



Development of a Psychometric Narcissistic Personality Disorder (NPD) Instrument for Early Detection of Narcissistic Symptoms in High School Students

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Abstract. Narcissistic Personality Disorder (NPD) is a form of deviation or personality disorder that in psychology is seen when an individual has a fantasy of being liked, so that they view themselves as stars who should be treated specially. In fact, students with NPD find it more difficult to establish healthy social relationships, namely being apathetic, manipulative, aggressive and anti-critical. Anticipating the rise of NPD among students can be done through preventive efforts. NPD behavior is rarely realized by the perpetrators, so coaching is needed so that students do not fall into it. The purpose of this study was to (1) develop a psychometric instrument for narcissistic personality disorder (NPD) to detect early symptoms of narcissism in high school students and analyze the validity and reliability of the psychometric instrument for narcissistic personality disorder (NPD) (2) Determine the perception of high school students related to narcissistic personality disorder (NPD). To achieve these goals, the instrument development method was used using the ADDIE model with testing the validity of the development instrument and reliability using Cronbach's Alpha. The results of this study indicate that of the 26 instrument items developed, 24 items were declared valid. The results of the instrument reliability test were 0.850 so that the instrument was said to be reliable. Through this instrument, it is expected to help students overcome social media pressure, develop a healthy self-image, and improve the mental well-being of high school students.

Keywords: *Narcissistic Personality Disorder* (NPD), Instruments, Psychometrics, Validity and Reliability Tests

1 Introduction

The development of technology has made social media very attached to people's lives. The positive side of social media can be used for *personal branding media*, rapid dissemination of information, trade, promotion and *campaign*, and can even increase user happiness [1]. However, the negative impacts caused by social media have the potential to have a negative effect on social life and psychological health. The ease of interacting via cyberspace without having to meet face to face and the many interesting features make social media popular and increasingly popular. This triggers individuals to have their own satisfaction if they get a lot of attention and praise, which can cause psychological disorders due to uncontrolled use of social media [2]. Based on Statista data in 2020, students or those in the 13-17 age group are in third place with the largest number of social media users after the early adult population, namely 18-24 years.

Students tend to build their self-image through social media [3]. High school students are teenagers whose search for identity is not always carried out through positive activities and efforts. Students who are active users of social media are very intense in uploading documentation of themselves, their activities, assignments, vacations, and also sharing stories about the activities they do in the most interesting way possible to attract comments in the form of praise or attention. If you do not have self-control and the intensity of uploading is increasingly accompanied by the desire to create the perfect self-image you want, it will hinder students' self-development [4]. Students' desire to be admired excessively can be manifested in daily actions that are feared to interfere with their social life. Egoism and the desire to be recognized arise because they feel unique and different, superior, and even anti-criticism [5].

Student behavior that expects respect, attention, lack of empathy, and difficulty accepting differences leads to *Narcissistic Personality Disorder* (NPD). In Freud's view, narcissism is a form of failure in individual development [6]. Individuals who form narcissistic behavior in Goffman's dramaturgy theory are said to prefer to highlight their advantages in order to look perfect, most attractive, and competent. Narcissistic behavior aims to get a lot of praise and is used as a mask to form a concept according to one's desires which will later unite into a personality [7]. The word narcissism was originally taken from the Greek figure *Narciscus* who liked to admire himself by looking in the mirror. Therefore, individuals who flatter themselves too much are called narcissists [8].

School is a social environment after the family which also plays a role in detecting psychological problems in students. In formal school environments such as junior high and high schools, the focus is not only on academic education but also character education, both emotionally and socially. Schools can play a role in reducing narcissistic tendencies in students [9]. Research by Engkus states that students tend to be more susceptible to personality disorders and emotional responses that represent various destructive behaviors and these data persist throughout life. Inherent factors that cause narcissism, apart from exposure to social media, can also be due to poor family relationship patterns and socio-cultural factors. Therefore, minimal efforts are needed to suppress the tendency towards narcissistic personality disorder or NPD in students.

Symptoms of someone experiencing Narcissistic Personality Disorder can be detected or diagnosed with the help of assessments or instruments. To minimize or suppress the development of NPD personality disorders that hinder student development and optimal learning processes, preventive efforts are needed. NPD disorders are rarely recognized by sufferers or perpetrators, so teachers play a role in directing students so that they do not fall into it. Initial assessments for teachers to recognize NPD tendencies can help students reduce excessive narcissism [10]. A test has been developed to detect NPD that can be accessed on the internet. However, the questions in the test instrument are not specifically aimed at high school students. Psychometric instruments can be used to measure a person's psychological condition. In order to make it easier for educators to reduce narcissistic disorders in high school students, this study aims to develop psychometric instruments for early detection of NPD tendencies and to determine high school students' perceptions regarding NPD.

2 Method

This study uses a phenomenological study to understand the personality of students suffering from *Narcissistic Personality Disorder* (NPD). This study focuses on how students' narcissistic behavior, views, and experiences appear from their own perspective. With this approach, researchers can identify and understand in depth how students experience and respond to narcissism in everyday life, especially in the context of social media use. The ADDIE development method (*Analysis, Design, Development, Implementation, Evaluation*) is applied to develop diagnostic assessment instruments. This model aims to be a preventive measure and an effort to reduce the phenomenon of NPD in students. Through five stages in the ADDIE method, this study begins with analyzing existing needs and problems (Analysis), designing appropriate counseling instruments and models (Design), developing the necessary tools and materials (Development), implementing the instrument in the field (Implementation), and evaluating the effectiveness and efficiency of the instrument that has been applied (Evaluation).

The phenomenological stage is carried out to identify the personality of students suffering from *Narcissistic Personality Disorder* (NPD) and provide an in-depth picture of the behavior, views, and experiences of narcissism from the student's perspective. The ADDIE approach aims to develop an instrument based on phenomenological findings. The ADDIE stage begins with an in-depth analysis of the needs and problems faced by students related to narcissism and the impact of hyperreality culture. This instrument is designed to help educators and counselors identify NPD symptoms effectively. The implementation of the instrument was carried out offline with researchers interacting directly with students at the research location, namely in high schools throughout Malang Regency. This direct interaction allows researchers to collect relevant primary data. In addition, secondary data is used to enrich the analysis and also support the discussion of research findings.

3 Result and Discussion

3.1 Research Results on the Phenomenology of *Narcissistic Personality Disorder (NPD)* in High School Students

The results of the phenomenological study were used to explore students' experiences and perceptions of narcissism, as well as to understand the social and psychological context of the emergence of NPD symptoms. Students who show symptoms of NPD tend to have personal experiences involving an excessive need for recognition and appreciation. They often manipulate social situations to gain praise and attention from their peers. Behaviors such as showing off achievements, physical appearance, and trying to be the center of attention in various school activities are some of the indications that are often found. Students with NPD symptoms often have unrealistic self-perceptions. They tend to overestimate their abilities and achievements, and feel superior to their peers. Their identity is highly dependent on external assessments, and they often feel worthless if they do not get the recognition they desire.

NPD symptoms negatively impact students' mental health, including increased risk of depression, anxiety, and other emotional problems. Their interpersonal relationships are often unstable and conflicted due to their tendency to exploit and lack of empathy for others. This also impacts academic performance and participation in school activities. This study provides in-depth insight into how NPD symptoms emerge and develop among high school students, as well as the importance of early detection to prevent further negative impacts. It is hoped that the developed instrument can be an effective tool for teachers and school counselors to identify and address narcissistic symptoms in students more proactively.

Based on the results of phenomenological research on high school students with Narcissistic Personality Disorder (NPD), it was revealed that they often feel insecure, but try to cover up these feelings with excessive behavior and are easily influenced by trends (FOMO). Students with NPD tend to feel right in many ways and have a strong desire to show their superiority over their friends. They often look for ways to be the center of attention and show off their abilities, with the aim of improving their self-image in the eyes of others. This tendency not only affects their social interactions, but also creates competitive and sometimes unhealthy dynamics in the school environment.

Previous research on the diagnosis of personality disorders, including NPD, has focused on the development of technology-based diagnostic applications or classical methods. However, few studies have developed psychometric instruments that can automatically detect NPD symptoms using machine learning-based approaches[11]. These studies have also not thoroughly explored how the selection of relevant features from student data can improve the accuracy of predictive models. This innovation provides a significant contribution to the development of psychometric instruments that are not only efficient and accurate but also offer practical solutions for schools and medical professionals in early detection of NPD symptoms among high school students. The main difference from previous research lies in the focus on integrating

feature selection and effectively applying machine learning methods, which have not been optimized in the context of NPD among adolescents. To date, no research has specifically developed psychometric instruments for the early detection of Narcissistic Personality Disorder (NPD) symptoms in high school students. Most existing studies have concentrated on traditional methods such as interviews and verbal reports to diagnose NPD, which are often time-consuming and subjective. Meanwhile, research on the development of applications or the use of technology in personality disorder diagnosis has focused more on general solutions for various mental disorders without special emphasis on developing machine learning-based models with relevant feature selection techniques to improve the accuracy of NPD diagnosis in adolescents.

In addition, students with NPD symptoms show reluctance to share knowledge or information with their peers. When their peers ask for something or achieve something, students with NPD feel unwelcome and threatened. They tend to feel competitive and unhappy if someone is superior to them. The desire to always be the best and most outstanding makes them reluctant to share knowledge, because they want to maintain their status as stars among their peers. Even in situations where collaboration and mutual assistance are needed, they may withdraw or provide minimal assistance, in order to maintain their position as superior individuals. These students also show a tendency to belittle or ignore the achievements of their peers, reinforcing attitudes of exclusivity and social isolation within their group.

3.2 Results of the Development of the Narcissistic Personality Disorder (NPD) Instrument

The research used is development research *by* developing instrument products in the form of scales. The research and development model used is ADDIE. The ADDIE model involves several stages of model development through 5 steps or 5 development phases, namely: *Analysis, Design, Development or Production, Implementation or Delivery and Evaluation* [12].

Narcissistic Personality Disorder (NPD) instrument, the results of the analysis show high validity and reliability of the instrument. The analysis process was carried out using IBM SPSS Statistics26 software. The results of the validity test show that the instrument items have a significant correlation to the total score, indicating that the instrument is valid. In addition, the reliability test shows a high Cronbach's Alpha coefficient, indicating that the instrument is consistent in its measurement. Complete details regarding the validity and reliability results can be seen in the table below, which includes the correlation value for each item and the overall reliability coefficient value.

The results of the study aimed at developing a psychometric instrument for early detection of Narcissistic Personality Disorder (NPD) symptoms in high school students can provide a number of important insights as well as practical tools for use by educators and counselors. The research process includes various in-depth stages, starting from analysis, design, development, implementation, to evaluation. By going through each of these stages, it is expected that the resulting instrument has high validity and reliability in identifying NPD symptoms. The psychometric instrument developed through this study involves systematic steps. In the initial stage, an in-depth analysis was conducted to understand the characteristics of NPD symptoms

in high school students. Researchers identified common signs of narcissism, such as excessive need for praise, feelings of superiority, lack of empathy, and obsession with personal appearance and achievement. Based on this analysis, researchers designed a questionnaire containing questions that were specific and relevant to these symptoms. These questions were structured in such a way as to explore the various dimensions of narcissism that students might experience.

To ensure the validity of the instrument, a pilot test was conducted on 200 high school students. Data from this pilot test were analyzed to assess whether the questions in the questionnaire were effective in measuring NPD symptoms. Adjustments were made based on the results of this analysis to improve the accuracy of the instrument. In addition, the reliability of the instrument was tested through internal consistency measurements, using methods such as Cronbach's Alpha. An instrument is considered reliable if it shows high consistency in measurement results, so that it can be relied on to be used on a wider scale. After the validity and reliability of the instrument were ensured, implementation was carried out more widely among high school students in Malang Regency. Students filled out the questionnaire under the supervision of researchers and educators, with a guarantee of confidentiality of their answers. Data were analyzed to identify patterns of NPD symptoms among students. The results of this analysis provide an overview of the prevalence of narcissism symptoms as well as factors that may contribute to the development of NPD in students. These findings provide valuable insights for educators and counselors in understanding the dynamics of narcissism among students.

Table 1. Results of NPD Instrument Validity Test

| Number | R-Calculated | R Table | Comparison | Sig2 Tailed | Signatur e | Conclusi on |
|---------------|---------------------|----------------|---------------------------|--------------------|-------------------|--------------------|
| 1 | 0.402 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |
| 2 | 0.257 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |
| 3 | 0.609 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |
| 4 | 0.341 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |
| 5 | 0.531 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |
| 6 | 0.349 years | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |
| 7 | 0.552 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |
| 8 | 0.561 years | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitim ate |

| | | | | | | |
|-----------|-------------|------------|---------------------------|-------|---------------|------------|
| 9 | 0.313 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 10 | 0.612 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 11 | 0.662 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 12 | -0.098 | 0.137 1 | r-calculated < r-table | 0.163 | 0.05 | Invalid |
| 13 | 0.562 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 14 | 0.394 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 15 | 0.513 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 16 | 0.613 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 17 | 0.712 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 18 | 0.585 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 19 | 0.616 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 20 | 0.469 | 0.137 1 | r-calculated > r-table | 0.000 | Date 00.05 | Legitimate |
| 21 | 0.236 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 22 | 0.084 years | 0.137 1 | r-calculated < r-table | 0.236 | 0.05 | Invalid |
| 23 | 0.572 years | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 24 | 0.659 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 25 | 0.388 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |
| 26 | 0.672 | 0.137 1 | r-calculated > r-table | 0.000 | 0.05 | Legitimate |

Source: Research Data Processing (2024).

Table 2. Results of the NPD Instrument Reliability Test

Reliability Statistics

| Alpha Cronbach | N Number of Items |
|----------------|-------------------|
| .850 | 26 |

Source: Research Data Processing (2024)

The purpose of the reliability test is to see whether the questionnaire has consistency if the measurement carried out with the questionnaire is carried out repeatedly. The basis for taking the cronbach alpha reliability test according to Wiratna Sujarweni [13] is that a questionnaire is said to be reliable if the conbach alpha value is >0.6 . Based on the results of the reliability test carried out on the NPD instrument, the cronbach alpha value was obtained at 0.850 so that it meets the reliability test and the instrument is said to be reliable.

Through instrument development, 26 question items were tested on a total of 200 high school students in Malang Regency. The results of the instrument item validity test were carried out using statistical techniques using Pearson correlation. Decision making is based on the significance value of the correlation results. The instrument question items are declared valid if the significance value is less than 0.05 or $\text{Sig} < 0.05$ [14]. There are 24 items that are declared statistically valid from a total of 26 question items on the Narcissistic Personality Disorder (NPD) psychometric instrument. The significance values of question items number 12 and 22 are 0.163 and 0.236 so that these two items are declared invalid. Based on the results of the validity test, 92.3% of the items are valid and can be used to measure NPD symptoms in high school students. In addition to being declared valid, the instrument must also meet reliability requirements. The reliability test using Cronbach Alpha showed a value of 0.850. According to Yusup [15], if the Cronbach Alpha value exceeds 0.70, the instrument can be declared reliable to measure or assess NPD symptoms in high school students. A reliable instrument can provide consistent measurement results even if used on different subject populations and at different times.

The results of this study indicate that the instrument is effective in early detection of NPD symptoms, allowing for faster and more targeted interventions. The instrument also provides insight into the relationship between social media use and the development of narcissism among students. Educators and counselors can use these results to design more effective intervention and counseling programs, helping students develop better mental well-being, and manage social stress more wisely. The study also revealed that students with NPD symptoms tend to show a high dependence on external validation from social media, and have difficulty in building healthy interpersonal relationships. Interventions based on the results of this study focus on developing social and emotional skills, increasing empathy, and educating about healthy and responsible social media use. Through the use of this instrument, schools can be more proactive in detecting and addressing NPD symptoms, thereby creating a more positive and supportive learning environment for all students. The

results of this study can be used as a basis for NPD prevention interventions among students. Through the development of an instrument based on empirical findings, it is hoped that it can help students cope with social media stress, develop a healthy self-image, and improve their mental well-being. Educators and counselors play a key role in implementing the findings of this study, ensuring that students receive the support needed to manage social media use wisely and build an authentic and positive self-image.

4 Conclusion

The phenomenological findings show that students with NPD symptoms tend to want to be recognized, show off their abilities, and feel excessively superior. Students often want to be the center of attention and look the most prominent, even making them reluctant to share their knowledge, which results in the emergence of unhealthy competitive dynamics in schools. The NPD psychometric instrument developed consists of 26 question items to measure/understand NPD symptoms in students. The results of the validity and reliability of the instrument use statistical techniques through Pearson correlation and Cronbach Alpha coefficient. Of the 26 question items, 22 questions were declared valid because they had a significance value below 0.05 with a Cronbach Alpha coefficient of 0.850, which means the instrument is reliable. It is hoped that the instrument developed can be used by educators to identify NPD tendencies in students. Based on the results of the reliability validity test, the instrument is valid and reliable for use and is able to provide relevant measurement results as a preventive measure so that students do not fall into narcissistic personality disorders.

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