



Needs Analysis for a Web-Based Moral Disengagement Scale for Junior High School Students

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ABSTRACT

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This study aims to identify user needs as the basis for developing a web-based Moral Disengagement Scale (MDS) to support early identification of aggressive behavior among junior high school students. The study employed a descriptive research method to analyze the needs of Guidance and Counseling (GC) teachers and students toward the development of a web-based moral disengagement assessment instrument. The participants consisted of 11 GC teachers and 64 junior high school students selected using purposive sampling. Data were collected using the Teacher Needs Questionnaire and Student Needs Questionnaire, consisting of 24 and 18 items, respectively. The instruments were reviewed by experts to examine content validity using the Item-Content Validity Index (I-CVI). Quantitative data were analyzed descriptively using mean scores, standard deviations, and need category interpretations. The findings revealed a high level of need for developing a web-based moral disengagement assessment instrument. The GC teachers showed a mean score of 3.27 (SD = 0.32), with an ideal score percentage of 81.80% and a positive response percentage of 95.80%. Meanwhile, students obtained a mean score of 3.36 (SD = 0.44), with an ideal score percentage of 84.11% and a positive response percentage of 94.81%. GC teachers emphasized the importance of implementation benefits, interpretation of results, and follow-up support within counseling services. In contrast, students highlighted confidentiality, data protection, understandable language, and psychological safety as important aspects of digital assessment acceptance. These findings indicate that the development of a web-based Moral Disengagement Scale should integrate accurate construct measurement, user-friendly design, automated scoring, secure data management, and appropriate counseling follow-up mechanisms. The proposed instrument is expected to support preventive guidance and counseling services while ensuring that assessment results are used as screening information rather than diagnostic or punitive tools.

Keywords: *Aggressive Behavior, Data Privacy, Guidance and Counseling, Moral Disengagement, Web-Based Assessment.*

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INTRODUCTION

Aggressive behavior among junior high school students is a problem that requires attention in educational services, particularly guidance and counseling (GC). Aggressive behavior can be prevented not only by identifying behaviors that have already emerged, but also by understanding the cognitive factors that lead individuals to justify actions that contradict moral norms. In Bandura's (1986) social cognitive theory, individuals may experience moral disengagement, a cognitive mechanism that enables a person to release moral control so that behavior that harms others is regarded as acceptable, justified, or not entirely the person's own responsibility (Bandura, 1999; Bussey, 2023). The moral disengagement construct comprises eight mechanisms: moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, distortion or disregard of consequences, dehumanization, and attribution of blame (Concha-Salgado et al., 2022). Measuring moral disengagement matters because it can reveal students' patterns of cognitive justification before they develop into more serious aggressive behavior. However, moral disengagement should be understood as a cognitive mechanism related to behavior, not as aggressiveness itself.

The need for early identification of moral disengagement is increasingly relevant because aggression, bullying, and antisocial behavior are still found in school environments. Various studies have shown that moral disengagement is associated with adolescents' involvement in aggressive behavior, bullying, and cyberbullying (Gomez Plata et al., 2022; Luo & Bussey, 2023; Thornberg et al., 2023). In the school context, problem behaviors are still often identified only after an incident occurs or is reported by others. GC teachers generally rely on observations, teacher reports, peer information, violation records, and counseling processes once a problem has already occurred. As a result, preventive services are not yet fully supported by information about how students think when they justify negative actions. Yet understanding the mechanisms of moral disengagement can help GC teachers provide more preventive, better-targeted services.

Previous research shows that measuring moral disengagement is a promising approach to understanding negative behavior in adolescents. Earlier studies found that moral disengagement helps explain bullying, cyberbullying, and antisocial behavior by allowing individuals to morally justify their actions (Lee & Jun, 2024; Meydiningrum et al., 2024; Tolmatcheff et al., 2022). In addition, advances in digital technology create opportunities to develop web-based assessment instruments that offer advantages in accessibility, automated scoring, data storage, and rapid presentation of results. However, developing digital assessments for students requires more than transferring conventional instruments into a technological format. Web-based instruments must attend to construct accuracy, ease of use, language readability, data security, and the presentation of results that can be used in GC services (Kemp et al., 2024; Topuz & Kinshuk, 2024).

Although research on moral disengagement in adolescents has grown, several gaps remain that need attention in developing school-based assessment instruments. Most previous studies have examined the relationship between moral disengagement and aggressive behavior or bullying, whereas studies on developing web-based instruments that consider the school context remain limited. In addition, developing digital assessments for students requires considering two main user perspectives: GC teachers, who use assessment results for services, and students, who provide personal information. The differences in these two users' needs must be analyzed so the instrument not only has good measurement quality but is also acceptable, secure, and supportive of GC services without stigmatizing students. Needs analysis is therefore an important stage for identifying instrument characteristics that fit field conditions before further product development is undertaken (Buchan et al., 2024; Wuttikamonchai et al., 2024).

Based on these gaps, this study aims to identify user needs to inform the development of a web-based moral disengagement assessment instrument to support early detection of aggressive behavior among junior high school students. The study addresses three research questions: (1) What is the level of students' need for developing a web-based moral disengagement assessment instrument? (2) What are GC teachers' needs regarding the characteristics of the assessment instrument and the web-based application features required in guidance and counseling services? (3) What characteristics of a web-based moral disengagement assessment instrument are appropriate from the perspectives of students and GC teachers as a basis for product development?

METHODS

This study employed a descriptive method to describe needs for the Moral Disengagement Scale (MDS) (Creswell & Plano Clark, 2018). The participants were GC teachers and students selected using purposive sampling. Specifically, the participants comprised 11 GC teachers and 64 students. The research instruments were the Teacher Needs Questionnaire for the MDS (TNQ) and the Student Needs Questionnaire for the MDS (SNQ). The TNQ consisted of 24 items and the SNQ of 18 items. Each questionnaire asked participants to respond to every item on a four-point Likert scale (Strongly Agree, Agree, Disagree, and Strongly Disagree). Before use, experts reviewed each item for content validity using the Item-Content Validity Index (I-CVI) method (Yusoff, 2019). Data were analyzed using a descriptive approach (Creswell & Plano Clark, 2018) covering the TNQ and SNQ data. Data from each questionnaire were described using means (M) and standard deviations (SD), and need categories were then determined as highly needed, needed, or not needed (Braun & Clarke, 2023). These data were treated as a data triangulation technique between the TNQ and SNQ, with the ultimate aim of comprehensively describing the level of need of GC teachers and students for the MDS.

RESULTS AND DISCUSSION

Needs of Guidance and Counseling Teachers and Students for a Web-Based MDS

First, analysis of the GC teacher data yielded $M = 3.27$, $SD = 0.32$, and $SE = 0.10$. The ideal score percentage was 81.80%, and the positive response percentage was 95.80%, indicating that the need to develop the instrument fell into the highly needed category. These results show that GC teachers have a high need for the MDS. The distribution of GC teachers' need scores is presented in Figure 1.

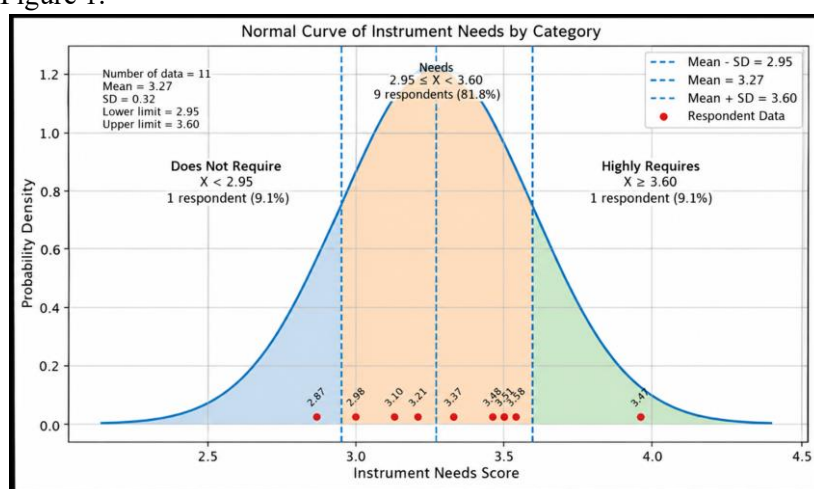


Figure 1. Distribution of MDS Need Scores Based on GC Teachers' Responses

Table 2. GC Teachers' Needs for the MDS (N = 11)

Dimension	M	SD
Behavior identification and early prevention needs (DG1)	3,25	0,37
Need for a moral disengagement instrument (DG2)	3,05	0,35
Need for a web-based system (DG3)	3,35	0,47
Readiness for use and school support (DG4)	3,33	0,44
Implementation benefits and follow-up (DG5)	3,41	0,45

Figure 1 shows that most respondents' scores fell within the needed to highly needed range, with a mean of 3.27. Although scores varied across respondents, the distribution shows a positive tendency toward needing a web-based MDS. This finding suggests that GC teachers' needs relate not only to the availability of an instrument but also to ease of interpreting results, support for service decision-making, and follow-up mechanisms that can be implemented in guidance and counseling services.

Dimension-level analysis showed that DG5 (implementation benefits and follow-up) had the highest mean ($M = 3.41$; $SD = 0.45$). This suggests that GC teachers most need an instrument that goes beyond identification and provides information useful for developing prevention strategies and follow-up services. Next, DG3 (need for a web-based system) had $M = 3.35$ ($SD = 0.47$), and DG4 (readiness for use and school support) had $M = 3.33$ ($SD = 0.44$). These high scores suggest that automated scoring, result presentation, data security, and school support are important components of product development.

By contrast, DG2 (need for a moral disengagement instrument) had the lowest mean among the dimensions ($M = 3.05$; $SD = 0.35$), although it still fell into the needed category. Within this dimension, the need to understand how students justify negative behavior received a high score ($M = 3.36$; $SD = 0.50$). However, using simple language received a lower score ($M = 2.45$; $SD = 0.93$). The response distribution for this item showed that 8 respondents chose agree, 3 respondents chose strongly disagree, and no respondents chose strongly agree. This varied response pattern suggests differences in understanding of the terms or the language used in the instrument, so readability needs to receive attention in the next development stage.

The relatively lower DG2 score compared with DG5, DG3, and DG4 suggests that GC teachers emphasized practical usefulness more than understanding the moral disengagement construct as a theoretical concept. Therefore, the instrument's development should include a simple conceptual explanation so that assessment results not only produce scores but also help GC teachers understand the meaning of the results and determine appropriate follow-up services.

Students' Needs for a Web-Based MDS

The student questionnaire yielded $M = 3.36$ ($SD = 0.44$; $SE = 0.05$), with an ideal score percentage of 84.11% and a positive response percentage of 94.81%. These results show that students' need for developing a web-based moral disengagement instrument fell into the highly needed category. Unlike GC teachers, who placed greater emphasis on service follow-up, students showed greater concern about response security, identity confidentiality, and comfort in answering. The distribution of students' need scores is presented in Figure 2.

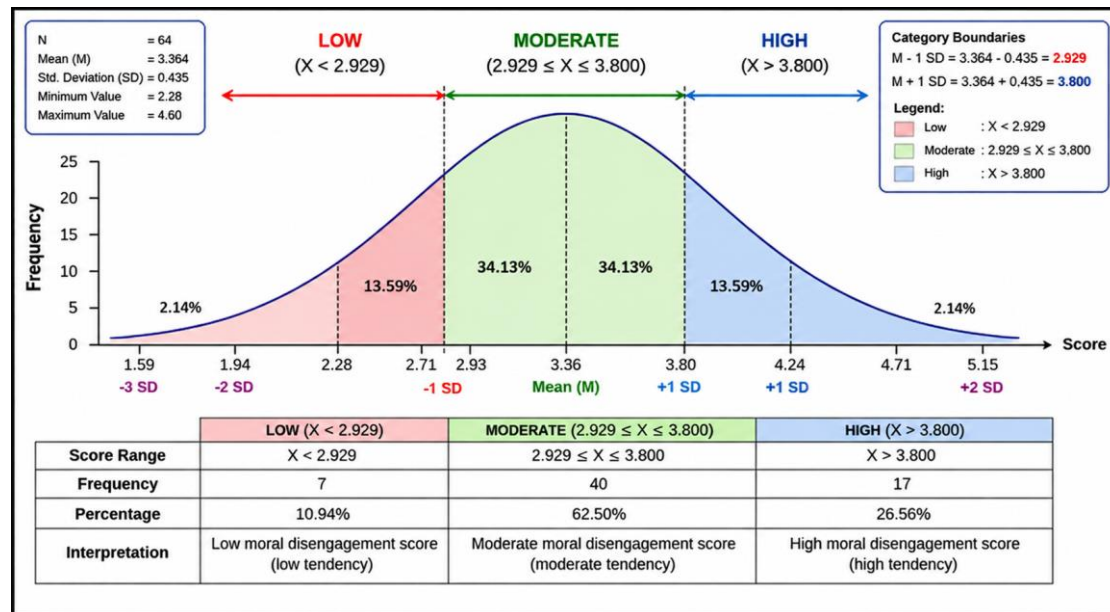


Figure 2. Distribution of Instrument Need Scores Based on Student Responses

Table 3. Descriptive Statistics of Student Needs by Dimension (n = 64)

Dimension	M	SD
Need for a behavior detection tool (DS1)	3,26	0,60
Preference for web/digital media (DS2)	3,34	0,47
Language clarity and item suitability (DS3)	3,36	0,52
Relevance and willingness to use (DS4)	3,33	0,48
Confidentiality and data protection (DS5)	3,49	0,50
Assistance, feedback, and result reports (DS6)	3,41	0,52

Figure 2 shows that most students fell into the moderate-to-high need category, with responses concentrated around the mean ($M = 3.36$). This distribution indicates that students generally responded positively to developing a web-based instrument, although need levels varied across respondents. This finding suggests that digital assessment must consider security and psychological comfort so that students are willing to respond openly.

Dimension-level analysis showed that DS5 (confidentiality and data protection) had the highest mean ($M = 3.49$; $SD = 0.50$). This finding suggests that privacy is students' primary need in using digital assessment. Students regarded the confidentiality of answers and the protection of identity not merely as technical aspects but as factors shaping their sense of safety in sharing information about their behavior and personal experiences.

Next, DS6 (assistance, feedback, and result reports) also scored highly ($M = 3.41$; $SD = 0.52$). Students showed a need for results to be presented in a way that is simple, easy to understand, and clearly beneficial. This suggests that students need not only easy-to-use digital media but also clarity about the assessment's purpose, how the results are used, and the follow-up provided.

Dimensions DS2, DS3, and DS4 also fell into the highly needed category. Students expected a practical system, easy-to-understand language, clear usage instructions, and statements that fit their school environment experiences. Thus, students' acceptance of web-based assessment

is influenced not only by technological aspects but also by the instrument's readability, information security, and the quality of the feedback provided.

Discussion

The main finding of this study is not merely that both groups showed a high level of need, but that their priorities differed according to their positions in the assessment ecosystem. GC teachers emphasized implementation benefits and follow-up, while students emphasized confidentiality and data protection. This convergence on general support, alongside an asymmetry of priorities, matters for product design: an assessment will be valuable to schools only if it produces usable information, but students will trust it only if the data-collection and use processes feel safe. Accordingly, professional needs and student security must be treated as two equal requirements rather than as alternatives that substitute for one another.

GC teachers' emphasis on follow-up extends discussions of educational technology acceptance, which often focus on usefulness and ease of use. Kemp et al. (2024) identify usefulness and ease of use as key determinants of technology acceptance, whereas this study's results show that, in GC assessment, usefulness takes on a more specific meaning: the ability to translate responses into interpretive guidance and proportionate service decisions. This also aligns with studies of online assessment that emphasize clear feedback and system reliability (Topuz & Kinshuk, 2024). Therefore, the design of the GC teacher dashboard should not stop at the total score but should provide dimension profiles, limited interpretation, history, and recommendations that encourage follow-up assessment.

At the same time, the dimension of need for a moral disengagement instrument had a lower mean than the web-based and follow-up dimensions. This pattern may indicate that the term moral disengagement, as a psychological construct, is not yet familiar in relation to the practical benefits expected from the system. This interpretation should be regarded as tentative because the sample of GC teachers was small, but it remains relevant as design input. The product needs to include a brief orientation on the difference between moral disengagement and aggressiveness. Moral disengagement is a cognitive mechanism that deactivates moral self-sanctions, whereas aggression is a behavior or behavioral tendency. This distinction matters to prevent scale results from being used as a behavioral diagnosis (Bandura, 1999; Concha-Salgado et al., 2022; Luo & Bussey, 2023).

For students, privacy was the highest need, even exceeding the preference for web-based media. This finding suggests that digitalizing assessment is not merely a matter of medium. Students can accept web use if their identity is protected, their answers are not misused, and results are presented nonjudgmentally. This result aligns with concerns about children's rights and data protection in educational technology (Holmes, 2025) and is relevant to Indonesia's personal data protection obligations (Republik Indonesia, 2022). In terms of design, this implies minimizing identifying data, restricting access by role, separating student and GC teacher views, and establishing explicit retention and deletion procedures.

The response pattern on the GC teachers' simple-language item is also methodologically important. A low mean accompanied by a majority of positive responses indicates a non-homogeneous distribution. This finding should not be interpreted solely through the mean or defended normatively. Rather, the pattern points to possible differences in how the item wording was interpreted. The expert review that was conducted helped improve the language, but the next stage still requires readability testing with students to ensure that the response process corresponds

to the intended construct. This approach aligns with the need to cross-validate moral disengagement scales for adolescents across contexts (Restrepo Cervantes et al., 2025).

The data also show that the instrument should be linked to school climate and prevention services, not automatic disciplinary action. Intervention evidence shows that social norms and moral disengagement components can support school-level bullying prevention (Tolmatcheff et al., 2022). Findings from Indonesia on school climate and cyberbullying also show that student behavior is formed within a broader social context (Maftuh et al., 2024). Therefore, individual screening results should be one source of information alongside observations, case records, and further counseling assessment. Punitive use of results risks reducing response honesty and increasing stigma.

The theoretical implication of this study is that developing a web-based moral disengagement assessment should be treated as a sociotechnical matter. Construct accuracy, user experience, data governance, and service follow-up are interdependent. In practice, subsequent development should include content review, initial trials, exploratory and confirmatory factor analyses, reliability estimation, testing relationships with relevant behavioral measures, and usability evaluation. Only after such evidence is adequate can the system be evaluated further as a screening tool that supports risk identification, rather than as an automated diagnosis.

This study is a preliminary needs analysis and is not intended as a psychometric validation of a moral disengagement scale. Because the number of GC teachers was small ($n = 11$), the results mainly describe the needs of the participants and cannot be broadly generalized to all schools in South Sumatra. The needs analysis questionnaires underwent expert review and an initial content agreement index, but they were not developed as standardized psychometric scales. Responses were self-reported, and some items had missing data because respondents provided multiple or ambiguous answers. In addition, the study did not examine the construct validity, reliability, sensitivity, specificity, or predictive ability of the moral disengagement scale to be developed. Therefore, the term early detection in this study should be understood as a goal of screening development, not as evidence that an instrument that has not yet been developed is able to detect or diagnose aggressive behavior.

CONCLUSION

The needs analysis shows strong support for developing a web-based moral disengagement scale for junior high school students, but this support is shaped by different priorities. GC teachers primarily need outputs they can interpret and act on in services, whereas students primarily need confidentiality, identity protection, clear language, and stigma-free feedback. These results confirm that future development must integrate construct accuracy, user experience, efficient scoring and reporting, secure data governance, and supportive GC follow-up pathways. The proposed scale must remain an initial screening and reflection tool, not a diagnosis or a basis for punishment. This study contributes by translating two stakeholders' needs into product requirements that balance practical value for GC teachers with psychological and informational safety for students.

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