


A randomized controlled trial testing the feasibility, acceptability, and preliminary effects of a mental health Screening, Brief Intervention, and Referral to Treatment among refugees in Malaysia

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Abstract

Background: Among refugees residing in countries of first asylum, such as Malaysia, high rates of psychological distress call for creative intervention responses.

Aims: This study examines implementation of a Screening, Brief Intervention, and Referral to Treatment (SBIRT) model promoting emotional well-being and access to services.

Method: The one-session intervention was implemented in community settings by refugee facilitators during 2017 to 2020. 140 Participants including Afghan ($n=43$), Rohingya ($n=41$), and Somali ($n=56$) refugees were randomized to receive either the intervention at baseline, or to a waitlist control group. At 30 days post-intervention, all participants completed a post-assessment. Additionally, after completing the intervention, participants provided feedback on SBIRT content and process.

Results: Findings indicate the intervention was feasible to implement. Among the full sample, Refugee Health Screening-15 emotional distress scores reduced significantly among participants in the intervention group when compared to those in the waitlist control group. Examining findings by nationality, only Afghan and Rohingya participants in the intervention condition experienced significant reductions in distress scores compared to their counterparts in the control condition. Examining intervention effects on service access outcomes, only Somali participants in the intervention condition experienced significant increases in service access compared to the control condition.

Conclusions: Findings indicate the potential value of this SBIRT intervention, warranting further research.

Keywords

Mental health, screening, brief intervention, refugees, migration

Introduction

Of the 100 million forcibly displaced people globally, most are internally displaced within their home country or reside with temporary status in neighboring countries (United Nations High Commissioner for Refugees [UNHCR], 2022a, 2022b). Malaysia hosts over 182,000 refugees and asylum seekers (UNHCR, 2022c). Most displaced people residing in Malaysia migrated from nearby Myanmar, with others migrating from Pakistan, Yemen, Syria, Somalia, Afghanistan, Sri Lanka, and Iraq (UNHCR, 2022c). With limited legal rights and protections, displaced people in Malaysia face hardships including economic insecurity, exploitation within employment

settings, and discrimination (Buscher & Heller, 2010; Nungsari et al., 2020; Smith, 2012; Women's Commission for Refugee Women and Children, 2008).

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Among displaced populations, pre-migration traumas as well as difficulties experienced in host countries can lead to mental health challenges (Affi et al., 2016; Hutson et al., 2016; Low et al., 2014; Thomas et al., 2011). Prevalence of distress and mental health disorders vary among refugee groups in Malaysia, with trauma symptoms as high as 80% among Rohingya samples where exposure to pre-migration traumatic events including torture is widespread (Kaur et al., 2020; Tay et al., 2022; Tay, Rees, et al., 2019). Though refugees in Malaysia expressed interest in receiving mental health services (Shaw et al., 2018), health resources are limited (Yunus et al., 2021), and few access mental health treatment (Smith, 2012). Barriers to health care services include financial cost, fears of detention, clinic accessibility, limited health literacy, and language and cultural differences (Chuah et al., 2018; Ismail & Kaur, 2021).

Program and policy efforts seek to improve health and mental health services among displaced populations in Malaysia. Multiple group and community interventions have positively influenced mental health outcomes (James et al., 2021; Tay et al., 2020; Tay, Ong, et al., 2019). For example, 3-day community workshops addressing partner violence and help-seeking led to increased intent to seek mental health resources (James et al., 2021). Additionally, a six-session intervention with refugees from Myanmar identified that multiple modalities had beneficial effects on mental health (Tay et al., 2020). An 8-week mental health intervention implemented among women from Afghanistan also led to improved mental health (Shaw et al., 2019), and an intervention for refugee teachers led to increases in mental health literacy (Tay, Ong, et al., 2019).

Despite these successes, many refugees are unable to participate in multi-session interventions. Work schedules often involve long hours and difficult conditions (Nungsari et al., 2020) that prohibit regular participation in services (Shaw et al., 2021). Approaches involving intervention flexibility, participant autonomy, and cultural accessibility are needed that respond to the contexts of migrant communities in countries like Malaysia (Jannesari et al., 2021).

While a range of mental health interventions with refugees are considered brief, most structured interventions involve multiple sessions. Reviews of psychosocial interventions with refugees identify very few studies with less than four sessions (Lambert & Alhassoon, 2015; Nosè et al., 2017). Additionally, most tested interventions have been conducted in high-income countries, with stronger effects found for longer term interventions with more sessions (Lambert & Alhassoon, 2015). Another review found that interventions implemented in lower income countries tended to be shorter, though none of the studies included were less than 5 weeks (Williams & Thompson, 2011). Some reviews do not specify intervention length across each study reported, though descriptions suggest multi-session interaction (Peterson et al., 2020; Slobodin & De Jong, 2015).

Brief interventions have several strengths, warranting further research. In low resource settings, SBIRT interventions have the potential to reach more people in a cost-effective manner, by identifying participants most at risk for negative mental health outcomes and connecting them to limited available resources (Schleider et al., 2020). Among migrant women in the U.S., one-session group workshops led to increased knowledge and intention to seek health services (Piwowarczyk et al., 2013). A three-session narrative exposure therapy implemented with refugees in the U.S. led to improvements at 2 months follow-up, though by 4 months follow-up, gains were similar to those experienced by the control group (Hijazi et al., 2014). Among non-refugee samples, single session mental health interventions demonstrate promise, though further research is needed (Schleider et al., 2020).

A commonly used brief intervention approach in related social service fields, the SBIRT (Screening, Brief Intervention, and Referral to Treatment) model may be helpful in expanding mental health knowledge and services among communities of displaced people, particularly those with limited access to services in low resource settings. The SBIRT has been used extensively with alcohol and substance use treatment, demonstrating beneficial outcomes and an ability to reach people in diverse medical settings (Alvarez-Bueno et al., 2015; Babor et al., 2007; Substance Abuse and Mental Health Services Administration, 2017). SBIRT models also demonstrate promise in addressing intimate partner violence (Gilbert et al., 2015, 2017). In promoting wellbeing among refugee communities, the SBIRT has potential to build strategies for coping with stress and connect participants to additional services.

This randomized controlled trial examines the feasibility and effectiveness of a SBIRT among refugees from three different communities in Malaysia (i.e., Afghan, Rohingya, and Somali). We hypothesized that the intervention would be feasible to implement and participating in the SBIRT would have a beneficial impact on distress among each refugee sample. We also hypothesized that participation would lead to increased access to services.

Methods

This SBIRT was developed in response to previous intervention studies with Afghan and Rohingya refugees in Malaysia, where intervention content led to beneficial changes in mental health symptoms (Shaw et al., 2019). In these studies, participants expressed interest in receiving content in a brief and flexible manner, to increase access for those who were unable to participate in multi-session groups. Intervention content was adapted from an 8-week culturally adapted cognitive behavioral therapy group intervention (Shaw et al., 2019), with inclusion of additional elements to fit the SBIRT model (Gilbert et al.,

2015). The SBIRT was developed in partnership with refugee facilitators, who shared feedback on model development and intervention content.

This SBIRT was implemented among Afghan, Rohingya, and Somali communities beginning in 2018 through 2020. Facilitators included multi-lingual refugee Afghan, Rohingya, and Somali paraprofessionals with experience implementing psychosocial services. Ethical approval was obtained from a University Institutional Review Board at Brigham Young University in the U.S. (Protocols IRB#: F18159, IRB2020-190) as well as by the Vulnerable Populations Ethics Review Committee (VP-ERC) in Malaysia.

Recruitment

Eligibility for study participation included being 18 years of age or older, living in Malaysia as a refugee, and cognitive ability to provide informed consent, which was assessed through the participant's ability to communicate with the facilitator and understand the consent form. Recruitment occurred separately for Rohingya refugees from Myanmar ($n=41$) as well as refugees from Afghanistan ($n=43$) and Somalia ($n=56$). In each case, recruitment occurred through community centers and networks, where a facilitator with the same native language and national origin as participants shared information about the study. Facilitators approached individuals to share information about the project while they waited to receive services or participated in other community programs. Other participants learned about the study through word of mouth from project participants or through information shared in community chat groups online. Potential participants were ensured that participation was voluntary and unrelated to other available services.

Participants provided informed consent prior to engaging in the study. Interviews were conducted face-to-face in a private setting, primarily in the community venues described above, as well as in places of a participant's choosing, such as one's home or a neighbor's home. The written consent process was administered by study facilitators in Dari, Rohingya, Burmese, Somali, and English, with forms available for participants in their respective languages, including in written Dari, Burmese, Somali, and English. Participants were compensated 10 Malaysian Ringgit (RM) (approximately \$2.50 USD) for completing the baseline assessment and engaging in the study, and 10 RM for completing the 30-day follow up assessment.

Randomization

A total of 140 people were randomly assigned to one of two study arms. Those assigned to the intervention group received the SBIRT directly after providing consent and completing the baseline assessment ($n=69$). Those in the

control condition ($n=71$) waited at least 30 days to complete the follow up assessment, after which they received the intervention (see Figure 1). Using simple randomization (Suresh, 2011), assignments were based on a random number generator (Graphpad, 2022) conducted by the study PI, with research assistants opening an envelope with the assignment for each participant after study enrollment. Though we were unable to assess intervention effects for those in the control group, we provided the intervention to all study participants to respond to community interest in receiving mental health supports.

Assessment

Research assistants administered a baseline questionnaire that assessed socio-demographic characteristics and service access for all participants. Those in the initial intervention condition completed the Refugee Health Screening 15 (RHS-15) emotional distress assessment as part of the SBIRT. Those in the control condition completed the RHS-15 as part of the baseline assessment. At the 30-day follow up appointment, participants in both conditions responded to emotional distress and service access questions. Directly after completing the SBIRT, participants in both groups shared feedback in response to open-ended questions regarding intervention content and process. Days between the baseline and the follow up assessment varied across groups, with an average of 36, 40, and 71 days for Afghan, Rohingya, and Somali participants respectively. Delays among the Somali group were primarily due to COVID related restrictions to meeting in person. After enrollment, three control group participants could not be found to complete the assessment at the time of follow-up, after multiple contact attempts. Over time, four additional participants were lost to follow-up (see Figure 1). Participants could choose not to respond to any questions. All available data was used for analyses.

Mental health screening. The RHS-15 was used to examine emotional distress with items related to depression, anxiety, and post-traumatic stress disorder (PTSD). Widely used among diverse refugee samples, the RHS-15 has high reliability ($\alpha=.92$) and internal consistency ($\alpha=.83$) (Hollifield et al., 2013; Kaltenebach et al., 2017; Palit et al., 2022). Items 1–14 assess symptoms such as “feeling helpless” in the past month. Responses ranged from 0 (*not at all*) to 4 (*extremely*). On item 15, participants indicated their current distress on a scale from 0 to 10. Distress scores were calculated based on the sum of items 1 through 14. Additionally, participants were considered distressed if items 1 to 14 were equal or greater to 12, *or* if the score on item 15 equaled or exceeded 5.

Socio-demographic characteristics and environmental context. Demographic questions assessed at baseline included

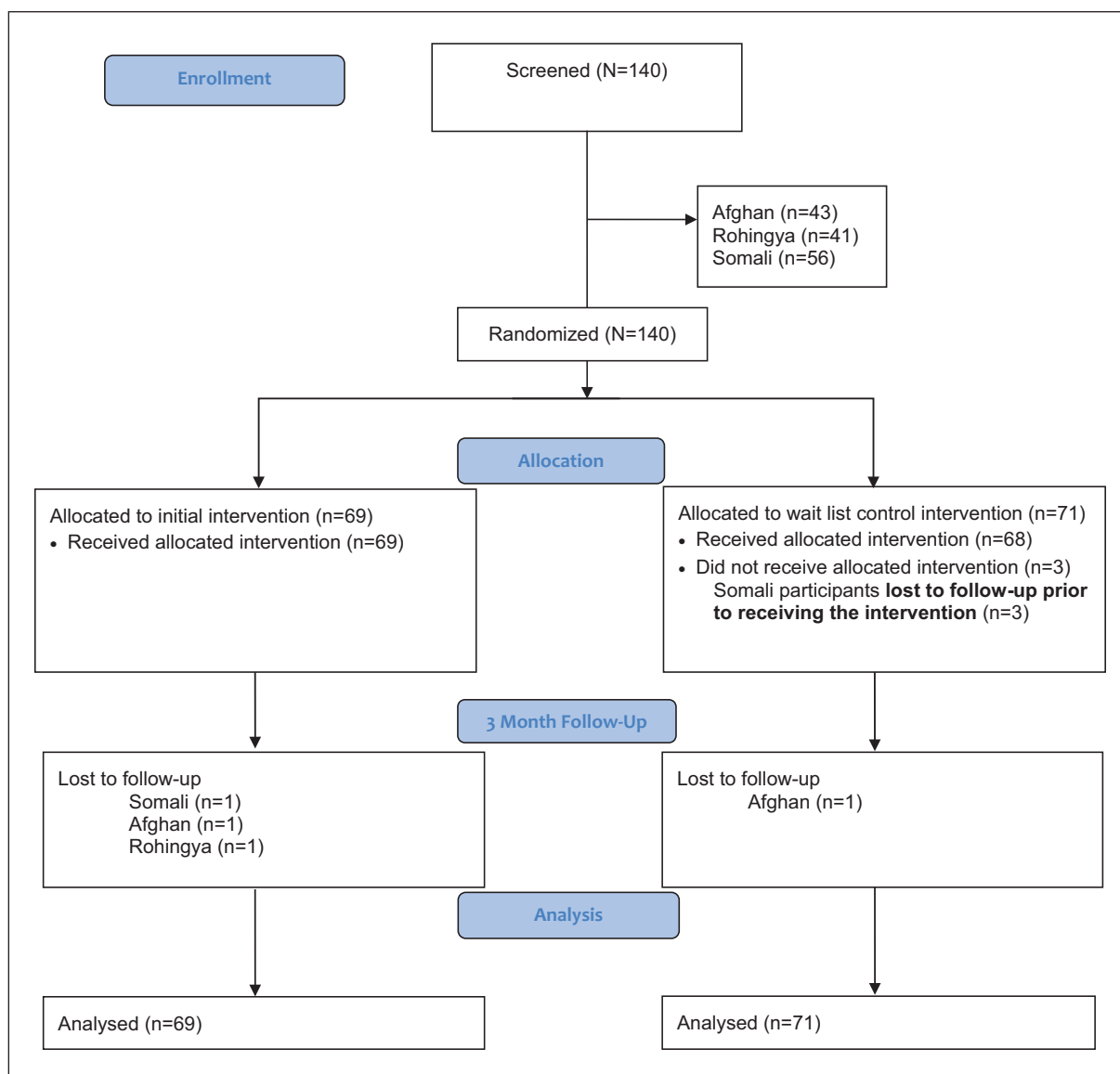


Figure 1. Consort chart.

gender, age, marital status (married, single, divorced, or widowed), whether the participant had children, employment status (full-time, part-time, or unemployed), and education level (no formal education, religious education, primary, secondary, or college/ university). To assess food insecurity, participants were asked whether they always had money for food in the past 90 days. To assess homelessness, participants indicated whether they always had a regular place to sleep in the past 90 days. Participants also reported how long they had lived in Malaysia.

Service access. Participants indicated whether they received services in the following areas since arriving in Malaysia: counseling, legal assistance, education, basic supplies, medical care, and family planning. Respondents then

reported whether they received services in these areas in the prior 30 days. Those who had not recently received services indicated whether each service was needed. At the follow-up assessment, participants reported which services they had received in the prior 30 days.

Participant feedback. After completing the SBIRT, facilitators asked for participant feedback. Questions assessed overall levels of satisfaction, honesty, comfort with the setting, and comfort with the facilitator on a scale from 1 (*extremely*) through 5 (*not at all*). To consider future replicability, facilitators also asked whether participants would be willing to do the intervention on a tablet/computer (yes or no), and whether they would prefer receiving the SBIRT from a facilitator, independently, or whether either way

was the same. Facilitators asked open-ended questions exploring suggestions for improving the program. Lastly, facilitators asked whether participants would recommend someone else take part in this program.

Intervention

After enrollment, facilitators conducted the SBIRT individually with participants in the community-based settings described above. The SBIRT began with discussion of emotions that can result from challenging experiences. Facilitators described physical symptoms that can result from stress and worry (or anxiety), sadness (or depression), and reliving past experiences (or post-traumatic stress disorder), with questions regarding the participant's experience.

The RHS-15 screening tool was then administered, assessing symptoms experienced in the prior month. Based on participant responses, facilitators provided feedback regarding the individual's level of emotional distress and segued into a discussion about possible coping strategies for the participant or for others who may experience distress. The SBIRT then addressed specific strategies including stretching, deep breathing, mindful attention to the present moment using the five senses, and emotion regulation through observing emotions and feeling compassion. Each strategy was practiced jointly, with exploratory questions regarding how these practices could be applied and useful for the individual. Additional resources including religious/spiritual practices, social support, and self-care were explored briefly, with questions regarding possible application for the participant. The final phase of the SBIRT involved goal setting around ways to reduce stress or access additional supports, after which the facilitator explored a range of locally available services. Time to implement the SBIRT took an average of 50 minutes ($SD=19$ minutes, range=30–180 minutes).

Approximately 1 week after the SBIRT was completed, research assistants contacted participants by phone or in person (based on participant preference) to ask whether they were able to practice the activities learned, connect to services, and to answer any follow up questions. Approximately one-half of participants ($n=72$, 51.4%) were reached at one-week follow up, the majority by phone.

Data analysis

Demographic and outcome differences by nationality at baseline were examined with chi-square tests and one-way analyses of variance. Cohen's d effect sizes were calculated for the full sample and for each nationality group. Standardized effect sizes were also calculated, based on modeling results.

Intervention effects between the control and intervention groups within each nationality were compared with multi-group modeling using *MPlus* (v8.8). The model

included RHS-15 follow-up scores as the dependent variable and RHS-15 scores at baseline as a controlled covariate. Intervention effects were also compared between intervention and control groups across the three nationalities with Probit and negative binomial modeling respectively examining any service access ($1=1$ or more services received, $0=no$ services received) and the total number of services received, while controlling for their baseline scores on these variables. Bayesian estimation was applied to the small sample size without any prior specifications. Nationality differences in intervention effects were examined using new parameters based on group differences of unstandardized effect estimates. The posterior predictive p -value ($ppp=.60$) indicated that the model fit the data well for the RHS-15 outcome.

Findings

Sample characteristics

On average, participants lived in Malaysia for 3.7 years ($SD=3.6$ years) (see Table 1). Participants average age was 34 years, and more than half (59.3%) were women. While most participants were married (60.7%), 15.7% were single, 8.6% were widowed, and 15.0% were divorced. Over three quarters of participants (77.6%) had children and the majority were unemployed (75.7%), with 13.6% working full time and 10.0% employed part time. Approximately half of participants had attended primary (25.7%) or secondary school (27.1%). A majority (80.0%) experienced food insecurity in the prior 90 days, and 16.4% experienced homelessness in the prior 90 days.

The mean emotional distress score at baseline was 33.7 ($SD: 13.4$) and all participants met criteria for being emotionally distressed. The most common services participants ever received in Malaysia were basic supplies (33.8%), medical care (18.1%), counseling (13.6%), education (12.9%), and family planning (12.1%). In the prior 30 days, the most common services received were basic supplies (26.3%), medical care (15.2%), and family planning (10.1%). Among those who did not receive services, most expressed a need for such services (see Table 2).

Across the three communities, demographic and social context variables varied (see Table 1). Rohingya participants lived in Malaysia for a longer duration and were more likely to be employed. Afghan participants tended to be older, female, and more highly educated. Somali participants were least likely to be married and have children. Food insecurity was highest among Afghan participants. Distress scores were lowest among Somali participants. Service access varied by group, with access to basic supplies highest among Rohingya participants, access to legal assistance and family planning highest among Somali participants, and access to counseling highest among Afghan participants (see Table 2). Service needs were higher for

Table 1. Socio-demographic and environmental factors by nationality.

	Full sample (N = 140)	Afghan (N = 43)	Rohingya (N = 41)	Somali (N = 56)
Years since arrival,** mean (SD)	3.7 (3.6)	2.0 (1.8)	6.4 (4.6)	2.8 (2.3)
Age,* mean (SD)	34.4 (10.2)	37.9 (9.6) ^a	32.8 (9.4)	33 (10.7) ^b
Female,** n (%)	83 (59.3)	35 (81.4)	20 (48.8)	28 (50)
Marital status**				
Married	85 (60.7)	39 (90.7)	30 (73.2)	16 (28.6)
Single	22 (15.7)	0 (0)	9 (22)	13 (23.2)
Widowed	12 (8.6)	4 (9.3)	0 (0)	8 (14.3)
Divorced	21 (15.0)	0 (0)	2 (4.9)	19 (33.9)
Have children**	104 (77.6)	39 (90.7)	32 (91.4) ^c	33 (58.9)
Employment**				
Full-time	19 (13.6)	0 (0) ^a	18 (43.9)	1 (1.8)
Part-time	14 (10)	5 (11.6)	4 (9.8)	5 (8.9)
Unemployed	106 (75.7)	37 (86)	19 (46.3)	50 (89.3)
Education**				
No formal education	34 (24.3)	17 (39.5)	15 (36.6)	2 (3.6)
Religious education	28 (20)	0 (0)	1 (2.4)	27 (48.2)
Primary	36 (25.7)	6 (14.0)	17 (41.5)	13 (23.2)
Secondary	38 (27.1)	17 (39.5)	8 (19.5)	13 (23.2)
College/university	4 (2.9)	3 (7.0)	0 (0)	1 (1.8)
Food insecurity**	112 (80)	25 (58.1)	38 (92.7)	49 (87.5)
Homelessness	23 (16.4)	9 (20.9)	7 (17.1)	7 (12.5)
RHS-15,** mean (SD)	33.7 (13.4) ^e	40.8 (12.1)	36.8 (11.6) ^d	26.0 (11.7)
Emotionally distressed, n (%)	139 (100%) ^e			

Note. n = ^a42, ^b55, ^c35, ^d40, ^e139.

* $p < .05$. ** $p < .01$, chi-square and one-way analysis of variance tests.

counseling, legal assistance, and family planning among Somali participants.

Bivariate analyses and effect size

Bivariate analyses indicated that among the full sample, emotional distress scores were significantly lower among those in the intervention group at the one-month follow-up assessment when compared to those in the waitlist control group (see Table 3). Intervention group differences were significant among Afghan and Rohingya participants, but not among Somali participants. Among the full sample, a moderate effect size was observed for those in the intervention group ($d = -.52$), while effects varied from large ($d = -1.38$), small ($d = -.15$), and ($d = .01$) no effect within Afghan, Rohingya, and Somali samples.

Modeling estimates

Multi-group modeling estimates are listed in Table 4 with 95% credibility intervals in brackets. Intervention effects indicated that for those in the intervention group within the Afghan and Rohingya samples, RHS-15 scores at the follow-up assessments reduced respectively by $\beta = -.49$ and $\beta = -.55$ standard deviations, as compared to the control groups. However, among Somali participants, the

intervention group did not differ from the control group at the follow-up assessment. For all participants, higher levels of emotional distress at baseline were associated with higher RHS-15 scores at the follow up assessment, as indicated by the pre-score effects. The model explained 65.6% (95% CI [0.47, 0.78]), 57.8% (95% CI [0.37, 0.72]), and 8.8% (95% CI [0.01, 0.26]) of variances in follow-up RHS-15 scores among Afghan, Rohingya, and Somali participants respectively.

Among Afghan and Rohingya participants, no differences in service access among those in the intervention and control groups were observed. However, significant differences were observed among Somali participants. Converting the effects reported in Table 4 to probabilities, Somali participants in the intervention group had respectively 10.3% (95% CI [-4.0, 20.9]) and 14.1% (95% CI [0.4, 23.6]) higher probabilities than the control group of accessing (intercept) and increasing (intervention effect) service access post-intervention. Among Somali respondents describing service access at follow-up ($n = 47$), access was highest to basic supplies ($n = 25$) and counseling ($n = 23$).

Participant feedback indicated that levels of satisfaction differed by nationality (see Table 5). Reported satisfaction, honesty, comfort with the setting, and comfort with the facilitator were high overall, though scores were closer to “extremely” among Afghan and Rohingya participants and

Table 2. Service access by nationality.

Services ever received	Full sample (N = 140)	Afghan (N=43)	Rohingya (N=41)	Somali (N=56)
Counseling,** n (%)	19 (13.6)	11 (25.6)	1 (2.4)	7 (12.5)
Legal assistance**	14 (10)	0 (0)	1 (2.4)	13 (23.2)
Education	18 (12.9)	7 (16.3)	4 (9.8)	7 (12.5)
Basic supplies*	47 (33.8) ^q	10 (23.8)	21 (51.2)	16 (28.6)
Medical care*	25 (18.1) ^t	13 (31) ^a	7 (17.1)	13 (31) ^b
Family planning*	17 (12.1) ^t	6 (14.0)	1 (2.4)	10 (17.9)
Services received, past 30 days				
Counseling	10 (7.2) ^q	3 (7)	1 (2.4)	6 (10.9) ^b
Legal assistance**	10 (7.4) ^r	0 (0) ^c	1 (2.4)	8 (16.4) ^b
Education	10 (7.3) ^s	3 (7.3) ^p	3 (7.3)	4 (7.3) ^b
Basic supplies**	36 (26.3) ^s	1 (2.5) ^e	20 (48.8)	15 (26.8)
Medical care*	21 (15.2) ^t	11 (26.2) ^a	7 (17.1)	3 (5.5) ^b
Family planning*	14 (10.1) ^s	4 (9.3)	1 (2.4)	9 (16.4) ^b
Services needed				
Counseling*	109 (86.5) ^u	28 (77.8) ^d	32 (80) ^e	49 (98) ^f
Legal assistance*	123 (94.6) ^u	37 (86)	40 (100) ^e	46 (97.9) ^g
Education	122 (95.3) ^v	36 (94.7) ^h	36 (94.7) ^h	50 (96.2) ⁱ
Basic supplies	93 (94.9) ^w	35 (94.6) ^j	19 (90.5) ^k	39 (97.6) ^e
Medical care	115 (99.1) ^x	28 (96.6) ^l	34 (100) ^m	53 (100) ⁿ
Family planning**	71 (57.3) ^y	14 (37.8) ⁱ	15 (37.5) ^c	42 (89.4) ^o

Note. n = ^a42, ^b55, ^c40, ^d36, ^e40, ^f50, ^g47, ^h38, ⁱ52, ^j37, ^k21, ^l29, ^m34, ⁿ53, ^o56, ^p41, ^q139, ^r136, ^s137, ^t138, ^u125, ^v124, ^w97, ^x116, ^y120.
*p < .05. **p < .01.

Table 3. Intervention outcomes.

RHS-15 pre-assessment score	Intervention group (N=69)	Control group (N=71)		
Full sample, Mean (SD)	33.5 (13.2)	33.9 (13.7)		
Afghan	39.4 (13.4)	42.4 (10.8)		
Rohingya	35 (11.9)	38.6 (11.3)		
Somali	27.5 (11.8)	24.7 (11.6)		
RHS-15 post-assessment score	Intervention group (N=66)	Control group (N=67)	Effect size	Standardized effect size
Full sample,** Mean (SD)	27.3 (10.7)	34.3 (12.6)	-.52	-.54
Afghan**	21 (13.1)	37.8 (11.8)	-1.38	-1.12
Rohingya**	33.6 (6.4)	42.8 (5.3)	-.15	-1.32
Somali	27.6 (8.2)	24.6 (11.3)	0.01	0.24
Services received past 30 days, post-assessment				
Counseling, n (%)	15 (22.7)	8 (12.9) ^a		
Legal assistance	4 (6.1)	1 (1.6) ^a		
Education	3 (4.5)	0 (0) ^a		
Basic supplies	14 (21.2)	11 (17.7) ^a		
Medical care	4 (6.1)	2 (3.2) ^a		
Family planning	8 (12.1)	6 (9.7) ^a		
Total services received	.73 (1.3)	.45 (1.0) ^a		

Note. n = ^a62. **p < .01, t-test and chi-square test.

closer to “very” among Somali participants. Most respondents (n = 81, 63.6%) said they would be willing to receive the SBIRT via tablet or computer, including 23.8% (n = 10)

of Afghan, 100% of Rohingya (n = 33), and 73.1% (n = 38) of Somali participants. However, a higher majority (n = 112, 88.4%) said they would prefer a facilitator.

Table 4. Standardized intervention effects by nationality with 95% credibility intervals.

	Intercept/threshold	95% CI	Intervention effect	95% CI	Pre-score effect	95% CI
RHS-15						
Afghan	.37	[-0.31, 1.13]	-.49**	[-0.65, -0.30]	.64**	[0.45, 0.76]
Rohingya	4.10**	[2.93, 5.36]	-.55**	[-0.71, -0.35]	.49**	[0.27, 0.66]
Somali	1.87**	[1.04, 2.73]	.12	[-0.15, 0.37]	.23*	[-0.05, 0.48]
Service access						
Afghan	2.03**	[0.63, 4.47]	-.34	[-0.91, 0.65]	-.27	[-0.89, 0.63]
Rohingya	2.49**	[1.22, 3.42]	.31	[-0.37, 0.80]	.24	[-0.43, 0.78]
Somali	-.05	[-0.71, 0.47]	.26	[-0.10, 0.55]	.36*	[-0.01, 0.63]
Service numbers						
Somali	-.01	[-0.50, 0.43]	.25	[-0.32, 0.80]	.28**	[0.09, 0.47]

* $p < .05$. ** $p < .01$.

Table 5. Post-intervention participant feedback, by nationality.

Feedback	Total ($n = 127$)	Afghan ($n = 42$)	Rohingya ($n = 33$)	Somali ($n = 52$)
Overall satisfaction**	1.57 (1.26)	1.05 (.22)	1.09 (.29)	2.31 (1.70)
Overall honesty**	1.54 (1.16)	1.05 (.22)	1.06 (.24)	2.23 (1.56)
Comfort with setting session**	1.48 (1.12)	1.05 (.22)	1.03 (.17)	2.12 (1.53)
Comfort with facilitator**	1.49 (1.13)	1.07 (.34)	1.03 (.17)	2.12 (1.53)
Session increased your awareness**	1.57 (1.14)	1.21 (.42)	1.15 (.36)	2.13 (1.58)
Emotional distress assessment helpful**	1.55 (1.08)	1.14 (.35)	1.12 (.33)	2.15 (1.45)
Aware of other different coping strategies**	1.57 (1.15)	1.10 (.30)	1.06 (.24)	2.27 (1.51)
Goal setting help with using coping strategies**	1.64 (1.16)	1.24 (.48)	1.12 (.33)	2.29 (1.53)
Identify needs for services and find referrals	2.15 (1.24)	2.10 (1.01)	2.00 (1.12)	2.29 (1.43)

** $p < .01$, one-way analysis of variance test.

Open-ended responses were coded into categories based on participant's words. Regarding suggestions, 28.6% ($n = 12$) of Afghan and 87.0% ($n = 45$) of Somali respondents said more time or more frequent meetings were needed. A few participants also pointed to the need for more participants ($n = 4$), group formats ($n = 8$), or including a physician ($n = 1$). The majority ($n = 125$, 98.4%) said they would recommend others participate.

Discussion

Findings indicate a mental health focused SBIRT contributed to improved mental health among multiple refugee communities in Malaysia, pointing to the promise of this model. Among the full sample, distress scores were significantly reduced among those in the intervention group when compared to the control group. Examining the communities separately, emotional distress scores reduced significantly among only Afghan and Rohingya participants, with effects most pronounced among Afghan participants. Findings point to the value of brief interventions among refugee communities, while indicating that effects differ based on community contexts. The lack of distress reducing effects observed among the Somali sample may be

related to implementation occurring early in the COVID-19 pandemic, which led to a longer time period (71 days on average) from baseline to follow up for the Somali sample compared to other participants (45 days on average). While both the Afghan and Rohingya samples completed the intervention prior to pandemic onset, the Somali sample received the intervention during a time of rapidly changing conditions where meeting in person was more difficult.

Regarding the secondary aim, significant increases in service access were identified only among the Somali sample. As Afghan and Rohingya participants reported high service needs, the limited available resources may be seen as inaccessible. This finding coincides with research identifying barriers to service access among refugee communities in Malaysia (Chuah et al., 2018; Ismail & Kaur, 2021). Further attention to increasing access to relevant services that are culturally, linguistically, and geographically accessible for refugees of all nationalities is needed.

High levels of emotional distress were experienced by refugees residing in Malaysia. While distress levels reduced after engagement in the intervention for many participants, the majority remained distressed. Ongoing challenges of temporary, uncertain living conditions make lasting wellbeing difficult to achieve and maintain.

Attention to improved policy conditions including rights to work, travel, access health and education services, and live without harassment are essential to improving wellbeing within refugee host communities.

This mental health focused SBIRT model was feasible to implement. While satisfaction across nationality groups was high, some pointed to the need for additional time and sessions. Among brief interventions, having multiple sessions may lead to greater impact (Alvarez-Bueno et al., 2015). Facilitators with language and cultural skills were a strength of this model, promoting access and engagement (Coldiron et al., 2013). Though participants indicated preferring to work with a facilitator, most were open to tablet or computer options, indicating potential for implementation through online programs or phone applications. Other research has identified the promise of mobile interventions (Burchert et al., 2019), particularly when aligned with how communities use technology and developed based on refugee priorities (Goodman et al., 2021).

Limitations

Findings are not generalizable to refugees in Malaysia as participants resided in one region and were recruited through social service settings or group networks. Because of the study recruitment strategy, this sample may have higher levels of connectivity than other refugees. Additionally, differences in study outcomes by nationality may be related to multiple factors, including facilitator approach, cultural understanding, and community experiences in Malaysia. The average length of time between baseline and follow up assessments was longer among the Somali sample. Challenges with social distancing requirements and rapidly changing conditions during the COVID pandemic made it difficult to measure SBIRT effects among Somali participants.

Conclusion

There remains an urgent need for low threshold effective mental health interventions for refugee communities globally, especially within countries of first asylum such as Malaysia. In settings where resources are scarce and policies limit refugee abilities to work and travel freely, interventions that are brief, individually tailored, and flexible may be especially valuable. Study findings indicate promise as well as limitations for a one-session mental health SBIRT model. Brief interventions have the capacity to reach a larger number of people quickly, with less of a time requirement placed on participants. In addition to implementation within community settings, brief interventions could be tailored to a variety of health or social service settings, increasing available supports to clients seeking other services. While this SBIRT demonstrated promising results, additional sessions may be needed to achieve

lasting impact on emotional distress as well as to improve service access. Multiple sessions may allow participants to review and practice coping strategies learned, further identify and address barriers to service access, and address additional needs through policy and advocacy initiatives. Future research can examine the value of brief interventions within diverse refugee communities and contexts.

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