




## Original Research

# Validation and Reliability Testing of the Indonesian Version of Reflective Functioning Questionnaire

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## Abstracts

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**Introduction:** Reflective function refers to the capacity to comprehend emotions, beliefs, and behaviors in oneself and others. Mental disorders are frequently associated with deficits in mentalizing capabilities. These deficits compromise an individual's capacity for self-reflection and understanding of mental states, impeding one's ability to regulate both mental states and interpersonal relationships. The Reflective Functioning Questionnaire (RFQ) is a practical tool to measure reflective function, but it has not yet been adapted into Indonesian, a crucial step toward addressing the needs of local populations. This study aimed to develop an Indonesian version of the RFQ with robust validity and reliability. **Methods:** The English RFQ was translated into Indonesian using standard guidelines, including forward and backward translation by certified translators. Content and face validity were assessed through expert panel reviews to ensure cultural and linguistic relevance. Construct validity was evaluated using confirmatory factor analysis (CFA), and reliability testing was conducted using Cronbach's Alpha. A pilot study with 10 subjects was conducted to refine the instrument, followed by testing with a sample of 100 participants. **Results:** The final Indonesian RFQ consists of 11 items across two subscales: RFQu and RFQc. CFA indicated a good model fit ( $\chi^2 = 1.16$ ,  $p = 0.55$ , and  $RMSEA = 0.041$ ). Reliability testing showed strong internal consistency, with Cronbach's Alpha values of 0.89 for RFQc and 0.87 for RFQu. **Conclusion:** The modified Indonesian RFQ demonstrated excellent validity and reliability, providing a robust tool for assessing reflective function in clinical and research settings.

**Keywords:** Mentalization, Psychotherapy, Psychological Well-being, Reflective Functioning Questionnaire

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## INTRODUCTION

Reflective function (also known as mentalization) is the capability to comprehend internal wishes and their relation to internal values and reaction tendency. It is essential for social functioning, interpersonal interaction, and adapting to the external world. Normally developed through interaction with a significant figure, reflective function defect occurs when attachment development is disrupted, especially due to mental disorder in parents or extreme external conditions.

Dynamically, reflective function plays a significant role in personality organization by shaping perception of reality. A tendency toward extreme negativity or positivity can challenge realistic and effective problem-solving. Consequently, misperceptions may lead to interpersonal difficulties and emotional regulation issues.

Factors influencing mentalizing include psychiatric disorders (e.g., concentration levels, reality-testing abilities), biological factors (e.g., intelligence), psychological factors (e.g., attachment style, personality traits), as well as sociodemographic and cultural factors (e.g., education, occupation, religion, culture, stress levels) [1], [2]. High levels of concentration and intact reality-testing ability are necessary for accurate situational appraisal [3]–[6]. Biologically, intelligence reflects overall brain capacity for thought and imagination. Psychologically, attachment styles and personality traits impact empathy development. Socially, profession, religion, and culture influence internalized values, while high stress may impair mentalizing ability [4], [7].

Mental disorders are often linked to deficits in mentalizing capabilities. Impaired mentalizing compromise an individual's capacity for self-reflection and understanding of mental states, hindering regulation of mental states and interpersonal relationships [1], [8]–[10]. When mental states cannot be effectively regulated, self-soothing during distress or maintaining a positive outlook becomes challenging [11].

Consequently, interpersonal relations suffer, limiting one's ability to empathize, maintain emotional boundaries, and respect personal limits [12]. Identifying these deficits during early psychiatric evaluation helps clinicians understand personality structure and devise short- and long-term therapeutic strategies. Mentalizing impairments generally fall into two categories: hypomentalizing and hypermentalizing (or pseudomentalizing). Hypomentalizing, observed in depression, antisocial personality disorder, and autism spectrum disorders, involves difficulties interpreting cognitive, affective, and motivational cues in interpersonal interactions [11]–[14]. Hypermentalizing, observed in borderline personality disorder, paranoid schizophrenia, and paranoid personality disorder, is characterized by overconfidence in understanding mental states, often based on assumptions without objective evidence [1], [15].

Genuine mentalizing involves recognition that mental states are complex and often difficult to fully understand. Individuals skilled in mentalizing integrate realistic cues, such as behavior, gestures, facial expressions, and muscle tension, with internal awareness, fostering an adaptive understanding of observed mental states [3], [16].

Given the disparity between the number of psychiatrists and patients with mental health disorders, time constraints often hinder thorough evaluation of mentalizing abilities due to the demand for psychiatric services. Therefore, an efficient and effective assessment tool is essential for timely diagnosis and intervention. The Reflective Functioning Questionnaire (RFQ) offers a practical method for assessing general mentalizing abilities in approximately 30 minutes, covering both completion and scoring. This instrument demonstrates reliability and validity in both general and clinical populations [13]. The RFQ holds promise for supporting Indonesian psychiatrists in conducting concise

assessments of mentalizing capacity, facilitating a comprehensive diagnostic and therapeutic framework for patients. However, the RFQ has not yet been translated or validated for the Indonesian language or adapted for clinical populations with mental disorders, highlighting the need for linguistic and psychometric validation. This study aims to develop an Indonesian version of the RFQ that ensures both reliability and validity.

## METHODS

Respondents were patients, both male and female, aged 18 to 59 years, who receive services from the Department of Psychiatric at Cipto Mangunkusumo National Hospital. Participants were diagnosed with mental disorders according to the Pedoman Penggolongan Diagnosis Gangguan Jiwa III (PPDGJ III) criteria, as determined by attending physicians on scheduled assessments. Additional inclusion criteria included: fluency in reading and writing Bahasa Indonesia, competent consciousness, attentional focus, reality testing ability, and a minimum education level of junior high school. Respondents were excluded if they refused to participate or had diagnosis of mental retardation or organic mental disorders. Recruitment continued until a sample size of 100 subjects was reached, using a non-probability consecutive sampling method.

This study involved a validation and reliability assessment of the RFQ, structured across three stages: translation, validity testing, and reliability testing. It was conducted from January 2018 to February 2019 at the Adult Psychiatry Outpatient Clinic of Cipto Mangunkusumo National Referral General Hospital (RSUPN Cipto Mangunkusumo). Content validity assessment was performed in February 2018, with data collection spanning January to February 2019.

Ethical approval was obtained from the local Ethics Committee. Initial permission to translate and validate the RFQ was requested via email from the original instrument

creators, Peter Fonagy and Patrick Luyten [13]. The instrument and manual were translated from English to Indonesian by two independent translators unfamiliar with the questionnaire. The translations were reviewed by a panel of three experts to ensure cultural and social relevance to the Indonesian context. This refined version was then back-translated into English by two additional translators, independent of the original team. The back-translation was sent to Peter Fonagy for content verification, and his feedback guided further revisions. Once no meaningful differences remained between the English and Indonesian versions, the instrument was deemed ready for data collection.

During the data collection phase, the translated RFQ was pilot-tested on 10 participants. Researchers introduced the RFQ to the head of the Adult Psychiatry Clinic and explained the study's objective. Eligible patients were approached and briefed about the purpose, benefits, and procedures of the study. Informed consent was obtained from participants who were willing to be included. Attention and comprehension were assessed using the Wechsler Test of Adult Reading, which comprise 24 words to be memorized and recalled. A minimum score of 50% was required to confirm adequate attention and comprehension [17]. This procedure continued until the sample reached 100 participants, after which the data were processed and analyzed.

Demographic variables such as age, gender, religion, ethnicity, education level, occupation, and marital status were collected via a self-administered questionnaire. Axis I and Axis II psychiatric diagnoses were obtained from participants' medical records, as documented by their examining physicians. The RFQ used in this study comprised 26 core items selected from the original 54-item English version, as recommended by the developers (RFQ items: 1, 2, 6, 7, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 27, 28, 30, 34, 35, 36, 38, 40, 42, 43, 44,

47, 52). This self-administered instrument utilizes a 7-point Likert scale and assesses two latent variables: RFQ-Uncertainty (RFQu) for hypomentalization, and RFQ-Certainty (RFQc) for hypermentalization [13]. Higher RFQu scores reflect limited capacity for recognizing mental states, while higher RFQc scores indicate a tendency for exaggerated or assumptive mentalization. The RFQ incorporates central stimulus items designed so that higher scores correspond to mid-scale responses rather than extreme responses, thus minimizing socially desirable bias.

Content validity was evaluated through a panel discussion comprising three experts and one layperson. Each item from two translated versions was reviewed by independent sworn translators unfamiliar with the original instrument. Selected and/or modified items were documented in a table. Face validity was assessed by submitting the back-translated version to the original authors for feedback, which informed further modifications as needed. Construct validity was analyzed using confirmatory factor analysis (CFA) with AMOS software to assess the fit between observed and latent variables in the sample population [18], [19]. Discrepancy estimates were obtained using the maximum likelihood method, with model fit assessments through saturated and independence models [19].

The initial two-way model included the 26-item RFQ central set, followed by removing non-significant items ( $p \geq 0.05$ ) and items with low correlations ( $r < 0.5$ ). Covariance relationships between items with matching RFQu and RFQc codes were incorporated.

Modifications were applied according to AMOS modification indices until model fit criteria were met, including chi-square significance  $\geq 0.05$ , Comparative Fit Index (CFI)  $\geq 0.95$ , and Root Mean Square Error of Approximation (RMSEA) between 0.00 and 0.06 [20]. Further modifications were based on AMOS indices and theoretical considerations [19]. Reliability was evaluated using Cronbach's Alpha coefficients calculated with SPSS version 22. A statistician reviewed the data analysis processes and findings.

## RESULTS

Patrick Luyten, the developer of the RFQ, responded to email communication and granted permission for translation, as well as validity and reliability testing, of the RFQ instrument. The translation, conducted by two certified translators, underwent panel review, with modifications made to the instructions and items 8, 18, 20, 30, and 43 for improved clarity. A back-translation was subsequently performed by two translators unfamiliar with the RFQ to ensure alignment with the original intent, and this version was approved by Luyten. After piloting the instrument with 10 subjects, feedback was collected and discussed in a follow-up panel review with three experts involved in the initial validation process, before proceeding to a trial involving 100 subjects. Subjects suggested adding a Likert scale reminder box on each page to minimize the need to reference the first page, and this modification was implemented for the main trial.

**Table 1.** Demographic characteristics (n=100)

Characteristics	Mean (SD) (N, %)
Age (years)	32.8 $\pm$ 10.5
Gender (N, %)	
Male	37 (37)
Female	63 (63)
Religion	
Islam	81 (81)
Christianity-Protestant	16 (16)
Christianity-Catholic	1 (1)

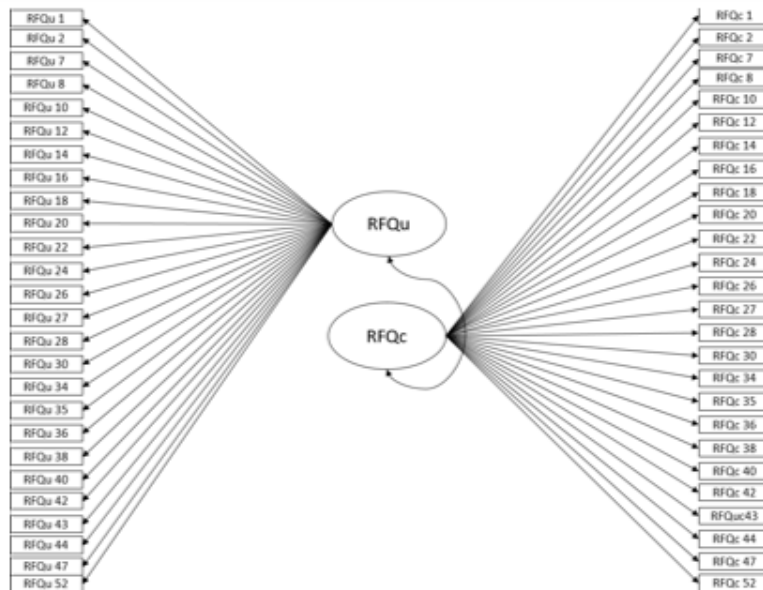
**Table 1.** Demographic characteristics (n=100)

Characteristics	Mean (SD) (N, %)
Religion	
Confucianism	1 (1)
Ethnic Group	
Batavians	14 (14)
Javanese	37 (37)
Sundanese	7 (7)
Bataknese	10 (10)
Minangkabau	13 (13)
Dayak	1 (1)
Manadonese	2 (2)
Makassarese	1 (1)
Balinese	1 (1)
Chinese	7 (7)
Others	7 (7)
Education Level	
Junior High School	6 (6)
Senior High School	33 (33)
Diploma	11 (11)
Bachelor's Degree	39 (39)
Master's Degree	11 (11)
Occupation	
Government Employees	7 (7)
Private Sector Employees	17 (17)
Entrepreneur	20 (20)
Unemployed	30 (30)
Others	26 (26)
Marital Status	
Married	32 (32)
Single	58 (58)
Divorced	8 (8)
Widowed	2 (2)
Axis I Diagnosis	
Schizophrenia (remission)	10 (10)
Depression Disorder	58 (58)
Bipolar Disorder	13 (13)
Dysthymia	2 (2)
Anxiety Disorder	6 (6)
Obsessive-Compulsive Disorder	4 (4)
Adjustment Disorder	7 (7)
Axis II Diagnosis	
Borderline Personality Disorder	11 (11)
Other Personality Disorder	2 (2)
No Diagnoses	87 (87)

\*SD: Standard Deviation

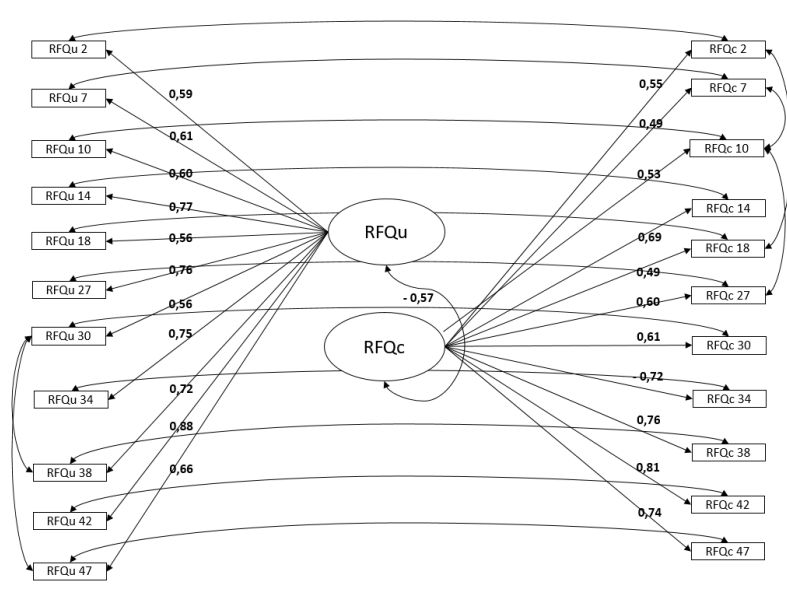
Demographic data for the 100 subjects are presented in Table 1. No significant associations were found between gender, religion, ethnicity, education, occupation, or marital status with RFQu and RFQc scores. Additionally, there was no observed correlation between age and either RFQu or RFQc.





**Figure 1.** Initial Model of RFQu and RFQc

Construct validity was examined using confirmatory factor analysis (CFA) applied to the 26 median items. These items were recoded, and an initial model was structured with two confirmatory factors—RFQu and RFQc—as recommended by the instrument’s developer (Figure 1). The initial model exhibited suboptimal fit indices:  $\chi^2 = 2.44$ ,  $p < 0.001$ , and RMSEA = 0.121. To improve the fit, items with non-significant correlations ( $p > 0.5$ ), low correlations ( $r < 0.5$ ), or residuals that could be integrated based on modification indices were iteratively removed or revised. The final model indicated a good fit:  $\chi^2 = 1.16$ ,  $p = 0.55$ , and RMSEA = 0.041. RFQu included items RFQ2, RFQ7, RFQ10, RFQ14, RFQ18, RFQ27, RFQ34, RFQ38, and RFQ42, while RFQc included items RFQ2, RFQ10, RFQ14, RFQ30, RFQ34, RFQ38, RFQ42, and RFQ47 (see Figure 2 and Table 2).



**Figure 2.** Final RFQ Model

**Table 2.** Final RFQ Model Items

Item	RFQu	RFQc
It is easy for me to know what someone else is thinking or feeling (RFQ 2)	√	√
I know exactly what my friends are thinking (RFQ 7)	√	
I can understand someone's feelings just by looking into their eyes (RFQ 10)	√	√
Understanding what is on someone's mind has never been difficult for me (RFQ 14)	√	√
It is very difficult for me to know what's going on in someone else's mind (RFQ 18)	√	
I can usually predict what someone is going to do (RFQ 27)	√	
My intuition ("gut feeling") about a person is rarely wrong (RFQ 30)		√
I usually have accurate thoughts about what is on someone's mind (RFQ 34)	√	√
I am good at reading people's minds (RFQ 38)	√	
I usually know exactly what someone else is thinking (RFQ 42)	√	√
I usually have a very accurate instinct about what someone is thinking (RFQ 47)		√

Cronbach's alpha reliability for RFQc (items RFQ2, RFQ7, RFQ10, RFQ14, RFQ18, RFQ27, RFQ34, RFQ38, and RFQ42) was 0.890 ( $\alpha > 0.75$ ), while RFQu (items RFQ2, RFQ10, RFQ14, RFQ30, RFQ34, RFQ38, RFQ42, and RFQ47) achieved a reliability of 0.87 ( $\alpha > 0.75$ ), indicating strong reliability for the Indonesian version of the RFQ.

Analysis of the model indicated that nine items formed the RFQu scale, whereas eight formed the RFQc scale, suggesting that the scoring method should be adjusted accordingly. Each scale score was derived as the mean of the items included, analogous to the original RFQ8 scoring method in English.

In this study, RFQu and RFQc were calculated by recoding RFQ items as LRFx (LRFu for RFQu and LRFc for RFQc), summing them, and dividing by the number of contributing items. For RFQ11, the RFQu median was 0.55 with an interquartile range of 1.11, while RFQc had a median of 0.37 with an interquartile range of 0.97.

## DISCUSSIONS

The dual translation of the RFQ into Indonesian underwent rigorous panel review to ensure intelligibility among research subjects who met specified inclusion criteria. Certain terms, especially those related to emotions, presented linguistic challenges; for example, "intuition" was clarified with "feeling" to aid comprehension. Additionally, "often cloud my thinking" required cultural adaptation, as Indonesian lacks a precise equivalent, reflecting limited use of emotional terminology in the language [21].

A larger proportion of female subjects was included, though no significant gender differences were found. These findings align with studies in clinical populations in the UK indicating gender-neutral RFQ results [13]. The demographic distribution, including employment and marital status, was representative of the Jakarta population, allowing generalization to health services in this region [22].

Construct validity was evaluated using CFA on median items only, as recommended by the instrument developer to avoid polar items that may bias mentalization assessments. Modifications were necessary to align with local cultural and linguistic nuances; for instance, RFQ1's use of the term "mystery" was found to imply mysticism in Indonesian. Reliability testing demonstrated internal consistency comparable to studies conducted in the UK, France, Poland, Spain and Italy [13], [23]–[28].

The RFQ11 Indonesian version offers a practical tool for assessing mentalization issues. While RFQ currently lacks definitive cut-off values, its scales provide indicative mentalization levels. Higher RFQ<sub>u</sub> scores suggest tendencies toward hypomentalization, while lower scores reflect stronger mentalization skills. In contrast, high RFQ<sub>c</sub> scores may indicate hypermentalization tendencies. These insights assist therapists in tailoring therapeutic responses and selecting suitable psychotherapies. The instrument is quick to administer, requiring approximately five minutes for completion and two minutes for scoring.

The significance of reflective functioning in psychological care underscores its prioritization in psychiatric education programs [3], [29]–[31]. Therapists possessing genuine mentalization capacity are more effective in serving as secure attachment figures, guiding patients toward fostering secure attachments. Secure attachment underpins empathetic care, enhancing the therapist's ability to demonstrate compassion toward both their patients and themselves. Empathetic care, recognized as one of the common factors in psychotherapy, is a fundamental component in establishing a strong therapeutic alliance [3], [30], [32], [33]. A productive therapeutic alliance facilitates the joint exploration of patients' internal experiences, anxieties, and suffering that may otherwise be difficult to articulate.

The capacity for self-compassion in therapists is equally critical for preventing burnout, which poses a significant challenge to the continuity of psychological services [32], [34], [35]. Effective burnout management is essential to sustaining therapeutic efficacy and maintaining the quality of care provided. Addressing therapist burnout systematically is a key strategy for ensuring the long-term sustainability of psychological services.

The cultivation of reflective functioning in parents serves as a critical mental health promotion and prevention strategy. Enhancing parents' reflective capacity helps establish supportive systems for individuals with mental health conditions, thereby transforming social interactions from stressors into sources of resilience [4], [7], [28], [36]. Social environments play a pivotal role in the success of psychological and psychiatric interventions. Actions such as providing affirming language, practicing mindful acceptance, and ensuring effective coordination with therapists significantly enhance therapeutic outcomes [15], [37], [38].

This study did not perform convergent or divergent validity tests and therefore did not evaluate correlations with established constructs such as psychological mindedness, empathy, or mindfulness.

## CONCLUSIONS

The Indonesian version of the Reflective Functioning Questionnaire (RFQ) demonstrates strong content validity, construct validity, and reliability. Comprising 11 modified items, it offers a practical and psychometrically sound tool for assessing reflective functioning in clinical and research contexts.

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## CONFLICT OF INTEREST

The authors have no conflict interest to declare

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None

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