were met. The AVE root value of the coping strategy construct can be seen in table 4.

Table 4
Root AVE of the Construct

	PFC	EFC
<i>Problem-Focused Coping</i>	0,798	0,794
<i>Emotion-Focused Coping</i>	0,794	0,791

The results of the reliability test are seen from the Cronbach alpha and composite reliability values. The expected value is at least > 0.7 . From the results of the analysis, it was found that the Cronbach alpha and composite reliability constructs of coping strategies were 0.904 and 0.922, respectively. This means that the scale of the coping

strategy developed in this study is reliable and meets the unidimensional criteria.

Table 5
Cronbach Alpha and Composite Reliability

Variabel	Cronbach alpha	Composite Reliability	Keterangan
Strategi Koping	0,904	0,922	Reliabel

Based on the results of the analysis of validity and reliability, it is known that the aspects and indicators that make up the construct of coping strategies in adolescents are valid and reliable. All aspects and indicators that exist are able to reflect and form the construct of coping strategies. The most dominant aspect in reflecting on coping strategies is problem-focused coping with a loading factor of 0.959. Problem-focused coping describes how individuals carry out an active process of taking steps to try to eliminate sources of stress and reduce the resulting negative impacts. In this study, emotion-focused coping is the weakest aspect in reflecting coping strategies, the loading factor value obtained is 0.933. Emotion-focused coping describes how an individual is emotionally oriented in dealing with problems indirectly, this is a form of effort directed at dealing with emotional stress in order to achieve a balance of affection. Efforts can be made by regulating the emotional response in order to adapt to the impacts that arise due to the pressure experienced.

Problem-focused coping is an individual's active effort to modify or eliminate sources of stress through positive behavior (Lazarus & Folkman, 1984; Folkman, 2010). This strategy is used because there is a belief that the situation or condition can be overcome or changed. Efforts made by individuals directly focus on the problems that cause anxiety and stress (Sarafino & Smith, 2020). Indicators that reflect problem-focused coping include: active coping, planning, suppression of competing activities, restraint coping, and seeking social support for instrumental reason (Carver & Connor-Smith, 2010; Carver, Scheier, & Weintraub, 1989). Active coping is the tendency to display strong behaviors to deal with stress actively, persistently, and

work hard in daily life. This coping strategy is characterized by a willingness to take direct action, increase problem-solving efforts, and try to make small efforts step by step gradually (Hertel, et al., 2015). Planning is the tendency to think or plan something about what might be done to overcome or change the situation that causes stress. Some of the behaviors that reflect this coping strategy include analyzing situations, setting goals, making several alternative solutions to problems, asking other people's opinions, taking direct action, and evaluating the results of planning (Polanco-Roman, Danies, & Anglin, 2016). Suppression of competing activities is an attempt to limit some activities that are deemed not so important so that they can focus on one problem to be solved. Individuals with this coping tend to prioritize one problem that is the main source of stress in their lives, avoid disturbing activities, and ignore certain things to pass by (Quraishi, Aziz, & Siddiquah, 2018; Walker, 2013). Restraint coping is an effort to control oneself so as not to rush into acting in response to a problem. This type of coping allows individuals to deal with problems effectively by being careful in acting, trying not to be impulsive, waiting for the right opportunity to act, and only acting when necessary (Kato, 2013; Thakur, et al., 2018). Seeking social support for instrumental reason is an effort to obtain informational or emotional support from interpersonal networks to gain comfort, understanding, and solutions to the problems being faced. Individuals can share stories or experiences with others who they feel can help solve their problems to ask for advice, suggestions, input, and support (Giammanco & Gitto, 2016; Goussinsky, 2012).

Emotion-focused coping is an effort to adjust to stressful situations or conditions by controlling emotions, avoiding threatening situations, denying that you are facing a problem, or trying to find a positive meaning from a problem. The choice of this type of coping strategy is usually based on the individual's inability to solve problems (Lazarus & Folkman, 1984; Folkman, 2010). Some indicators that reflect emotional focused coping include escapism,

minimization, self-blame, and seeking meaning (Aldwin, et al., 2018). Escapism is an attempt to temporarily escape from a boring or stressful daily routine by looking for other activities or entertainment that can reduce tension such as walking, reading, watching television, exercising, playing or listening to music (Kuo, Lutz, 2003). , & Hiler, 2016). The word "escapism" often carries a negative connotation, because some forms of escape activities tend to deviate from social norms such as drug abuse, alcohol, and free sex (Cain, et al., 2020). Minimization is a form of denial and rationalization of the problems of life. This effort was made to reduce the level of tension and anxiety felt (Grover, et al., 2013). Individuals with this coping style tend not to think about the problem and think as if there is no problem. Individuals see themselves in a safe situation without considering the possibility of greater danger or difficulty in the future and as far as is known there is nothing to worry about in their lives (Mayordomo-Rodríguez, et al., 2015). Self-blame is an attempt to blame oneself or a negative evaluation of the occurrence of a stressful event (Eisenbarth, 2019). Individuals with this coping feel responsible for the occurrence of the event, the individual believes that there is something wrong in him that caused the event to occur so that he deserves to be punished (even punishing himself), thus the individual regrets mistakes that should not be given to him (Straud & McNaughton-Cassill, 2019). Seeking meaning is an effort to find the positive meaning of a problem causing stress through self-reflection (Pieper, 2019). Individuals with this type of coping when facing a problem tend to seek benefits or lessons that can be obtained in their lives (Wang, 2019). et al., 2019).

Previous studies that are relevant include the research of Frydenberg and Lewis (2011). The proposed coping strategy instrument is the Adolescent Coping Scale (ACS), intended for adolescents aged between 12 and 18 years. ACS was developed to help understand coping behavior in adolescents, both in general and in response to specific stressors, and as a means to determine how adolescents cope with various problems in

their lives. This instrument consists of 60 items covering 18 types of coping strategies, namely seeking social support, focus on solving the problem, work hard and achieve, worry, investing in close friends, seek to belong, wishful thinking, social action, tension reduction, not coping, ignore the problem, self-blame, keep to self, seek spiritual support, focus on the positive, seek professional help, seek relaxing diversions, and physical recreation. The eighteen types of coping are grouped into two main dimensions, namely productive coping and nonproductive coping. Productive coping is the integration of problem-focused coping, while nonproductive coping is the integration of emotion-focused coping. The ACS was then tested on 673 students and the Cronbach alpha coefficient value was 0.70. These results indicate that the ACS instrument is feasible to use in measuring adolescent coping abilities.

Further development was carried out by Plessis and Martins (2019). The proposed coping strategy instrument is The Comprehensive Coping Strategies Questionnaire (CCSQ). The instrument consists of 33 items and 9 dimensions that form the basis for the preparation of the CCSQ, namely social support coping, religious coping, cognitive coping, active leisure coping, avoidant coping, social disengagement, vacation time, rumination and emotional coping. The participants involved in testing the CCSQ were permanent employees who worked in South African Higher Education Institutions with a total sample of 305 people. From the results of testing the CCSQ instrument, the Cronbach alpha coefficient value is 0.84, with these results it can be said that this instrument is feasible to be used as a reference in measuring coping strategies.

From the two developments of coping instruments, when compared with coping instruments in this study, it shows that the scale of the coping strategy developed in this study can be used as a reference in assessing adolescents' coping strategy due to its higher validity and reliability ($r = 0.904$). However, future studies are suggested to refine this

instrument, as the instrument validation is a continuous process.

CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that the developed coping strategy construct has met good validity and reliability, thus all aspects and indicators can represent a coping strategy. Problem-focused coping is the most dominant aspect in reflecting coping strategies in this study.

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