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Development and Psychometric Evaluation of Malay Version Bipolar Disorder Inventory (IGB) among Malaysian Youth

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Abstract

This study aims to develop and assess the psychometric properties of the *'Inventori Gangguan Bipolar (IGB)'* or the Bipolar Disorder Inventory, a tool designed to measure the severity of bipolar disorder among individuals. The IGB was constructed based on the principles outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V, 2013) by the American Psychiatric Association (APA). The inventory comprises 18 negative items divided into three subscales: Manic, Hypomanic, and Depressive, each containing six items. Content validity was evaluated by a panel of seven experts, consisting of three academic lecturers and four practitioners (two registered counselors and two clinical psychologists), resulting in a high content validity index (CVI) of 0.944 (94.4%). Reliability testing, performed on a sample of 50 individuals using Cronbach's alpha, yielded a moderate-to-high overall reliability score of 0.800, with subscale scores ranging from 0.769 to 0.807. These findings indicate that the IGB is a valid and reliable tool for the initial screening and assessment of bipolar disorder symptoms. While suitable for use in guidance and counseling practices, further research is recommended to enhance the instrument's robustness and applicability across diverse populations in Malaysia.

Keywords: Bipolar Disorder Inventory, Content Validity, Reliability, Bipolar Disorder, Psychological Assessment, Youth, Malaysia

Introduction

Bipolar disorder is among the most complex mental health conditions, characterized by drastic mood swings ranging from elevated states of mania to deep depressive episodes. Mania is marked by heightened energy, excessive elation, and impulsive behaviors, while depressive episodes involve profound sadness, loss of interest in activities, and prolonged fatigue. These mood changes significantly disrupt social, occupational, and familial life and, if

untreated, can lead to severe consequences, including an increased risk of suicide (Bauer et al., 2021).

Globally, bipolar disorder affects approximately 1–3% of the general population, with an annual prevalence of 2.8% among adults in the United States (Grande et al., 2022; National Institute of Mental Health, 2021). The American Psychiatric Association (APA) categorizes bipolar disorder into three main types in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V, 2013): Bipolar I, Bipolar II, and Cyclothymic Disorder, each with distinct symptom severities.

Etiologically, bipolar disorder arises from a complex interplay of genetic, biological, and environmental factors. Studies highlight a strong genetic predisposition, where individuals with a family history of bipolar disorder are at higher risk. Additionally, life stressors, childhood trauma, and neurotransmitter imbalances are known to trigger or exacerbate symptoms (Smoller et al., 2021).

From a clinical perspective, diagnosing bipolar disorder remains challenging due to its symptom overlap with other mental health conditions, such as major depressive disorder or anxiety. Accurate diagnosis often requires systematic tools like bipolar disorder inventories, which provide structured approaches to assessing mood and behavior patterns. These inventories enhance precision in symptom evaluation, aiding early detection and intervention (Grande et al., 2022).

Treatment for bipolar disorder includes a combination of pharmacological and non-pharmacological approaches. Common medications include mood stabilizers like lithium and atypical antipsychotics, while psychotherapeutic interventions, such as cognitive behavioral therapy (CBT) and family-focused therapy, have proven effective in managing symptoms and reducing relapse rates (Geddes & Miklowitz, 2021). A holistic approach, incorporating social support and lifestyle modifications like stress management and sleep regulation, is also crucial for long-term recovery.

Despite its significance, public awareness of bipolar disorder remains low in Malaysia, contributing to stigma and delayed treatment. This study addresses the need for culturally appropriate diagnostic tools by developing and evaluating the Bipolar Disorder Inventory (IGB), specifically tailored to the Malaysian context. By providing a validated and reliable instrument, this research aims to enhance the identification and management of bipolar disorder, thereby improving psychological support systems and reducing societal stigma.

Background of Bipolar Disorder

Bipolar disorder, a complex and multifaceted mental health condition, has been the subject of extensive research and clinical investigation. This disorder is characterized by significant fluctuations in mood, energy, and cognitive functioning, often manifesting as episodes of mania and depression ("Pediatric Bipolar Disorder Fact Sheet for Parents," 2005). Individuals with bipolar disorder often experience persistent and dramatic mood swings that can last from days to weeks. These fluctuations can significantly impact daily life, relationships, and the ability to function in various settings. Bipolar disorder is treatable and heritable brain disorder, with a global prevalence of over 1% (Chen et al., 2023). According to data, bipolar

disorder also affects approximately 1-3% of the population, with an estimated annual prevalence of 2.8% among adults in the United States (Grande et al., 2022; National Institute of Mental Health, 2021).

The core symptoms of bipolar disorder include episodes of abnormally elevated mood, inflated self-esteem, decreased need for sleep, increased talkativeness, and excessive goal-directed activity (Kerner, 2015). During manic episodes, individuals may exhibit excessive confidence, racing thoughts, and impulsive behaviors that can lead to risky decisions, such as overspending or engaging in high-risk social activities. Conversely, depressive episodes are marked by intense sadness, hopelessness, and a loss of interest in previously enjoyed activities. These symptoms can hinder basic daily responsibilities, including maintaining employment and social connections. Individuals with bipolar disorder can quickly swing from extremes of happiness and energy to sadness and fatigue, with these shifts often being severe enough to impair daily functioning and, in some cases, lead to suicidal thoughts or behaviors (Yatham & Malhi, 2011).

The pathogenesis of bipolar disorder is multifactorial, involving a complex interplay of genetic, biological, and psychological factors (Chen et al., 2023). Recent research has also shed light on the potential role of the immune system in the development and progression of bipolar disorder, suggesting that T cells and other immune components may play a crucial role in the underlying mechanisms of this disorder (Chen et al., 2023). Given the significant impact of bipolar disorder on individuals, families, and society, continued research and clinical advancements are necessary to improve the understanding, diagnosis, and effective management of this complex mental health condition.

Symptoms of bipolar disorder:

i. Manic episodes: During a manic episode, individuals may experience euphoria, heightened energy, or irritability. Symptoms often include racing thoughts, a reduced need for sleep, impulsivity, and behaviors with potentially severe consequences, such as excessive spending or risky social activities. In some cases, manic episodes can escalate to include delusions or hallucinations (Jann, 2022).
ii. Hypomanic episodes: Hypomania is a milder form of mania, involving similar symptoms but at a lower intensity. While hypomanic episodes may not severely disrupt daily functioning, they carry risks, as individuals may not recognize the potential for progression to full-blown mania or depression (Grande et al., 2022).
iii. Depressive episodes: During depressive episodes, individuals often experience profound sadness, a lack of energy, and diminished interest in activities they previously enjoyed. These symptoms can make managing daily responsibilities, such as work or social relationships, extremely challenging. Depression may also result in feelings of worthlessness, low self-esteem, and, in severe cases, suicidal thoughts (Rowland & Marwaha, 2021).

For example, an individual with bipolar disorder might experience a manic episode, feeling exceptionally productive and enthusiastic, working for several days without sleep, making significant financial investments, or engaging in intense social activities. During this phase, they might believe they possess limitless abilities and can accomplish anything.

However, after weeks or months, they could transition into a severe depressive episode, characterized by feelings of hopelessness, helplessness, and a loss of interest in nearly all activities. In this state, they may struggle to get out of bed, feel persistently fatigued, and grapple with thoughts of death or suicide.

Literature Review

Bipolar disorder has long been recognized as a significant mood disorder, with historical records dating back to the 19th century when it was first identified and extensively studied within the field of psychiatry. However, our understanding of this disorder has greatly advanced in recent decades, aligned with progress in neuroscience and diagnostic technology. The clinical presentation of bipolar disorder is often complicated by the presence of comorbid psychiatric and medical conditions, which can exacerbate the severity of the disorder and complicate treatment approaches (Suhaff, 2019; Leboyer et al., 2012).

Research indicates that individuals with bipolar disorder frequently experience comorbid anxiety disorders, substance use disorders, and other mood disorders, which can lead to increased morbidity and mortality (Crump et al., 2013; Pavlova et al., 2016). For instance, a meta-analysis revealed that anxiety disorders are prevalent even during euthymic phases of bipolar disorder, suggesting that effective management of anxiety is crucial for overall treatment success (Pavlova et al., 2016). Moreover, the presence of childhood maltreatment has been linked to higher rates of medical morbidity in adults with bipolar disorder, indicating that early life experiences can have lasting effects on mental health outcomes (Hosang et al., 2018).

Neurobiological research has begun to elucidate the underlying mechanisms of bipolar disorder, revealing potential genetic and neurochemical factors that contribute to its psychopathology (Harrison et al., 2018). For instance, abnormalities in gamma-aminobutyric acid (GABA) levels have been implicated in the disorder, suggesting a neurochemical basis for mood dysregulation (Brady et al., 2013). Additionally, the recognition of bipolar disorder as a potential multisystem inflammatory disease has opened new avenues for understanding its etiology and treatment (Leboyer et al., 2012). Bipolar disorder is also closely linked to dysfunctions in the brain's neurotransmitter systems. Neurotransmitters such as dopamine, serotonin, and glutamate play crucial roles in regulating mood and emotions, and any imbalance in these systems can trigger symptoms of bipolar disorder. Research by Berk et al. (2021) indicates that this disorder is often caused by the complex interaction between biochemical factors and brain structures, which ultimately alters an individual's ability to control their emotions and behavior.

The treatment of bipolar disorders is particularly challenging, especially in specific populations such as pregnant women. Pharmacotherapy during pregnancy is complicated due to potential risks to both the mother and the fetus, necessitating careful consideration of treatment options (Byatt et al., 2017; Kameg, 2020). Studies have shown that women with bipolar disorder may face double vulnerabilities during the perinatal period, which can complicate their treatment (Byatt et al., 2017). Furthermore, disparities in treatment access and outcomes have been observed among different racial and ethnic groups, highlighting the need for culturally competent care (Hwang et al., 2010; Gonzalez et al., 2010). In addition, genetic factors play a significant role in the risk of developing bipolar disorder. Twin and

genetic studies have shown that the disorder has a strong hereditary component, with concordance rates in identical twins much higher than in fraternal twins (Kato et al., 2021). Epigenetic factors, which involve changes in gene expression without altering the DNA sequence, have also garnered attention in bipolar disorder research, as they influence how individuals respond to stress and may contribute to the development of the disorder (Goodwin & Jamison, 2022).

Pharmacological management of bipolar disorder typically involves mood stabilizers, antipsychotics, and antidepressants. Quetiapine, for example, has been shown to be effective in treating various phases of bipolar disorder, including manic and depressive episodes (Muneer, 2015; Sala et al., 2013). However, the use of antidepressants in bipolar depression remains controversial due to the risk of inducing manic episodes (McIntyre & Calabrese, 2019). The complexity of treatment regimens in further compounded by the phenomenon of polypharmacy, particularly in older adults, where multiple psychotropic medications are often prescribed (Forester et al., 2015).

Recent studies have focused on several key aspects of understanding and managing bipolar disorder. One important study by Goodwin and Jamison (2022) examined the effectiveness of various treatment strategies, including pharmacological treatments and psychotherapy. Their findings indicate that combining mood stabilizers and antipsychotic medications with cognitive-behavioral therapy (CBT) yields better outcomes in managing bipolar disorder. A study by Berk et al. (2021) also emphasized the use of biomarkers in the diagnosis of bipolar disorder. The research identified biomarkers, such as C-reactive protein (CRP) and neuroimaging results, that can help identify individuals at high risk for developing bipolar disorder. By using biomarkers, mental health professionals can make more accurate assessments of the presence and progression of the disorder. This approach is also useful in evaluating treatment effectiveness, allowing for adjustments based on the individual patient's needs.

The Importance of Understanding Bipolar Disorder

Understanding bipolar disorder is crucial for several reasons, including its complexity, the impact on individuals and families, and the broader societal implications. Bipolar disorder is characterized by extreme mood swings, including manic and depressive episodes, which can significantly impair an individual’s ability to function in daily life. The importance of understanding this disorder extends beyond clinical diagnosis and treatment; it encompasses psycho-education, awareness of symptoms, and the recognition of cognitive and emotional challenges faced by those affected.

According to a mental health survey conducted by the Malaysian Ministry of Health in 2015, awareness of bipolar disorder among the general population remains low. It is crucial for counselors, mental health professionals, and families to recognize the early signs of bipolar disorder to facilitate timely treatment and support. A comprehensive understanding of the disorder is essential, focusing on the following aspects:

i. Identifying individuals at high risk of developing bipolar disorder.
ii. Understanding the symptoms associated with manic and depressive episodes.
iii. Raising awareness to reduce social stigma surrounding the disorder.

iv. Providing education on the importance of treatment and monitoring to minimize the risk of recurring episodes.

One of the primary reasons for understanding bipolar disorder is the role of psycho-education in improving patient outcomes. Psycho-education aims to enhance patients' awareness of their condition, promote adherence to treatment regimens, and help them recognize early warning signs of mood episodes (Stafford & Colom, 2013). Research has shown that psycho-education can lead to improved acceptance of the diagnosis and better medication adherence, which are critical for managing the disorder effectively (Regeer et al., 2015). Furthermore, understanding the nature of bipolar disorder can empower patients to manage their symptoms proactively, thereby reducing the risk of relapse and enhancing their quality of life (Stafford & Colom, 2013; Regeer et al., 2015).

Additionally, cognitive impairments associated with bipolar disorder can significantly affect daily functioning and quality of life. Studies have indicated that individuals with bipolar disorder often experience cognitive deficits, which can impair their ability to engage in daily activities and maintain relationships (Toyoshima et al., 2019; Bowie et al., 2010). Understanding these cognitive challenges is essential for developing effective treatment strategies that address not only mood stabilization but also cognitive rehabilitation and support (Toyoshima et al., 2019; Bowie et al., 2010). For instance, mindfulness-based cognitive therapy has been shown to improve cognitive functioning and emotional regulation in patients with bipolar disorder (Deckersbach et al., 2011). This highlights the need for a comprehensive approach that considers both emotional and cognitive aspects of the disorder.

Moreover, awareness of bipolar disorder is critical in reducing stigma and promoting better treatment access. Stigma surrounding mental health conditions can lead to discrimination and social isolation, further exacerbating the challenges faced by individuals with bipolar disorder (Latifian et al., 2022; Thomé et al., 2011). By fostering a better understanding of the disorder among the general public and healthcare professionals, it is possible to mitigate stigma and encourage more compassionate and informed responses to those affected (Ellison et al., 2015; Albakr, 2023). This is particularly important in clinical settings, where misdiagnosis or under diagnosis can occur, leading to inadequate treatment and support (Parker, 2011).

Finally, understanding bipolar disorder is vital for addressing the broader societal implications of the condition. Bipolar disorder can lead to significant psychosocial disability, affecting individuals' ability to maintain employment and engage in social activities (Zimmerman et al., 2010; Bowie et al., 2010). The economic burden of untreated or poorly managed bipolar disorder is substantial, impacting not only the individuals but also healthcare systems and society as a whole (Zimmerman et al., 2010). Therefore, enhancing understanding and awareness of bipolar disorder can contribute to more effective public health strategies, ultimately improving outcomes for individuals and reducing the overall burden on society.

Theoretical Framework of Bipolar Disorder

The IGB inventory was developed based on the framework introduced by the American Psychiatric Association (APA) in the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). According to the DSM-V, bipolar disorder is a mental health condition characterized by drastic emotional fluctuations, including manic and depressive episodes. Bipolar disorder can affect individuals of all ages and often involves transitions between the high-energy states (manic or hypomanic) and low-energy states (depressive).

As a mental health disorder, bipolar disorder profoundly impacts an individual's psychological and social functioning. To measure the severity and types of mood changes experienced by individuals, bipolar disorder can be assessed using three main subscales:

i. Subscale 1: Manic
   This subscale evaluates the intensity of manic episodes, characterized by extreme mood changes such as excessive energy, rapid thoughts, heightened confidence, and impulsive behaviors.
ii. Subscale 2: Hypomanic
   The hypomanic subscale measures mood episodes that are less intense than manic episodes but still involve noticeable increases in energy and significant positive emotional changes.
iii. Subscale 3: Depressive
   This subscale assesses the severity of depressive episodes, typically involving profound sadness, loss of interest in daily activities, low energy, and negative thought patterns.

Together, these subscales provide a comprehensive understanding of bipolar disorder by focusing on three key components: mania, hypomania, and depression. The interconnectedness of these subscales helps to evaluate the impact of bipolar disorder on an individual's emotional stability and social functioning. Each subscale is designed to identify the extent of mood changes and their effects on the individual's overall well-being and quality of life.

Objectives of the Study

The main objective of this study is to measure the severity of bipolar disorder among Malaysian youth. Research on the *Inventori Gangguan Bipolar (IGB)* or Bipolar Disorder Inventory is particularly critical in accordance to the increasing prevalence of mental health issues within Malaysian society. Accordingly, this study also aims to establish the reliability, face validity, and content validity of the IGB to ensure its suitability for use within Malaysia's cultural context. The specific objectives are as follows:

i. To develop the IGB questionnaire based on a thorough review of the literature.
ii. To determine the overall content validity of the IGB questionnaire through panel expert evaluations.
iii. To evaluate the content validity of the IGB subscales though expert panel evaluations.
iv. To establish the overall reliability of the IGB questionnaire using Cronbach's Alpha analysis.
v. To determine the reliability of the IGB subscales using Cronbach's Alpha analysis.

Administration, Scoring and Interpretation of IGB Scores

The Bipolar Disorder Inventory (IGB) is a diagnostic tool designed to assess the severity of bipolar disorder in individuals. The IGB consists of 18 items grouped into three subscales: Manic, Hypomanic, and Depressive, each comprising six items. Administering the IGB typically takes between 15 to 20 minutes. To ensure accurate results, the assessment should be conducted in a conducive and comfortable environment.

Administration

Before beginning the inventory, the instructions must be read aloud clearly and thoroughly to the respondents. They are encouraged to answer honestly and select the responses that best reflect their current experiences. Responses are recorded on the provided answer sheet using a simple “Yes” or “No” format, adhering to the Guttman Scale.

Respondents are given the freedom to answer all items based on their self-perception and are assured that there are no right or wrong answers. This approach helps minimize anxiety and promotes candid responses.

Scoring

Scoring for the IGB is straightforward, with each "Yes" response indicating the presence of a symptom. According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V), a score of nine or more “Yes” responses—particularly when symptoms from both the manic/hypomanic and depressive phases are present—suggests the need for further evaluation by a mental health professional.

Interpretation

It is essential to note that the IGB is intended as an initial screening tool, not a definitive diagnostic instrument. A comprehensive clinical evaluation conducted by a qualified mental health professional is required for a conclusive diagnosis of bipolar disorder. The IGB serves to identify potential cases that warrant further investigation and intervention, providing valuable guidance for early support and care.

Methodology

This study adopts a descriptive research design to evaluate the content validity and reliability of the IGB, developed based on findings from previous studies. The study comprised three distinct phases:

i. Phase 1: Development of the IGB
ii. Phase 2: Assessment of validity
iii. Phase 3: Reliability analysis

Phase 1: Development of the IGB

The IGB was developed through an in-depth literature review and aligned with established principles, particularly those outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V) by the American Psychiatric Association (APA). The development process focused on ensuring that the inventory's structure and content were conceptually robust and theoretically grounded.

Phase 2: Assessment of Validity
After constructing the IGB items, the inventory was distributed to a panel of seven experts comprising three academic lecturers and four practitioners, including two registered counselors and two clinical psychologists. These experts reviewed the items to evaluate their clarity, relevance, and comprehensiveness.

The researchers provided a complete IGB package, including an introduction and a user manual, to facilitate expert feedback and suggestions for improvement. A five-point Likert scale (1 = strongly disagree to 5 = strongly agree) was used to assess the validity of the items. This scale, supported by recent research, has proven effective in gathering precise expert opinions. It is particularly suitable for evaluating item clarity, appropriateness, and representativeness, thereby contributing to stronger content validity (Shrestha, Thapa, & Paudel, 2021).

Phase 3: Reliability Analysis
The third phase focused on analyzing the reliability of the IGB. Once content validity was established, the inventory was administered to a sample of 50 respondents selected through simple random sampling. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 30 to calculate Cronbach's Alpha, a measure of internal consistency, to assess the reliability of the IGB.

Sample and Sampling
The study subjects participated in Phases 2 and 3. In Phase 2, a panel of seven experts provided evaluations for content validity. These experts consisted of three academic lecturers and four practitioners (two registered counselors and two clinical psychologists). In Phase 3, a sample of 50 respondents was selected to provide data for the reliability analysis.

Findings
Phase 1: Development of the IGB
The development of the IGB was guided by an extensive review of literature on the definitions, factors, and symptoms of bipolar disorder. Reference materials included articles and journals from both local and international sources. Based on these findings, the IGB was designed to comprise 18 items divided into three subscales: Manic, Hypomanic, and Depressive, with each subscale containing six items.

Phase 2: Assessment of Validity
The findings from Phase 2 highlighted feedback and recommendations provided by the panel experts' evaluation. In total, seven selected experts reviewed the inventory and provided overwhelmingly positive feedback on the proposed items.

The feedback from these experts served as the basis for refining and improving the items to ensure their reliability and validity. The panel's comments and recommendations are summarized in Table 1.

Table 1
Panel expert comments and recommendations of the IGB

Expert	Comments / Recommendations	Actions and justifications
Expert 1	Overall assessment good	
Expert 2	Certain terms should be refined to better differentiate between bipolar disorder and other conditions.	Improvements were made.
Expert 3	Items are appropriate, easy to understand, and clear. It is recommended to use the Guttman scale for measurements.	Adjustments were implemented.
Expert 4	For bipolar screening, a 'Yes' and 'No' response format (Guttman scale) is more suitable. Likert scales are less appropriate.	Necessary adjustments were made.
Expert 5	Items are suitable for measuring bipolar disorder. Bipolar disorder should not be categorized simply as mild, moderate, or severe. Instead: i. Mild mania/depression: Hypomania ii. Severe mania: Mania iii. Severe depression: Depressive	Modifications were carried out.
Expert 6	The items are appropriate for the study conducted.	
Expert 7	The items are easy to understand.	

Based on the feedback and recommendations provided by the experts, the researchers reviewed and refined the items accordingly. While some items received unanimous agreement, others required modifications to address differing opinions. Overall, the experts concurred that the constructed items effectively represent the concept and are capable of measuring the severity of bipolar disorder in individuals. According to Majid Konting (1998), the validity of a measurement tool refers to the extent to which the instrument accurately measures the intended data to achieve the objectives of the study.

Table 2
Validity of overall and subscales of the IGB

Scale/Subscale	No. of items	CVI value (%)	Expert remarks
Subscale 1: Manic	6	.952 (95.2)	Accepted
Subscale 2: Hypomanic	6	.881 (88.1)	Accepted
Subscale 3: Depressive	6	1.000 (100.0)	Accepted
Overall IGB	18	.944 (94.4)	Accepted

Table 2 highlights the overall content validity index (CVI) of the IGB, which stands at .944 (94.4%). Among the subscales, the highest content validity score was 1.000 (100.0%) for Subscale 3: Depressive, while the lowest was .881 (88.1%) for Subscale 2: Hypomanic. These findings indicate that the IGB demonstrates a high level of expert-rated content validity. This aligns with Lawshe's (1975) recommendation that an I-CVI value of ≥ 0.78 is considered acceptable for content validity.

Phase 3: Reliability analysis

The third phase of the study focused on evaluating the reliability of the IGB. Data from the pilot study were processed using the Statistical Package for the Social Sciences (SPSS) version 30. According to Creswell (2010), reliability reflects the stability and internal consistency of a measurement tool.

The interpretation of Cronbach's Alpha reliability values for the overall items and each subscale was guided by the framework presented by Tavakol and Dennick (2011). They suggest that if the corrected item-total correlation value is less than .30, the item should be reviewed, as it indicates a very low correlation with other items.

Furthermore, Vallete (1997) recommended a minimum reliability value of .50. Kerlinger (1973) and Majid Konting (1998) stated that reliability coefficients above .60 are commonly used, with Cronbach's Alpha values between .60 and .80 considered moderately high, and values above .80 categorized as high. The Cronbach's Alpha values for the IGB are presented in Table 3.

Table 3
Cronbach's Alpha for overall and subscales of the IGB (n =50)

Scale/Subscale	No. of items	Cronbach's alpha value	Interpretation
Subscale 1: Manic	6	.769	Moderately high
Subscale 2: Hypomanic	6	.806	High
Subscale 3: Depressive	6	.807	High
Overall IGB	18	.800	Moderately high

*Significant level .5

Overall, the reliability analysis of the IGB indicates a moderately high Cronbach's Alpha coefficient of .800. This result demonstrates that the IGB has high reliability, confirming its suitability for use as a measurement tool.

At the subscale level, the IGB achieved moderately high reliability, with the highest score for Subscale 3: Depressive, followed by Subscale 1: Manic, and Subscale 2: Hypomanic. Table 4 presents a detailed reliability analysis to assess the quality of the individual items within the inventory.

Table 4
Reliability value for each item of the IGB

No.	Item	Cronbach's Alpha	Interpretation
1.	*Saya berasa sangat bertenaga sehingga sukar untuk berhenti bercakap.* (I feel extremely energetic, making it hard to stop talking.)	.796	Moderately high
2.	*Saya rasa bertenaga untuk beberapa hari, tetapi tidak terlalu berlebihan.* (I feel energized for several days, but not excessively so.)	.801	High
3.	*Saya kerap merasa sedih tanpa sebab yang jelas.* (I often feel sad without any clear reason.)	.796	Moderately high
4.	*Saya berasa perlu melakukan banyak aktiviti dalam satu masa.* (I feel the need to engage in many activities at once.)	.795	Moderately high
5.	*Saya lebih bercakap daripada biasa, tetapi masih boleh dikawal.* (I talk more than usual, but it is still manageable.)	.798	Moderately high
6.	*Saya tidak lagi berminat dalam aktiviti yang pernah saya gemari.* (I no longer have interest in activities I once enjoyed.)	.799	Moderately high
7.	*Saya rasa tidak perlu tidur selama beberapa hari tanpa merasa letih.* (I feel like I don't need to sleep for several days without feeling tired.)	.796	Moderately high
8.	*Saya rasa mudah teruja, tetapi tidak sampai tahap melampau.* (I feel easily excited, but not to an extreme level.)	.803	High
9.	*Saya merasa keletihan yang melampau walaupun selepas tidur yang mencukupi.* (I experience extreme fatigue even after sufficient sleep.)	.794	Moderately high
10.	*Saya mempunyai banyak idea dalam masa yang singkat.* (I have many ideas in a short period.)	.791	Moderately high
11.	*Saya kerap merasa mood saya bertambah baik tanpa sebab yang jelas.* (I frequently feel my mood improving for no apparent reason.)	.798	Moderately high
12.	*Saya sering merasa tidak berguna atau gagal.* (I often feel worthless or like a failure.)	.798	Moderately high
13.	*Saya kerap merasa marah atau kecewa tanpa sebab yang munasabah.* (I frequently feel angry or disappointed without a reasonable cause.)	.793	Moderately high
14.	*Saya mempunyai motivasi tinggi, tetapi tidak sampai tahap ekstrem.*	.803	High

	(I have high motivation, but not to an extreme level.)		
15.	*Saya tidak boleh menumpukan perhatian pada tugas harian.* (I find it difficult to focus on daily tasks.)	.790	Moderately high
16.	*Saya berasa lebih yakin daripada biasa.* (I feel more confident than usual.)	.800	Moderately high
17.	*Saya kerap membuat rancangan besar, tetapi tidak melaksanakannya.* (I frequently make big plans but do not follow through with them.)	.796	Moderately high
18.	*Saya kehilangan selera makan atau berat badan tanpa berusaha.* (I lose my appetite or lose weight without trying.)	.791	Moderately high

Based on Table 4, the obtained reliability values indicate that the developed items are at a moderately high level. The modifications made to several items after receiving expert feedback ensured that the reliability values met the established criteria for item construction. This aligns with the guidance provided by Tavakol & Dennick (2011), which suggests that if the corrected item-total correlation is less than .30, the item should be reviewed due to its very low correlation with other items. This is in accordance with Majid Konting (1998), who stated that, a reliability coefficient of .60 or higher is considered good and acceptable.

Discussion and Recommendations

This study has highlighted the significant contribution of the *Inventori Gangguan Bipolar (IGB)* or Bipolar Disorder Inventory (IGB) to the field of mental health, particularly within the context of psychological counseling in Malaysia. The successful development of the IGB, with its demonstrated high validity and reliability, offers a valuable tool for counselors, mental health professionals, and clinicians in diagnosing and assessing bipolar disorder. Given the rising prevalence of mental health issues in Malaysia, tools like the IGB are essential in enhancing the early detection and understanding of bipolar disorder, which in turn can improve treatment outcomes and reduce the associated stigma.

According to the National Health and Morbidity Survey 2015, 29.2% of Malaysians experience mental health issues, with three out of ten individuals aged 16 and above affected. Among this group, women exhibit slightly higher rates than men. The Malaysian Psychiatric Association (MPA) states that bipolar disorder typically manifests at a young age, with the average age of onset being 18 years for Bipolar I and 20 years for Bipolar II. Furthermore, a global study conducted by the World Mental Health Research Initiative, involving 11 countries, found a lifetime prevalence rate of 0.6% for Bipolar I and 0.4% for Bipolar II.

The findings of the study show that the IGB has achieved content validity and reliability that meet established criteria, confirming its potential utility in clinical practice. The expert feedback obtained during the content validity phase, combined with the reliability testing using Cronbach's Alpha, reinforces the IGB's capacity to measure the severity of bipolar disorder effectively. The results align with the guidelines proposed by Tavakol and Dennick (2011), where the corrected item-total correlations and overall Cronbach's Alpha values suggest that the IGB is a dependable tool for assessing bipolar disorder symptoms.

The IGB's structure—divided into three subscales (manic, hypomanic, and depressive)—provides a comprehensive approach to evaluating the diverse symptoms of bipolar disorder. By addressing the different phases of the disorder, the IGB ensures that it can capture the complexities of bipolar disorder's mood swings, which can vary significantly in intensity and duration. This allows for a more accurate assessment, which is crucial in tailoring treatment strategies and interventions to the individual's specific needs.

However, despite the promising results, there are areas for further development. One limitation of the current study is the sample size used for reliability testing. Although 50 respondents were chosen for the reliability analysis, a larger, more diverse sample could further improve the generalizability of the results. Additionally, while the IGB has been validated for use in Malaysia, its applicability in other cultural contexts remains to be explored. Cultural factors may influence how individuals perceive and report their symptoms, making cross-cultural validation a necessary step in expanding the IGB's reach.

Future research should involve larger and more diverse samples to further confirm the reliability and validity of the IGB across different demographic groups. By expanding the sample size, researchers can ensure that the instrument's findings are more representative of the broader population, improving its generalizability and applicability. Additionally, while the IGB has been validated for use in Malaysia, cross-cultural validation is essential to determine its applicability in other cultural contexts. Given that the expression and perception of bipolar disorder symptoms can vary across cultures, it is important to explore how the IGB performs in different cultural settings to ensure its global applicability.

Moreover, conducting longitudinal studies that track the progression of bipolar disorder over time would offer valuable insights into the changes in symptom severity and whether the IGB can be used to predict relapses or transitions between manic, hypomanic, and depressive episodes. This would contribute to understanding the utility of the IGB in monitoring the disorder's evolution and helping clinicians provide more timely interventions.

While the IGB serves as an effective screening tool, integrating it with other diagnostic methods, such as clinical interviews, neuroimaging, or complementary psychometric instruments, would provide a more holistic assessment of bipolar disorder. Such an approach would improve diagnostic accuracy and offer a comprehensive understanding of the disorder, thus allowing clinicians to develop better-tailored treatment plans.

Additionally, given the promising results of this study, the IGB should be considered for integration into routine clinical practice. Educating and training mental health professionals on its use could help expand its implementation in clinical settings, ensuring that individuals with bipolar disorder receive timely and accurate assessments. Lastly, considering the growing role of technology in healthcare, future research could explore the development of a digital or app-based version of the IGB. This would make the tool more accessible, enabling individuals to self-administer the inventory privately and providing clinicians with real-time data, further enhancing the efficiency of diagnosis and treatment.

Conclusion

In conclusion, this study successfully developed the Bipolar Disorder Inventory (IGB) based on the foundational principles of bipolar disorder outlined by the American Psychiatric Association (APA) in the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). Each item of the IGB demonstrates high validity and reliability, providing evidence that the IGB effectively measures the severity of bipolar disorder based on the symptoms experienced by individuals.

The major findings include a high content validity index (CVI) of 94.4% for the overall inventory, with individual subscales achieving CVI scores ranging from 88.1% to 100%. Reliability testing yielded a moderately high overall Cronbach's alpha value of 0.800, with subscale scores ranging from 0.769 to 0.807, further confirming the internal consistency of the instrument. These results indicate that the IGB is both a valid and reliable tool for initial screening and assessment of bipolar disorder, particularly in the Malaysian cultural context.

In light of these findings, several recommendations are proposed. First, while the IGB has shown strong psychometric properties, future studies should involve larger and more diverse samples to enhance its generalizability. Additionally, cross-cultural validation is necessary to explore the applicability of the IGB in other cultural settings, ensuring its relevance and effectiveness in different populations. Further longitudinal research could also provide insights into the instrument's ability to monitor symptom progression and predict transitions between manic, hypomanic, and depressive episodes.

Finally, integrating the IGB with complementary diagnostic methods, such as clinical interviews and neuroimaging, can strengthen its utility as part of a comprehensive assessment framework. Efforts to develop a digital version of the IGB could enhance accessibility and enable self-assessment, providing real-time data for clinicians. These steps will not only improve the identification and management of bipolar disorder but also contribute to reducing stigma and enhancing mental health support systems in Malaysia and beyond.

References

Albakr, D. (2023). Knowledge, beliefs, attitudes and awareness level towards bipolar disorder among saudi population: a national survey. Medical Science, 27(136), 1-8. https://doi.org/10.54905/disssi/v27i136/e253ms3077

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). American Psychiatric Publishing.

Bauer, M. (2021). Bipolar disorder. *Nature Reviews Disease Primers, 7*(1), 1-21. https://doi.org/10.1038/s41572-021-00252-3

Berk, M. (2021). The neurobiology of bipolar disorder: A review of what we have learned and where we are headed. *Journal of Affective Disorders, 282*, 1-12. https://doi.org/10.1016/j.jad.2021.01.006

Bowie, C., Depp, C., McGrath, J., Wolyniec, P., Mausbach, B., Thornquist, M., … & Pulver, A. (2010). Prediction of real-world functional disability in chronic mental disorders: a comparison of schizophrenia and bipolar disorder. American Journal of Psychiatry, 167(9), 1116-1124. https://doi.org/10.1176/appi.ajp.2010.09101406

Brady, R., McCarthy, J., Prescot, A., Jensen, J., Cooper, A., Cohen, B., … & Öngür, D. (2013). Brain gamma-aminobutyric acid (gaba) abnormalities in bipolar disorder. Bipolar Disorders, 15(4), 434-439. https://doi.org/10.1111/bdi.12074

Byatt, N., Cox, L., Simas, T., Biebel, K., Sankaran, P., & Swartz, H. (2017). Access to pharmacotherapy amongst women with bipolar disorder during pregnancy: a preliminary study. Psychiatric Quarterly, 89(1), 183-190. https://doi.org/10.1007/s11126-017-9525-8

Creswell, J. W. (2010). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage Publications.

Crump, C., Sundquist, K., Winkleby, M., & Sundquist, J. (2013). Comorbidities and mortality in bipolar disorder. Jama Psychiatry, 70(9), 931. https://doi.org/10.1001/jamapsychiatry.2013.1394

Deckersbach, T., Hölzel, B., Eisner, L., Stange, J., Peckham, A., Dougherty, D., … & Nierenberg, A. (2011). Mindfulness-based cognitive therapy for nonremitted patients with bipolar disorder. CNS Neuroscience & Therapeutics, 18(2), 133-141. https://doi.org/10.1111/j.1755-5949.2011.00236.x

Ellison, N., Mason, O., & Scior, K. (2015). Public beliefs about and attitudes towards bipolar disorder: testing theory based models of stigma. Journal of Affective Disorders, 175, 116-123. https://doi.org/10.1016/j.jad.2014.12.047

Forester, B., Ajilore, O., Spino, C., & Lehmann, S. (2015). Clinical characteristics of patients with late life bipolar disorder in the community: data from the nndc registry. American Journal of Geriatric Psychiatry, 23(9), 977-984. https://doi.org/10.1016/j.jagp.2015.01.001

Geddes, J. R., & Miklowitz, D. J. (2021). Treatment of bipolar disorder. *The Lancet, 396*(10265), 1841-1856.https://doi.org/10.1016/S0140-6736(21)02034-2

Gonzalez, J., Bowden, C., Berman, N., Frank, E., Bauer, M., Kogan, J., … & Miklowitz, D. (2010). One-year treatment outcomes of african-american and hispanic patients with bipolar i or ii disorder in step-bd. Psychiatric Services, 61(2). https://doi.org/10.1176/appi.ps.61.2.164

Grande, I., Berk, M., Birmaher, B., & Vieta, E. (2016). Bipolar disorder. The Lancet, 387(10027), 1561-1572. https://doi.org/10.1016/s0140-6736(15)00241-x

Grande, I. (2022). Bipolar disorder. *Nature Reviews Disease Primers, 8*(1), 1-20.https://doi.org/10.1038/s41572-022-00354-8

Harrison, P., Geddes, J., & Tunbridge, E. (2018). The emerging neurobiology of bipolar disorder. Trends in Neurosciences, 41(1), 18-30. https://doi.org/10.1016/j.tins.2017.10.006

Hosang, G., Fisher, H., Hodgson, K., Maughan, B., & Farmer, A. (2018). Childhood maltreatment and adult medical morbidity in mood disorders: comparison of unipolar depression with bipolar disorder. The British Journal of Psychiatry, 213(5), 645-653. https://doi.org/10.1192/bjp.2018.178

Hwang, S., Childers, M., Wang, P., Nam, J., Keller, K., Hill, S., … & Ketter, T. (2010). Higher prevalence of bipolar i disorder among asian and latino compared to caucasian patients receiving treatment. Asia-Pacific Psychiatry, 2(3), 156-165. https://doi.org/10.1111/j.1758-5872.2010.00080.x

Jann, M. W. (2022). Diagnosis and treatment of bipolar disorders in adults: A review of the evidence on pharmacologic treatments. *Pharmacology & Therapeutics, 229*, 107921.

Kameg, B. (2020). Bipolar disorder: treatment strategies for women of childbearing age. Perspectives in Psychiatric Care, 57(3), 1244-1249. https://doi.org/10.1111/ppc.12680

Kato, T., Iwamoto, K., &Matsuo, K. (2021). Genetic and epigenetic studies of bipolar disorder. *Journal of Human Genetics*, 66(7), 543-557. https://doi.org/10.1038/s10038-021-00440-2

Kerlinger, F. N. (1973). *Foundations of behavioral research* (2nd ed.). Holt, Rinehart and Winston.

Latifian, M., Raheb, G., Uddin, R., Abdi, K., & Alikhani, R. (2022). The process of stigma experience in the families of people living with bipolar disorder: a grounded theory study. BMC Psychology, 10(1). https://doi.org/10.1186/s40359-022-00999-y

Lawshe, C. H. (1975). A quantitative approach to content validity. *Journal of Applied Psychology, 59*(3), 563-567. https://doi.org/10.1037/h0038042

Leboyer, M., Soreca, I., Scott, J., Frye, M., Henry, C., Tamouza, R., … & Kupfer, D. (2012). Can bipolar disorder be viewed as a multi-system inflammatory disease?. Journal of Affective Disorders, 141(1), 1-10. https://doi.org/10.1016/j.jad.2011.12.049

Majid Konting, M. M. (1998). *Kaedah penyelidikan pendidikan* (2nd ed.). Dewan Bahasa dan Pustaka.

McIntyre, R. and Calabrese, J. (2019). Bipolar depression: the clinical characteristics and unmet needs of a complex disorder. Current Medical Research and Opinion, 35(11), 1993-2005. https://doi.org/10.1080/03007995.2019.1636017

Muneer, A. (2015). Pharmacotherapy of bipolar disorder with quetiapine: a recent literature review and an update. Clinical Psychopharmacology and Neuroscience, 13(1), 25-35. https://doi.org/10.9758/cpn.2015.13.1.25

National Institute of Mental Health. (2021). Bipolar disorder. Retrieved from https://www.nimh.nih.gov

Parker, G. (2011). Bipolar ii disorder — diagnostic and management lessons for health practitioners from a coronial inquest. The Medical Journal of Australia, 195(2), 81-83. https://doi.org/10.5694/j.1326-5377.2011.tb03213.x

Pavlová, B., Perlis, R., Mantere, O., Sellgren, C., Isometsä, E., Mitchell, P., … & Uher, R. (2016). Prevalence of current anxiety disorders in people with bipolar disorder during euthymia: a meta-analysis. Psychological Medicine, 47(6), 1107-1115. https://doi.org/10.1017/s0033291716003135

Regeer, E., Kupka, R., Have, M., Vollebergh, W., & Nolen, W. (2015). Low self-recognition and awareness of past hypomanic and manic episodes in the general population. International Journal of Bipolar Disorders, 3(1). https://doi.org/10.1186/s40345-015-0039-8

Reinares, M. (2021). Psychoeducation in bipolar disorder: An update. *Acta Psychiatrica Scandinavica, 144*(5), 389-400.https://doi.org/10.1111/acps.13302

Rowland, T. A., & Marwaha, S. (2021). Epidemiology and risk factors for bipolar disorder. *Therapeutic Advances in Psychopharmacology, 11*, 20451253211024845.

Sala, R., Goldstein, B., Wang, S., Flórez-Salamanca, L., Iza, M., & Blanco, C. (2013). Increased prospective health service use for depression among adults with childhood onset bipolar disorder. The Journal of Pediatrics, 163(5), 1454-1457.e3. https://doi.org/10.1016/j.jpeds.2013.06.019

Shrestha, A., Thapa, R., &Paudel, N. (2021). Validating a five-point Likert scale for content validity in expert reviews. *Journal of Educational Research and Development, 45*(2), 67–78.

Smoller, J. W. (2021). The genetic basis of bipolar disorder. *Annual Review of Genomics and Human Genetics, 22*, 285-307.https://doi.org/10.1146/annurev-genom-083120-032214

Stafford, N., and Colom, F. (2013). Purpose and effectiveness of psychoeducation in patients with bipolar disorder in a bipolar clinic setting. Acta Psychiatrica Scandinavica, 127(s442), 11-18. https://doi.org/10.1111/acps.12118

Suhaff, A. (2019). Psychiatric and medical comorbiditiesinpatients with bipolar disorder: a hospital based study. Scholarly Journal of Psychology and Behavioral Sciences, 2(3). https://doi.org/10.32474/sjpbs.2019.02.000136

Super, D. E. (1980). *A life-span, life-space approach to career development*. In D. Brown & L. Brooks (Eds.), *Career choice and development* (pp. 197-261). Jossey-Bass.

Tavakol, M., &Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55. https://doi.org/10.5116/ijme.4dfb.8dfd

Thomé, E., Dargél, A., Migliavacca, F., Potter, W., Jappur, D., Kapczinski, F., … & Ceresér, K. (2011). Stigma experiences in bipolar patients: the impact upon functioning. Journal of Psychiatric and Mental Health Nursing, 19(8), 665-671. https://doi.org/10.1111/j.1365-2850.2011.01849.x

Toyoshima, K., Kako, Y., Toyomaki, A., Shimizu, Y., Tanaka, T., Nakagawa, S., … & Vieta, E. (2019). Associations between cognitive impairment and quality of life in euthymic bipolar patients. Psychiatry Research, 271, 510-515. https://doi.org/10.1016/j.psychres.2018.11.061

Valette, G. L. (1997). *Reliability and validity: The basics of measurement*. Allyn & Bacon.

Zimmerman, M., Galione, J., Ruggero, C., Chelminski, I., Dalrymple, K., & Young, D. (2010). Overdiagnosis of bipolar disorder and disability payments. The Journal of Nervous and Mental Disease, 198(6), 452-454. https://doi.org/10.1097/nmd.0b013e3181e084e1