Published in final edited form as:

J Immigr Minor Health. 2019 October ; 21(5): 1077–1084. doi:10.1007/s10903-018-0804-8.

Health Realization Community Coping Intervention for Somali Refugee Women

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Abstract

Health Realization (HR) is a strengths-based stress and coping intervention used to promote the use of internal and external coping resources. Our three-arm comparison group trial examined the effects of a culturally adapted Somali HR intervention on coping and mental health outcomes in 65 Somali refugee women post-resettlement. Subjects participated one of three conditions: HR, nutrition attention-control, and evaluation-control. The HR intervention significantly affected multiple dimensions of coping: WAYS-distancing ($p = 0.038$), seeking social support ($p = 0.042$), positive reappraisal ($p = 0.001$); and Refugee Appraisal and Coping Experience Scale-Internal subscale ($p = 0.045$). The HR intervention also demonstrated improvement in depression symptom ratings ($p = 0.079$). We discuss findings from the pilot, challenges encountered conducting a three-arm comparison group trial, and implications for further research involving the HR intervention with culturally diverse refugee communities.

Keywords

Somali; Refugee; Health Realization; Coping intervention; Resilience

Background

Somali refugees encounter a range of post-trauma mental health outcomes [1–3]. These include depression and anxiety disorders, including post-traumatic stress disorder [4, 5]. Despite the reported need for services to address psychological problems, Somali refugees perceive Western mental health services as unavailable or unacceptable [3, 6, 7]. We believe it is critical to discover and adapt effective community-oriented interventions that decrease stress-related problems, enhance healthy coping, and improve mental wellbeing and community support among vulnerable groups such as refugees [8, 9].

Refugee mental health research is situated within a larger theoretical tradition that appreciates the impact of stress on every physiologic system as well as the emotional

experience [10–12]. Notable within this framework is an emphasis on the perception of the stressor and the subsequent circumstances of stress that affect physiological and psychological responses [13]. Effective strategies of coping with stressors demonstrate an important and positive impact on the stress response [14–16]. Given this foundation of evidence, our overall *overarching objective* in this study was to pilot and refine the Somali Health Realization (HR) intervention among resettled Somali refugee women who have experienced war trauma and associated psychosocial problems.

The Somali HR intervention is a community-based educational intervention aligned with Lazarus and Folkman's stress and coping theoretical framework [17–19]. It consists of highly interactive educational sessions that routinely include stories and visual illustrations. Consistent with African cultural practices, the pedagogy integrates group discussion, role-playing and storytelling as teaching tools [20–22]. The intervention has potential to alleviate trauma-related psychological difficulties by promoting understanding of the impact of thought on experience [23]. We established the feasibility and acceptability of the Somali HR intervention in our previous study [23]. Our *aim* in this pilot three-arm community group trial was to acquire critical preliminary data for effect size estimates, and inform the content and design of a larger trial of the Somali HR intervention. This study builds upon 15 years of scientific and community collaboration with the Somali community in the Twin Cities to improve the psychosocial health of women refugees with trauma histories.

Conceptual Framework

HR is a strengths-based stress and coping model that promotes and enhances the use of internal and external coping resources. In our research, we translated the framework to a community-delivered mental health intervention that emphasizes health and resilience over psychopathology. HR is a non-invasive, strengths-based approach that focuses on gaining perspective in the present. Strategies do not encourage the retelling of past traumatic experiences or active attempts to change thoughts. Participants are taught to manage and cope with their perceived stresses through a responsive thought process. HR directly affects internal coping resources, while also shifting primary and secondary appraisal of stressors [17].

Methods

Within this pilot three-arm community group trial, three geographically distinct urban neighborhoods with dense populations of Somali residents were assigned to one of three different study conditions: (a) the HR intervention condition ($n = 21$), (b) a nutrition education intervention condition ($n = 22$), and (c) an evaluation only control condition ($n = 22$). We opted to assign by community rather than by subject in order to minimize contamination. Because a population sampling frame was unavailable, we used a combination of face-to-face and convenience sampling approaches [24–27]. We relied on Somali community-based partners and study staff to facilitate initiate contact with potential participants and actively follow up with potential participants who expressed interest in the study. Notably, one study team member was a health provider affiliated with a community-based clinic serving high numbers of Somali community members. Subsequently, word-of-

mouth was the most successful form of recruiting with 28% of subjects referred by another participant. Participants were provided written or oral consent in their preferred language (Somali or English) prior to being administered a screening tool to assess eligibility. A median of two visits was required to complete the informed consent process and the pre-test instruments (range 1–3). The University of Minnesota Human Subjects Research Review board approved the study. The authors have no conflicts of interest to report and certify responsibility for this manuscript. To support continued participation in the study over the intervention timeframe, Somali community-based partners and study staff remained actively engaged with the participants.

Sample

Eligibility requirements for the proposed study included: (1) Somali woman 18 years of age or older (2) prior residence in Somalia after 1991, (3) current residence in one of the three designated Twin Cities metropolitan area neighborhoods, (4) self-report of current common stress-related symptoms; and (5) expressed willingness to participate in the intervention. Our recruitment target was 25 women from each of three distinct geographical communities. Women with any of the following conditions were excluded from the study: (1) evidence of a major psychiatric disorder (i.e. psychosis), (2) participation in another mental health program at the time of the study (e.g. ongoing individual or group therapy), and (3) planning to move from the area within the next year. These exclusionary criteria enabled us to evaluate the intervention minimizing attrition, without the confounding effects of severe mental health related complications.

Participant Enrollment

Potential participants first completed informed consent with the study staff. An interpreter was available to support this process, if necessary. Women who consented to participate in the research were then administered a screening evaluation to assess their eligibility (Fig. 1). We did not screen participants for prior exposure to trauma. In our previous epidemiological trauma prevalence study, we found that 228 out of 330 Somali participants reported trauma exposure [3]. Our recruitment goal was a final sample of 60 women who participated in pre and post intervention assessments. The recruitment target of 75 women allowed for a 10–15% attrition rate over the course of the study to sustain reasonable numbers to estimate effect size.

Study Conditions

The *Somali Health Realization intervention* consisted of 8 weekly 3-h group education sessions. Among the objectives for each session are the participant's acquisition of information and strategies designed to deal with issues unique to refugee migration and current challenges of acculturation. Areas of content included:

- (a) *Three principles of HR* (session 1): Information about the three principles of mind, thought, and consciousness as the elements of human experience are woven throughout the sessions and tailored to respond to the needs of Somali women.

- (b) *Innate health* (session 1): The concept of innate health is integral to the intervention—that the human core of health remains accessible as resilience regardless of past experience.
- (c) *Thought* (sessions 2, 3): Instruction and practice explain how thoughts create personal reality. Activities demonstrate the role of thought, different modes of thinking, effective uses of thought, thought recognition to support health, and skills in quieting thoughts—living in the present versus preoccupation with the past
- (d) *Moods and living in the moment* (sessions 4, 5): Instruction and practice help develop strategies to understand moods, recognize moods, and the impact of one's own mood and the moods of others on healthy relationships. Women practice strategies to shift one's mood and the moods of others
- (e) *Emotions* (session 6): Instruction and practice guide participants to recognize emotions as indicators of one's level of psychological functioning. Emotions are understood as a guidance system—introducing the concept of emotional intelligence.
- (f) *Separate realities* (session 7): Instruction and practice create understanding of separate realities, and how culture, family, community, and habit all contribute to our beliefs about what is acceptable in self and others. Women learn about the links among thoughts, feelings, and judgment. Skill building exercises help to decrease judgment and increase compassion.
- (g) *Levels of understanding* (session 8): The final information and exercises demonstrate how personal levels of understanding affect relationships, including parenting. Skill-building includes personal grounding strategies and practice in dealing with challenging behavior in others. The groups explore the role of parents in family adjustment to life in a new country—children's experience versus parents' experience.

We conducted the alternative treatment condition, the *nutrition education program*, as weekly 3-h sessions for 8 weeks. This program included interactive lessons on diet quality, food safety, food resource management as well as cooking instruction. The *evaluation-only control* group participants received a 1-day HR class and written materials from the Nutrition intervention following post-testing.

Measures

To evaluate anxiety and depression we administered two subscales of the Symptom Checklist 90-R [28]. In a previous study the Somali translated version of the SCL-90 had high reliability and internal consistency (Cronbach's alpha 0.94) [3]. The Ways of Coping Questionnaire (WAYS) [29] measured participants' coping skills and strategies when dealing with stress. Originally normed on 75 Caucasian American middle-class couples, the WAYS has since been extensively used with other populations, including refugees [29]. The instrument offers eight empirically derived subscales. The subscales of *confrontative*, *seeking social support*, and *planful problem-solving* are related to problem-solving efforts.

The subscales of *self-control*, *distancing*, *positive reappraisal*, *accepting responsibility*, and *escape or avoidance* are related to emotion-focused efforts (manuscript in preparation). In an earlier research initiative, members of this study team developed the Osman-Mohammed-Gob-ena Coping (OMGC) questionnaire (manuscript in preparation). We implemented the instrument in this study context to measure refugee coping and appraisal. The tool consists of 29 Likert-style questions that load on two factors identified as internal coping (20 items, Cronbach's alpha 0.74) and relational coping (9 items, Cronbach's alpha 0.73). For all instruments, we used the Brislin model of translation [30]. Items were translated and back translated by skilled Somali study staff and external readers.

Data Analysis

We compared scores of the WAYS as the mean of each subscale. Comparisons between groups for baseline interval data were accomplished using analysis of variance (ANOVA) with post hoc comparisons using Tukey's LSD to Control for overall alpha level. Comparisons pre to post were conducted using analysis of covariance (ANCOVA) where the pre-test measure was used as a covariate and a random effect was included for site when comparing post-test measures. Post hoc comparisons using Tukey's LSD were used to delineate differences between groups. Analysis was performed using SPSS v.22 and Proc Mixed in SAS v 9.4 for the ANCOVA with a random effect. Results were considered significant at $p = 0.05$.

Results

Of the original sample, 65 of 77 recruited Somali women completed the study (81–88%), with comparable attrition in the three groups over the course of the study ($p = 0.84$). Participation and attendance were robust. The three groups were similar in demographic characteristics (Table 1) with two exceptions. First, the Nutrition group was older (mean 46.8 years, SD 13.7) compared to the HR group (35.9 years, SD 9.6) and the Control group (mean 32.1 years, SD 8.2) ($p < 0.001$). Second, the Nutrition Control group reported having fewer children in the home (mean 1.4, SD 1.7) than the HR group (mean 2.9, SD 1.6) ($p = 0.033$). Overall, the women were an average age of 37 (SD 12.1) years. The overall group had a median of 3 children (range 0–10) with a median of 2 of those children living at home (range 0–8), and almost 50% worked full or part time outside the home. The sample had been in the US an average of 10.5 (SD 5.4) years and in Minnesota 9.6 (SD 4.7) years. A greater proportion of the Nutrition group participants required more than two visits to complete the intake (62%, $p = 0.004$) and required more support from Somali interpreters to complete the pre-and post-tests (62%, $p = 0.064$).

Baseline and Post-intervention

There were few differences in pre-test scores among the three groups at baseline. Collectively in the eligibility screening, participants reported high prevalence of negative symptom experiences including: feeling unhappy (59%), trouble sleeping (53%), difficulty with activity (57%), worry (64%), and headaches or back pain (67%) (Table 2). The HR group reported slightly more worry (81%, $p = 0.06$) and headaches (86%, $p = 0.13$) than the

Nutrition (59%, 63%, respectively) and Control groups (52%, 52%, respectively). Overall, the three groups were similar at baseline in symptom reporting.

In Table 3 we describe baseline responses to the formal study instruments. We found a statistically significant difference between groups in the relational subscale of the OMGC instrument, with the Nutrition group scoring higher than the Health Realization group or the Control group ($p = 0.004$).

We compared pre and post-test scores for the three groups (Table 4). The HR group showed significant improvement over the Control group on several subscales. There were fewer differences between the HR group and the Nutrition group.

Symptom Checklist 90-R (SCL)

There were no statistically significant differences among groups at post-test on the SCL anxiety and depression scales. There was a suggested improvement in the depression scores in the HR group ($p = 0.079$).

Ways of Coping Questionnaire (WAYS)

The HR group was higher than the Control group in the WAYS positive coping subscales of *distancing*, *self-control*, *seeking social support* ($p = 0.05$). The HR group was higher than both the Control and Nutrition groups in positive reappraisal ($p = 0.001$). The HR group also endorsed fewer negative coping styles, with confrontive coping decreasing from 11 to 8% of total coping. The Nutrition and Control groups remained around 12%. The increase in the *seeking social support* scale of the WAYS was significant ($p = 0.042$) for the HR group compared to the Control group after adjusting for baseline differences.

Osman-Mohammed-Gobena Coping Questionnaire (OMGC)

Results from the OMGC instrument showed a significant improvement in internal coping for the HR group compared to the Nutrition group.

Discussion

HR effect findings show promising trends in the support mental health and coping among the sample Somali refugee women. Improvements on the OMGC internal coping scale (i.e. staying calm when upset or having choices about thoughts to pay attention to) were associated with Somali HR teaching. The lower SCL depression scale scores was also notable, although not statistically significant. The HR intervention group showed higher scores on several of the WAYS positive coping subscales, and post-intervention was greater than both the Control and Nutrition groups for positive reappraisal (an emotion-focused coping strategy). Researchers have found emotion-focused coping to be less effective than problem-focused coping among refugees [31]. However, Huijts et al. [32] found emotion-focused coping strategies are positively correlated with quality of life among highly traumatized refugees. Our results are aligned this assertion.

The role of culture in health is a central facet in the exploration of the physical and mental health experience of refugees [33]. Culture influences the ways in which stressors are

perceived and responses are generated [34]. In addition, representations of culture function as tangible coping resource [33]. We perceive the HR intervention to be an important tool in supporting the complex mental health needs of refugees in culturally tailored ways. Anecdotally in our experiences working with Somali women in the community, HR functions to remind people that there is choice in their thinking. A compelling comparison participants made during the pilot was that HR facilitated “locking my thoughts in a lock box and knowing that I have the key. I can unlock the box if I want to.” Where HR stands out among alternative coping interventions is that it is developed, delivered, and refined in a culturally specific, community-centered context.

This community-delivered, strengths-based intervention strengthens coping skills through a focus on resilience rather than psychopathology. Anecdotal reports and our pilot data [35] suggest that a community-delivered HR intervention reduces stress-related problems, supports calm parenting, and improves coping for diverse high-risk populations. HR focuses on gaining perspective in the present and, unlike other approaches, does not encourage the retelling of past traumatic experiences. Participants are taught to manage and cope with their perceived stresses through a responsive thought process. Within a stress and coping theoretical framework, HR is hypothesized to most directly affect internal coping resources, while also shifting the primary and secondary appraisal of stressors [18]. Though the HR model has elements in common with other stress intervention approaches, there are key differences. Cognitive interventions have a tendency to focus on what people think about their problems and external circumstances [17]. Understanding the role of thought is a critical element of HR; thus the early proponents of this approach differentiated it with the labels “constructivist” or “neo-cognitive” in that it does not promote actively changing intrusive or negative thoughts but rather promotes an understanding that allows a degree of detachment from thoughts [36–41]. The ability to notice one’s thinking habits and the ability to discriminate self from thoughts allows people to let disturbing thoughts pass. This, in turn, results in increased access to a more positive level of thinking that includes common sense, natural self-esteem, and rising above past or present circumstances. In other words, people are able to access coping resources through a shift in perception.

We considered several limitations in the study design. First, we did not randomly assign participants to study condition. To prevent contamination, we allocated subjects to study condition based on the geographic location of their residences. However, it is possible that contamination still occurred because of the proximity of the communities to one another and the deeply rooted network of Somali refugees in Twin Cities. Second, several comparisons between groups that appeared to be clinically important were not statistically significant due to sample size. The sample size was large enough to collect preliminary data that allowed for effect size estimation in future studies, a primary aim in this research.

Overall success in recruiting and maintaining the three groups was highly dependent on the expertise and community credibility of the Somali researchers. Study team members worked intensely with participants in the two intervention groups to overcome barriers to attendance and participation wherever possible. Willingness of researchers and staff to carefully and respectfully explain the informed consent process, conduct oral questionnaires with non-literate participants, and provide reminder calls all contributed to the high participation rates.

Conclusions

Refugee psychosocial response to a history of trauma exposure is complex and varied, calling for a range of therapeutic support options—from medical to community. Our research team has worked closely with Somali community members to adapt this coping intervention into a relevant and potentially healing community-based approach that is accessible and cost-effective. Findings from this study support the development of a larger trial of the Somali HR intervention that can empirically determine its effects on stress and coping. Strategies that strengthen Somali women are strategies that strengthen Somali families, and ultimately the larger community.

Acknowledgments

Funding This research was supported in part by a grant from the NIH/ NINR.

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Community Coping Intervention for Somali Women

Please answer these questions to see if you qualify to participate in the study:

1. How old are you (or what year were you born)?
2. What year did you leave Somalia
3. What city do you live in today?
4. Please tell me if you experience any of these signs of stress? Yes/no
 - Do you feel unhappy much of the time?
 - Do you often find it difficult to sleep at night?
 - Do you often have difficulties doing the activities that you need to do?
 - Do you often worry about things that you cannot control?
 - Do you suffer from headaches or back pain?
5. Do you participate in any kind of talk therapy or support program to help you with any of these signs of stress?
6. Do you plan to move out of your house within the next year?
7. Would you like to participate in this study

Fig. 1.
Screening questionnaire

Table 1

Demographics for participants

Variable	Health Realiza tion	Nutrition Control	Control	p-value
Participants, n	21	22	22	
Age (years)	35.9 ^b (9.6)	46.8 ^{a,c} (13.7)	32.1 ^b (8.2)	< 0.001
Years in U.S.	11.7 (5.4)	9.1 (5.2)	12.0 (5.2)	0.150
Years in Minnesota	10.0 (4.3)	8.6 (4.5)	11.3 (4.7)	0.139
Children	3.3 (2.1)	3.8 (2.6)	2.4 (2.2)	0.152
Children in the home	2.9 ^b (1.6)	1.4 ^a (1.7)	2.2 (1.9)	0.033
Required 2 visits to complete intake	3/18 (17%)	13/21 (62%)	4/19 (21%)	0.004
Able to complete own forms	9/17 (53%)	8/21 (38%)	15/19 (53%)	0.032

^aPost hoc comparison to HR using Tukey's LSD p-value < 0.05^bPost hoc comparison to Nutrition Control using Tukey's LSD p-value < 0.05^cPost hoc comparison to Control using Tukey's LSD p-value < 0.05

Table 2

Eligibility screening comparisons by group

Variable	Health Realization	Nutrition Control	Control	p-value
Unhappy	15/21	12/19	9/21	43% 0.154
Trouble sleeping	11/20	10/18	10/20	50% 0.929
Difficulty with activity	14/21	10/18	10/21	48% 0.457
Worry	17/21	10/17	11/21	52% 0.131
Headache/back pain	18/21	12/19	11/21	52% 0.064
Therapy/support	1/20	3/17	1/21	5% 0.288
Plan to move	4/21	1/18	7/21	33% 0.096

Table 3

Baseline comparisons of SCL, WOC, and OMG by group

Variable	Health Realization	Nutrition Control	Control	p-value
SCL				
SCL anxious	1.82 (0.55)	1.84 (0.80)	2.04 (0.93)	0.598
SCL depression	2.05 (0.58)	1.98 (0.85)	1.98 (0.85)	0.947
WAYS				
Confrontive coping	1.41 (0.63)	1.47 (0.59)	1.54 (0.56)	0.763
Distancing	1.38 (0.43)	1.51 (0.52)	1.67 (0.51)	0.205
Self-controlling	1.77 (0.70)	1.62 (0.56)	1.90 (0.59)	0.326
Seeking social support	1.73 (0.74)	1.64 (0.34)	1.64 (0.65)	0.857
Accept responsibility	1.62 (0.78)	1.69 (0.51)	1.51 (0.42)	0.576
Escape-avoidance	1.09 (0.49)	1.30 (0.49)	1.28 (0.50)	0.304
Planful problem solve	2.51 (0.62)	1.62 (0.65)	1.72 (0.53)	0.520
Positive reappraisal	1.85 (0.71)	1.96 (0.46)	2.01 (0.59)	0.671
Refugee Appraisal and Coping Experience Scale (OMGC)				
Internal subscale	1.92 (0.49)	2.10 (0.75)	1.90 (0.39)	0.442
Relational subscale	1.74 ^b (0.37)	2.22 ^{a,c} (0.48)	1.86 ^b (0.54)	0.004

^aPost hoc comparison to HR using Tukey's LSD p-value < 0.05^bPost hoc comparison to Nutrition Control using Tukey's LSD p-value < 0.05^cPost hoc comparison to Control using Tukey's LSD p-value < 0.05

Table 4

Post comparisons by group, adjusted by baseline

Means	Health Realization	Nutrition	Control	p-value
SCL				
SCL anxious	1.35	1.61	1.60	(0.69) 0.330
SCL depression	1.35	1.68	1.56	(0.57) 0.079
WAYS				
Confrontive coping	1.23	1.52	1.44	(0.71) 0.360
Distancing	1.75 ^c	1.70 ^c	1.49 ^{a,b}	(0.52) 0.038
Self-controlling	2.05	1.94	1.67	(0.62) 0.064
Seeking social support	1.98 ^c	1.83	1.51 ^a	(0.57) 0.042
Accept responsibility	1.61	1.71	1.34	(0.65) 0.228
Escape-avoidance	1.19	1.21	1.03	(0.47) 0.500
Planful problem solve	2.03	1.84	1.70	(0.62) 0.123
Positive reappraisal	2.45 ^c	2.10	1.92 ^a	(0.49) 0.001
Refugee Appraisal and Coping Experience Scale (OMGC)				
Internal subscale	1.59 ^c	1.93	1.80 ^a	(0.32) 0.045
Relational subscale	1.58	1.85	1.73	(0.46) 0.488

^aPost hoc comparison to HR using Tukey's LSD p-value < 0.05^bPost hoc comparison to Nutrition Control using Tukey's LSD p-value < 0.05^cPost hoc comparison to Control using Tukey's LSD p-value < 0.05