

Assessment of acceptability, appropriateness, and feasibility of the mindfulness and well-being toolkit for depression in Malaysian primary care clinics: A cross-sectional study

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ABSTRACT

Introduction: Depression is a major contributor to disability worldwide, and mild to moderate depressive symptoms are frequently managed in primary care, where time and specialist access are constrained. The Mindfulness and Well-being Toolkit (Mind-WELL Kit) was developed to support primary care providers in delivering brief, structured mindfulness-based support for depression, but its implementation potential requires evaluation.

Materials and Methods: A cross-sectional online survey was conducted among providers from a systematic sample of primary health care clinics in Selangor. Participants received the Mind-WELL Kit in portable document format (PDF) and were given approximately two weeks to review it before completing the acceptability of intervention measure (AIM), intervention appropriateness measure (IAM), and feasibility of intervention measure (FIM), along with a single-item overall satisfaction rating (1–5). Pearson correlation, independent-samples t-test, and one-way ANOVA were used to examine differences by participant characteristics.

Results: A total of 151 healthcare providers participated in the study, with a mean (standard deviation, SD) age of 37.83 (5.67) years, and 80.8% were female. Participants reported favourable perceptions of the Mind-WELL Kit, with mean (SD) scores of 4.13 (0.55) for AIM, 4.07 (0.59) for IAM, and 3.96 (0.61) for FIM. Scores did not differ significantly according to age, gender, ethnicity, job category, duration of service, or clinic type ($p > 0.05$). Overall satisfaction was high, with a mean (SD) score of 4.21 (0.78), and 84.8% of participants rated the toolkit 4 or 5 out of 5.

Conclusions: The Mind-WELL Kit showed promising perceived implementation potential, with high acceptability and appropriateness, favourable feasibility, and strong overall satisfaction among primary care providers.

KEYWORDS:

Depression; mindfulness; implementation outcomes; primary care; AIM IAM FIM

INTRODUCTION

Depression remains one of the leading causes of disability worldwide and continues to impose substantial social and

economic consequences across health systems.^{1,2} Although pharmacological and psychotherapeutic treatments are well established, many individuals with mild to moderate depressive symptoms are treated in primary care settings. In these settings, short consultation times, limited access to mental health specialists, and uneven psychosocial resources often constrain the depth and continuity of care. In Malaysia, national data show a notable rise in depressive symptoms over the past decade, underscoring the need for practical, scalable interventions that can be delivered effectively within primary care.² The central issue is no longer whether effective interventions exist, but whether they can be integrated into routine clinical workflows in ways that are both sustainable and contextually appropriate.

Strengthening mental health services in primary healthcare requires more than a single standardized solution. Instead, it calls for integrated, biopsychosocial approaches that combine medical management with accessible psychological support. Embedding basic mental health care within primary care services facilitates early detection, continuity of follow-up, reduced stigma, and potentially lower long-term healthcare and social costs.³ However, primary care providers often manage high patient volumes within limited consultation periods. Under such conditions, the introduction of any additional psychosocial component must align with workflow demands, provider confidence, and perceived clinical value.^{4,5} Cultural relevance and contextual compatibility further shape provider engagement and sustained implementation. Without a systematic evaluation of these implementation factors, the transition from a validated manual to a routine clinical tool remains uncertain. Within this broader framework, structured psychosocial tools that are brief, adaptable, and feasible for non-specialist providers are particularly valuable.

Mindfulness-based interventions (MBIs) have emerged as one such evidence-supported approach. A growing body of systematic reviews and randomized controlled trials demonstrates that structured MBIs reduce depressive symptoms and help prevent relapse across diverse populations.^{5,6} Beyond symptom reduction, mindfulness has been shown to strengthen emotional regulation and foster autonomous motivation through the satisfaction of basic psychological needs, as described in Self-Determination Theory.^{7,9} These theoretical and empirical foundations

This article was accepted: 01 July 2026

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support incorporating brief, structured mindfulness practices into primary care encounters, particularly when delivered in ways that align with patients' intrinsic motivation and everyday experiences.

In response to service gaps at the primary care level, we developed and validated the mindfulness and well-being toolkit (Mind-WELL Kit), an adapted mindfulness-based toolkit designed for practical delivery within Malaysian primary care settings. The toolkit was created through a theory-driven, multi-stage process grounded in self-determination theory and refined using a modified Delphi method with multidisciplinary experts.¹⁰ Content and face validation demonstrated strong relevance, clarity, and usability, indicating that the toolkit was conceptually sound and contextually suited for Malaysian primary care settings. The Mind-WELL Kit was developed for use by primary healthcare providers involved in the assessment and management of patients with mild-to-moderate depression, including family medicine specialists, medical officers, assistant medical officers, nurses, and counsellors. The toolkit comprises two main components: a provider-focused manual that enhances mental health literacy, communication skills, and patient engagement strategies, and a collection of structured mindfulness exercises designed for use during routine clinical encounters. To facilitate integration into busy practice settings, the mindfulness activities were intentionally designed to be brief, flexible, and easily incorporated into existing consultations, including mental health screening, counselling sessions, chronic disease follow-up, and mental health reviews. Importantly, the toolkit functions as an adjunct to standard clinical management rather than a stand-alone intervention.

Despite encouraging validation findings, strong validation indices alone do not ensure successful uptake in everyday practice. Implementation science highlights the importance of examining outcomes such as acceptability, appropriateness, and feasibility when determining whether an intervention can be sustained in real-world settings.¹¹ Acceptability refers to the perception among implementation stakeholders that a particular treatment, service, practice, or innovation is agreeable, palatable, or satisfactory. Appropriateness involves the perceived fit, relevance, or compatibility of the innovation or evidence-based practice within a specific practice setting, for a provider or a consumer. It also encompasses the perceived fit of the innovation in addressing a particular issue or problem. Feasibility is defined as the extent to which a new treatment or innovation can be successfully utilized or implemented within a given agency or setting.¹² Even theoretically robust and clinically effective interventions may fail if these practical dimensions are not adequately addressed.

Therefore, the present study builds on earlier development and validation work by examining the acceptability, appropriateness, and feasibility of the Mind-WELL Kit among primary healthcare providers.¹⁰ By focusing on these implementation outcomes, the study adds early insight into how well the toolkit fits real-world primary care settings and helps indicate whether larger effectiveness studies are needed.

MATERIALS AND METHODS

Study Design

A cross-sectional study was conducted in the fourth quarter of 2025. It involved the primary healthcare providers working in selected health clinics in Selangor, Malaysia. They included family medicine specialists, medical officers, counsellors, assistant medical officers, staff nurses, community nurses, and others. The sampling frame comprised all primary health care clinics in Selangor (N=85). Clinics were first organised by district, then selected using systematic random sampling with an interval of five. Every fifth clinic on the district-based list was selected until the required number of clinics was reached. Using this approach, 20 primary care clinics were selected.

Participant Recruitment

Healthcare personnel were eligible if they met at least one of the following conditions within the selected clinics: (i) were involved in the clinic's mental health programme, (ii) were assigned to the dedicated Non-Communicable Disease (NCD) unit, and (iii) were involved in mental health screening activities in the outpatient department. Individuals were excluded if they did not consent or were on extended leave during the study period. A site investigator was appointed at each selected clinic to facilitate participant recruitment. Eligible healthcare personnel were identified according to the predefined eligibility criteria and invited to participate voluntarily. Given the variability in staffing structures and service arrangements across clinics, site investigators recruited eligible personnel based on availability during the study period. Therefore, the total number of healthcare personnel approached was not systematically recorded.

The required sample size was estimated using a single-mean formula, $n = \left(\frac{z\sigma}{\Delta} \right)^2$, where z is the critical value for the chosen confidence level, σ is the standard deviation, and Δ is the desired precision around the population mean. Using a 95% confidence level ($z=1.96$) with a precision of 1, the estimated sample sizes were 34 for acceptability based on a standard deviation of 2.96, 118 for appropriateness based on a standard deviation of 5.55, and 64 for feasibility based on a standard deviation of 4.07, using estimates reported by Chung et al. (2022).¹³ Since appropriateness produced the largest required sample size, and after adjusting for a 20% non-response rate, the minimum required sample size for this study was 148 participants.

Data Collection

The selected site investigators distributed an electronic copy of the Mind-WELL Kit to the eligible participants, who were given two weeks to review. Subsequently, a Google Form containing the consent form, the link to assess the toolkit, and the questionnaires was distributed. Participant characteristics (age, gender, ethnicity, occupation, duration of service, and clinic type) and three validated implementation outcome measures (AIM, IAM, and FIM) were collected. No personal identifiers were collected to protect participants' privacy and confidentiality.

Study Instrument

Acceptability, appropriateness, and feasibility were assessed using the AIM, IAM, and FIM questionnaires. They are

Table I: Participants' Demographics (N=151)

Characteristics	Mean (SD)/ n (%)
Mean age, mean (SD)	37.8 (5.67)
Sex	
Male, n (%)	29 (19.2)
Female, n (%)	122 (80.8)
Ethnicity	
Malay, n (%)	121 (80.1)
Chinese, n (%)	4 (2.7)
Indian, n (%)	18 (11.9)
Others, n (%)	8 (5.3)
Designation	
Family Medicine Specialist, n (%)	15 (9.9)
Medical Officer, n (%)	66 (43.7)
Counsellor, n (%)	2 (1.3)
Assistant Medical Officer, n (%)	16 (10.6)
Staff Nurse, n (%)	28 (18.5)
Community Nurse, n (%)	7 (4.6)
Others, n (%)	17 (11.3)
Duration of Service	
Less than 5 years, n (%)	11 (7.3)
5-10 years, n (%)	38 (25.2)
10-15 years, n (%)	63 (41.7)
More than 15 years, n (%)	39 (25.8)
Clinic Type	
Type I	23 (15.2)
Type II	10 (6.6)
Type III	94 (62.3)
Type IV	22 (14.6)
Type V	2 (1.3)

Note. Values are presented as mean (SD) for continuous variables and n (%) for categorical variables. Percentages may not total 100% due to rounding.

Table II: Item-level Responses to the AIM, IAM, and FIM Measures for the Mind-WELL Kit (N=151)

Question	5	4 n (%)	3 n (%)	2 n (%)	1 n (%)	Mean n (%)	95% CI (SD)	Min-Max
AIM								
The Mind-WELL Kit meets my approval.	39 (25.8)	96 (63.6)	12 (7.9)	3 (2.0)	1 (0.7)	4.13 (0.55)	4.04–4.22	2.00–5.00
The Mind-WELL Kit is appealing to me.	39 (25.8)	100 (66.2)	11 (7.3)	1 (0.7)	0 (0)			
I like the Mind-WELL Kit.	32 (21.2)	107 (70.9)	9 (6.0)	3 (2.0)	0 (0)			
I welcome the Mind-WELL Kit	37 (24.5)	99 (65.6)	11 (7.3)	4 (2.7)	0 (0)			
IAM								
The Mind-WELL Kit seems fitting.	32 (21.2)	99 (65.6)	16 (10.6)	3 (2.0)	1 (0.7)	4.07 (0.59)	3.98–4.17	2.00–5.00
The Mind-WELL Kit seems suitable.	34 (22.5)	97 (64.2)	15 (9.9)	3 (3.3)	0 (0)			
The Mind-WELL Kit seems applicable.	35 (23.2)	101 (66.9)	13 (8.6)	2 (1.3)	0 (0)			
The Mind-WELL Kit seems like a good match.	30 (19.9)	103 (68.2)	15 (9.9)	3 (1.9)	0 (0)			
FIM								
The Mind-WELL Kit seems implementable.	27 (17.9)	98 (64.9)	22 (14.6)	3 (2.0)	1 (0.7)	3.96 (0.61)	3.86–4.06	1.25–5.00
The Mind-WELL Kit seems possible.	25 (16.6)	100 (66.2)	22 (14.6)	3 (2.0)	1 (0.7)			
The Mind-WELL Kit seems doable.	24 (15.9)	106 (70.2)	17 (11.3)	3 (2.0)	1 (0.7)			
The Mind-WELL Kit seems easy to use.	21 (13.9)	104 (68.9)	21 (13.9)	4 (2.7)	1 (0.7)			

Note. Response options were rated on a 5-point Likert scale: 1 = completely disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = completely agree. Mean (SD) and 95% confidence intervals are shown for the overall AIM, IAM, and FIM construct mean scores, each calculated as the average of four items, with possible increments of 0.25. AIM = Acceptability of Intervention Measure; IAM = Intervention Appropriateness Measure; FIM = Feasibility of Intervention Measure. Percentages may not total 100% due to rounding.

Table III: AIM, IAM, and FIM Scores by Participant Characteristics (N=151)

Factor	n	AIM	95% CI	p-value Mean (SD)	IAM	95% CI	p-value Mean (SD)	FIM	95% CI	p-value
Age	151									
Gender										
Male	29	4.09 (0.68)	3.83-4.35	0.803 ^a	4.06 (0.72)	3.78-4.34	0.837 ^a	3.96 (0.70)	3.69-4.22	0.954 ^a
Female	122	4.14 (0.51)	4.05-4.23	0.626 ^b	4.07 (0.56)	3.97-4.18	0.913 ^b	3.96 (0.59)	3.86-4.07	0.961 ^b
Ethnicity										
Malay	121	4.15 (0.53)	4.05-4.24	0.204 ^c	4.08 (0.58)	3.98-4.19	0.728 ^c	3.98 (0.61)	3.87-4.09	0.580 ^c
Chinese	4	4.56 (0.52)	3.74-5.38		4.31 (0.47)	3.56-5.07		4.25 (0.54)	3.39-5.11	
Indian	18	3.99 (0.63)	3.68-4.29		3.97 (0.72)	3.62-4.33		3.82 (0.69)	3.47-4.17	
Bumiputera Sabah/ Sarawak	8	3.97 (0.63)	3.44-4.50		4.00 (0.67)	3.44-4.56		3.91 (0.59)	3.41-4.41	
Job Category										
Family Medicine Specialist	15	4.00 (0.65)	3.64-4.36	0.413 ^c	4.00 (0.68)	3.62-4.38	0.219 ^c	3.80 (0.96)	3.27-4.33	0.517 ^c
Medical Officer	66	4.20 (0.57)	4.06-4.34		4.14 (0.64)	3.98-4.29		3.96 (0.66)	3.80-4.12	
Assistant Medical Officer	16	4.00 (0.51)	3.73-4.27		3.91 (0.63)	3.57-4.24		3.91 (0.53)	3.62-4.19	
Staff Nurse	28	4.16 (0.37)	4.02-4.30		4.13 (0.36)	3.88-4.28		4.00 (0.34)	3.87-4.13	
Counsellor	2	5.0			5.0			5.0		
Community Nurse	7	4.13 (0.35)	3.83-4.42		4.19 (0.37)	3.88-4.50		4.19 (0.37)	3.88-4.50	
Others	17	4.01 (0.67)	3.67-4.36		3.82 (0.65)	3.49-4.16		3.93 (0.56)	3.64-4.22	
Duration of Service										
< 5 years	11	4.18 (0.48)	3.86-4.50	0.497 ^c	4.09 (0.50)	3.75-4.43	0.874 ^c	4.07 (0.53)	3.72-4.42	0.849 ^c
5 - 10 years	38	4.09 (0.56)	3.90-4.27		4.07 (0.56)	3.89-4.26		3.95 (0.57)	3.76-4.13	
10- 15 years	63	4.20 (0.65)	4.04-4.37		4.11 (0.71)	3.93-4.29		3.99 (0.74)	3.80-4.17	
>15 years	39	4.04 (0.33)	3.94-4.15		4.01 (0.43)	3.87-4.15		3.90 (0.46)	3.86-4.06	
Clinic Type										
Type I	23	4.32 (0.49)	4.10-4.53	0.108 ^c	4.22 (0.51)	4.00-4.44	0.261 ^c	4.13 (0.58)	3.88-4.38	0.246 ^c
Type II	10	4.35 (0.58)	3.84-4.66		4.13 (0.52)	3.76-4.49		3.94 (0.64)	3.47-4.38	
Type III	94	4.04 (0.57)	3.92-4.16		3.99 (0.63)	3.86-4.12		3.88 (0.64)	3.75-4.01	
Type IV	22	4.28 (0.43)	4.09-4.48		4.25 (0.52)	4.02-4.48		4.15 (0.5)	3.93-4.37	
Type V	2	4.0 (0)	4.00-4.00		4.0 (0)	4.00-4.00		4.0 (0)	4.00-4.00	

Note. Values are the mean (SD). p-values are two-tailed. a Pearson correlation (age with AIM/ IAM/ FIM scores). b Independent-samples t-test (gender). c One-way ANOVA (ethnicity, job category, duration of service, clinic type). A p-value < 0.05 was considered statistically significant. Estimates for subgroups with small sample sizes (n < 5) are not reported for standard deviation and 95% confidence intervals due to statistical instability and limited precision.

Table IV: Overall Satisfaction Rating with the Mind-WELL Kit (N=151)

Overall Satisfaction	n	%
1	2	1.3
2	0	0
3	21	13.9
4	69	45.7
5	59	39.1
Total	151	100

Note. Ratings were recorded on a 5-point scale (1 = very dissatisfied to 5 = very satisfied). Percentages are based on valid responses, with no missing data.

available in English and have established psychometric properties. Prior validation reported good structural validity using confirmatory factor analysis (CFI=0.96; RMSEA=0.08; factor loadings=0.75–0.89), strong internal consistency (Cronbach's α =0.85–0.91), and acceptable test–retest reliability (0.73–0.88). Each construct contains four items, rated on a 5-point Likert scale (1=completely disagree to 5=completely agree). Higher scores indicate more favourable perceptions of acceptability, appropriateness, or feasibility. In addition to AIM, IAM, and FIM, an overall satisfaction item was included. Participants rated their overall satisfaction with the Mind-WELL Kit on a 5-point scale (1=very dissatisfied to 5=very satisfied).

Statistical Analysis

Descriptive statistics were used to summarise participant characteristics and implementation outcome scores. Mean scores for the AIM, IAM, and FIM were calculated in accordance with the instrument's scoring guidance. For each construct, item responses were summed and divided by four to generate a mean score ranging from 1 to 5, with higher scores indicating more favourable perceptions. Associations between age and implementation outcomes (AIM, IAM, FIM) were examined using Pearson's correlation coefficient. Differences in mean scores by gender were assessed using independent-samples t-tests. Comparisons across categorical variables with more than two groups (ethnicity, job category, duration of service, and clinic type) were conducted using one-way analysis of variance (ANOVA). A two-sided p-value of <0.05 was considered statistically significant. Where appropriate, subgroup-specific mean scores and 95% confidence intervals were reported to support descriptive interpretation. These subgroup analyses were exploratory in nature and were not intended to test formal equivalence between groups. All analyses were performed using IBM SPSS Statistics for Windows, Version 30.0.

Participants were nested within 20 primary care clinics; however, clustering at the clinic level was not explicitly accounted for in the analysis. As such, standard errors and confidence intervals may be slightly underestimated due to potential intra-clinic correlation. Given the primarily descriptive and exploratory nature of the analyses, this limitation is unlikely to meaningfully affect the overall interpretation of the findings.

Ethical Approval

Ethical approval for this study was obtained from the Universiti Teknologi MARA (UiTM) Research Ethics Committee (FREC), approval reference number: REC/09/2024 (PG/MR/473), and the Medical Research and Ethics

Committee (MREC), Ministry of Health Malaysia (NMRR ID-24-04045-JF5 (IIR)). Permission to conduct the study within the selected primary health care clinics was obtained from the relevant authorities prior to data collection.

RESULTS

Participants' Characteristics

A total of 151 primary healthcare providers participated in the study (Table I). Participants were aged between 25 and 58 years, with a mean (SD) age of 37.8 (5.67) years, and most participants were female (80.8%, n=122). The sample was predominantly Malay (80.1%, n=121), followed by Indian (11.9%, n=18), with smaller proportions of Chinese (2.7%, n=4) and Bumiputera Sabah/ Sarawak (5.3%, n=8).

In terms of professional designation, the largest group comprised medical officers (43.7%, n=66), followed by staff nurses (18.5%, n = 28) and assistant medical officers (10.6%, n=16). Family medicine specialists represented 9.9% (n=15). Smaller proportions included community nurses (4.6%, n=7), counsellors (1.3%, n=2), and other job categories (11.3%, n=17). Most participants reported substantial clinical experience, with approximately 41.7% (n=63) having 10–15 years of service, while 25.8% (n=39) had more than 15 years.

Among the 151 participants, most worked in Type III clinics (n=94, 62.3%), followed by Type I (n=23, 15.2%), Type IV (n=22, 14.6%), Type II (n=10, 6.6%), and Type V (n=2, 1.3%). Clinic type (Klinik Kesihatan, KK) was defined according to the MOH Malaysia classification based on the average daily patient attendance. In this classification, clinics are categorized as Type I (>800 patients per day), Type II (500–800 patients per day), Type III (300–500 patients per day), Type IV (150–300 patients per day), and Type V (100–150 patients per day).¹⁴

Overall, participants reported favourable perceptions of the Mind-WELL Kit across all three implementation outcomes. Acceptability had the highest mean score (AIM: 4.13, SD=0.55), followed by appropriateness (IAM: 4.07, SD=0.59) and feasibility (FIM: 3.96, SD=0.61). Feasibility was slightly lower than the other two domains, although all mean scores remained high. Item-level responses showed a consistently positive pattern across the AIM, IAM, and FIM measures, with most participants selecting "agree" or "completely agree" for all items (Table II). Feasibility items showed slightly greater variability than acceptability and appropriateness items.

As shown in Table III, AIM, IAM, and FIM scores were broadly similar across participant characteristics. No statistically

significant differences were observed by age, gender, ethnicity, job category, duration of service, or clinic type (all $p > 0.05$). Although no statistically significant differences were observed across participant subgroups, several categories contained small numbers of participants (e.g., counsellors, Chinese participants, and Type V clinics). Therefore, subgroup findings should be interpreted cautiously as these analyses may have been underpowered to detect meaningful differences.

Overall satisfaction with the Mind-WELL Kit was high, with a mean (SD) rating of 4.21 (0.78), and most participants reported ratings of 4 or 5 (84.8%) (Table IV). Additional analyses showed no statistically significant associations between overall satisfaction and participant characteristics, including age, gender, ethnicity, job category, duration of service, and clinic type ($p > 0.05$).

DISCUSSION

This study examined how primary healthcare providers viewed the Mind-WELL Kit in terms of acceptability, appropriateness, and feasibility for managing patients with mild-to-moderate depression in routine primary care. Three main findings stand out. First, providers reported high acceptability and appropriateness, with mean scores above 4.0. Second, feasibility was also rated positively but was the lowest of the three domains, with a wider observed range (1.25–5.00), suggesting greater variability in perceived ease of implementation than in perceived fit or appeal. Third, perceptions were remarkably consistent across participant characteristics, as AIM, IAM, and FIM did not differ by age, gender, ethnicity, job category, service duration, or clinic type. The high overall satisfaction rating (mean 4.21; 84.8% rating 4–5) converged with the domain scores, reinforcing the interpretation that providers generally endorsed the toolkit as both desirable and usable.

High acceptability and appropriateness scores suggest that providers not only valued the toolkit but also perceived it as suitable for primary care realities. In implementation science terms, acceptability and appropriateness are often regarded as early “leading indicators” of an innovation’s likelihood of adoption and sustained use, even before effectiveness outcomes are tested.¹⁵ The consistency of favourable item-level endorsement, with most responses clustering in “agree” and “completely agree,” aligns with broader implementation outcomes research showing that stakeholder-perceived fit and satisfaction frequently precede uptake decisions and influence subsequent engagement.¹⁶ In the Malaysian setting, these findings are plausible given the growing public health burden of depression. National Health and Morbidity Survey (NHMS) 2023 estimated that about 1 million Malaysians aged 16 years and above had depression, and that the number had doubled since 2019, reinforcing the need for scalable psychosocial supports that can be integrated into routine care.¹⁷ The relatively high AIM, IAM, and FIM scores in the present study are broadly consistent with other mental health implementation studies using the same measures. DeVyllder et al. found mean acceptability, appropriateness, and feasibility scores of 4.3, 4.4, and 4.4, respectively, for the COVID Coach mobile mental health app among frontline

healthcare workers.¹⁸ In rural Guatemala, de la Garza Iga et al. likewise reported high mean scores for acceptability, appropriateness, and feasibility, equivalent to approximately 4.7, 4.7, and 4.5 on a 5-point scale.¹⁹ Taken together, these findings suggest that the Mind-WELL Kit achieved similarly favourable perceived implementation ratings among primary healthcare providers.

Although perceived feasibility remained favourable, it was lower than acceptability and appropriateness, and this is understandable in the Malaysian primary care context. Implementation theory distinguishes these constructs, with feasibility focusing specifically on whether an intervention can be successfully used in a particular setting, rather than simply whether it is liked or seen as relevant.^{12,16} In Malaysian clinics, such caution is plausible because adding new activities often occurs within busy services. Malaysian implementation research has shown that new activities in public clinics are often constrained by human resources, clinic infrastructure, and the need to adapt workflows locally.²⁰ Local workforce studies further show substantial strain among providers, including high levels of personal and work-related burnout in Selangor primary care clinics and greater work-related stress among Malaysian primary care doctors as job demands increase.^{21–22} The slightly lower feasibility score may therefore reflect realistic concern about implementation within busy clinic workflows rather than doubt about the value of the Mind-WELL Kit itself. This interpretation is also compatible with implementation research emphasising the need to measure implementation outcomes carefully in behavioural health settings, where context strongly shapes what is practically deliverable.¹⁵

The absence of statistically significant differences by provider characteristics further suggests that perceptions of the Mind-WELL Kit were broadly shared across professional roles and levels of experience. This is encouraging because implementation in primary care is inherently multidisciplinary, and uptake is more likely to be sustained when new practices are acceptable across professional groups rather than supported by a single cadre.²³ At the same time, these findings should be interpreted with caution. Some subgroups in the present study, such as counsellors and Chinese participants, were very small, which limits statistical power and increases uncertainty around subgroup-specific estimates. As a result, the absence of significant differences is better understood as indicating no clear evidence of systematic variation in perceptions within this sample, rather than definitive evidence that perceptions are identical across all clinic settings.²⁴ Similarly, implementation scores did not differ significantly across clinic types, suggesting that the Mind-WELL Kit was viewed positively across different levels of Malaysian public primary care. This is notable because clinic type in Malaysia generally reflects differences in patient load and service demand, and such organisational factors often shape how easily new interventions can be incorporated into routine practice.²⁰

The favourable implementation profile of the Mind-WELL Kit is important because the usefulness of MBIs depends not only on their clinical effectiveness, but also on whether they can be integrated into routine care. MBIs have shown benefit in

reducing depressive symptoms and supporting relapse prevention, although the magnitude of effect varies across delivery formats and implementation contexts.²⁵ More recent evidence continues to support MBIs as scalable options within stepped-care models, including for individuals who do not respond adequately to first-line treatment.^{5,26} Against this background, the high AIM, IAM, and FIM scores in the present study suggest that the Mind-WELL Kit was perceived by Malaysian primary healthcare providers as a useful, relevant, and potentially implementable resource. These findings add to the current body of knowledge by providing early implementation evidence for a mindfulness-based support guide in Malaysian primary care, a setting where scalable mental health resources are needed. In practice, this supports the potential role of the Mind-WELL Kit as an accessible adjunct to primary mental healthcare, while future studies should evaluate actual uptake, delivery under routine service conditions, and effectiveness for patients.

Implications for practice and next research steps

These findings justify moving beyond perception-based evaluation toward early-phase implementation testing. A sensible next step is a pilot that embeds the toolkit into routine workflows and evaluates: (1) adoption and reach, (2) fidelity and adaptations, (3) time burden and workflow impact, and (4) patient-level proximal outcomes. Mixed-method designs would be particularly useful because feasibility barriers often emerge in qualitative detail even when quantitative feasibility scores are “high.” In parallel, the slightly lower feasibility and the “easy to use” item pattern suggest that implementation supports may be needed, such as brief orientation sessions, scripts for short consultations, and integration into documentation prompts.

LIMITATIONS

Several limitations should be considered when interpreting these findings. First, the study relied on self-reported responses, which may be influenced by social desirability or positive expectation bias. This risk was partly reduced by administering the survey online, which may have encouraged more candid responses by allowing participants to complete it privately rather than in front of the research team. However, because participants had not yet implemented the toolkit under routine service conditions, ratings, particularly for feasibility, may still have been more optimistic than would be observed during actual use. Second, selection bias may also have influenced the findings. Participation was voluntary, and healthcare personnel with a greater interest in mental health care, implementation initiatives, or professional development may have been more likely to participate. Similarly, the online format may have preferentially attracted individuals who were more comfortable with digital platforms or more engaged in psychosocial aspects of care. Together, these factors may have contributed to more positive perceptions than those that might be observed across the broader primary healthcare workforce.

Lastly, the sample was demographically skewed, with a predominance of female and Malay participants, and several subgroups were small. This limits the stability of subgroup comparisons and reduces confidence in interpreting

differences across categories such as ethnicity or job category. In addition, the analysis did not account for potential clustering of responses within clinics. Healthcare personnel working in the same clinic are likely to share similar organisational environments, workplace cultures, and exposure to mental health programmes, which may result in correlated responses. Failure to adjust for such clustering could have led to underestimated standard errors and overly narrow confidence intervals. However, because the primary objective of the study was descriptive, to estimate overall perceptions of the Mind-WELL Kit rather than to examine complex multilevel relationships, the effect of this limitation on the principal findings is likely to be modest. Despite these limitations, the study provides valuable preliminary evidence that the Mind-WELL Kit was perceived positively by Malaysian primary healthcare providers.

CONCLUSION

In a context where the depression burden is rising and primary care capacity is stretched, the Mind-WELL Kit was perceived positively by Malaysian primary healthcare providers, demonstrating high levels of acceptability, appropriateness, and feasibility. These findings provide preliminary evidence of its implementation potential and support further evaluation in real-world clinical settings. The slight feasibility gap relative to acceptability or appropriateness is not a weakness; it is an actionable cue about where implementation support should focus. Taken together, the results warrant progression to real-world pilot implementation and, if workflow integration proves workable, to larger effectiveness and scale-up studies in Malaysia.

CONFLICT OF INTEREST

The authors declare no competing interests.

FUNDING

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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