

Development of An Instrument to Measure Self Endurance

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Received Month 2020-08-02;

Revised Month 2020-10-26;

Accepted Month 2020-10-19;

Published Online 2020-10-31

Conflict of Interest

Disclosures:

The authors declare that they have no significant competing financial, professional or personal interests that might have influenced the performance or presentation of the work described in this manuscript.



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Abstract: The purpose of this research development is to determine the value of the validity of the instrument as well as to find out the reliability value of the instrument of self endurance questionnaire. This research was included research and development (R&D) with a four-D (4D) model which is a research method for producing or developing a particular product. The 4D research model consists of four steps: 1) defining (collecting references or references used to collect research products), 2) design (collecting product self-endurance questionnaire instruments), 3) developing (developing products through expert judgement research or experts), and 4) disseminate (ie the distribution of research products). The data analysis used in this study was to know the validity of the Lawshe CVR and CVI tests as well as the reliability test of the questionnaire with the Alpha Cronbach coefficient. Testing the validation of the instrument was carried out by 5 experts consisting of 3 lecturers of the Undiksha Counseling Guidance Postgraduate Program and 2 BK teachers. The results of the CVR calculation of the self-endurance instrument with 40 approved items have obtained results of more than 0 (> 0), which means 40 items are declared valid. Furthermore, an analysis of CVI data with a result of 0.98 or CVI of more than 0, then the questionnaire instrument was declared valid. After calculating the reliability value (r_{11}) the self-endurance instrument is 0.918 with the very high reliability category.

Keywords: Instrument Development, Self Endurance, Research and Development

How to Cite: Ni Made Sulistrisiana Dewi, I Ketut Dharsana, Ni Ketut Suarni. 2020. Development of An Instrument to Measure Self Endurance. Bisma, 4 (2): pp. 116-122, DOI: <http://dx.doi.org/10.23887/bisma.v4i1>

Introduction

Character education in self can be applied by developing potentials or abilities that exist in everyone's personal self. Character education is important to have an individual, in order to provide a convenience in his life and with good character a person will get more fluency in taking action and avoiding various problems. In its development, everyone is faced with obstacles, especially students in schools will certainly be faced with many problems ranging from mild and severe problems. Therefore, the ability of individuals to survive in the face of obstacles and obstacles must be high. Everyone has different obstacles and difficulties in life, as well as ways of solving and handling, depending on everyone itself. To achieve the expected goals of course, students must have the ability to withstand obstacles or self-endurance, so that students have a character that is not easily discouraged, never give up, trying their best to find a way out of the problem being faced to be able to resolve any obstacles they receive. However, based on observations on students in SMP

Negeri 1 Mengwi many students who do not have the motivation to complete their assignments on time, like to delay and stall for time doing tasks or doing work, do not have the enthusiasm to finish work to completion, unfocused and tend to feel lazy, lack of students' ability to stay in class until the end of hours, students tend to not be able to survive listening to lessons that are taking place and prefer to play or play truant. In line with research by (Putra, Arum, & Dharsana, 2017) which in his observation found several students who showed symptoms of difficulty in trying to do school work to completion, did not show the attitude of working hard in completing school work, impatient and not trying to the maximum to do his own schoolwork. Another study by (Rosmeriani, Suarni, Dharsana, 2017) in his observations found that some students were unable to do school work until they finished their own effort, always giving up and asking friends for help in completing school work. If students with self-endurance problems are left and not given an intervention, it will have an unfavorable impact on the students themselves in carrying out their daily lives and hampering the development of students' self-potential.

Subject teachers currently complain of student behavior that tends to have low self-endurance, because it affects the achievement of learning outcomes. On the other hand, subject teachers also experience difficulties in how to have students have the motivation and responsibility to do the tasks given. This has become one of the foundations of researchers as BK teachers to develop a self-endurance instrument. The preparation of this self-endurance instrument is considered important to support the professional duties of a BK teacher, one of which is an effort to find out students' self-endurance, especially in the current covid-19 pandemic situation where students learn and teachers give assignments by online, so from that the preparation of an online self-endurance questionnaire that can be accessed via Google form is right to do. By knowing the relative high or low self-endurance of a student, the BK teacher will have accurate data about the self-endurance of each student and of course the BK programs that will be arranged later can be more on target. Guidance and Counseling teachers can also provide guidance to students, and this will certainly help the subject teacher condition the class and improve the achievement of learning outcomes.

Research by (Barida & Sutamo, 2016) that examined the development of questionnaire instruments found there is still many BK teachers in schools that did not yet have a student's personal measurement instrument. Everyone will face various challenges and obstacles in the future in achieving his goals. Therefore, the ability to withstand all obstacles must be developed as early as possible (Parvathy, U., & Praseeda, 2014). If students who have symptoms of low self-endurance are still left, it will have a negative impact on the students themselves, namely the accumulation of students' assignments or work because they are not done and completed, over time students become lazy trying to complete each assignment, and the loss of confidence will student's ability to work on and complete the assignment until the stress occurs in students (Montarello, S., & Martens, 2005). This can be caused because students have the wrong perception of themselves, and the challenges faced. Students are expected to have self-endurance and be able to overcome difficulties and obstacles so that every job or task that students get can be completed properly and optimally. Based on the explanation, students who have low endurance must be able to be detected and intervened with the Counseling Guidance service that can be provided by BK teachers or school counselors. In an effort to intervene in students with low self-endurance, previously students must be able to detect whether students really have low or high self-endurance. In measuring self-endurance students of BK teachers certainly need instruments that can be used to detect self-endurance. However, the observation of BK teachers in SMP Negeri 1 Mengwi did not yet have an instrument to measure student self-endurance, and BK teachers at the school did not know about self-endurance.

The instrument is a tool that can be used to measure the value of observed items (Theunissen, de Wolff, & Reijneveld, 2019). In this study the instrument used to measure student self-endurance was a questionnaire. (Black & Reynolds, 2016) Questionnaire is a data collection technique by giving several questions or statements answered by respondents. Other opinions from (Kraaij & Garnefski, 2019) questionnaires are research instruments consisting of several items of questions to be answered by respondents that are useful for gathering data or symptoms that are expected. The questionnaire can be considered as a written interview with print and online media. With the questionnaire, the necessary data can be collected quickly, in detail, and accurately, which is useful for large and small populations. Questionnaires can be an effective method

in measuring individual behavior, attitudes, opinions of respondents in large numbers and can gather information in a short time. In providing information, the questionnaire can describe the client's situation in full, the strength of the questionnaire in providing information is that it can help the therapist in refining the topic of problems or symptoms that arise on the client and can help monitor changes (Horvath & Röthlin, 2018). The instruments compiled in this study were self-endurance questionnaire instruments.

Endurance is an individual's ability to survive in the face of difficulties, obstacles, or problems in the process of completing a task and work (McCormick, A., Meijen, C., & Marcora, 2015). Every individual who wants to achieve success must have endurance or endurance in dealing with problems and obstacles, someone who can deal with problems and obstacles wisely, and can persevere to achieve goals will provide success for his own future (Pangma, R., Tayraukham, S., & Nuangchalerm, 2009). Endurance (End): tenacity, to keep at a job until it is finished (Ferrara, 1996). Endurance is endurance for how long the difficulties will last (Rakhmawati, 2016). Endurance: Persisting in any task undertaken (persisting in every task performed) (Dilmaç, 2009). I need of endurance "the need to persist in carrying out tasks to completion" (Syafuddin & Tommy, 2016). "Self endurance is the need to remain resistant to overcome obstacles in the process of achieving the expected goals, including persevering to do work until completion, trying to survive completing work until completion and persisting to work hard until completion" (Dharsana, 2015).

Based on the explanation above, to help students intervene in self-endurance, help provide effectiveness in counseling activities, as well as provide information to BK teachers in handling students with low self-endurance. It is necessary to have data collection tools to obtain information or symptoms of self-endurance. So this research focuses on developing the Middle School Students Self Endurance Questionnaire.

Method

This research is a research and development or research and development (R&D). R&D is a process of developing and validating educational products. The model used in this study is the development of the 4D model. The 4-D (Four D) development model is a learning device development model. This model consists of four main stages, namely: 1) Define, 2) Design, 3) Develop and 4) Disseminate. This method and model were chosen because it aims to produce products in the form of self-endurance instruments.

The product in the form of a self-endurance questionnaire instrument is then tested for content validity using Lawshe data analysis techniques, to determine the extent to which an instrument measures what it wants to measure. Next, a reliability test is performed to determine the extent to which an instrument is consistent in measuring a symptom if the same measurement is repeated (Taber, 2018). Validity test is done to find out how well the instrument measures what is meant to be measured (Ab Aziz, Yusof, & Mokhtar, 2019). The content validity in the study was carried out by five experts who were competent in the Guidance for Counseling and Psychology. The data analysis technique used is the Lawshe CVR formula which is a test to find out how many experts rate valid self-endurance instrument items (Taherdoost, 2018). This formula produces values with a range of numbers from +1 to -1, positive values indicate that half the writers rate items as important. The greater the CVR value of 0, the more "important" and the higher the validity of the product content (Hendryadi, 2017).

$$CVR = \frac{n_e - N/2}{N/2}$$

Instrument to Measure Self Endurance)

Sumber: (Baghestani, Ahmadi, Tanha, & Meshkat, 2019)

In addition to CVR, the data analysis used is the CVI (content validity index), which is an assessment carried out by a team of experts to determine whether each item in the scale, relevant to its construct, with the formula:

$$CVI = \frac{\sum CVR}{k}$$

Sumber: (Lawshe, 1975)

The reliability test is carried out on the self-endurance instrument, with the aim to measure the extent to which the instrument provides stable and consistent results. (Chan & Idris, 2017) Reliability testing is important because it refers to the consistency of all parts of the measuring instrument, which in this study is a self-endurance questionnaire. The most common and most reliable measurement of reliability used in this study is the Cronbach Alpha coefficient using Microsoft excel 2010 for windows.

Results and Discussion

This research is a type of Research and Development (R&D) with a product developed, namely the self-endurance questionnaire instrument for junior high-school students. The development research model is the 4D model pioneered by (Thiagarajan, S; Semmel, D S; Semmel, 1974). The 4D model consists of four steps of research activities, namely the first stage of defining or defining stage to define the needs in developing the product of the self-endurance questionnaire instrument by collecting references or references in supporting the development of the instrument; The second stage is the design or design of self-endurance questionnaire product instruments that include the preparation of conceptions, the preparation of the grid, and the preparation of questionnaire statement items; The third stage is the development of the self-endurance instrument which includes product trial activities for five experts or practitioners in the field of guidance and counseling; and the fourth stage, namely disseminate or dissemination, which in this study was not carried out because it considers several issues related to the public health situation in the presence of the COVID-19 pandemic.

The self-endurance questionnaire instrument that has been compiled subsequently is assessed or tested by experts or practitioners in the field of Counseling Guidance. This assessment is carried out to determine whether the instrument developed is valid or not. Validation by experts also aims to obtain information, criticisms and suggestions, which are then used to improve the instrument. In this study, validation was carried out by five experts consisting of three lecturers of the Undiksha Counseling Guidance Postgraduate Program and 2 BK teachers. Based on the results of the calculation and analysis of CVR data per item self endurance questionnaire statement. The results obtained in the CVR test are each item questionnaire statement obtained a value of more than 0 (CVR > 0) which means that all items in the self-endurance questionnaire instrument are declared valid.

The CVI calculation gets a value of 0.98, which is more than 0 or (CVI > 0) which means the self-endurance questionnaire instrument is declared valid. In addition to these values, experts and practitioners

provide some suggestions for improvements to the contents of the instrument by taking into account the effective use of language as well as improvements to the grammar concerning the neatness and suitability of the writing on the instrument.

The reliability test of the self-endurance questionnaire instrument using the Cronbach Alpha coefficient or alpha r using Microsoft excel 2010 for windows obtained the value of r alpha = 0.918, which means the reliability of the self-endurance questionnaire instrument is classified as very high.

Conclusion

Based on the results of this research and development, it can be concluded that: This research and development resulted in an instrument in the form of the Development of a Self Endurance Instrument in Middle School Students. The questionnaire instrument is a data-collection tool used to measure the symptoms of self-endurance in junior high-school students. Self endurance is the ability of individuals to stay afloat in facing obstacles and obstacles in order to achieve the expected goals. The self-endurance instrument developed in this study has met the criteria for acceptance to be used as an instrument to support the implementation of counseling guidance services. The results of the analysis of the data obtained are self-endurance questionnaire instruments declared valid.

Acknowledgment

The author would like to thank and appreciation as much as possible for all the help, guidance, and contributions of all relevant parties who have worked hard for the development of this research. The author would like to thank the supervisors of this study, Prof. Dr. I Ketut Dharsana, M.Pd., Kons as the first supervisor, and Prof. Dr. Ni Ketut Suarni, MS., Kons as the second counselor and at the same time as the Head of the Postgraduate Program of Undiksha Counseling Guidance, who has always given all directions in this research. Dr. I Ketut Gading, M.Psi., As a validation of experts, Ni Made Arini, M.Pd., Ni Wayan Ari Farnili, S.Pd., as a BK teacher who was willing to test experts. As well as all other relevant parties that have provided support for this research have achieved the expected results.

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First Publication Right: BISMA The Journal of Counseling

<https://doi.org/10.xxxx/xxxxx>

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Word Count:

