

Development of a Parental Discipline Measurement Instrument for Upper Elementary School Students

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Abstract—This study aims to develop a valid and reliable assessment instrument to measure parental discipline and its influence on elementary school students' behavior. Using the ADDIE model, the research involved a comprehensive process, including literature review, expert validation, and statistical analysis (EFA and CFA) to design an instrument that measures four key dimensions: parental control, democratization in the family, emotional bonding, and parental empathy. The instrument underwent two trials involving 37 and 104 students, confirming its content and construct validity, with factor loadings above 0.400 in EFA and good model fit in CFA. Reliability testing indicated a Cronbach's Alpha above 0.7, ensuring consistency. The instrument was implemented in SDN Tegalrejo 1 Yogyakarta, where it demonstrated effectiveness in measuring parental discipline levels, providing valuable insights for teachers to enhance classroom management and student support. The study concludes that the developed instrument is both valid and reliable, offering an effective tool for assessing the influence of parental discipline on students' behavior and facilitating teacher-parent collaboration in education.

Keywords— Parental discipline, student behavior, assessment instrument, validity and reliability.

I. INTRODUCTION

Education is a deliberate and organized endeavor to establish a learning environment and learning process, enabling students to optimally develop their potential. This is as emphasized in Law No. 20/2003 on the National Education System (SISDIKNAS), especially Article 1 Paragraph 1 and Article 3. The main purpose of education is to form human beings who are faithful, pious, noble, intelligent, creative, independent, and responsible as democratic citizens. One important component in education is the role of parents. Law No. 20/2003 Article 7 Paragraph 2 states that parents of children of compulsory school age have the obligation to provide basic education to their children.

Education is closely related to the development of human resources. The quality of human resources is largely determined by the quality of education received early on, where the family is the first and main environment in the formation of children's character and behavior. The family provides the basis for the formation of children's behavior, character, morals and education [1]. Children who are raised with proper care will grow into responsible adults with good character. The development of a child's personality is influenced by what he receives during the golden age, namely the first 0-6 years of life and the ability to go through each phase of development, if a child gets good education and care, it will result in the child having a good personality as an adult.

Family types are divided into three, namely nuclear families (father, mother, and child), conjugal families (father, mother, child, grandparents), and extended families (with other relatives) [2]. Of the three, the nuclear family has the greatest influence on the formation of children's character and emotions. This influence is mainly realized through parenting patterns applied by parents.

Parenting is the way parents guide and raise children both physically and psychologically. Parenting is divided into three [3]: (1). Authoritarian parenting emphasizes absolute obedience to children, minimal two-way communication, and is often accompanied by punishment. (2). Democratic parenting that emphasizes open communication, provides freedom but within limits, and encourages children to take responsibility. (3). Permissive parenting that provides unlimited freedom, minimal supervision and control, which risks children violating social norms.

This parenting will shape the child's attitude, character and morality. Parents should help their children build self-discipline, which is essential to face the era of globalization that demands internal control and adherence to moral values. Discipline is an important character trait in supporting children's learning process. Teachers have an important role, but the influence of parents is greater because they spend more time with children. Therefore, collaboration between parents and teachers is key to the success of children's education. Teachers need to understand the parenting patterns applied by parents, because that is how student behavior is formed at school. Currently, the problems that children often experience are at the level of moral development, where children have problems that are mainly obtained from the surrounding environment which then have an impact on the character that is formed outside the home, Character associated with morality is the ability to learn right or wrong and understand how to make the right choices [4]. Therefore, parental assistance and discipline are very important and have an impact on children's growth.

Several studies that have been conducted previously reveal that knowledge and understanding of the types of parenting is very important for parents, this is because parenting has a significant influence on the formation of children's character [5]. Other research also reveals that the type of parenting used by parents will affect the formation of children's character. For example, the use of democratic parenting is more effective in shaping the character of learning discipline of elementary school students [6]. Further research also revealed a similar thing, namely it was said that parenting patterns had a very large influence on the formation of children's personalities [7]. Based on some of these research results, it can be said that

understanding parenting is needed by parents, because it can affect the development of children's character.

In accordance with the description above, about the importance of knowing the discipline of parenting patterns that affect student discipline behavior to obtain better learning outcomes and the unavailability of instruments to measure, the research will develop a valid and reliable parental discipline measurement instrument. With this instrument, it is expected that teachers can know and understand the disciplinary behavior of their students based on parental discipline and can also be used as material for collaborating with parents in educating children. Based on the limitations of the problem, the problems studied are as follows:

1. How is the construct of the instrument to measure parental discipline of elementary school students?
2. What is the quality of the instrument to measure the discipline of parenting of elementary school students?
3. How are the measurement results using the parenting discipline assessment instrument for elementary school students that has been developed?

II. RESEARCH METHODS

A. Development Model

This research is a research and development (R&D) study using the ADDIE model, known for its systematic approach and continuous evaluation to produce valid and reliable products. The main objective is to design an assessment instrument for the discipline aspect of parenting styles for elementary school students.

B. Development Procedure

The development of the assessment instrument for the discipline aspect of parenting styles in this study follows the ADDIE model, consisting of five main stages: analysis, design, development, implementation, and evaluation. The analysis stage involved observations and interviews to identify the needs, characteristics of students, and parenting styles. In the design stage, an instrument blueprint was prepared, including the determination of specifications, scale (using a 5-point Likert scale), scoring system, indicators, and items.

The development stage includes expert validation, an initial trial involving 37 students, and a broader trial involving 104 students with data analysis using EFA and CFA to ensure validity and reliability. After revisions, the instrument was implemented through direct measurement of students and interpretation of results based on scores. Finally, a comprehensive evaluation was conducted at each stage to ensure the feasibility and effectiveness of the instrument.

This study was conducted in March 2024 at two public elementary schools in Yogyakarta.

C. Product Trial Design

The instrument trial for assessing student character was conducted in the second semester of the 2023/2024 academic year at elementary schools in Yogyakarta through four stages. First, expert review was conducted via expert judgment to assess content, construct, and language aspects, providing initial feedback for instrument refinement. Second, a limited trial was carried out with 37 respondents to explore the factor structure using exploratory factor analysis (EFA). Third, a broader trial with 106 students was conducted to test factorial

validity through confirmatory factor analysis (CFA)[8]. Fourth, the instrument was administered to assess its characteristics and effectiveness for more accurate use.

The trial subjects were elementary school students in Yogyakarta selected using purposive sampling, involving SD Pingit and SD Tegalrejo 1, as they represent a diversity of socioeconomic backgrounds and parenting styles.

Data collection was conducted using three techniques: (1) Interviews with teachers to explore discipline assessment processes in schools; (2) Questionnaires for subject matter and education experts to assess the instrument's feasibility; and (3) Self-assessment questionnaires using a 5-point Likert scale targeting indicators of discipline behavior in physical education learning.

Data analysis included assessments of validity, reliability, and result interpretation. Content validity was evaluated by two experts using the Aiken's V scale (Istiyono, 2020). Items were considered suitable if the score was $\geq 75\%$. EFA was used to identify the latent structure of the instrument [9], while CFA tested the alignment of the theoretical model with empirical data [8], using goodness-of-fit indicators such as GFI, RMSEA, CFI, TLI, and SRMR [10,11].

Reliability was tested using Cronbach's Alpha formula [8,12], with an instrument deemed reliable if the coefficient was >0.6 [13]. The measurement results were analyzed descriptively and categorized based on the conversion of quantitative data to a five-level qualitative scale.

III. RESULT AND DISCUSSION

A. Construction of the Parental Discipline Assessment Instrument

In the analysis phase, a literature review and teacher interviews were conducted to understand the need for an assessment of parental discipline that influences student behavior, particularly in physical education. Knowledge of parenting styles can help teachers adapt teaching methods, improve classroom discipline, build more personal relationships with students, and design more relevant learning programs. The benefits of understanding parental discipline include adjusting instructional approaches, enhancing classroom management, and fostering positive character traits such as responsibility and cooperation. Teachers can use this knowledge to develop effective classroom management strategies, prevent disciplinary issues, and motivate students.

During the design phase, the assessment instrument was created based on the analysis results, focusing on a Likert scale that includes statements about parental discipline. This instrument is designed to measure four main aspects: democratization in family life, parental control over children's behavior, parental bonding with children, and parents' ability to understand their children's world. The instrument was then tested for validity and reliability.

The researcher developed an assessment sheet consisting of 32 statements based on 16 indicators that represent various dimensions of parental discipline. This instrument is expected to provide more accurate information about the influence of parenting styles on children's discipline and be used by teachers to identify and address challenges faced by students.

The literature review indicates that assessments based on

parental discipline are crucial to support students' character development in physical education. Self-assessment is integrated into the process to give students an opportunity to reflect on their own disciplinary behavior. This assessment aims to reinforce positive values such as responsibility and integrity while increasing students' awareness of the importance of discipline in everyday life [14].

The use of self-assessment can enhance students' confidence and responsibility for their development and help teachers provide constructive feedback. Therefore, the developed instrument is intended not only to measure discipline but also to encourage students to become more self-aware and accountable.

The developed assessment instrument is in the form of a rating sheet to be completed by students. It measures discipline based on 16 indicators focused on four main aspects of parenting style. The use of this instrument can provide deeper insight into how parenting styles influence student behavior and help design more effective parenting strategies [15].

Overall, the development of this instrument aims to provide clear guidance for parents and teachers in assessing and improving student discipline. The instrument is also expected to support the creation of a more conducive educational environment and the shaping of student character.

B. Analysis of the Validity and Reliability of the Character Assessment Instrument

This section presents the findings related to the validity and reliability analysis of the character assessment instrument, as well as the process it underwent to ensure its validity and reliability. Before presenting the results of this analysis, a comprehensive trial of the character assessment instrument was conducted to ensure that the instrument had undergone appropriate validation and reliability testing.

1. Product Trial Results

After the parental discipline assessment instrument was designed, the first step in testing the instrument was to ensure that it accurately measures parental discipline and functions effectively. The trial was conducted in several stages to evaluate the validity and reliability of the instrument. Prior to distributing the instrument to respondents, content validation was essential to ensure that the questions aligned with the research objectives and possessed a high degree of accuracy.

The initial trial phase involved exploratory factor analysis (EFA) to identify valid items, followed by a second trial using confirmatory factor analysis (CFA) to verify and confirm the initial results. This process sought to evaluate if the instrument effectively measured the concept of parental discipline.

In the first trial, the instrument was tested with 37 students to assess how parental discipline influences student behavior. This first trial resulted in 32 validated items, as reviewed by experts. The second trial was conducted in two elementary schools in Yogyakarta, involving 104 students to confirm the previous findings.

a. Content Validity

Content validity was conducted after the instrument was developed and revised based on input from experts. Validation

results from two education and physical education experts showed that the instrument was valid and suitable for further trials. These results were accompanied by comments and suggestions used to improve the instrument [16]

b. Construct Validity: Exploratory Factor Analysis (EFA)

EFA was conducted using SPSS to identify the underlying factors of the assessment instrument and eliminate less valid items. EFA helps determine the relationship between measured variables and appropriate latent factors. In this analysis, items with factor loadings below 0.400 were removed, while those above 0.400 were retained.

The EFA results showed that all items had factor loadings above 0.400, so all items were retained in the instrument. According to the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test, the sample was deemed adequate and appropriate for further factor analysis. These results indicated that the instrument is reliable for assessing parental discipline.

From the 32 items, the EFA identified four dominant factors that explained 71.619% of the variance. This suggests that the developed instrument effectively and validly measures parental discipline [17].

c. Construct Validity: Confirmatory Factor Analysis (CFA)

CFA was performed using Lisrel to verify the EFA results. CFA aims to confirm the factor model used to measure the construct. The second trial in elementary schools in Yogyakarta involved 104 students, and the CFA results confirmed that the developed character assessment instrument consisted of four main factors: parental control over children's behavior, democratization and openness in the family, parents' ability to empathize with their children's world, and parental bonding in realizing moral values.

The CFA testing showed a p-value greater than 0.05, a Root Mean Square Error of Approximation (RMSEA) of 0.029, a Comparative Fit Index (CFI) of 0.98, and a Standardized Root Mean Square Residual (SRMR) of 0.069. These indicators confirm that the factor model fits the empirical data and has a good level of fit [18].

d. Instrument Reliability

Instrument reliability was tested using SPSS to determine the consistency of the instrument. The reliability test showed a Cronbach's Alpha value greater than 0.7, indicating that the instrument is reliable for measuring parental discipline [19].

2. Final Product Review

a. Implementation Stage

After the developed character assessment instrument was tested and proven to be valid and reliable, it was implemented with students at SDN Tegalrejo 1 Yogyakarta. The implementation process involved carefully and systematically measuring and interpreting the assessment results. During this stage, the instrument was applied in accordance with established procedures.

In the implementation phase, the character assessment instrument took the form of a self-assessment, yielding data in the form of scores ranging from 1 to 5. The instrument consisted of 29 statement items, with the highest possible score being 5 and the lowest 1. The measurement results revealed a score distribution that reflected the level of parental discipline.

b. Evaluation Stage

Following the implementation stage, an evaluation was conducted to assess the effectiveness of the applied character assessment instrument. The evaluation involved semi-structured interviews with students and teachers who participated in using the instrument. Interview results indicated that the character assessment instrument was effective in assessing parental discipline and its impact on students' disciplinary behavior. Four interviewed teachers gave positive feedback regarding the accuracy of the assessment results produced by the instrument. The instrument demonstrated potential for wider application in various schools, and evaluation findings suggested that it could effectively measure the influence of parental discipline on student behavior.

Research Limitations

Although the developed character assessment instrument proved to be valid and reliable, this study has limitations. One of the primary limitations is that the research focused solely on parental discipline as a factor influencing students' disciplinary behavior, while many other factors may also play a role, such as cultural background, family values, life experiences, and so forth. These factors are difficult to measure objectively and may significantly affect the research outcomes.

IV. CONCLUSION

Based on the foregoing discussion, the conclusion of this study is as follows:

1. The instrument was constructed through a comprehensive process involving literature review, expert validation, and statistical analysis. It consists of 32 statement items based on 16 indicators that reflect four key dimensions of parental discipline: parental control, democratization in the family, emotional bonding with children, and parents' empathy and understanding of their children's world. These dimensions were confirmed through Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), ensuring a solid theoretical and empirical foundation for the instrument.
2. The instrument demonstrated high quality in terms of validity and reliability. Content validity was confirmed by expert judgment, with all items receiving favorable evaluations. Construct validity was supported by EFA and CFA results, indicating that the instrument effectively captures the construct of parental discipline. Additionally, the instrument showed high reliability, with a Cronbach's Alpha coefficient above 0.7, suggesting consistency in measurement.
3. The implementation of the instrument in SDN Tegalrejo Yogyakarta revealed that it could effectively measure the level of parental discipline as perceived by students. The data obtained reflected a varied distribution of discipline levels, which aligns with the diverse parenting styles in the school community. Evaluations conducted through interviews with teachers and students further validated the instrument's usability and accuracy. Teachers reported that

the results were consistent with their observations and provided useful insights for classroom management and student support.

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