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Cultural Congruence in Mental Health Promotion: A Cluster-Randomized Controlled Trial on Integrating Javanese Local Wisdom (*Kearifan Lokal*) to Enhance Resilience and Reduce Stigma

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ABSTRACT

Mental health disparities persist in rural Indonesia, exacerbated by a lack of culturally appropriate interventions and high levels of stigma. This study aimed to evaluate the effectiveness of a novel psychoeducation program integrated with Javanese local wisdom (kearifan lokal) in improving psychological resilience and reducing mental health-related stigma. We conducted a two-arm, parallel-group, cluster-randomized controlled trial in 12 rural villages (desa) in the province of Yogyakarta, Indonesia. Villages were randomly assigned to either the intervention group (n=6 villages, 312 participants) or a wait-list control group (n=6 villages, 308 participants). The intervention, "Program Laras Jiwo" (Harmonious Soul Program), was a facilitator-led, 8-session group program co-designed with community members. It integrated standard psychoeducation with Javanese cultural principles such as gotong royong (mutual cooperation), tepo seliro (empathy), and narrative elements from wayang (shadow puppetry). The control group received general health information. Primary outcomes were resilience (Connor-Davidson Resilience Scale) and stigma (Depression Stigma Scale). Secondary outcomes included mental health literacy, help-seeking attitudes, and psychological distress. Data were collected at baseline, post-intervention (8 weeks), and 6-month follow-up. Linear mixed-effects models were used for analysis. At the 6-month follow-up, the intervention group demonstrated significantly greater improvements in resilience scores (Mean Difference [MD]: 15.8, 95% CI: 13.2 to 18.4; p < 0.001) and a significantly greater reduction in public stigma scores (MD: -8.5, 95% CI: -10.1 to -6.9; p < 0.001) compared to the control group. Significant positive effects were also observed for all secondary outcomes, including mental health literacy, help-seeking attitudes, and reduced psychological distress (p < 0.001 for all). In conclusion, integrating Javanese kearifan lokal into a community-based psychoeducation program is a highly effective strategy for enhancing psychological resilience and combating mental health stigma. This culturally congruent approach offers a scalable and sustainable model for reducing the mental health treatment gap in rural Indonesia and other similar contexts.

1. Introduction

The global burden of mental, neurological, and substance use disorders represents one of the most significant public health challenges of the 21st century. The vast majority of this burden falls upon low- and middle-income countries (LMICs), where a

profound "treatment gap" exists, with estimates suggesting that over 75% of individuals with mental health conditions receive no formal care. Indonesia, the world's fourth most populous nation, exemplifies this challenge. The national Basic Health Research (Riskesdas) survey in 2018 indicated that the

prevalence of severe mental disorders was approximately 7 per 1,000 households, with an even higher prevalence of mood and anxiety disorders affecting over 9.8% of the population aged 15 and above. 1-3

This treatment gap is particularly pronounced in Indonesia's rural areas, which are home to a significant portion of the population. Barriers to care are multifaceted, including a severe scarcity of mental health professionals (an estimated 0.31 psychiatrists per 100,000 population), geographical inaccessibility, low mental health literacy, and prohibitive costs. Perhaps the most formidable barrier, however, is the pervasive social and cultural stigma attached to mental illness. In many Indonesian communities, mental distress is often attributed to supernatural causes, personal weakness, or a lack of religious faith, leading to social exclusion, discrimination, and a reluctance to seek professional help. This cultural lens shapes how symptoms are interpreted, expressed, and managed, often leading individuals and families to consult traditional healers or religious figures before considering biomedical services. 4-6

In response to these challenges, global mental health initiatives have historically tended to export Western-developed models of care. While well-intentioned, these top-down approaches often fail to gain traction due to a fundamental lack of cultural resonance. They may promote concepts of self, illness, and healing that conflict with local worldviews, thereby inadvertently increasing resistance to engagement. There is a growing consensus that for mental health interventions to be effective, acceptable, and sustainable, they must be culturally adapted to align with the beliefs, values, and social structures of the target community. 7,8

Indonesia is a nation of immense cultural diversity, possessing a rich repository of local wisdom, or *kearifan lokal*. This concept refers to the body of knowledge, practices, and philosophies that have been developed and accumulated by communities over generations to manage life's challenges and maintain social harmony. In the context of Java, Indonesia's

most populous island, *kearifan lokal* is deeply embedded in social life and includes principles such as gotong royong (mutual cooperation and collective responsibility), *tepo seliro* (the ability to feel what others feel; empathy), *musyawarah untuk mufakat (deliberation to reach consensus), and nrimo ing pandum* (graceful acceptance of one's destiny while striving for the best).^{9,10} These cultural tenets foster social cohesion, regulate interpersonal conduct, and provide frameworks for coping with adversity.

They represent an invaluable, yet largely untapped, resource for mental health promotion. To date, few studies have systematically attempted to integrate these profound cultural concepts into a structured mental health intervention and evaluate their effectiveness using a rigorous scientific methodology. Most interventions remain centrally designed, with cultural "adaptation" often limited to simple language translation rather than a deep structural integration of local worldviews. This leaves a critical gap in the evidence base, particularly concerning programs that aim not only to treat illness but to proactively build psychological resilience and dismantle stigma at a community level.

This study was designed to address this gap. We developed and evaluated a novel community-based psychoeducation program, named "Program Laras Jiwo" (The Harmonious Soul Program). This program was co-designed with community members in rural Java and explicitly weaves core principles of Javanese kearifan lokal into a modern psychoeducational framework. The primary aim of this study was to assess the effectiveness of the Program Laras Jiwo, through a cluster-randomized controlled trial, in enhancing psychological resilience and reducing public mental health stigma compared to a control condition. The novelty of this research lies in its rigorous, experimental evaluation of a mental health intervention that is fundamentally grounded in indigenous knowledge systems, offering a potential paradigm shift from culturally-adapted to culturallysynthesized mental health promotion.

2. Methods

This study was a two-arm, parallel-group, superiority cluster-randomized controlled trial (c-RCT) conducted between January 2024 and October 2024. The unit of randomization (cluster) was the Indonesian village, or *desa*. This design was chosen to minimize contamination between intervention and control participants and to reflect the community-level focus of the intervention. The study took place in four predominantly rural districts (*kecamatan*) within the province of Yogyakarta, a region on Java island known for its strong preservation of Javanese culture and traditions. The study protocol was approved by the Institutional Review Board of CMHC Research Center, Indonesia.

Clusters were eligible if they were officially designated as rural desa, had a population between 2,000 and 5,000 inhabitants, did not have an existing formal mental health program, and provided consent from the village head (kepala desa). Within each selected village, community members were eligible to participate if they were aged 18-65 years, were permanent residents, and provided written informed consent. Exclusion criteria included having a severe mental illness, diagnosed such schizophrenia or bipolar disorder, requiring specialist care, or having an intellectual or cognitive impairment would preclude participation in that discussions.

Sample size was calculated based on the primary outcome of resilience. Assuming a medium effect size (Cohen's d = 0.5), an alpha of 0.05, and power of 80%, a sample of 252 participants per arm was required. To account for the clustered design, we assumed an intracluster correlation coefficient (ICC) of 0.03, based on previous community-based studies in similar settings. This yielded a design effect of $1 + (m-1) \rho = 1 + (50-1)0.03 = 2.47$, where m is the average cluster size. The required sample size was thus inflated to 622 participants. To account for a potential 10% attrition rate, we aimed to recruit approximately 680 participants from 12 villages (approximately 55-60 participants per village).

A multi-stage sampling process was used. First, four districts were purposively selected from the Yogyakarta region. Second, from a list of all eligible villages within these districts, 12 villages were selected via simple random sampling. These 12 villages were then randomized to the trial arms. Within each selected village, participants were recruited through announcements at community gatherings (*pertemuan warga*), flyers posted at community centers (*balai desa*), and with the assistance of local community health volunteers (*kader kesehatan*).

The 12 eligible villages were randomized in a 1:1 ratio to either the intervention or control arm. The randomization sequence was generated by an independent statistician using a computer-generated list of random numbers. The allocation was concealed from the research team until after the completion of baseline data collection for all 12 villages. Due to the nature of the psychosocial intervention, blinding of participants and program facilitators was not possible. However, the data collectors responsible for administering outcome assessments were blinded to the group allocation of the villages throughout the study.

The intervention Program Laras Jiwo was developed through a participatory co-design process involving four focus group discussions (FGDs) and two community workshops with village elders, community leaders, religious figures, and general community members. This process identified key Javanese concepts relevant to mental wellbeing and informed the structure and content of the program.

The final program, "Program Laras Jiwo," consisted of eight weekly 90-minute group sessions delivered to groups of 12-15 participants. The sessions were led by trained local facilitators (community health workers with a background in social work or psychology) who underwent a comprehensive 5-day training program. The program curriculum integrated standard evidence-based psychoeducational components with Javanese *kearifan lokal*: (1) Session 1: *Kenalan lan Kaseduluran* (Introduction and Brotherhood): Establishing group norms based on the principle of

kekeluargaan (family-like spirit). Introduction to mental health as a spectrum of wellbeing; (2) Session 2: Stres lan Carane Ngatasi (Stress and How to Overcome It): Basic psychoeducation on stress and anxiety, framed within the concept of balancing one's inner and outer worlds (jagad cilik lan jagad gedhe). Introduction to simple breathing and mindfulness techniques presented as olah napas (breath work); (3) Session 3: *Nampa Kahanan* (Accepting the Situation): Discussing coping with adversity through the lens of nrimo ing pandum (graceful acceptance) and sabar (patience), distinguishing it from passive resignation; (4) Session 4: Golek Pitulungan (Seeking Help): Addressing barriers to help-seeking. Stigma is discussed using metaphors from wayang (shadow puppet) stories, where even heroes face internal struggles and require guidance from wise mentors; (5) Session 5: Gotong Royong Jiwa (Mutual Help for the Soul): A session focused on social support, framed by the powerful cultural value of gotong royong. Participants discussed how to support neighbors and family members in distress; (6) Session 6: Tepa Selira (Empathy): Role-playing and discussion exercises designed to build empathy for individuals with mental health challenges, directly linking to the core Javanese value of tepo seliro; (7) Session 7: Guyub Rukun (Communal Harmony): Discussing the role of a supportive community in promoting mental wellness and preventing isolation. Activities focused on strengthening social connections; (8) Session 8: Nglanjutake Urip (Continuing with Life): Relapse prevention, goal setting, and consolidating skills. A closing ritual reinforced the sense of community and ongoing mutual support.

Participants in the control villages were assigned to a wait-list control group. During the study period, they received two printed leaflets containing general health information on topics unrelated to mental health, such as nutrition, hygiene, and physical activity. This was done to control for the effects of attention and receiving materials from a research project. After the 6-month follow-up data collection was completed, the control villages were offered the full Program Laras Jiwo

intervention.

All assessment instruments were translated from English to Indonesian and Javanese, back-translated, and culturally validated through pilot testing with 30 community members not involved in the main trial. Data were collected by trained, blinded assessors via face-to-face structured interviews at baseline (TO), post-intervention (T1, 8 weeks after baseline), and at 6-month follow-up (T2). Primary outcomes were psychological resilience and public stigma. Psychological Resilience were measured using the 25item Connor-Davidson Resilience Scale (CD-RISC). It assesses the ability to cope with adversity. Scores range from 0 to 100, with higher scores indicating greater resilience. The Indonesian version has shown good psychometric properties. Public stigma were measured using the 9-item public stigma subscale of the Depression Stigma Scale (DSS) (16). It assesses stigmatizing attitudes towards people with depression. Scores range from 0 to 36, with higher scores indicating greater stigma. Secondary Outcomes: (1) Mental Health Literacy: Assessed using the Mental Health Literacy Scale (MHLS), adapted for the local context. It measures knowledge and beliefs about mental disorders that aid in their recognition, management, or prevention. Scores range from 0 to 35, with higher scores indicating better literacy; (2) Help-Seeking Attitudes: Measured using the Attitudes Toward Seeking Professional Psychological Help Scale-Short Form (ATSPPH-S). Scores range from 0 to 30, with higher scores indicating more positive attitudes toward seeking professional help; (3) Psychological Distress: Measured using the Kessler Psychological Distress Scale (K-10). It is a 10-item screening tool for non-specific psychological distress. Scores range from 10 to 50, with higher scores indicating greater distress. Demographic information including age, gender, marital status, education level, occupation was collected at baseline.

All analyses were performed following the intention-to-treat (ITT) principle, including all participants as per their original randomized group allocation. Missing data were handled using multiple

imputation. Descriptive statistics (means, standard deviations, frequencies, and percentages) were used to summarize baseline demographic characteristics and outcome scores for both arms. Baseline comparisons were performed using t-tests for continuous variables and chi-square tests for categorical variables, adjusted for clustering. The effectiveness of the intervention was analyzed using linear mixed-effects models (LMMs) to account for the hierarchical structure of the data (participants nested within villages). For each outcome, the model included fixed effects for group (intervention vs. control), time (treated as a categorical variable: T0, T1, T2), and the group-by-time interaction. A random intercept for village was included to account for cluster-level correlations. The primary coefficient of interest was the group-by-time interaction term, which indicates whether the change in the outcome over time differed significantly between the intervention and control groups. All tests were twotailed, with a statistical significance level set at α =

0.05. Analyses were conducted using Stata version 17.0 (StataCorp, College Station, TX, USA).

3. Results and discussion

A total of 14 villages were assessed for eligibility, of which 12 were recruited and randomized. In the intervention arm, 312 participants were enrolled from 6 villages, and in the control arm, 308 participants were enrolled from 6 villages. The retention rate was high, with 93.3% (n=291) in the intervention group and 94.5% (n=291) in the control group completing the 6-month follow-up assessment. A CONSORT diagram detailing the flow of clusters and participants through the trial is presented in Figure 1. The demographic and baseline characteristics of the participants are presented in Table 1. The two groups were wellbalanced at baseline, with no statistically significant differences observed in age, gender, educational attainment, marital status, or baseline scores on any of the primary or secondary outcome measures.

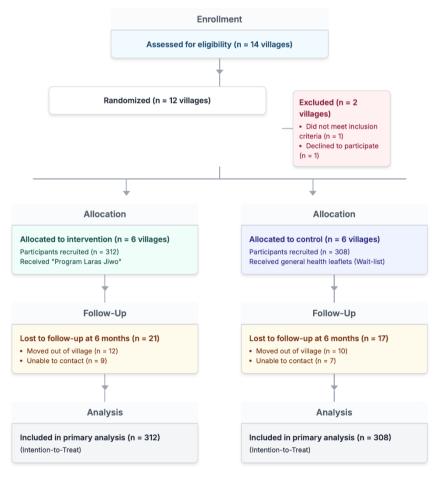


Figure 1. CONSORT flow diagram

Table 1. Baseline Demographic and Clinical Characteristics of Participants by Trial Arm

CHARACTERISTIC	INTERVENTION GROUP (N=312)	CONTROL GROUP (N=308)	P-VALUE
Demographics			
Age, mean (SD)	41.2 (11.5)	40.8 (12.1)	0.681
Gender, n (%)			0.753
Female	175 (56.1)	169 (54.9)	
Male	137 (43.9)	139 (45.1)	
Education Level, n (%)			0.812
Primary school or less	102 (32.7)	105 (34.1)	
Secondary school	158 (50.6)	151 (49.0)	
Higher education	52 (16.7)	52 (16.9)	
Marital Status, n (%)			0.904
Married	248 (79.5)	244 (79.2)	
Single/Widowed/Divorced	64 (20.5)	64 (20.8)	
Baseline Scores, mean (SD)			
Resilience (CD-RISC)	55.4 (10.2)	56.1 (9.8)	0.448
Public Stigma (DSS)	21.8 (5.5)	21.5 (5.8)	0.617
Mental Health Literacy (MHLS)	18.2 (4.1)	18.5 (4.3)	0.499
Help-Seeking Attitudes (ATSPPH-S)	15.6 (3.8)	15.3 (3.9)	0.426
Psychological Distress (K-10)	22.5 (6.1)	22.9 (6.4)	0.501

SD: Standard Deviation. P-values are adjusted for clustering.

The results of the linear mixed-effects models for the primary outcomes are presented in Table 2. There was a significant group-by-time interaction effect for both resilience and public stigma.

For resilience, participants in the Program Laras Jiwo group showed a marked increase in CD-RISC scores over time compared to the control group. At the 6-month follow-up (T2), the adjusted mean score for the intervention group was 71.5, while it was 55.7 for the control group, representing a statistically significant mean difference of 15.8 (95% CI: 13.2 to

18.4; p < 0.001).

For public stigma, the intervention group demonstrated a significant reduction in DSS scores compared to the control group. At the 6-month follow-up, the adjusted mean stigma score for the intervention group was 13.2, compared to 21.7 for the control group, yielding a significant mean difference of -8.5 (95% CI: -10.1 to -6.9; p < 0.001). Figure 2 graphically illustrates the change in mean resilience scores from baseline to the 6-month follow-up for both groups, clearly showing the divergent trajectories.

Estimated Marginal Means of Resilience (CD-RISC) Scores Over Time



Figure 2. Estimated marginal means of resilience (CD-RISC) scores over time

The intervention also had a significant positive effect on all secondary outcomes, as detailed in Table 2. The intervention group showed significantly greater improvements in mental health literacy, more positive attitudes toward seeking professional help, and a

greater reduction in psychological distress at both the post-intervention and 6-month follow-up time points compared to the control group (p < 0.001 for all group-by-time interaction effects at T2).

Table 2. Results of Linear Mixed-Effects Models for Primary and Secondary Outcomes

OUTCOME / TIME POINT	INTERVENTION GROUP Mean (SE)	CONTROL GROUP Mean (SE)	MEAN DIFFERENCE (95% CI)	P-VALUE
Primary Outcomes				
Resilience (CD-RISC)				
Post-intervention	68.9 (0.8)	55.8 (0.8)	13.1 (10.7, 15.5)	<0.001
6-month follow-up	71.5 (0.8)	55.7 (0.8)	15.8 (13.2, 18.4)	<0.001
Public Stigma (DSS)				
Post-intervention	14.5 (0.5)	21.6 (0.5)	-7.1 (-8.5, -5.7)	<0.001
6-month follow-up	13.2 (0.5)	21.7 (0.5)	-8.5 (-10.1, -6.9)	<0.001
Secondary Outcomes				
Mental Health Literacy (MHLS)				
Post-intervention	25.8 (0.4)	18.6 (0.4)	7.2 (6.1, 8.3)	<0.001
6-month follow-up	27.1 (0.4)	18.7 (0.4)	8.4 (7.2, 9.6)	<0.001
Help-Seeking Attitudes (ATSPPH-S)				
Post-intervention	21.2 (0.3)	15.4 (0.3)	5.8 (4.9, 6.7)	<0.001
6-month follow-up	22.5 (0.3)	15.5 (0.3)	7.0 (6.1, 7.9)	<0.001
Psychological Distress (K-10)				
Post-intervention	17.1 (0.4)	22.7 (0.4)	-5.6 (-6.9, -4.3)	<0.001
6-month follow-up	16.3 (0.4)	22.8 (0.4)	-6.5 (-7.8, -5.2)	<0.001

SE: Standard Error; CI: Confidence Interval. All models adjusted for baseline scores and clustering at the village level.

This study provides robust evidence for the effectiveness of a community-based psychoeducation program that is deeply integrated with Javanese local wisdom (kearifan lokal). The Program Laras Jiwo led to significant sustained and improvements psychological resilience, mental health literacy, and help-seeking attitudes, while concurrently reducing public stigma and psychological distress among participants in rural Javanese communities. The large effect sizes and the maintenance of gains at the 6month follow-up underscore the powerful impact and potential durability of this culturally-synthesized approach.

The profound success of the Program Laras Jiwo, as evidenced by the significant and sustained improvements in resilience and reduction in stigma, cannot be understood as a mere consequence of delivering psychoeducational content. Rather, its efficacy is rooted in a much deeper principle: that of cultural congruence. This principle posits that an intervention's effectiveness is magnified when its core structure, language, and conceptual framework resonate with the foundational cultural schemas of its participants. Unlike interventions that superficially adapted through simple translation or the addition of culturally-themed examples, the *Program* Laras Jiwo was architected from the ground up using the blueprints of Javanese local wisdom (kearifan lokal). Its success can be attributed to four interconnected, culturally-synthesized mechanisms that transformed standard psychological principles into a deeply meaningful and socially acceptable experience. 11-13

First and foremost, the program established a robust foundation of psychological safety by operationalizing the core Javanese values of *gotong royong* (mutual cooperation) and *kekeluargaan* (family spirit). In many collectivistic societies, including rural Java, the group holds primacy over the individual. While this fosters strong social bonds, it can also create immense pressure for conformity and the maintenance of social harmony (*rukun*). Within this context, an individual's admission of psychological

distress can be perceived not merely as a personal problem, but as a disruptive force that threatens the equilibrium of the family or community. It can be misinterpreted as a personal failing or a lack of spiritual fortitude, leading to feelings of shame (*malu*) and a reluctance to self-disclose.14,15 Western therapeutic models, which often champion individual autonomy, self-expression, and direct confrontation of issues, can inadvertently clash with these cultural norms, feeling alienating or even culturally inappropriate.

The Program Laras Jiwo circumvented this barrier by framing the entire endeavor as an act of gotong royong. Participants were not positioned as "patients" seeking to "fix" a personal deficit; they were invited to be members of a supportive *kekeluargaan* working collectively to enhance the wellbeing of the entire community. This reframing was transformative. It shifted the focus from individual vulnerability to collective strength, creating a shared space where discussing personal struggles became an act of communal care rather than a shameful confession. 16 The group sessions became a microcosm of an idealized community, where mutual support was the expected norm, thereby dismantling the primary barrier to engagement.

Second, the program leveraged the profound power of indigenous narrative and metaphor to de-stigmatize mental distress, primarily through the tradition of wayang (shadow puppetry). Clinical terminology-"depression," "anxiety disorder," or such as "psychosis"—is often absent from the local lexicon and can be perceived as alien, severe, and frightening. These labels can activate deeply entrenched stigmas associated with madness (qila). The Program Laras Jiwo skillfully substituted this clinical language with the rich, allegorical world of the wayang, a revered art form that has served as a vessel for moral and philosophical instruction in Java for centuries. Instead of a didactic lecture on the symptoms of depression, a facilitator might narrate the story of a noble hero like Arjuna in the throes of a profound internal battle (perang batin) before the great war—a state of deep despair, doubt, and existential turmoil. By embedding the discussion within this familiar and beloved narrative, participants could explore emotional states in a psychologically distant yet deeply resonant manner. They could identify with the struggles of a revered hero, which inherently normalized their own experiences and stripped them of their shame. This narrative approach provides a pre-existing cognitive and emotional framework for difficult information, allowing for processing engagement on a metaphorical level that bypasses the cognitive defenses and anxieties triggered by direct clinical discourse. It effectively translated abstract psychological concepts into the living language of the culture. 16-18

Third, the intervention reframed universal psychological concepts into locally meaningful and virtuous terms, most notably in its approach to resilience. The dominant Western conception of resilience often involves the idea of "bouncing back" from adversity, a metaphor that implies an active, forceful, and individualistic mastery over one's circumstances. While effective in some cultural contexts, this framing can be incongruent with Javanese values that prioritize harmony, humility, and acceptance. The program, therefore, reconceptualized resilience through the indigenous concepts of nrimo ing pandum (the graceful acceptance of one's fate or destiny) and sabar (patient endurance). These concepts are frequently misunderstood by outsiders as passive resignation, but in their proper context, they represent a profound and active psychological stance. Nrimo ing pandum is not about giving up; it is the wisdom to accept that which cannot be controlled, conserving one's spiritual and emotional energy for what can be influenced. Similarly, sabar is not merely waiting; it is an active state of patient forbearance and steadfastness in the face of hardship, often rooted in deep faith. By framing resilience in these terms, the program aligned the goal of psychological strength with deeply held cultural and spiritual virtues. It became an aspirational state that was not about individualistic conquest over problems, but about

achieving a state of inner peace and enduring strength that contributes to social and cosmic harmony. This reframing process represents a deep form of cultural adaptation that goes beyond language, modifying the very core of the psychological construct to ensure its resonance and motivational appeal. 19,20

Finally, the program's explicit focus on tepo seliro directly targeted the affective and social mechanisms that underpin stigma. Tepo seliro is a sophisticated Javanese concept that encapsulates the ability to feel what others feel—a form of profound empathy—and, crucially, to measure one's own words and actions against the potential feelings of others. It is the cornerstone of Javanese social etiquette and the primary tool for maintaining communal harmony. Stigma, at its core, is a process of "othering"-of creating a social and emotional distance between "us" and "them." The program systematically worked to dissolve this distance by activating the cultural muscle of tepo seliro. Through structured role-playing, group discussions, and guided reflections, participants were encouraged to place themselves in the shoes of someone experiencing mental distress or the family members supporting them. By framing these exercises as a practice of a revered cultural value, the intervention fostered а powerful empathetic connection that is fundamentally antithetical to the act of stigmatization. It moved participants from a position of judgment to one of compassion. The significant reduction in public stigma scores is a direct testament to this mechanism. The program did not simply tell people not to stigmatize; it cultivated an empathetic orientation that made the act of stigmatizing a violation of one's own cultural values. In synthesis, these four mechanisms worked in concert to create a holistic and culturally resonant therapeutic experience. The Program Laras Jiwo was successful not because it taught new skills in a cultural wrapper, but because it awakened and skillfully applied the inherent wisdom and strengths already present within the community's own cultural traditions.20

Our findings are consistent with the growing body of literature that supports the cultural adaptation of mental health interventions. However, this study makes a unique contribution by employing a rigorous c-RCT design to evaluate an intervention that moves beyond simple adaptation to a model of cultural synthesis, where local knowledge is not an add-on but the core organizing principle. While other studies in Asia have successfully adapted interventions like cognitive-behavioral therapy (CBT), they often retain fundamental Western theoretical underpinnings. 14,15 Our approach suggests that starting with indigenous knowledge systems and integrating psychological science into them, rather than the other way around, may yield more powerful and sustainable outcomes in certain cultural contexts. The magnitude of the effect on resilience and stigma in our study is notably large, suggesting that this bottom-up, co-designed approach may be particularly potent.

This study has several limitations. First, while the findings are strong for the Javanese cultural context of Yogyakarta, their generalizability to other diverse ethnic groups within Indonesia or other countries requires further investigation. Second, the reliance on self-report measures may be subject to social desirability bias, although the use of blinded assessors and standardized instruments helps mitigate this. Third, the 6-month follow-up period provides evidence of sustained effects, but longer-term follow-up is needed to ascertain the ultimate durability of the changes.

Future research should focus on the scalability and implementation of the Program Laras Jiwo. This includes developing a sustainable training and supervision model for local facilitators and assessing cost-effectiveness. Furthermore, program's adapting this co-design methodology to other Indonesian cultures, such as Sundanese, Minangkabau, and Balinese, could build a portfolio of culturally-synthesized interventions to address the nation's mental health needs more equitably. Finally, exploring the program's impact on behavioral

outcomes, such as formal service utilization rates, would be a valuable next step.

4. Conclusion

This study demonstrates that a community-based psychoeducation program, co-designed with and fundamentally grounded in Javanese kearifan lokal, is a highly effective, acceptable, and potent intervention for enhancing psychological resilience and reducing mental health stigma in a rural setting. The findings champion a paradigm shift in global mental health, urging a move away from the simple adaptation of imported models towards a more profound engagement with indigenous knowledge systems. By weaving wellness through the threads of local culture, it is possible to create interventions that are not only scientifically effective but also deeply meaningful and empowering for the communities they serve. This approach holds significant promise for closing the mental health treatment gap and promoting mental wellbeing in a manner that respects and honors cultural diversity.

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