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Adaptation of Impostor-Profile 30 Scale into Indonesian: Evidence of content validity and response process

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ABSTRACT

Background: Academic success is often perceived as a source of pride, but for some students, it can lead to increased pressure. These individuals tend to attribute their success to external factors rather than their own abilities, a phenomenon known as impostor phenomenon.

Purpose: This study aims to translate the Impostor-Profile 30 for measuring the impostor phenomenon, into Indonesian using a double translation procedure, as well as to collect content validity evidence and response process validity through expert evaluation and cognitive interviews.

Method: The adaptation process of the measurement tool of the IPP30 followed the guidelines of the International Test Commission up to the development stage, which is the second phase after the pre-condition. The development stage included: 1) translation using the forward-backward translation method, 2) collection of content validity evidence through expert evaluations, and 3) collection of response process validity evidence through cognitive interviews with eligible participants.

Findings: The results demonstrated that the Indonesian version of IPP30 possesses both content validity and response process validity, supporting its use to measure the impostor phenomenon in Indonesia. The validity evidence obtained serves as an initial foundation for testing this scale on a larger sample to verify its psychometric properties.

Implication: This study represents an initial validation step to provide a measurement tool that can be used to assess the impostor phenomenon, which can be beneficial for related research in Indonesia.

KEYWORDS
Impostor phenomenon; adaptation; content validity; cognitive interviews

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Introduction

Achieving good academic results is a common goal for many students, often perceived as achieving high grades, gaining a deep understanding of subjects, or succeeding in academic competitions. Studies have shown that performing well academically can boost students' self-esteem (Sharma & Sharma, 2021). Thus, academic success should be a point of pride for students. However, in reality, it can also create psychological pressure for some. Not all students experience the positive effects of their academic achievements. Some may not feel proud of their success, believing it results from external factors rather than their own abilities, leading them to question their true competence (Nurhikma, 2019). This is known as the impostor phenomenon. For example, a student won a national scientific writing competition but believed the victory was merely due to luck, not their own ability. As a result, this achievement became a source of pressure, as they feared that others who believed in their capabilities would eventually realize they were not as intelligent as they seemed. Individuals experiencing this phenomenon feel over-evaluated by those around them and worry about being exposed not as smart as others believe them to be (Bravata et al., 2020).

The impostor phenomenon was first identified by Dr. Pauline Clance and Suzanne A. Imes in successful women who felt unintelligent and believed they had deceived others about their abilities. As a result, they struggled to acknowledge their talents and competencies, often attributing their success to external factors (Clance & Imes, 1978). Ibrahim et al. (2022a), in their research developing an instrument to measure the impostor phenomenon, defined it as a set of characteristics that include feelings of inauthenticity, alongside fear of failure and the fear of

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being exposed as a fraud. More recently, Walker and Saklofske (2023) re-conceptualized the impostor phenomenon as a subjective perception of self-doubt regarding one's abilities and achievements in comparison to others, despite objective evidence to the contrary. For an impostor, experiences of success can cause discomfort because their accomplishments conflict with their negative self-assessment of intelligence and talent, which is shaped by various influences throughout life. This negative self-evaluation typically develops over time and influenced by biological, individual, familial, and sociocultural contexts (Cokley, 2024).

Individuals experiencing the impostor phenomenon are typically intelligent, hardworking, and highly motivated (Thompson et al., 2000). Clance and Imes (1978) noted that individuals with the impostor phenomenon do not fall into any specific category of psychological disorders. However, they often report symptoms such as anxiety, low self-esteem, depression, and frustration due to their inability to meet the high standards they set for themselves. Although the impostor phenomenon is not explicitly classified as a psychological disorder, it warrants special attention and intervention, as the psychological symptoms it produces can significantly affect an individual's mental health (Addae-Konadu et al., 2022).

Research in Indonesia indicates that students frequently experience the impostor phenomenon at "moderate" to "high" levels (Tasya et al., 2024). Empirical evidence has linked the impostor phenomenon to poor mental health outcomes, such as anxiety, depression, and low self-esteem (Cokley, 2024). Feelings of anxiety, depression, and worry often arise from the pressure to meet high success standards (Windradi, 2023). Perfectionism plays a significant role in the emergence of impostor feelings (Ferrari & Thompson, 2006). Individuals with high perfectionistic self-presentation tend to experience the impostor phenomenon more intensely (Dumitrescu & De Caluwé, 2024). This pattern occurs as an attempt to gain self-esteem by meeting the ideal image perceived by others (Langford & Clance, 1993). When this ideal is unmet, individuals may experience low self-esteem, which in turn reinforces impostor feelings (Nurhikma, 2019). This tendency is also closely related to low self-efficacy (Pákozdy et al., 2024), in line with Yaffe's (2023) finding that impostor feelings and self-efficacy are negatively correlated. Low self-esteem and self-efficacy can trigger anxiety, depression, and fear of failure (Wulandari & Sia, 2007). Savitri (2023) revealed that individuals with a tendency toward impostor feelings respond negatively to both failure and success, engage in social comparison, and feel uncomfortable when receiving praise. Several studies on the impostor phenomenon in Indonesia have linked it to various other psychological constructs, such as self-efficacy (Pikoli, 2023), anxiety (Windradi, 2023), resilience (Ula et al., 2023), self-compassion (Latief, 2021), authoritarian parenting (Indira & Ayu, 2021), self-esteem (Antero, 2019), and academic hardiness (Nurhikma, 2019). Thus, it can be understood that the impostor phenomenon is a significant psychological issue in Indonesia that requires further attention and research. Developing valid and reliable measurement tools adapted to the language and culture of Indonesia is crucial for enabling more in-depth research on this phenomenon in the local context.

Most studies on the impostor phenomenon in Indonesia utilize the Clance Impostor Phenomenon Scale (CIPS) developed by Clance (1985). Based on our literature review regarding the use of CIPS, particularly in quantitative studies, we found that the CIPS instruments used lacked sufficient psychometric evidence and had not undergone a comprehensive and standardized adaptation process in line with the test adaptation guidelines set by the International Test Commission (ITC, 2017), which are widely regarded as the standard for translating and adapting measurement tools. Research by Pikoli (2023), Ula et al. (2023), Indira and Ayu (2021), Fahira, (2020), Antero (2019), and Nurhikma (2019), indicated that the adaptation processes in these studies did not adhere to the language and cultural adjustment procedures recommended by the ITC guidelines. These studies did not report crucial steps such as double translation, which is essential to mitigate the risks associated with relying on a single translation. Moreover, they failed to provide evidence that the items and procedures were suitably adapted for the target populations, particularly in Indonesia. Without adequate and transparent reporting on the adaption quality, assessing the extent to which the findings of these studies can be trusted has been difficult (Iliescu et al., 2024). Additionally, although CIPS is widely

used, Mak et al. (2019) argued that it should not yet be considered the gold standard for measuring the impostor phenomenon. Unresolved issues remain regarding the dimensions of the impostor phenomenon and its operationalization, as assessments based on a single overall score appear to contradict its theoretical conceptualization (Mak et al., 2019).

Ibrahim et al. (2022a) developed a measurement tool for the impostor phenomenon called the Impostor-Profile 30 (IPP30) based on the recommendations and criticisms made by Mak et al. (2019) regarding existing tools, such as the Harvey Impostor Phenomenon Scale (1981), Clance Impostor Phenomenon Scale (1985), and the Perceived Fraudulence Scale (1991) which use overall scores reflecting a unidimensional conceptualization rather than being based on relevant dimensions. This approach leads to a loss of understanding of the multidimensional nature of the impostor phenomenon construct (Mak et al., 2019). Several confirmatory factor analysis studies revealed that the original theoretical models of Harvey Impostor Phenomenon Scale (HIPS), Clance Impostor Phenomenon Scale (CIPS), and Perceived Fraudulence Scale (PFS) might be problematic due to concerns over the psychometric stability of the constructs (Hellman & Caselman, 2004; Mak et al., 2019). The factors of luck and discount in CIPS needed theoretical clarification if they were to be retained as separate scales, as the correlation between the two was too high to be considered distinct constructs (French et al., 2008). The results of Freeman et al.'s (2022) exploratory factor analysis of CIPS suggested that the impostor phenomenon measured by the CIPS is more accurately considered a unidimensional construct, rather than multidimensional. The IPP30 was designed to address the weaknesses of previous impostor phenomenon measurement tools by clarifying the dimensions of the phenomenon, providing a more comprehensive assessment and interpretation (Ibrahim et al., 2022a). Offering a comprehensive and multidimensional measurement tool would help clarify the fundamental characteristics of the impostor phenomenon (Walker & Saklofske, 2023).

The IPP30 has adequate psychometric evidence, with a bifactor model structure consisting of 30 items that form one general factor and six grouping factors: Competence doubt, working style, alienation, other-self divergence, ambition, and need for sympathy. This structure supports the use of both total scores and subscale scores (Ibrahim et al., 2021). A key strength of the IPP30 is that the dimensions of ambition and need for sympathy do not correlate with the CIPS, the most widely used tool for measuring the impostor phenomenon. However, these two dimensions represent important elements of the impostor phenomenon construct as outlined by Clance, the originator of the theory. Ambition relates to the need to be perceived as special, while need for sympathy is associated with fear or guilt regarding success (Ibrahim et al., 2021). Additionally, IPP30 was developed with consideration of the caution regarding the use of CIPS, particularly items 5, 9, and 13, which contained the word "sometimes." This could cause confusion when combined with the "sometimes" response option on the 5-point Likert scale (Ibrahim et al., 2021). IPP30 was developed in Germany and has been validated in English by Ibrahim et al. (2022b) and in Swedish by Doshi et al. (2024). Therefore, to be effectively used by researchers in Indonesia, a comprehensive and standardized test adaptation process, as outlined by the ITC (2017) is required to ensure it aligns with the language and cultural context of the Indonesian population.

Most measurements are based on tests originally developed for a specific language, culture, or context but later applied in different settings (Iliescu et al., 2024). Using norms from one country to interpret test scores in another ignores cultural differences and population characteristics, violating the principle that psychological tools must be adapted for the specific population (Gudmundsson, 2009). Adapting a test to a new language and culture requires a scientific process (Van De Vijver & Tanzer, 2004). The adaptation process involves more than just translation; it includes selecting qualified translators, making cultural adjustments, and gaining a deep understanding of cultural, psychological, and linguistic aspects (Hambleton & Li, 2005). The standard approach for test adaptation prioritizes the validity of score interpretations in relation to the intended purpose of the test and emphasizes the importance of providing valid evidence, including translation validity, in reports and documentation to support the legitimate use of test scores (Iliescu et al., 2024). Validity is a key element in measurement theory, particularly in the field of psychometrics (Finch & French, 2018). One important form of validity evidence can be

obtained by analyzing the relationship between the test content—such as themes, wording, and item format—and the construct being measured (American Educational Research Association et al., 2014). Content validity involves expert assessment, in which experts provide ratings and verbal feedback on the items being evaluated (Finch & French, 2018). The expert panel should ideally consist of individuals who understand the theoretical foundations of the construct being measured and have expertise in test construction (Davis, 1992). Agreement among experts can be calculated to serve as an indicator of content validity and the overall validity of the test. In addition to content validity, another important type of validity evidence to collect is response process evidence, which can help explain variations in the meaning of test scores across different subgroups of participants (American Educational Research Association et al., 2014). Peterson et al. (2017) suggest using Cognitive Interviews as a method to collect validity evidence from the response process in self-report instruments.

A valid measurement tool for the impostor phenomenon is essential for conducting in-depth studies and exploring its connections with other psychological constructs in Indonesia. This study aims to translate the IPP30 using a double translation procedure, gather content validity evidence through expert assessments, and collect response process validity evidence via cognitive interviews. These steps are part of the test development phase, as outlined by the ITC (2017), to ensure that the items remain relevant and culturally appropriate. Collecting and reporting the results from these steps is important as an initial phase to support accurate score interpretation before proceeding to the next phase—empirical data collection, or the confirmation phase, according to the ITC guidelines.

Method

Study design

This methodological study focuses on the first of the three key aspects of psychometrics for instrument development and validation: theoretical, empirical, and analytical. This study focuses on the theoretical aspect, which includes the stages of instrument development. This is a descriptive study that examines content validity through expert assessments and response processes by conducting cognitive interviews with several respondents to ensure the instructions and items are meaningful across target populations. This research follows the guidelines of the ITC (2017) for adapting measurement tools, specifically the Pre-condition and Test Development stages.

Measurement Tool

The measurement tool used and tested in this study is the Impostor-Profile 30 (IPP30) developed by Ibrahim et al. (2021), which consists of six dimensions: Competence Doubt (11 items), Working Style (6 items), Alienation (3 items), Other-Self Divergence (4 items), Ambition (3 items), and Need for Sympathy (3 items). One example of an item is, "I often think that my skills are not enough" (item 2). The IPP30 uses a Likert scale with responses ranging from 1 (not like me at all) to 10 (very much like me).

The development of the Impostor-Profile (IPP30) was based on the impostor phenomenon theories by Clance (1985), Clance and Imes (1978), Harvey and Katz (1985), and Sakulku and Alexander (2011). In a subsequent study by Ibrahim et al. (2022a) validated the IPP30 in Germany, samples selected through online survey panels with diverse age, occupational, and educational groups. The process began with an Exploratory Factor Analysis (EFA) of 65 items, using a sample of n = 300. The EFA results yielded 31 items grouped into six factors. Subsequently, a Confirmatory Factor Analysis (CFA) was conducted on the six-factor model with 31 items using a sample of n = 471, demonstrating good model-data fit (Ibrahim et al., 2022a).

The subsequent study by Ibrahim et al., (2021) tested the appropriateness of using total scores from the 31-item IPP using a sample of n = 482. The results showed that item 28, which was highly skewed, was removed, resulting in a final set of 30 items. Measurement model evaluation indicated that the bifactorial model with one general factor and group factors was the most theoretically appropriate, with fit indices of *CFI*=.920, *TLI*=.908, *RMSEA*=.057, *SRMR*=.052,

supporting the use of total scores to measure the impostor phenomenon. The overall reliability coefficient was ω=.95, with subscales such as Competence Doubt (ωs=.91), Working Style (ωs=.82), Alienation (ωs=.84), Other-Self Divergence (ωs=.83), and Ambition (ωs=.71) showing good reliability, while the Need for Sympathy subscale (ωs=.50) showed relatively low reliability (Ibrahim et al., 2021).

Procedure and Data Analysis

At the pre-condition stage, the researcher contacted Dr. Fabio Ibrahim, the developer of the IPP30, via email on May 21, 2024, to request permission and confirm that no similar research was planned in Indonesia. The Test Development stage focuses on adjusting the language, psychological, and cultural aspects to suit the target population.

This study focuses on the Test Development stage, which is the second step following the Pre-condition stage, and includes: 1) translation using the forward-backward translation method, 2) gathering content validity evidence through expert evaluations, and 3) collecting response process validity evidence through cognitive interviews with participants who meet the criteria.

Translation Process. The translation process employed the forward-backward translation method to translate IPP30 from English to Indonesian. The process involved four language experts with strong proficiency in English, demonstrated by TOEFL scores above 500, who worked independently at different stages of the translation. The first phase involved two translators: one with a background in psychology who understood the construct being tested, and the other without a psychology background, unaware of the construct. Both translators worked independently and translated the original questionnaire into Indonesian. Afterward, the researcher compared the two forward translations to identify any discrepancies, such as inconsistencies or ambiguities in the original language, or inaccurate word choices. These discrepancies were discussed and resolved through an online meeting, allowing both translators to clarify their choices and work together to reach a consensus. The researcher and translators identified areas where certain words or phrases required adjustment to preserve the original meaning in the context of Indonesian language and culture.

Once a consensus translation was reached, the synthesis of the two forward translations was documented in a written report. The report served as a detailed record of how discrepancies were resolved. The next phase was backward translation. For this step, the researcher contacted two new language experts—one with a psychology background and another without—neither of whom was informed about the construct being tested. The synthesized version of the translation was provided to these translators, who translated it back into English. The backward translation served as a validity check to ensure that the translated version accurately captured the same content and meaning as the original version. The researcher compared the two backward translations with the original English version to check for consistency and to verify that the backward translation was faithful to the original questionnaire. This step helped identify any potential errors in conceptualization or wording that might have emerged during the forward translation process (Beaton et al., 2000).

Expert Panel Evaluation. Validity evaluates the extent to which a measurement tool, such as a test or research instrument, truly measures the variable it is intended to measure (Bollen, 1989). Content validity involves assessments from experts who provide ratings and verbal feedback on the items being evaluated (Finch & French, 2018). The selection of experts was based on the following criteria: 1) Educational qualifications, such as a Doctorate, Master's degree, or a professional degree in Psychology, or being in the process of completing postgraduate studies in relevant fields like Psychometrics, Clinical Psychology, Educational Psychology, or Social-Cultural Psychology. 2) Professional or research experience, including expertise in the development, validation, and evaluation of psychometric instruments, a strong understanding of the social and cultural context of Indonesian society, and experience in psychological assessments related to self-esteem, anxiety, identity, or student academic performance. These experts helped evaluate the theoretical construct of the impostor phenomenon, the formulation of items and test instructions, the cultural context, and item relevance. The required number of experts is a

minimum of six and a maximum of ten (Yusoff, 2019). In this study, 9 experts participated: 3 Psychometrics experts, 3 Clinical Psychology experts, 2 Educational Psychology experts, and 1 Social-Cultural Psychology expert. Six of the experts were professors at the Faculty of Psychology and also practiced as psychologists, two were pursuing their master's degrees at the Faculty of Psychology, and one had worked as a psychologist.

The expert evaluation was conducted online by sending a consent form along with the review guidelines for the Impostor-Profile 30 (IPP30) scale via email or WhatsApp. The researcher provided information about the construct being evaluated, the purpose and benefits of the study, requested the expert's consent to participate, and clarified that participation was voluntary. After providing written consent, the experts were given 3 weeks, from August 29, 2024, to September 19, 2024, to assess the relevance of each item and provide suggestions for improvement in areas such as grammar, test instructions, test items, and the overall content of the test.

The validity of the content is calculated using the Content Validity Index (CVI) method. There are two types of calculations used to determine the content validity index: the item-level content validity (I-CVI) and the overall scale validity (S-CVI) (Polit & Beck, 2006). The overall scale validity (S-CVI) can be calculated using two methods: S-CVI/Ave, which is the average value of I-CVI, and S-CVI/UA, which uses the universal agreement (UA) score, where each item is given a score of 1 if it receives 100% agreement from experts, and if not, the item is given a UA score of 0. In this case, S-CVI/Ave is more recommended because S-CVI/UA is too strict, requiring universal agreement (UA) from all experts, which may be difficult to achieve and impractical in all research contexts (Polit & Beck, 2006). These methods were selected because the metrics offer a simple yet rigorous approach to assess the content relevance of the instrument in a specific and objective manner, involving experts in the field. Additionally, over the past decade, these methods have been widely used for content validity testing of research instruments (Hendryadi, 2017; Puspitasari & Febrinita, 2021).

Each expert assessed the relevance of the item using a 1-4 scale (from highly relevant to highly irrelevant), where a score of 1 was given for relevance values of 3 and 4, and a score of 0 is given for relevance values of 1 and 2. Polit and Beck (2006) suggest that if the number of experts is ≥ 6, the minimum acceptable I-CVI value is .78. Meanwhile, the minimum value for S-CVI according to Davis, (1992) is .80. Further explanation regarding the calculation of the I-CVI/S-CVI method is presented in Table 1 below.

Table 1
The calculation of the I-CVI/S-CVI method

CVI	Definition	Formula
I-CVI	The proportion of items that received a score of 3 or 4	$\frac{\sum \text{item score 1}}{\text{N expert}}$
S-CVI/Ave	The average I-CVI score across all items.	$\frac{\sum \text{I – CVI}}{\text{N item}}$
S-CVI/UA	The proportion of items on the scale that received a score of 3 or 4 from all experts	$\frac{\sum \text{UA}}{\text{N item}}$

Cognitive Interview. A cognitive interview was conducted to evaluate how well respondents can understand the translation results and to identify potential ambiguities or difficulties in understanding the statements. Obtaining feedback from respondents regarding their response strategies or reactions to the items enriched the understanding of the construct and provide validity evidence based on the response process (American Educational Research Association et al., 2014).

There are two strategies commonly used in cognitive interviews: 1) think-aloud, where participants are asked to express or verbalize the thoughts that arise while answering the statements, with the interviewer providing only prompts without intervening, and 2) verbal probing, which involves the active investigation process by the interviewer using pre-determined questions to help the respondent articulate their thought process in determining the selected response (Cruz et al., 2023).

The selected respondents should reflect a population that aligns with the purpose of the instrument being used, with the number typically ranging from 5 to 15 people (Peterson et al., 2017). In this study, the researcher conducted cognitive interviews with 12 respondents who met the criteria: Indonesian citizens who use Bahasa Indonesia in their daily lives, active students from a state university with an A or Excellent accreditation, with high academic achievements indicated by a Grade Point Average (GPA > 3.5) and/or who have received awards in academic competitions (such as scientific paper competitions, essay contests, debate competitions, MAWAPRES (Outstanding Student), Olympiads, etc.), and who voluntarily agreed to participate as respondents in this study. These criteria were based on the characteristics of individuals who tend to experience the impostor phenomenon, which is commonly found in high-achieving individuals (Clance & Imes, 1978).

The cognitive interview sessions were conducted individually, lasting approximately 30-40 minutes, and were audio-recorded with the respondents' consent, from September 25, 2024, to September 27, 2024. The test instructions and each item were evaluated to assess the respondents' ability to understand the words, terms, meanings, and format. The researcher observed the respondents' cognitive reactions to each item, how they interpreted and interacted with the items, and identified any difficulties or weaknesses that arose. Any suggestions regarding the best way to present the items were recorded in writing and revised (Pereira et al., 2023).

The researcher provided two sheets of paper to the respondents. The first sheet contained the IPP30 scale with test instructions and 30 items, along with a response scale for answers, while the second sheet featured a table for writing comments or suggestions regarding the items. The researcher then explained the procedure as follows: *"Please read the test instructions and each item aloud. After reading, explain your understanding of the instructions and the items. We would also like to know what led you to the answer you chose. If there are any parts that are confusing or unclear, please let me know".* Respondents were asked to explain their understanding and the reasoning behind their answers. They were then instructed to fill in the second sheet with comments or suggestions regarding the items. Some questions, such as "What are you thinking?", "What comes to your mind?", "What do you remember after reading this statement?", "How do you interpret this statement?", or "What is your experience with [concept]?" can be useful in encouraging verbalization (Cruz et al., 2023).

Result and Discussion

The research began with obtaining permission from the developer of the IPP30 measurement tool, Dr. Fabio Ibrahim. Once permission was granted to carry out the adaptation, the researcher was required to respect the original characteristics of the test (structure, content, format, scoring, etc.), unless there was approval for modifications to these characteristics (ITC, 2017). The next step was translation, to convert IPP30 from English into Indonesian. The translation process involved two methods, forward translation and backward translation, both carried out independently by a team of translators. Beaton et al. (2000) outlined several important considerations for achieving translation equivalence between the original version and the target version, including: semantic equivalence (do the words have the same meaning? Is there any ambiguity in certain items? Are there grammatical issues in the translation?), idiomatic equivalence (colloquial or idiomatic terms are often difficult to translate, so a similar meaning item must be found), experiential equivalence (in some countries, certain tasks may not have been experienced, even though they can be translated, so the item should be replaced with a similar relevant one from the target culture), and conceptual equivalence (words often have

different conceptual meanings between cultures). Simply translating a test from one language to another does not guarantee that the translated version will be equivalent in terms of content, difficulty level, or accuracy to the original version (American Educational Research Association et al., 2014).

The translation results of IPP30 into the Indonesian version indicate no difference in meaning between the synthesized forward translation results at the reconciliation stage and the backward translation results. Both backward translation formats, obtained from two different translators, also convey consistent meanings and align with the original version. For example, item 20, which reads "I am rarely my real self", was agreed upon during the reconciliation stage to be translated into Indonesian as *"Saya jarang menunjukkan diri saya yang sesungguhnya"*. During the backward translation stage, the two translators retranslated it as "I rarely show my true self" (translator 1) and "I rarely showed my true self" (translator 2). Although there are minor differences appeared in the tense usage between the two back-translations, the researcher concluded that the primary meaning and intent of item 20 were well preserved. These results indicate that the translation process successfully maintained the meaning of the original version was consistent with the translated Indonesian version. This consistency was achieved because the items in the original version used common language, making them still relevant to the experiences and cultural context in Indonesia after translation.

The next step was the content validity assessment. Most items received suggestions for improvement, including items 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 16, 18, 20, 21, 24 and 27. For example, item 1 in the original version reads: *"..., I have a strong fear of failure"*,which, after translation into Indonesian, became: *"..., saya tetap memiliki ketakutan yang kuat terhadap kegagalan."* The experts suggested replacing the word *"kuat"* to *"besar,"* resulting in the revised version: *"..., saya tetap memiliki ketakutan yang besar akan kegagalan"*. This suggestion was based on the consideration that the word *"besar"* is more commonly used in the context of describing the intensity of feelings or emotions in Indonesian, while the word *"kuat"* is more appropriately used for describing physical strength or power objectively. Another example is in item 11, where *"ekspektasi"* was changed to *"harapan"* or provided with a clarification such as *"harapan (ekspektasi)"*, and *"stres"* was replaced with *"tertekan"*. Changing *"ekspektasi"* to *"harapan"* and *"stres"* to *"tertekan"* could make it easier for respondents who may not be familiar with academic or scientific terms. In the context of psychological measurement instrument development, it is important to ensure that the language used is easily understood by respondents from various backgrounds, particularly those who are not experts in psychology. Additionally, the experts emphasized the importance of paying attention to proper grammar, especially the use of effective sentence structures following the SPOK (Subject, Predicate, Object, Description) rules in Indonesian.

Subsequently, the assessment of the relevance and agreement of each item by the experts was quantified (see Table 2). The revisions were then carried out by the researchers, incorporating the assessors' suggested ideas, concepts, and sentence formulations. The final revised format was used during the cognitive interview stage with several respondents to collect validity evidence based on the response process.

Table 2

Results of content validity calculation

	Relevancy				
	Ne ($\sum n_{3\text{-}4}$)	Universal	*I-CVI*	Validity	Interpretation
item 1	9	1	1	VALID	Used
item 2	9	1	1	VALID	Used
item 3	9	1	1	VALID	Used
item 4	9	1	1	VALID	Used
item 5	9	1	1	VALID	Used

Table 2
Results of content validity calculation

	Relevancy				
	Ne ($\sum n_{3\text{-}4}$)	Universal	*I-CVI*	Validity	Interpretation
item 6	9	1	1	VALID	Used
item 7	9	1	1	VALID	Used
item 8	9	1	1	VALID	Used
item 9	9	1	1	VALID	Used
item 10	9	1	1	VALID	Used
item 11	9	1	1	VALID	Used
item 12	9	1	1	VALID	Used
item 13	8	0	.89	VALID	Used
item 14	9	1	1	VALID	Used
item 15	9	1	1	VALID	Used
Item 16	9	1	1	VALID	Used
Item 17	8	0	.89	VALID	Used
Item 18	7	0	.78	VALID	Used
Item 19	8	0	.89	VALID	Used
Item 20	8	0	.89	VALID	Used
Item 21	8	0	.89	VALID	Used
Item 22	9	1	1	VALID	Used
Item 23	9	1	1	VALID	Used
Item 24	8	0	.89	VALID	Used
Item 25	9	1	1	VALID	Used
item 26	9	1	1	VALID	Used
item 27	9	1	1	VALID	Used
item 28	9	1	1	VALID	Used
Item 29	9	1	1	VALID	Used
item 30	9	1	1	VALID	Used
		S-CVI/UA=.77	*S-CVI/Ave*=.97		

Notes. Pnx = Assessor, ne = number of assessors in agreement; UA = Universal Agreement, I-CVI = Item-Content Validity Index. For the average and UA, a relevance score of 3 and 4 is assigned 1 point, while a score of 1 and 2 is assigned 0 points. X = the proportion of average items whose relevance is agreed upon by 9 assessors.

These results showed that both the item and the scale of the IPP30 Indonesian version were content valid for measuring the impostor phenomenon. Quantitatively, item 18 was at the cut-off value of .78, meaning that it could still be retained, although it needed to be considered and re-evaluated qualitatively. The researchers' evaluation of item 18 led to the decision to retain the item and proceed with further analysis through the cognitive interview phase. This decision was based on a thorough qualitative review of the fundamental concept underlying the impostor phenomenon, which served as the theoretical foundation for the instrument's development. Item 18, originally stated as "Often I behave little authentic," was translated to "*Sering kali saya berperilaku tidak seperti diri saya sendiri*." The translators avoided using the word "*otentik*" as the translation for "authentic" based on the consideration that measurement indicators for a construct should use language that is easily understood by all respondents, without causing confusion. Based on feedback from several experts, the researchers decided to revise the item to "*Sering kali saya berperilaku tidak mencerminkan diri saya yang sesungguhnya*." the original and revised versions were similar in meaning, both describing an individual who felt that their

behavior did not fully reflect their true self. Theoretically, individuals with impostor tendencies often struggle to present their true selves. They fear that others will discover who they really are, as they worry they may not meet the expectations placed upon them. Despite the low I-CVI score, item 18 was found to substantially reflect the phenomenon within the well-established theoretical framework.

After obtaining the content validity, revisions to the test instructions and items were made in preparation for the cognitive interviews. Cognitive interviews, as stated by Willis (2005), are an important step in understanding the cognitive process of respondents in providing accurate responses. The cognitive interview procedure began with the researcher instructing respondents to read the test instructions and items aloud. Afterward, respondents were asked to explain what they understood from the test instructions and the items. For instance, after reading item 1, which stated, *"Meskipun pernah berhasil meraih sesuatu, saya tetap memiliki ketakutan yang besar akan kegagalan,"* the respondent explained: *"Ya, saya bisa memahami pernyataan ini. Maksudnya, meskipun seseorang sudah pernah meraih sesuatu atau mencapai sukses, bukan berarti kita otomatis merasa yakin bahwa kita akan terus berhasil. Ada rasa takut kalau-kalau nanti gagal, padahal keberhasilan sebelumnya mungkin hanya keberuntungan atau kebetulan. Saya sendiri sering merasa seperti itu, seperti merasa tidak pantas dengan apa yang sudah saya capai. Bahkan ketika orang lain memberi pujian atau mengakui hasil kerja saya, di dalam hati saya selalu berpikir, 'Apa iya saya pantas mendapatkannya?' Rasanya selalu ada suara yang berkata, 'Mungkin saya hanya beruntung kali ini,' atau 'Ada orang lain yang lebih layak'."* The researcher then probed further by asking, *"Bisakah anda ceritakan pengalaman nyata anda dalam situasi seperti itu?"* The respondent responded: *"Sebenarnya, saya pernah beberapa kali berhasil menyelesaikan tugas besar yang menurut saya itu sulit dengan hasil yang baik. Tapi setiap kali ada kesempatan baru, saya malah merasa takut kalau saya tidak bisa mengulanginya. Saya merasa seolah-olah saya harus membuktikan lagi diri saya, seolah-olah saya harus menunjukkan bahwa saya memang kompeten. Padahal, kadang-kadang saya hanya berusaha sebisanya, dan hasilnya kebetulan sesuai dengan harapan. Saya ingat pernah ditugaskan untuk memimpin tim dalam tugas kelompok, dan meskipun hasilnya memuaskan, saya tetap merasa was-was setelahnya."* The researcher then confirmed by asking, *"Dari yang Anda jelaskan, sepertinya Anda sering merasa ada tekanan untuk terus membuktikan diri, ya? Meskipun sudah ada pencapaian, masih ada keraguan tentang kemampuan sendiri?"* The respondent replied, *"Iya, betul sekali. Rasanya seperti… meskipun saya sudah berhasil, saya terus merasa belum cukup. Seperti ada rasa tidak puas dengan diri sendiri, seolah-olah saya takut kalau nanti orang-orang mulai melihat kelemahan saya".* Based on the respondent's explanation, it was inferred that they truly understood the item as described, they would likely provide a high response score for item 1.

The cognitive interviews conducted with 12 respondents revealed that some items were difficult for the respondents to understand in terms of the intended situation and context. For example, item 2, which reads *"Saya sering berpikir bahwa saya tidak cukup mampu"*, raised a question from respondent 3: *"Tidak cukup mampu dalam apa?"*. Another example, item 3, which reads *"Masa-masa ujian sangat menekan bagi saya"*, prompting comments from respondent 9 and respondent 12 such as *"Ujian apa yang dimaksud?"* and *"Ujian dari Allah?"*. In response to these comments, the researcher took steps to modify the test instructions with the approval of the instrument developer, Dr. Fabio Ibrahim. This modification included an explanation that the IPP30 is used to measure respondents' academic experiences during their studies, revised to: "*Berikut ini akan disajikan beberapa butir kalimat pernyataan yang menggambarkan pikiran dan perasaan seseorang terkait dengan pengalaman akademiknya. Bacalah setiap pernyataan dengan teliti, kemudian berilah respon terhadap masing-masing kalimat pernyataan tersebut berdasarkan pengalaman akademik Anda selama menjalani perkuliahan"*. For broader application of the Indonesian version of IPP30 in other fields, the researcher suggests adjusting the instructions to fit the specific context being studied.

Several items received input and suggestions from the respondents, including items 6, 7, 13, 16, 18, 22, 23, 25, 26, 27, and 28. For example, item 16, which stated *"Saya sering mengganggu diri saya (mengalihkan perhatian), meskipun banyak hal yang harus saya kerjakan"*, could be

clearer, with one noting, *"Item ini bisa dipahami tapi harus baca berulang kali. Mungkin bisa dipilih salah satu aja. Sepertinya lebih cocok mengalihkan perhatian,"* while another stated, *"Kalau langsung aja mengalihkan perhatian, bagaimana? Soalnya mengganggu diri terkesan seperti apa. Mending langsung to the point aja."* A third respondent suggested, *"Lebih baik langsung menggunakan 'mengalihkan perhatian' karena kata mengganggu diri agak membingungkan,"* and another simply asked, *"Sering mengganggu bagaimana?"* These comments highlighted the need for clearer phrasing, particularly regarding the term "*mengganggu diri*," which some respondents found ambiguous. Based on this feedback, the researcher consulted with several experts on the panel to modify the item, and a consensus was reached to revise it to read, *"Saya sering mengalihkan perhatian saya, meskipun banyak hal yang harus saya kerjakan".*

From the cognitive interviews, no items were found to be considered irrelevant to Indonesian culture or unacceptable to all potential participants. Asking respondents about their performance strategies or responses to the item statements can provide evidence that enriches the definition of a construct (American Educational Research Association et al., 2014). This indicates the presence of validity evidence based on the response process. Below are some items with changes after the cognitive interviews (see Table 3).

Table 3
Item changes after cognitive interviews

Item	Final item after cognitive interviews
6	Kegagalan tidak membuat saya ragu terhadap kemampuan saya
7	Saya sering kali merasa tidak puas dengan kualitas hasil pekerjaan saya
13	Saya sering kali menunda untuk mulai mengerjakan tugas-tugas penting
16	Saya sering mengalihkan perhatian saya, meskipun banyak hal yang harus saya kerjakan
18	Saya sering kali menunjukkan perilaku yang tidak mencerminkan diri saya yang sesungguhnya
22	Harapan (ekspektasi) rekan-rekan saya terhadap saya terlalu tinggi
23	orang-orang terlalu melebih-lebihkan kemampuan saya
25	Bagi saya, sangat penting untuk menciptakan sesuatu yang bermakna
26	Memimpin pekerjaan yang melibatkan banyak bawahan akan memberikan kepuasan bagi saya
27	Mencapai sesuatu yang bermakna adalah hal yang paling penting dalam hidup saya
28	Bagi saya, penting untuk terlihat peduli kepada orang lain

Test developers are responsible for providing relevant evidence and justifications for the interpretation of test scores for their intended use. Sources of supporting evidence for test validation include evidence based on test content, evidence based on the response process, evidence based on internal structure, evidence based on relationships with other variables, and evidence based on testing consequences (American Educational Research Association et al., 2014). Overall, this study successfully demonstrated that the initial validation of the Indonesian version of IPP30, through a systematic and collaborative scientific process, can be used to measure the impostor phenomenon and provide a solid foundation for further evaluation of the psychometric properties for broader application. Science and practice in behavioral, social, and medical fields rely on measurement outcomes, thus highlighting the importance of the quality of the measurement tools used (Iliescu et al., 2024).

IPP30 was developed in Germany and has been validated in English by Ibrahim et al. (2022b) and in Swedish by Doshi et al. (2024). Culturally, the United States, Germany, and Sweden can be categorized as Western countries, each influenced by Western traditions, including individualism. Western cultures tend to emphasize independence, self-focus, and the expression of unique personal attributes, rather than fostering open interconnectedness among individuals

(Markus & Kitayama, 1991). In contrast, Indonesia, as a highly collectivistic society, views the self and identity in relation to others, making it challenging to apply psychological theories focused on self-concept (Himawan, 2024). Collectivistic cultures prioritize social relationships and contributions to the group, viewing emotions and identity as integral to interpersonal interactions and group harmony, unlike individualistic cultures that emphasize personal achievement and autonomy (Matsumoto & Juang, 2008). Regarding impostor feelings, the researcher hypothesizes that Indonesians may perceive their success as a result of group collaboration or support from others, rather than personal effort or ability. Additionally, Indonesia's cultural value of humility may intensify impostor feelings. Individuals with impostor tendencies often doubt their abilities and tend to downplay their achievements or reject praise (Cokley, 2024). It is suggested that this rejection of praise may occur in Indonesian society due to the cultural discomfort individuals feel when acknowledging their success, even after significant accomplishments. Therefore, to assess cultural differences and the validity of the Indonesian version of the IPP30, a large sample and statistical analysis are required to determine whether the scale is applicable, meaningful, and psychometrically equivalent in measuring impostor phenomena within the Indonesian cultural context. This step is essential to ensure that an instrument developed in one culture can be used accurately and effectively in another (Matsumoto & Juang, 2008).

The development of the IPP30 scale provided a unique approach to improving the measurement and understanding of the Impostor Phenomenon through bifactor modeling, a method increasingly popular in psychological and psychiatric research. This approach has shown promise in exploring how different aspects of the phenomenon relate to external variables, including potential antecedents and outcomes (Cokley, 2024). To ensure consistency and accuracy in measurement, advanced psychometric analyses—such as Confirmatory Factor Analysis (CFA)—are necessary to assess model fit, identify poorly functioning items, and refine the instrument when required. In addition, evaluating criterion validity through correlations with other variables and reliability estimation is crucial. A thorough report of psychometric data was essential to evaluate the proposed structure of a construct and to assess how effectively it has been operationalized in measurement scales (Mak et al., 2019).

As a next step, following the ITC (2017) guidelines, empirical data collection will involve the final version of the IPP30 Indonesian version, which has undergone content validity and cognitive interviews. The Indonesian version of IPP30 could be applied in various settings, such as academic environments, clinical counseling, and the organizational context, with careful adjustments to the test instructions, to suit specific contexts and populations being measured. For example, in an organizational setting with employee samples, the focus could be directed toward professional performance and career development. However, any modifications made must be clearly outlined and reported. With these careful adaptations, IPP30 can become a flexible and effective tool for identifying and addressing feelings of impostor across diverse populations.

This study has some limitations. All responses provided by the experts were subjective. The translation process and expert assessments were conducted online by sending translation and review forms via email, including the reconciliation stage with the translators. Direct discussions might have provided greater opportunities for improvements and variations. The use of a high-achieving sample may limit the generalizability of the research findings to a more diverse population, given the fundamental differences in characteristics such as motivation and self-esteem between high and low achievers. Therefore, the impostor phenomenon may manifest differently in other populations, and the results should be interpreted with caution. For future research, it is recommended to assess the scale's consistency across different groups, such as high and low achievers, by using Measurement Invariance (MI).

Conclusion

This study aimed to translate IPP30 from English to Indonesian, collect validity evidence based on content, and gather evidence of the response process as part of the development phase, in accordance with the ITC guidelines. Based on the procedures carried out, it was found that the

IPP30 provides content validity and response process evidence that supports its use in measuring the impostor phenomenon construct. It should be noted that this study refers to the initial stage of the adaptation process, which is the development phase according to the ITC guidelines, and must proceed to the next stage, the confirmation phase for psychometric property analyses to support the internal structure validity and reliability of the IPP30 Indonesian version.

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