Examining Changes in the Mental Health Status of Refugees Over the First Six Months of Resettlement Using the Refugee Health Screener-15 (RHS-15)

Niva Dhakhwa, BSN, RN

University of Utah

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Executive Summary

Refugees are people forced to leave their native countries and unable to return due to fear of war, violence, or political instability. Every year about 69,987 refugees resettle in the United States and approximately 1,200 refugees arrive in Utah. Refugees face various challenges, such as language and cultural barriers and adapting to a new environment, placing them at higher risk for depression, post-traumatic stress disorder, and panic attacks. Currently, the Utah Department of Health (UDOH) utilizes the Refugee Health Screener-15 (RHS-15) tool to evaluate the mental health status of refugees 14 years of age and older at 1, 3 and 6 months after resettlement. The RHS-15 is a validated and culturally sensitive tool designed to assess the range of emotional distress in refugees14 years and older. It is composed of two parts: Part I includes 14 symptom questions ranked on a scale of 0 to 4 and part II consists of a distress thermometer ranked on a scale of 0 to 10. The refugees scoring ≥12 on questions 1-14 or ≥ 5 on the distress thermometer are identified as symptomatic individuals who may benefit from the mental health services. Over the past 3 years, UDOH has partnered with resettlement clinics and agencies to screen refugees ≥ 14 years old at three intervals over a 6-month period to identify more refugees in need of mental health services. However, the changes in the mental health status of refugees over the first 6 months of resettlement have not been determined. Examining the changes over time in the mental health status of refugee population will help determine the need for routine mental health screening during their resettlement period and establish evidence based underpinnings for continued use.

The purpose of this project is to examine the changes in the mental health status of refugees over the first 6 months of resettlement. The four primary objectives for the project were to: (a) obtain deidentified RHS-15 data for newly arrived refugees ≥ 14 years old, (b) examine changes in the mental health status of refugees ≥ 14 years old at three intervals, (c) evaluate the prevalence of mental health referrals by age group, gender, ethnic group, and country of origin at three intervals, and (d) disseminate the findings.

The University of Utah and UDOH Institutional Review Boards approved this project. The analysis results show that in the Utah approximately 1,014 refugees ≥ 14 years old received at least one mental health screening using the RHS-15 tool between June 2014 and June 2015. However, only 197 refugees received RHS-15 screening at the three intervals. The results show that the mean RHS-15 scores on questions 1-14 were lowest at the 1-month screening and highest at the 3-month screening. Thus, mental health distress in refugees significantly increased during the 3 months of their resettlement, which suggests month 3 is the optimum time to screen refugees for further mental health problems. The project also demonstrated that mental health distress during the resettlement is higher in refugees age 65 and older and closer mental health screening follow up is recommended for refugees older than 65 years old.

This project is guided by Jane Dyer CNM, FNP, MBA, PhD, FACNM, who served as Project Chair. Jia-Wen Guo, PhD, RN and Amelia Self, MSW served as Content Experts. The Supervisory Committee included Julie Balk DNP, APRN, FNP-BC, CNE and Pam Hardin PhD, RN, Executive Director of the MS and DNP programs.

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Problem Statement

The United Nations High Commission for Refugees (UNHCR) has identified that there are "16 million refugees and asylees and 26 million internally displaced persons in the world as of 2009" (Hollifield et al., 2013, p.202). The term 'refugee' will be used in this paper refer to persons of refugee status. The refugees' past experiences of exposure to war, torture, violence, prolonged separation from or loss of family members, long-distance journeys, discrimination, social exclusion, and lack of opportunities experienced in the country of resettlement predispose many refugees to suffer mental health disorders prior to and after resettlement (Centers for Disease Control and Prevention [CDC], 2015). The most prevalent mental health conditions in newly arrived refugees are depression, posttraumatic stress disorder (PTSD), and panic attacks during the first year of their arrival (Bishop et al., 2012). An inadequate standard practice of mental health screening among these refugees may lead to failure to identify the mental health conditions and related comorbidities, such as degraded physical health conditions and an increased rate of suicide.

Upon arrival in the United States, refugees undergo a resettlement process that includes a Domestic Refugee Medical Examination (DRME) within 30-90 days of arrival (CDC, 2015). The DRME is a comprehensive medical assessment that includes a head to toe physical exam, screening and tests for sexually transmitted disease, parasites, deficiencies of vitamin B-12 and other nutrients, chronic diseases, immunization status, TB screening, and mental health screening (Utah Department of Health [UDOH], 2015). The CDC (2015) has identified mental health screenings as an important component of the DRME. However, no standard practice of mental health screening at multiple

intervals has been established. This problem is compounded by the changes in living situations and coping strategies of refugees during the resettlement period. The Refugee Mental Health Subcommittee at UDOH has recognized the need to identify changes in the mental health status of refugees over time to determine the continuity of mental health screening conducted at multiple times during their resettlement. Therefore, the purpose of this project is to examine changes in the mental health status of refugees over the first 6 months of resettlement by analyzing RHS-15 screening results at three intervals (1,3, and 6 months).

Clinical Significance and Policy Implications

Utah Refugee Mental Health Program

In Utah, about one-fourth of the refugee population or 1,048 newly arrived refugees suffered from mental health conditions (Chang, 2015). Newly arrived refugees are screened for mental health status using RHS-15 along with DRME within 30 days of arrival at three community clinics in the Salt Lake Valley. Although, no guideline has promoted screening for mental health at different intervals, the UDOH has requested agencies and clinics to conduct RHS-15 screening at multiple intervals to identify refugees in need of mental health services later in the resettlement process. In addition to 1-month screening at community health clinics, two local resettlement agencies in Utah, Catholic Community Services (CCS) and the International Rescue Committee (IRC), have been administering the RHS-15 at specific intervals (3months and 6 months) during the first year of the resettlement process for the last 3 years (UDOH, 2015).

The UDOH provides funding to offer these additional RHS-15 screenings at multiple intervals (A. Self, personal communication, July 8, 2015). However, the

usefulness of offering additional RHS-15 at multiple intervals has not been determined (A. Self, personal communication, July 8, 2015). Therefore, this project has been developed to examine whether the mental health status of refugees changes over their first 6 months of the resettlement period. The findings of this project will be utilized by the UDOH to determine the significance of frequent mental health screenings in newly arrived refugees. The project results can influence UDOH's mental health screening policy. The refugees are the major stakeholders in this project. Primary healthcare providers, mental health providers, social workers, case managers, and the UDOH are other stakeholders who may be directly or indirectly affected by the findings of this project.

Purpose and Objectives

The purpose of this project is to determine changes in the mental health status of refugees over their first 6 months of resettlement. The following objectives served to meet the purpose of this scholarly project:

1. Obtain the deidentified data for newly arrived refugees ≥ 14 years old on the RHS-15 questionnaire at 1, 3, and 6 months from the Utah Department of Health (UDOH) using an encrypted flash drive.
2. Examine changes in the mental health status of refugees' ≥ 14 years old at 1, 3, and 6 months.
3. Evaluate the prevalence of mental health referrals by age group, gender, ethnic group, and country of origin at 1, 3, and 6 months.
4. Disseminate the findings to the UDOH Refugee Mental Health Subcommittee in a meeting and submit an abstract to the Western Institute of Nursing (WIN)

conference.

Literature Review

Background

In accordance with the *1951 Convention Relating to the Status of Refugees*, a refugee is defined as any person who

> Owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (UNHCR, 2010, p. 14)

As a part of humanitarian efforts, the US has been providing refugee status to individuals who have been displaced by war, disaster, or conflict. The Displaced Person Act of 1948 was the first refugee legislation passed by Congress that permitted entry of 400,000 displaced Europeans to the US, in addition to the 250,000 who had arrived prior to its enactment (UDOH, 2015). To ensure the smooth transition of newly arrived refugees into their new communities, the Bureau of Population, Refugees and Migration (PRM), in conjunction with the Office of Refugee Resettlement (ORR) in the Department of Health and Human Services (HHS), contracted with nine Voluntary Agencies (VOLAGS). VOLAGS helps with arrival placement of refugees in the resettlement locations and referral to eligible programs in the newly relocated community (Bishop et al., 2012; UDOH, 2015).

Resettlement Process in the United States

In the past 35 years, more than 3 million refugees have been resettled in the U.S. Approximately 70,000 to 80,000 refugees are admitted to the US annually (UDOH, 2015). The process of becoming a refugee and the resettlement process in the US are complex and may take a few months to several years to complete. The resettlement process is divided into three phases: preflight, flight, and resettlement (CDC, 2015). The preflight phase includes the period of time during which individuals experience trauma and violence, leading up to the decision to flee their home country. The decision to flee leads to the flight phase, in which individuals are uncertain about the journey from the host country to the various resettlement sites. Some resettlement sites may involve temporary refugee camps or detention centers. The third phase is the resettlement period, when individuals experience many challenges to adapt to and integrate into their new country, a foreign environment. Thus, as a result of prolonged, life-threatening experiences refugees are at higher risk for psychiatric symptoms and may have profound psychological distress (CDC, 2015).

During the resettlement process all refugees have to pass the overseas medical screening examination (OME) that screens for “Class A” and “Class B” conditions (CDC, 2015). “Class A” conditions include active or infectious tuberculosis, untreated sexually transmitted infections (STIs), Hansen’s disease (leprosy), drug or alcohol addiction/abuse, and mental illness with harmful behavior, all of which preclude admission to the US. “Class B” conditions include inactive or noninfectious tuberculosis, treated STI, treated Hansen’s disease (leprosy), sustained remission from drug or alcohol

addiction or abuse, well-controlled mental illness, and pregnancy. These conditions require close follow-up upon arrival in the US (Bishop et al., 2012; UDOH, 2015).

Upon arrival, all refugees undergo a DRME as part of the resettlement process. The CDC (2015) highly encourages providers to use a DRME as an opportunity to screen for mental health and educate refugees about mental health issues, discuss expected stress responses, and provide mental health resources. Currently, mental health screenings for refugees newly arrived in the US are conducted differently in different states. Screenings are dependent on both the availability of local mental health referral services and the staffing of the particular health-screening clinic (CDC, 2015). In addition, language and cultural barriers, lack of appropriate mental health screening tools geared toward refugees, and/or lack of knowledge about the effectiveness of screening and treatment of mental health conditions are constant barriers that impede appropriate mental health screening and treatment of the newly arrived refugee population.

Mental Health Disorders in Persons of Refugee Status

Murray et al. (2011) state that refugees are at a substantially higher risk for mental health disorders than is the general population because of their trauma and past experiences with violence or torture, increasing their risk for mental illness. In addition, refugees face multiple postmigration resettlement stressors, such as “social isolation, financial problems, generational acculturation differences, culture shock, employment difficulty, disability issues, and housing issues,” that adversely affect their psychosocial health (Eckstein, 2011, p. 432). The research shows that the most prevalent mental health disorders in refugees are posttraumatic stress disorder (PTSD), major depressive disorder, and anxiety disorder (Eckstien, 2011). A systematic review by Chang (2015) revealed

that more than one-fourth (27%) of the refugees in the Utah were considered clinically symptomatic of mental health conditions and the highest percentage of mental health conditions was found between the ages of 45 and 64. Hence, a review of the literature clearly indicates that mental health conditions are a major problem in newly arrived individuals with refugee status, which further justifies the need to screen this population for their mental health status.

Refugee Mental Health Screening in Utah

Each year approximately 1,100 refugees are resettled in Utah (Chang, 2015). Over 25,000 refugees who speak more than 40 different languages are currently living in Utah. This number shows that the refugee population comes from various cultural backgrounds and it is therefore important to consider the cultural dimension while screening for mental health status in the refugee population. According to UDOH (2015), two resettlement agencies, CCS and IRC, are actively working with newly arrived refugees to provide direct services and support related to mental health. The State of Utah offers a comprehensive and holistic health screening and accords special importance to mental health for the wellbeing of refugees.

The Refugee Health Screener 15 (RHS-15) is used to screen for depression, anxiety, PTSD, and overall distress in refugees aged 14 and older in the Utah (UDOH, 2015). The RHS-15 is a culturally and linguistically validated screening instrument developed to screen for common mental disorders in refugees (Hollifield et al., 2013). Refugees who have been identified as symptomatic during this mental health screening are referred to mental health care via assistance from CCS and IRC. The resettlement agencies, CCS and IRC, have been conducting mental health screenings using RHS-15 at

3 and 6 months for refugees 14 years and older for the past 3 years. In addition, these agencies arrange referrals to mental health providers, schedule follow-up appointments to assure continuity of care, and coordinate transportation services as required by the refugees (UDOH, 2015). The goal of administering the RHS-15 at specific intervals is to identify refugees in need of mental health services early during the resettlement process (Hollifield et al., 2013). However, changes in the mental health status of refugees over 14 during first year of resettlement process are unknown.

The State of Utah has an excellent mental health screening and referral program to address mental health concerns in the refugee community (UDOH, 2015). However, there has been little to no evaluation of the mental health status of refugees overtime.

RHS-15 tool

The Pathways to Wellness Project, supported by the Robert Wood Johnson Foundation, developed the RHS-15 tool. This tool is designed to detect the range of emotional distress common across refugee groups in a culturally sensitive way (Hollifield et al., 2013). The UDOH directs clinics, CCS, and IRC to screen all newly arrived refugees aged 14 and older using the RHS-15 to predict problems associated with mental health. The RHS-15 is a predictive tool, not a diagnostic one (Hollifield et al., 2013). It has been translated and validated and is available in six languages: Arabic, Nepali, Karen, Burmese, Russian, and Somali (Hollifield et al., 2013). A refugee scoring 12 or greater on Part I or 5 or greater on Part II (distress thermometer) is identified as a symptomatic individual who may benefit from mental health services (UDOH, 2015). Using the standardized RHS-15 tool will fill the gap in public health screening, further detect vulnerable refugee populations who are in need of mental health services, reduce the

stigma of mental illness, and enhance access to care.

Mental Health Status of Older Refugees

In Utah, about 3% of refugees who arrived from 2009 through 2014 were between the ages of 65 and 84 and only 1% was above 85 (Chang, 2015). An analysis of refugee mental health has found that refugees, 65 years of age and older, appear to have a higher rate of depression rate (Change, 2015). Kirmayer et al. (2011) state that older refugees have specific needs and are usually neglected in program planning. Also, older refugees reportedly struggle more while learning a new language and are found to have difficulty adapting to a new culture and environment (Kirmayer et al., 2011). Salt Lake County Office of Community Innovation in partnership with Salt Lake County's Adult and Aging Services has recognized the need for innovative programs to build a healthier community for seniors refugees (Salt Lake County, n.d). The program initiative, called 'Healthy Aging for Refugee Seniors (HARS)' was developed to provide opportunities for refugees aged 60 and older to participate in a healthy lifestyle (Salt Lake County, n.d). The HARS program also provides resources such transportation, translation/interpretation, and citizenship classes in Salt Lake County senior centers to qualified seniors. Other resources available in Utah for senior refugees are the English Skills Learning Center, Easter Seals Senior Community Service Employment Program, Elderly Refugee Citizenship Program, and Salt Lake County Aging Services. These programs provide services such as Meals on Wheels, senior employment, senior companions, and English learning classes (Department of Workforce Services, n.d).

Theoretical Framework

A Framework for Program Evaluation

The Framework for Program Evaluation was selected as the theoretical framework for this project. It provides a common understanding of evaluation concepts and integrates program evaluation as a routine activity in public health organizations. According to Milstein, Wetterhall, and the Center for Disease Control and Prevention (CDC) evaluation working group (2000), "the framework for program evaluation has two basic parts: steps in evaluation practice and standards for effective evaluation" (p. 221). The first part of the Framework includes six connected steps to tailor an evaluation process for a particular program at a particular point in time. The six steps of the Framework for Program Evaluation are to: engage stakeholders, describe the program, focus on the evaluation design, gather credible evidence, justify conclusions, and ensure the use and lessons learned (Milstein et al., 2000). The second part of the Framework includes standards for effective evaluation of the quality of evaluation activities. These standards are organized into four groups: utility, feasibility, propriety, and accuracy (Milstein et al., 2000). Appendix A provides a visual representation of this model.

The Framework for Program Evaluation has been used in this project to tailor an evaluation process of the Utah's refugee mental health-screening program at multiple intervals. The evaluation cycle began by engaging stakeholders in the program. The active involvement and input from the stakeholders was essential to this project to assess the gaps and identify any problems in the program. The stakeholders involved in this scholarly project were the UDOH State Refugee Health Coordinator and managers and staffs from CCS and IRC. The second step in the Framework was to describe the current

refugee mental health-screening program in the Utah. The third step helped to identify a well-focused research design and determine evaluation process procedures, such as the collection of data, and its assessment, and storage. The fourth and fifth steps in the Framework further guided the organization of data collection and the analysis and interpretation of the outcomes. Finally, as the last step, the evaluation results and recommendations from the data analysis were shared with the stakeholders to further enhance the quality of the program. While implementing the above six steps outlined in the framework, the four sets of framework standards (utility, feasibility, propriety, and accuracy) were also implemented. Thus, this Framework guided the scholarly project to synthesize the existing best practices and evaluate a set of standards for further improvement in examining the mental health status of refugees.

Implementation and Evaluation Plan

Objective 1: Obtain the deidentified data of newly arrived refugees ≥ 14 years old on the RHS-15 questionnaire at 1, 3, and 6 months from the Utah Department of Health (UDOH) using an encrypted flash drive.

The first objective for this scholarly project was to obtain Refugee Health Screener (RHS-15) data for refugees ≥ 14 years old, including their age, gender, country of origin, ethnic group, date of arrival, score on the RHS-15 questionnaire and number of mental health referrals at 1, 3, and 6 months screening from UDOH. The project proposal was presented at College of Nursing DNP faculty and was approved on October 23rd, 2016. The project received Institutional Review Board (IRB) approval from the UDOH and University of Utah. The project used retrospective RHS-15 data for refugees ≥ 14 years old who arrived between June 2014 and June 2015. RHS-15 data were de-identified

by the UDOH and were transferred to an encrypted flash drive for the purpose of data analysis. This objective was evaluated by the completion of the proposal defense, IRB approval, and successful data retrieval from the UDOH, and storage of the data on an encrypted flash drive.

Objective 2: Examine changes in the mental health status of refugees ≥ 14 years old at 1, 3, and 6 months.

The second objective of the scholarly project was to examine changes in the mental health status of refugees ≥ 14 years at three different intervals using the RHS-15 screening tool. The RHS-15 data were analyzed in SPSS software using descriptive statistics, repeated measures analysis of variables (ANOVA), and a paired t-test to compare RHS-15 scores of the refugees at the three different time periods.

In addition to objective 2, the project attempted to compare RHS-15 score between refugees aged ≥ 65 and older with refugees aged 14-64 using an independent sample t-test and Mann-Whitney U test to examine the differences in mental health status of the two age groups. The statistical analysis for this project was planned with Dr. Jia-Wen Guo, Nursing Informatics, University of Utah College of Nursing. Dr. Guo provided assistance during the statistical analysis and interpretations of the results. The objective was evaluated by completion of statistical analysis of the RHS-15 data and interpretation of the results.

Objective 3: Evaluate the prevalence of mental health referrals, by age group, gender, ethnic group, and country of origin at three time periods.

The third objective for this scholarly project was to determine the prevalence of mental health referrals at multiple intervals by age range, gender, ethnic group, and

country of origin. One of the agencies (International Rescue Committee) was unable to provide mental health referral data. Therefore, Objective 3 was not implemented and evaluated.

Objective 4: Disseminate the findings

The fourth objective of this scholarly project was to disseminate the final results and recommendations of the project. The project results was presented to the stakeholders at UDOH Refugee Mental Health Subcommittee in April 5th, 2016. A poster on this scholarly project was selected for poster presentation at the Western Institute of Nursing Conference on April 6-9, 2016 in Anaheim, California. This objective was completed by sharing the project results with stakeholders at UDOH and by the poster presentation at the WIN conference.

Results

Through multiple email conversations, telephone calls, and the onsite de-identification process at the UDOH, RHS-15 data was successfully retrieved and stored in the encrypted flash drive for data analysis. A total of 1,014 refugees aged ≥ 14 participated in the study. The participants had completed at least one mental health screening using the RHS-15 tool during the period June 2014 to June 2015. The total number of males was 50.9% (*n*=516) and the number of females was 49.1% (*n*=498). The mean age of participants at the time of arrival was 33, with a range of 14 to 85 years. Overall, 11% (*n*=112) of the participants were between the ages 14-17, 86.1% (*n*=873) were between 18-64 years old, and only 3.0% (*n*=29) were 65 years and older (see Appendix I). The distribution of participants shows fewer adults ≥ 65 years old arriving in Utah.

The Refugee Health Screener-15 (RHS-15) tool has two parts. RHS-15 Part I includes 14 symptom questions that are scored on a scale of 0 to 4. A total score of ≥12 on RHS-15 Part I is considered as positive for emotional distress. The RHS-15 Part II is a 'distress thermometer' that measures distress on a scale of 0 to 10, with 0 being no distress and 10 being severe distress. Refugees scoring 5 or greater on RHS-15 Part II are identified as symptomatic individuals who need further mental health evaluation.

Comparison of RHS-15 scores at three-time point (1, 3 and 6 months):

Overall, the mean scores on RHS-15 Part I (*n*=1,014) were 9.19 (11.09), 12.26 (13.24), and 13.03 (13.83) at 1, 3, and 6 months, respectively (see Table 1 Appendix J). RHS-15 Part I mean scores for total participants (*n*=1,014) appeared to gradually increase by one point each from 1 month to 3 and 6 months, surpassing the cut off point of ≥ 12 at 3 and 6 months, indicating the need for further mental health referral at these time. On the other hand, the mean scores on RHS-15 Part II (*n*=1,014) were 2.14 (2.79), 2.62 (3.15), and 2.99 (3.27) at 1, 3, and 6 months, respectively (see Table 2 Appendix K for further statistical information). The mean scores on RHS-15 Part II somewhat increased from 1 month to 3 and 6 months; however, scores were less than 5, indicating negative screening.

The frequency of distribution of RHS-15 scores for total refugee participants (*N*=1,014) was positively skewed. Therefore, log10 data transformations were used for data analysis on repeated measure ANOVA and the independent sample t-test. A total of participants were selected for Repeated Measure Analysis of Variance, as RHS-15 scores were available for these participants at three time points (1, 3, and 6 months) to evaluate

whether overall scores differences existed over time. (see Appendix K for further statistical information).

RHS-15 Part I: The Repeated Measures ANOVA showed that, for the 197 participants, the differences in mean scores on RHS-15 Part I between 1, 3, and 6 months were statistically significant, F (1.932, 378.745) = 6.12, p = .003, partial η^2 = .030, power= .88. A Paired t-test and Wilcoxon Signed Rank test were used for pairwise comparisons, which showed that the mean scores on RHS-15 Part I were significantly higher at 3 months screening (M=13.19, SD=13.89) than 1 month screening (M=10.80, SD=12.65) (p= .003). No significant difference was found between mean scores at 1 and 6 months, and 3 and 6 months (p >.05). The mean scores on RHS-15 Part I over 6 months are shown in Table 2 (see Appendix K).

Thus, the project findings suggest that the mean scores on RHS-15 Part I were different at the three time points, thereby identifying an increase in mental health distress in the refugees overtime. Furthermore, the result supports that refugees are more likely to suffer from mental health problems at 3 months of the resettlement period, perhaps because the external factors related to postmigration resettlement such as social isolation, financial problems, the availability of federal benefits for up to 8 months, and difficulty finding or sustaining new employment may directly affect their psychosocial health.

RHS-15 Part II: The Repeated Measures ANOVA showed that, for 197 participants, the difference in mean scores on RHS-15 Part II between the 1 (M=2.50, SD=3.10), 3 (M= 2.81, SD=3.18), and 6 months (M=3.01, SD=3.31) time points were statistically significant, F (1.75, 343.49) = 3.19, and p= .049, partial η^2 = .016, Power = .57. A post hoc paired t-test and Wilcoxon Signed Rank test were used for pairwise comparisons

between each time point, which showed significant differences in mean scores between 1 and 6 months (p= .02) (see Appendix L). However, no differences were found between mean scores at 1 and 3 months and 3 and 6 months (p >.05). The mean scores on RHS-15 Part II over 6 months are shown in Table 2. Based on the mean scores of RHS-15 Part II, it is suggested that mean scores steadily increased over 6 months. However, none of the mean scores for RHS-15 Part II passed the cut-off point of 5 or greater requiring mental health referrals. Thus, the findings suggest that RHS-15 Part I identifies more refugees with positive screening than RHS-15 Part II.

Comparison of RHS-15 scores in refugees between Age 14-64 and Age ≥ 65

This project attempted to compare RHS-15 scores in refugees between the ages 14-64 and 65 or greater (N=1014) to meet the requirement for the Interdisciplinary Gerontology Certificate program. An independent sample t-test (see Appendix M for statistical information) was selected for the study. The number of participants aged 14-64 who had RHS-15 screening at 1 month were (n= 756), 3 months were (n= 597), and 6 months were (n= 397). Likewise, the number of participants aged 65 and older who had RHS-15 screening at 1 month were (n= 24), 3 months were (n= 15), and 6 months were (n= 10) (see Table 4 Appendix M). The mean scores for RHS-15 for refugees aged 14-64 were lower compared to the scores for refugees aged 65 and older (see Table 4 Appendix M).

RHS-15 Part I: An independent sample t-test showed that the differences in mean scores of RHS-15 Part I between participants aged 14-64 (n=756, M= 9.03, SD= 10.97) and the participants aged 65 and older (n= 24, M= 14.42, SD= 13.53) at 1 month were statistically significant, $t\ (778)= -2.69$, $p= 0.007$. A follow-up comparison using a Mann Whitney U

test with a level of significance of 0.008 revealed the means scores for participants 65 and older were significantly higher than for those aged 14-64.

Similarly, an independent sample t-test showed that the difference in mean scores of RHS-15 Part I between participants age 14-64 (n=597, M= 12.02, SD= 13.13) and participants aged 65 and older (n= 15, M= 21.6, SD= 13.33) at 3 months were statistically significant, $t\ (610)= -2.52, p= 0.012$. A follow up comparison using a Mann Whitney U test with a level of significance of 0.008 revealed the means scores for participants 65 and older were significantly higher than for participants aged 14-64. However, there is no difference between mean scores between these two groups at 6 months. The results showed that mental health distress is more likely to be higher in refugees aged ≥ 65 and older than in refugees aged 14-64 at 1 and 3 months ($p<.05$), which suggest close follow up on mental health screening in older adult refugees.

RHS-15 Part II: An independent sample t test showed that the difference in mean scores of RHS-15 Part II between participants aged 14-64 and 65 and older were not significant at any time points ($p > .05$). Again, the means scores for RHS-15 Part II did not pass the cut-off point of 5 or greater, which shows that RHS -15 Part II does not detect as much positive screening as RHS-15 Part I.

The result from this project was presented to the Utah Department of Health Refugee Mental Health Committee in April 5th, 2016 and at the Western Institute of Nursing Conference on April 6-9, 2016 in Anaheim, California.

Limitations

This project had several limitations one of the most prominent of which was the small sample size. Only 197 participants had RHS-15 scores for all three time points. UDOH,

CCS, and ICR reported several reasons for not being able to conduct RHS-15 screening at the three time points, including refugees simply not wanting to have mental health screening, the limited number of interpreters available at all times to successfully conduct the referral process, and conflicts in schedules for refugees and agency workers. It was also reported that when agency workers visited participants' homes, some refugees were unavailable for screening because they worked 5 days a week. Moreover, the agencies reported that some months, such as December, did not provide adequate time for them to complete the screening on all participants.

Another limitation of this project was that one of the agencies was unable to provide data on mental health referrals. Therefore, this project was limited to exploring several plausible comparisons between these referral periods and the prevalence of mental health referrals by age group, gender, ethnic group, and country of origin at three time points.

The external factors such as difficulty adapting to new environment/culture, finding a new job, and speaking a new language that exacerbate mental health distress in refugees at 3 months were not explored.

Recommendations

This project has great potential to provide a better understanding of the mental screening process for refugees. In order to generalize the findings, the project could include a larger sample size, including mental health referrals data. Based on the finding that suggested stress levels increase over time, peaking at 3 months, a future study could be conducted using survival analysis with a larger sample size to determine the appropriate time to screen refugees for mental health problems.

The literature supports that refugees may face multiple postmigration resettlement stressors such as social isolation, financial problems, and housing issues affecting their mental and emotional health (Eckstein, 2011). Future studies might investigate external factors preceding mental health distress in refugees during resettlement.

In addition, the project provided evidence that there is an increase in the prevalence of mental health distress in refugee participants 65 and older, as compared to younger refugee participants (14-64). In Utah, multiple organizations (as mentioned above in the literature review section concerning older refugees) have innovative programs that are geared towards building a healthier community for senior refugees. Additional projects may be undertaken to create awareness of available resources among older refugees, as well as evaluate the unforeseen barriers that older refugees encounter while seeking resources in the community.

DNP Essentials

The Doctor of Nursing Practice (DNP) Essentials identify eight key competencies that are crucial components of the DNP degree and that are essential to any advanced nursing practice role. This project addresses six of these DNP Essentials. I)The Scientific Underpinnings for Practice, II) Organizational and Systems Leadership for Quality Improvement and System Thinking, III) Clinical Scholarship and Analytical Methods for Evidence-Based Practice, V) Health Care Policy for Advocacy in Health Care, VI) Interprofessional Collaboration for Improving Patient Health Outcomes, and VII) Clinical Prevention and Population Health for Improving the Nation's Health.

This purpose of this project was based on "A Framework for Program Evaluation" to evaluate the mental health status of refugees during their resettlement process and

establish the scientific underpinnings for a mental health screening program (DNP Essential I). DNP Essential II was evident in this project as it evaluated care delivery approaches to address the mental health needs of refugees populations based on statistical findings. The analytic methods were used to conduct a thorough review of the existing literature to identify gaps in evidence for practice and to evaluate quality improvement methodologies to promote efficient, high quality, and patient-centered care as discussed in DNP Essential III. DNP Essential V Health Care Policy was addressed through the involvement of stakeholders at the UDOH via active participation on the Refugee Mental Health Subcommittee to enhance mental health screening and outcomes. DNP Essential VI was accomplished by examining the change in mental health status among refugees during their resettlement period and engaging interprofessional teams (social workers, managers, agents, expert nursing faculty) to create a change in health care accordingly. Lastly, this project was focused on improving the mental health of a vulnerable population by statistical analysis of RHS-15 scores at three time points to further streamline the mental health screening process, meeting the criteria for DNP Essential VII.

Conclusions

This project demonstrated the gradual increase in mental health distress in refugee participants during their resettlement period and suggested that refugees stress level peaks at 3 months, which suggests 3 months is the optimum time to further screen refugees for mental health problems.

This project also demonstrated evidence of greater mental health distress in participants aged 65 and older than in participants aged 14-64, which indicates the need

for close follow-up on mental health screening for older refugees. Ultimately, this project served to provide evidenced-based scientific underpinnings for stakeholders on the UDOH Refugee Mental Health Subcommittee to further improve the mental health-screening program.

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Centers for Disease Control and Prevention (CDC). (2015). Domestic Mental Health Screening Guidelines. Retrieved from http://www.cdc.gov/immigrantrefugeehealth/guidelines/domestic/mental-health-screening-guidelines.html

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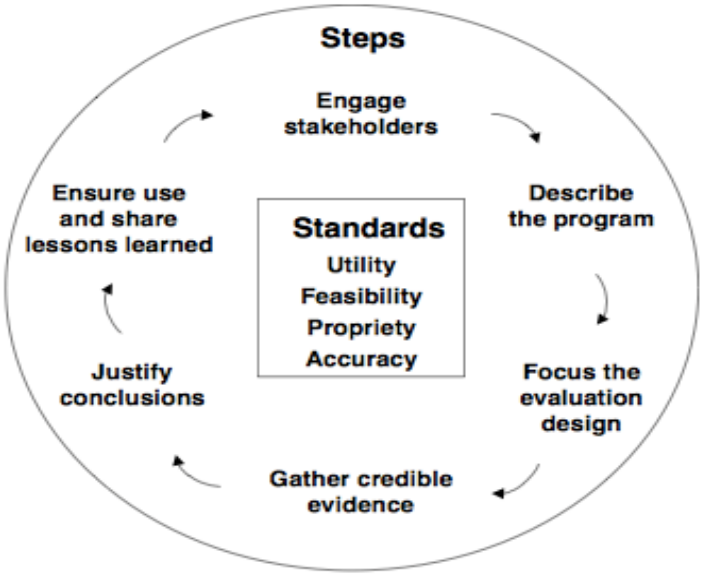
Appendix A

The Framework for program evaluation

Overview of the Framework for Program Evaluation

ELEMENTS OF THE FRAMEWORK



REFERENCE CARD

Steps in Evaluation Practice	Standards for Effective Evaluation
• **Engage stakeholders** Those involved, those affected, primary intended users • **Describe the program** Need, expected effects, activities, resources, stage, context, logic model • **Focus the evaluation design** Purpose, users, uses, questions, methods, agreements • **Gather credible evidence** Indicators, sources, quality, quantity, logistics • **Justify conclusions** Standards, analysis/synthesis, interpretation, judgment, recommendations • **Ensure use and share lessons learned** Design, preparation, feedback, follow-up, dissemination	• **Utility** Serve the information needs of intended users • **Feasibility** Be realistic, prudent, diplomatic, and frugal • **Propriety** Behave legally, ethically, and with due regard for the welfare of those involved and those affected • **Accuracy** Reveal and convey technically accurate information

Appendix B

Implementation and Evaluation Plan

Objective 1: Obtain the de-identified data of newly arrived refugees ≥ 14 years old on RHS-15 questionnaire at 1, 3, and 6 months from the Utah Department of Health (UDOH) using encrypted flash drive.	
Implementation	**Evaluation**
▪ Submit IRB applications ▪ Obtain RHS-15 mental health screening data between October 1, 2014 and September 30, 2015 on refugees aged 14 and older from the UDOH, CCS and IRC ▪ The data will be collected using encrypted flash drive. ▪ Present the proposal on the plan of action of data transfer, storage, and its organization with the UDOH Refugee Mental Health Subcommittee for final approval	▪ De-identified data obtained and store on encrypted flash drive. ▪ Data set is cleaned and organized ▪ Final approval obtained from UDOH Refugee Mental Health Subcommittee ▪ IRB approval or exemption
Objective 2: Examine changes in mental health status of refugees' ≥ 14 years old at 1, 3, and 6 months.	
Implementation	**Evaluation**
▪ The collected data will be imported to SPSS software ▪ Conduct the statistical analysis using repeated measure ANOVA ▪ Determine descriptive statistics mean, standard deviation, and confidence interval at three different intervals	▪ Data imported into SPSS ▪ Variable definitions established ▪ Analysis completed and graphed
Objective 3: **Evaluate the prevalence of mental health referrals varies by age group, gender, ethnic group, and country of origin at three different periods**	
Implementation	**Evaluation**
▪ Import and organize data according to age range, gender, ethnic group, and country of origin in SPSS. ▪ Conduct the statistical analysis using repeated measure ANOVA	▪ Data organized by variables ▪ Analysis completed and graphed
Objective 5: Disseminate the findings	
Implementation	**Evaluation**
▪ Share the findings at UDOH Refugee Mental Health Subcommittee meeting ▪ Submit abstract to Western Institute of Nursing (WIN) and the annual snowbird conference	▪ Results presented to UDOH MH Subcommittee ▪ Abstract submission confirmed at WIN ▪ Results presented to research conference and at a poster session

Appendix C

Utah Department of Health Institutional Review Board Decision

State of Utah
GARY R. HERBERT
Governor
Spencer J. Cox
Lieutenant Governor

Utah Department of Health
W. David Patton, Ph.D.
Executive Director

Division of Family Health and Preparedness
Marc E. Babitz, MD
Division Director

December 15, 2015

Niva Dhakhwa
University of Utah College of Nursing
1340 University Village
Salt Lake City, UT 84108

Re: IRB #436 – Examining changes in mental health status of refugees over the first 6 months of resettlement using the Refugee Health Screener-15 (RHS-15) tool

Dear Ms. Dhakhwa:

Thank you for submitting your project to the UDOH IRB for review.

Based on compliance of your study, IRB approval is given to your project entitled Examining changes in mental health status of refugees over the first 6 months of resettlement using the Refugee Health Screener-15 (RHS-15) tool December 15, 2016.

If you have any additional questions, please contact me at 801-273-6643.

Sincerely,

Iona Thraen
Chair

UTAH DEPARTMENT OF HEALTH
3760 South Highland Drive, Salt Lake City, UT
Mailing address: P.O. Box 142002, Salt Lake City, UT 84114-2002
Telephone (801) 273-6601, Facsimile (801) 273-4150, www.health.utah.gov

Appendix D

University of Utah Institutional Review Board Decision

INSTITUTIONAL REVIEW BOARD
THE UNIVERSITY OF UTAH
75 South 2000 East Salt Lake City, UT 84112 | 801.581.3655 | IRB@utah.edu

IRB: IRB_00087604

PI: Niva Dhakhwa

Title: Examining changes in mental health status of refugees over their first 6 months of resettlement using the Refugee Health Screener -15 (RHS-15) tool

Date: 11/23/2015

Thank you for submitting your request for approval of this study. On 11/23/2015, a designated IRB member has determined that your study is exempt from further IRB review, under **Exemption Category 4**. Note the following delineation of categories:

- Categories 1-6: Federal Exemption Categories defined in 45 CFR 46.101(b)
- Categories 7-11: Non-Federal Exemption Categories defined in University of Utah IRB policy at http://irb.utah.edu/_pdf/IGS - Exempt Research 090113.pdf

You must adhere to all requirements for exemption described in University of Utah IRB policy (http://irb.utah.edu/_pdf/IGS - Exempt Research 090113.pdf). This includes:

- All research involving human subjects must be approved or determined exempt by the IRB before the research is conducted.
- All research activities must be conducted in accordance with the Belmont Report and must adhere to principles of sound research design and ethics.
- Orderly accounting and monitoring of research activities must occur.

Ongoing Submissions for Exempt Projects

- **Continuing Review:** Since this determination is not an approval, the study does not expire or need continuing review. This determination of exemption from continuing IRB review only applies to the research study as submitted to the IRB. You must follow the protocol as proposed in this application
- **Amendment Applications:** Substantive changes to this project require an amendment application to the IRB to secure either approval or a determination of exemption. **Investigators should contact the IRB Office if there are questions about whether an amendment consists of substantive changes.** Substantive changes include, but are not limited to
  - Changes to study personnel (to secure Conflict of Interest review for all personnel on the study)
  - Changes that increase the risk to participants or change the risk:benefit ratio of the study
  - Changes that affect a participant's willingness to participate in the study
  - Changes to study procedures or study components that are not covered by the Exemption Category determined for this study (listed above)
  - Changes to the study sponsor
  - Changes to the targeted participant population
  - Changes to the stamped consent document(s)
- **Report Forms:** Exempt studies must adhere to the University of Utah IRB reporting requirements for unanticipated problems and deviations: http://irb.utah.edu/submit-application/forms/index.php
- **Final Project Reports for Study Closure:** Exempt studies must be closed with the IRB once the research activities are complete: http://irb.utah.edu/submit-application/final-project-reports.php

If you have questions about this, please contact our office at 581-3655 and we will be happy to assist you. Thank you again for submitting your proposal.

Appendix E

RHS-15 screening tool

REFUGEE HEALTH SCREENER-15 (RHS-15)

Pathways to Wellness

Integrating Refugee Health and Well-being

Creating pathways for refugee survivors to heal

ENGLISH VERSION

DEMOGRAPHIC INFORMATION

NAME: _____ DATE OF BIRTH: _____

ADMINSTERED BY: _____ DATE OF SCREEN: _____

DATE OF ARRIVAL: _____ GENDER: _____ HEALTH ID #: _____

Developed by the *Pathways to Wellness* project and generously supported by the Robert Wood Johnson Foundation, The Bill and Melinda Gates Foundation, United Way of King County, The Medina Foundation, Seattle Foundation, and the Boeing Employees Community Fund.

Pathways to Wellness: Integrating Community Health and Well-being is a project of Lutheran Community Services Northwest, Asian Counseling and Referral Services, Public Health Seattle & King County, and Dr. Michael Hollifield. For more information, please contact Beth Farmer at 206-816-3252 or bfarmer@lcsnw.org.

REFUGEE HEALTH SCREENER (RHS-15)

Instructions: Using the scale beside each symptom, please indicate the degree to which the symptom has been bothersome to you over the past month. Place a mark in the appropriate column. If the symptom has not been bothersome to you during the past month, circle "NOT AT ALL."

SYMPTOMS	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1. Muscle, bone, joint pains	0	1	2	3	4
2. Feeling down, sad, or blue most of the time	0	1	2	3	4
3. Too much thinking or too many thoughts	0	1	2	3	4
4. Feeling helpless	0	1	2	3	4
5. Suddenly scared for no reason	0	1	2	3	4
6. Faintness, dizziness, or weakness	0	1	2	3	4
7. Nervousness or shakiness inside	0	1	2	3	4
8. Feeling restless, can't sit still	0	1	2	3	4
9. Crying easily	0	1	2	3	4

The following symptoms may be related to traumatic experiences during war and migration. How much in the past month have you:

10. Had the experience of reliving the trauma; acting or feeling as if it were happening again?	0	1	2	3	4
11. Been having PHYSICAL reactions (for example, break out in a sweat, heart beats fast) when reminded of the trauma?	0	1	2	3	4
12. Felt emotionally numb (for example, feel sad but can't cry, unable to have loving feelings)?	0	1	2	3	4
13. Been jumpier, more easily startled (for example, when someone walks up behind you)?	0	1	2	3	4

REFUGEE HEALTH SCREENER (RHS-15)

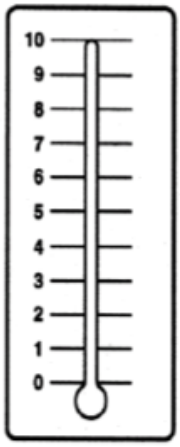
14. Generally over your life, do you feel that you are:

- Able to handle (cope with) anything that comes your way 0
- Able to handle (cope with) most things that come your way 1
- Able to handle (cope with) some things, but not able to cope with other things.....2
- Unable to cope with most things.....3
- Unable to cope with anything 4

15.

Distress Thermometer

FIRST: Please circle the number (0-10) that best describes how much distress you have been experiencing in the past week including today.



Extreme distress

"I feel as bad as I ever have"

"Things are good"

No distress

ADD TOTAL SCORE OF ITEMS 1-14: ___

SCORING

Screening is POSITIVE

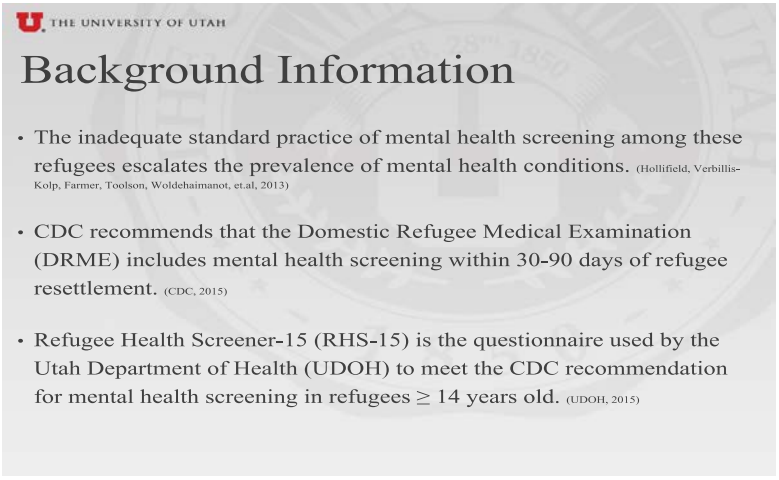
1. **If Items 1-14 is ≥ 12 OR**
2. **Distress Thermometer is ≥ 5**

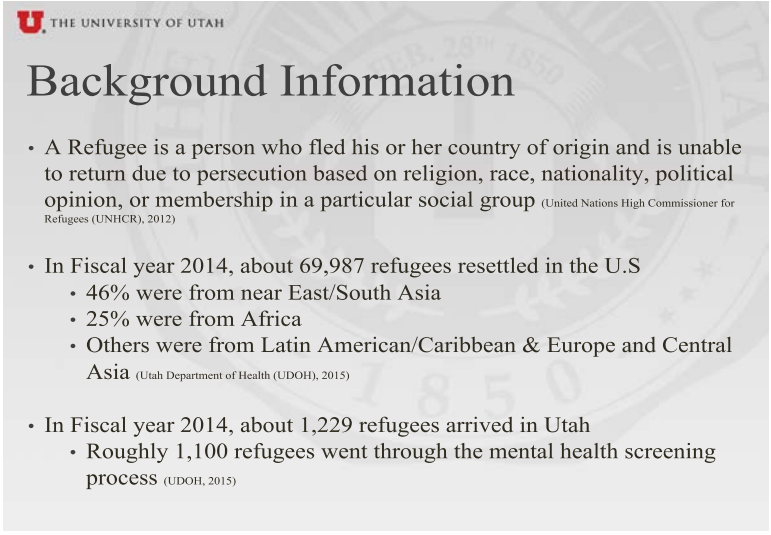
Self administered: ____
Not self administered:____

CIRCLE ONE: **SCREEN NEGATIVE** **SCREEN POSITIVE REFER FOR SERVICES**

Appendix F

Proposal Defense PowerPoint





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Background Information

- Physical and emotional trauma, long-distance journeys, and resettlement may severely test refugees' emotional resilience. (CDC, 2015)
- Profound psychological distress during resettlement in a new country is often present in refugees. (UDOH, 2015)
- Depression, post-traumatic stress disorder (PTSD), and panic attacks are among the most prevalent findings in refugees in their first year of resettlement. (CDC, 2015)

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Problem Statement

- Utah Department of Health (UDOH), and two resettlement agencies, the Catholic Community Service (CCS) and the International Rescue Committee (IRC) conduct screenings using RHS-15 tool at 1, 3, and 6 months interval after refugee resettlement. (UDOH, 2015)
- The necessity and effectiveness of screening refugees ≥ 14 years old at these multiple intervals of 1, 3 and 6 months has not been determined. (UDOH, 2015)
- The purpose of this project is to determine the effectiveness of administering the RHS-15 mental health screening in refugees ≥ 14 years old at 1, 3 and 6 months interval.

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Significance & Policy Implications

- More than ¼ of newly arrived refugees ≥ 14 years old in Utah were reported to suffer from mental health conditions. (Chang, 2015)
- About 39% of refugees ≥ 14 years old were referred for mental health services at 1 month screening. (Chang, 2015)
- Determining the significance of the RHS-15 tool at multiple intervals will help to identify refugees who are in need of mental health services, and establish an evidence based mental health screening guideline in refugees ≥ 14 years old in the Utah

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Objectives

- Obtain data of newly arrived refugees ≥ 14 years old on RHS-15 questionnaire at 1, 3, and 6 months from the UDOH, CCS, and IRC
- Determine the effectiveness of administering the RHS-15 mental health screening in newly arrived refugees ≥ 14 years old at 1, 3, and 6 months
- Evaluate the prevalence of mental health referrals by age group, gender, ethnic group, and country of origin at 1, 3, and 6 months using repeated measure analysis of variance (ANOVA) in Statistical Package for the Social Sciences (SPSS) software
- Disseminate findings to UDOH Refugee Mental Health Subcommittee, and submit project abstract to the Western Institute of Nursing and the annual snowbird conference.

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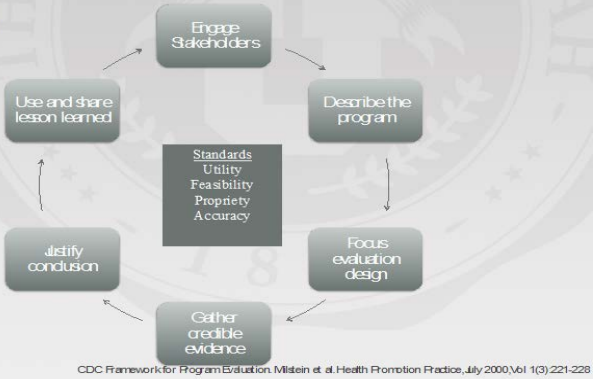
Theoretical Framework

CDC Framework for Program Evaluation



CDC Framework for Program Evaluation. Milstein et al. Health Promotion Practice, July 2000,Vol 1(3):221-228

THE UNIVERSITY OF UTAH

Literature Review

- Resettlement process in the U.S.
  - Preflight, Flight, Resettlement (UDOH, 2015;Bishop et al., 2012; Chang, 2015)
- Mental health disorders in Refugees
  - Post resettlement stressors (Wallis, 2014)
  - Long term poor health (Bishop et al., 2012; Chang, 2015; Murray et al.; 2011; Eckstien, 2011).
- Refugee Mental health screening in U.S
  - Barriers
    - Cost, time, lack of routine access to medical care (Morris et al.,2009)
  - Only Virginia, Washington, Utah are using RHS-15 tool. (Bishop et al., 2012; Chang, 2015; Murray et al.; 2011; Eckstien, 2011).

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Implementation & Evaluation

Objectives	Implementation	Evaluation
1. Data collection	• Obtain RHS-15 mental health screening data between October 1, 2014 and September 30, 2015 • Use encrypted flash drive • Assess for data completeness • Share proposal with UDOH for approval • Submit IRB application	• Met/not met criteria • Meet with UDOH refugee mental health subcommittee • Plan evaluate by UDOH and content expert and project chair • Confirm submission of IRB application by October 31, 2015
2. Determine effectiveness of current mental health screening process	• Import collected data to SPSS • Create variable data definition table • Statistical analysis using repeated measure ANOVA • Measure descriptive mean, standard deviation, frequency of mental health referrals at three different interval.	• Met/not met criteria • Complete data analysis by March 15, 2016 • Share analysis and interpretation results with content expert and chair for accuracy

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Implementation & Evaluation

Objectives	Implementation	Evaluation
3. Evaluate prevalence of mental health referrals according to age, gender, ethnic group, and country of origin at three different intervals	• Organize data accordingly in SPSS • Statistical analysis using repeated measure ANOVA	• Met/not met criteria • Complete data analyses by March 15, 2016 • Share analysis and interpretation result with content expert and project chair for accuracy
4. Disseminate the findings	• Share the findings at UDOH Refugee Mental Health Subcommittee meeting • Submit abstract to Western Institute of Nursing (WIN) and the annual snowbird conference	• Abstract submission confirmed at WIN • Share result with key stakeholders by March 27, 2016 • Submit abstract by March 27, 2016

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Summary

- Utah is one of the leading States to screen mental health conditions in newly arrived refugees ≥ 14 years old at three different intervals
- Effectiveness of administering the RHS-15 mental health screening tool in refugees ≥ 14 years old at 1, 3, and 6 months interval has not been determined
- Statistical analysis and evaluation of implementation of the RHS-15 tool in refugees ≥ 14 years old at multiple intervals will provide evidence to establish continuity of routine screening and referral process

THE UNIVERSITY OF UTAH

Acknowledgments

I would like to express my sincere gratitude and appreciation for the following individuals who have provided numerous hours of advice and support to this project

Committee

Project Chair: Sherri Evershed, DNP, RN, MSPH
Program Director: Julie Balk, DNP, APRN, FNP-BC, CNE
Executive Director of MS and DNP programs Pam Hardin PhD, RN

Content Experts

Amelia Self, MSW
(Utah State Refugee Health Coordinator and Program Manager)
Jia-Wen Guo, PhD, RN
(Assistant Professor, Nursing Informatics, College of Nursing, University of Utah)

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Appendix G
Western Institute of Nursing Conference Poster Acceptance

gistration fee and to cover their own travel expenses.

If, for any reason, you are unable to attend due to last minute matters, you are asked to send a

Appendix H
Public Health Conference Poster Acceptance

Your Poster for the 2016 Utah Public Health Conference

› NIVA DHAK... 3/4/2016

PH Conference [conference@upha.org] Actions

To: NIVA DHAKHWA

Attachments: (2) Download all attachments

Dhakhwa-PosterProfilesSent~1.pdf (105 KB) [Open as Web Page] 2016PosterLogistics.pdf (58 KB) [Open as Web Page]

Inbox Tuesday, March 01, 2016 5:17 PM

- You forwarded this message on 3/4/2016 9:17 PM.

Dear Niva

Your submitted poster **Examining changes in mental health status of refugees over their first 6 months of resettlement using Refugee Health Screener-15 (RHS-15)** has been accepted for the 2016 Utah Conference for Public Health: "Honoring the Past, Celebrating the Future" to be held April 12-13, 2016 at the Salt Lake City Sheraton: 150 West 500 South, Salt Lake City.

The details of your Poster presentation are found on the attached pages and include day and session times. Also attached are the logistics for conference posters you need to follow.

What you need to do next:

1. Review the information attached and then Email Leanne.johnston@hsc.utah.edu to confirm that your information in the attachment is correct, or notify of any edits to be made. This information will be appearing on the conference mobile App.

2. Register and pay the discounted Presenter Registration Fee for one or two days of the Conference. Any co-presenters assisting you with the Poster presentation must also register and pay the same discounted Registration Fee.

To register and pay for the conference, go to the Registration web site at: www.upha.org/conference/pages/registration.htm

Thank you again for submitting your Poster Abstract. We look forward to your contribution to the success of this conference, marking the first 100 years of the Utah Public Health Association!

Best Regards,

2016 Conference Agenda & Presenters Committee
Leanne Johnston, Chair ~ 801-585-9971
Linda Bogdanow, Jim Bond, Paul Wightman, Dean Penovich

:

Poster Session Details

As of: 3/1/2016

2016 Utah Public Health Conference and UPHA's 100 Year Anniversary Gala
April 11-13 ~ Sheraton Hotel ~ Salt Lake City

Presenter & Poster Details

Presenter Full Name and Degrees: Niva Dhakhwa

Presenter# 1057

Organization: University of Utah

Poster #: 401.10

Date: April 12

Times: 11:00 AM 11:30 AM 1:30 PM 2:00 PM

Poster Title: Examining changes in mental health status of refugees over their first 6 months of resettlement using Refugee Health Screener-15 (RHS-15)

Poster Details

Short Description:

Every year about 69,987 refugees resettle in the United States and about 1200 refugees arrive in Utah. During the resettlement period, refugees face various challenges like language, cultural barriers, and adapting to new environment that result into increased psychological distress. More than ¼ of newly arrived refugees in Utah reported to suffer from mental health conditions. However, the changes in mental health status among these refugees over the first 6 months of resettlement have not been determined.
Currently, Utah Department of Health (UDOH) utilizes Refugee Health Screener -15 (RHS-15) tool to screen mental health status in refugees 14 years and older at 1, 3 and 6 months interval. Over the past three years, UDOH has partnered with Catholic Community Services (CCS) and International Rescue Committee (IRC) to screen refugee 14 years and older at three intervals to discover more refugees in need of mental health services. Thus, the purpose of this project is to examining the changes in the mental health status of refugees over their first 6 months of resettlement and the usefulness of subsequent mental health screenings.
The project plans on using Statistical Package for the Social Sciences (SPSS) software and one way repeated measures analysis of variables (ANOVA) to compare RHS-15 scores of refugees at three different periods. Examining the changes in mental health status among these refugees population overtime will help to determine the need of routine mental health screening during their resettlement period and establish evidence based underpinnings for continued use.

Presenter Details

Resume or Biographical Sketch:

I am Niva Dhakhwa currently enrolled in Doctor of Nursing Practice program with emphasis of Primary Care Nurse Family Nurse Practitioner at University of Utah.

Appendix I

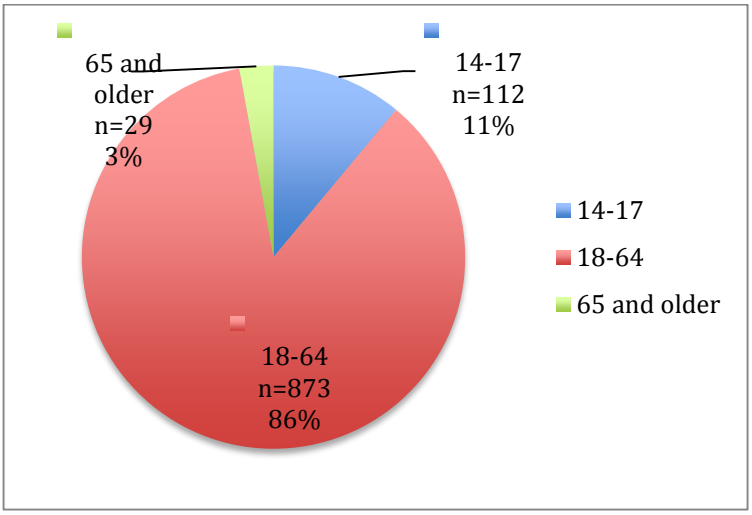

Figure 1. Age group of Refugees at arrival

Appendix J

Descriptive statistics of RHS-15 scores

Table 1. Descriptive statistics

		Raw Data			Log10		
		M	*SD*	Skewness Coefficient	*M*	*SD*	Skewness Coefficient
RHS-15 Part I	1month	9.19	11.09	21.44	0.78	0.46	0.50
RHS-15 Part I	3month	12.26	13.24	13.32	0.89	0.49	-1.85
RHS-15 Part I	6month	13.03	13.83	10.56	0.91	0.49	-1.94
RHS-15 Part II	1month	2.14	2.79	14.38	0.34	0.36	5.32
RHS-15 Part II	3month	2.62	3.15	10.10	0.39	0.39	3.03
RHS-15 Part II	6month	2.99	3.27	6.30	0.44	0.39	1.02

*N=1,014

Note:

RHS-15 Part I denotes scores on item 1 to 14 on RHS-15 tool

RHS-15 Part II denotes scores on item 15 on RHS-15 tool

Statistical Detail:

The frequency of distribution of RHS-15 scores on total refugee participants (N=1,014) was positively skewed. Therefore, log10 transformation was used to transform data.

Appendix K

Table 2. Comparison of RHS-15 scores at three time point (1, 3 and 6 months) n= 197

Variable	1month		3 month		6 months		Repeated Measure ANOVA				Paired t-test		
	M	*SD*	*M*	*SD*	*M*	*SD*	*F (df)*	*p*	Partial η^2	Power	*p* 1 vs. 3 month	*p* 1vs. 6 month	*p* 3vs. 6month
RHS-15 Part I	10.80	12.65	**13.19**	13.89	12.73	14.04	6.12,1.93	**.003**	.030	**0.88**	**.003**	.186	.283
RHS-15 Part II	2.50	3.10	2.81	3.18	3.01	3.31	3.19,1.75	**.049**	.016	0.57	.285	.092	.069

Notes:
RHS-15 Part I denote scores on item 1 to 14 on RHS-15 tool
RHS-15Part II denotes scores on item 15 on RHS-15 tool and also called (distress thermometer)
The outcome was based on Log10 transformation of Repeated Measure ANOVA and Paired t-test

Statistical Detail on Repeated Measure ANOVA:

RHS-15 Part I: Mauchly's Test of sphericity for log 10 RHS-15 Part I indicates that the assumption of sphericity had been violated ($\chi^2 = 8.971$, and $p = .011$). When sphericity is violated either Greenhouse-Geisser or Huynd Feldt correction is used to correct *F* (Munro, 2005). Huynd Feldt correction was used as epsilon (ε) was >.75. Thus, result for RHS 15 Part I scores obtained was *F* (1.932, 378.745) = 6.12, $p = .003$, partial $\eta^2 = .030$, power= .88 (see Table 3). This result shows that scores on RHS-15 Part I were significantly different at three different times ($p < .05$) and effect size (partial $\eta^2 = .030$) had small to moderate effect size. But, the power is high (power = .88).

RHS-15 Part II: Mauchly's test of sphericity for scores on RHS-15 Part II indicates that the assumption of sphericity had been violated ($\chi^2 = 31.82$, and $p = .001$). When sphericity is violated either Greenhouse-Geisser or Huynd Feldt correction is used to correct *F* (Munro, 2005). Huynd Feldt correction was used as epsilon (ε) was >.75. Thus, RHS 15 Part II scores was *F* (1.75, 343.49) = 3.19, and $p = .049$, partial $\eta^2 = .016$, Power = .57 (see Table 2). This result shows that mean scores on log10 RHS 15 Part II were significantly different at three times ($p < .05$) and e (partial $\eta^2 = .016$) had small effect size. Also, power is not high (power =. 57), Further post-hoc test is performed using the paired t-test was used to determine the time where the differences occurred.

Appendix L

Table 3. Nonparametric comparison of RHS-15 scores at three time point (1, 3 and 6 months) n= 197

		Friedman's Test					Wilcoxon Signed Rank Test		
		Mean Rank							
Variables	n	1 month	3 month	6 month	χ^2	*p*	*p* 1 vs. 3 month	*p* 1vs. 6 month	*p* 3 vs. 6month
RHS-15 Part I	197	1.84	2.11	2.06	9.09	.011	**.003**	.062	.070
RHS-15 Part II	197	1.86	2.03	2.11	8.661	.013	.085	**.022**	.245

Notes:
RHS-15 Part I denote scores on item 1 to 14 on RHS-15 tool
RHS-15Part II denotes scores on item 15 on RHS-15 tool and also called (distress thermometer)
The outcome was based on Log10 transformation of Nonparametric Friedman's Test and Wilcoxon Signed Rank Test

Statistical Details:
Nonparametric Friedman's two-way analysis of variance and Wilcoxon Signed Rank Test was calculated since the data transformation still showed slight positive skewedness. The Friedman's test summarizes data for mean rank at 1, 3, and, 6 months period on log10-transformed RHS-15 scores. The mean rank scores on RHS-15 Part I were 1.84, 2.11 and 2.06 for 1, 3, and 6 months respectively and the result showed significant difference among the distributions of RHS-15 Part I scores at three different times (based on Friedman's test, χ^2 =9.09, p= .011) (see Table 3). Similarly, the mean rank scores on log 10 RHS-15 Part II were 1.86, 2.03, and 2.11 for 1, 3, and 6 months, respectively and there was significant difference among the distributions of RHS-15 Part II scores at three different times (based on Friedman's test, χ^2 =8.66, p= .013) (see Table 3). The level of significance of log 10 RHS-15 Part II on repeated measure ANOVA is p > .05, whereas on non-parametric Friedman's test is p <. 05. Therefore, Wilcoxon signed rank test correction was conducted to test the pairwise comparisons between RHS-15 scores at three different time points.

Appendix M

Table 4. Comparison of RHS-15 scores in refugees between Age 14-64 and Age ≥ 65 (N=1014)

								Parametric Test			Non Parametric Test
		Age 14-64			Age ≥ 65			Independent Sample t-test			Mann Whitney U Test
Variable	Time	n	*M*	*SD*	n	*M*	*SD*	*t*	*df*	*p*	*p*
RHS-15 Part I	1month	756	9.03	10.97	24	14.42	13.53	-2.69	778	**.007**	**.008**
	3months	597	12.02	13.13	15	**21.6**	13.33	-2.52	610	**.012**	**.008**
	6months	397	12.86	13.78	10	19.70	15.00	-1.61	405	.109	.108
RHS-15 Part II	1month	756	2.12	2.78	24	2.54	3.12	-0.51	778	.608	.648
	3months	597	2.58	3.14	15	4.07	3.47	-1.60	610	.110	.112
	6months	397	2.96	3.25	10	4.40	3.81	-1.17	405	.242	.252

RHS-15 Part I denotes scores on item 1 to 14 on RHS-15 tool
RHS-15 Part II denotes scores on item 15 on RHS-15 tool and also called (distress thermometer)
The outcome was based on Log10 transformation of Independent sample t-test and Mann-Whitney U Test

Statistical Details: The 1,014 study participants who had completed at least one RHS-15 mental health screening were included in the independent sample t- test The Levene's test for equality of variance is a test of equality of variance assumption (Munro, 2005). Levene's test for equality of a variance for both age groups was not significant ($p > .05$), indicating that the variances are equal. The significant difference in mean scores of RHS-15 Part I between refugees' aged 14-64 and refugees' 65 and older at 1 month t (778)= -2.69, p= 0.007; and 3 month t (610) = -2.52, p= .012 (see Table 4). Whereas, the mean RHS-15 Part I scores between these two groups at 3 months was not significantly different t (405)= -1.61, p= .109
Since the data was positively skewed, the Mann-Whitney test was conducted, which indicates that the RHS-15 Part I scores were significantly higher in refugees 65 and older than refugees aged 14-64, at 1 and 3 months U= 11927, p= .008 and U= 6265, p= .008 (see Table 4)