# Community Wellness Program

LOCAL EVALATION REPORT

**Prepared by:**

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# EXECUTIVE SUMMARY

**Background.** In human developmental terms, Cambodian immigrants and refugees are among the most traumatized populations in the U.S. During the Pol Pot regime that took place from 1975 to 1979, Cambodians lived through concentration camp-like conditions that included forced labor, starvation, and torture. Although decades have passed since the war and genocide in Cambodia, a study by RAND found "shockingly high" rates of post-traumatic stress disorder (PTSD) among Cambodians in Long Beach; 62% met the DSM-IV diagnosis criteria for PTSD and 51% met diagnostic criteria for major depression (Marshall et al., 2005). When left unaddressed, experiences of extreme trauma can result in patterns of emotional distress, poor sleep, unhealthy diet, physical inactivity, and other health-compromising behaviors, which if left unaddressed, result in chronic illnesses.

Despite high rates of mental illness and other chronic conditions, health care utilization among Cambodians remain low. Cambodians face many barriers accessing health and social services. Limited English proficiency is by far the most significant barrier to care, followed by low health literacy, lack of transportation, and the inability to navigate the U.S. health care system. By and large, Cambodians remain disconnected from government sponsored and mainstream service programs. The lack of culturally- and linguistically-appropriate services is significant barrier to care among Cambodian immigrants and refugees, and to their ability to maintain good health. Mainstream providers do not understand Cambodian cultural traditions and health beliefs, and are unable to communicate with their monolingual Khmer-speaking patients. As a result, Cambodians remain severely underserved, despite suffering many chronic physical and mental health conditions.

**Community Wellness Program.** Funded by the California Department of Public Health Office of Health Equity, the California Reducing Disparities Project (CRDP) aims to reduce mental health disparities by supporting the development of *community-defined evidence-based practices (CDEPs)* to demonstrate the importance of culturally- and linguistically-responsive programs and approaches. One of 35 CDEPs, the Community Wellness Program (CWP) aims to reduce mental health disparities among Cambodians in the greater Long Beach and Santa Ana area. It is implemented by five Cambodian-serving organizations: Cambodian Association of America (CAA-Lead Agency), Families in Good Health (FiGH), Khmer Parent Association (KPA), The Cambodian Family (TCF), and United Cambodian Community (UCC). The CWP consisted of four components: 1) Outreach & Education, 2) Educational Workshops, 3) Strength-based Case Management, and 4) Social & Spiritual Activities. Program activities were delivered by bilingual and bicultural Community Health Workers (CHWs). To be eligible to enroll in the CWP, individuals must: 1) self-identify as Cambodian, 2) be 18 years and over, 3) live in the greater Long Beach and Santa Ana areas, and 4) be able to commit to the program for six months. Efforts were made to serve extremely low, very low, or low-moderate income persons.

CAA and its partners aimed to break the cycle of poor physical and mental health, and negative social outcomes by providing greater opportunities to empower Cambodian immigrants and refugees to take ownership of their well-being. To that end, the CWP was designed to contribute to changes in five areas: 1) knowledge, attitudes, and beliefs about mental health; 2) social connectedness; 3) health-promoting behaviors; 4) healthcare access and utilization; and 5) overall mental health.

**Evaluation Design.** Local evaluation of the CWP was performed by the Center for Health Equity Research (CHER) at California State University, Long Beach. A mixed methods approach was used to assess the effectiveness of the CWP in promoting mental health and alleviating symptoms of existing mental illness among Cambodians in Long Beach and Santa Ana. The local evaluation followed a nonequivalent delayed control group design and included assessments at baseline, 3, 6 and 9 months. The evaluation also included focus groups to further examine the CWP's contribution to improvements in health and well-being among program participants.

**Methods.** We employed convenience sampling techniques, such that all CWP participants were invited to participate in the evaluation. To be eligible, participants must: 1) self-identify as Cambodian, 2) be over 18 years of age, and 3) able to commit to the program for 6 months. Baseline and follow-up surveys were administered by trusted bilingual and bicultural Community Health Workers using paper and online surveys. Surveys were available in English and Khmer and took approximately 60-90 minutes to complete. Focus groups were facilitated by a member of the CHER evaluation team and were held in person and online via Zoom. Khmer interpretation was provided by partner agency staff not affiliated with the CWP to allow participants to openly share about their experience in the program.

Data Analysis. SPSS Version 25 was used to performed univariate analyses on the outcome variables to examine frequency distribution. We then performed paired t-tests to examine mean change scores at Time 1 (no treatment) and Time 2 (treatment) to determine change in each of the outcome variables. Since the purpose of the focus groups was to learn about participants' experience in the CWP and to ask for suggestions for how the program can better serve the Cambodian community, we did not employ a rigorous data analysis plan. Instead, focus group recordings were transcribed and synthesized by members of the CHER evaluation team, who grouped responses into key themes that aligned with CWP goals to further support our quantitative findings.

**Results.** A total of 386 individuals enrolled in the CWP across four cohorts. A large majority of CWP participants were female (69%) and were 50 years of age or older (75%). Almost 95% of participants were born outside the U.S. and more than one-third have spent time in a refugee camp. Among those who were foreign born, the average length of time in the U.S. is 20 years. Forty-five percent (45%) of participants were married or living with a partner. Two-thirds of participants reported having less than a high school education and 8.3% were employed at

baseline assessment. Eighty-three percent (83%) of participants did not speak English very well or at all.

At 6-month follow-up, 100% of program participants were able to identify at least two potential strategies for improving their mental health (goal 70%), 67.2% of participants reported feeling less alone (goal 60%), 100% of participants with moderate to severe mental illness symptoms at baseline were linked to a mental health provider (goal 100%) and of those, 83% were seen by a provider (goal 75%), 59.4% of participants reported a reduction of trauma symptoms (goal 50%), and 70.1% of participants with depression-related symptoms reported a reduction of symptoms (goal 50%). While the CWP collaborative failed to meet the other goals for all participants combined, it is important to note that significant between-cohort differences were observed. For example, 86.7% of individuals in Cohort 4 reported increased positive self-perception, far exceeding the goal of 60% by 26.7 percentage points, even though the goal was not met when all participants were included in the analysis.

Paired t-tests Analysis. Results from the paired t-tests revealed that CWP participants reported statistically significant changes between Time 1 and Time 2 for seven of the thirteen outcomes included in the analysis. The mean number of endorsed mental health stigma beliefs significantly decreased between Time 1 and Time 2 . We also observed a statistically significant decrease in mean change score for the outcome variable social isolation and trauma symptoms, and a statistically significant increase in mean change score for the outcome variable social connectedness and perceived physical health. We also observed a statistically significant increase in the mean change score for overall mental health. One outcome variable resulted in changes in the opposite direction of what was expected. A statistically significant increase between Time 1 and Time 2 was observed for Soda and fast food intake.

Focus Groups. Focus group findings revealed many positive impacts of how CWP has influenced participants' knowledge, attitude and beliefs surrounding mental health and mental illness, and how the resources made available to them have helped to improve their mental and physical health. Since joining the program, participants shared how the program has contributed to a new understanding about mental health and mental illness and has inspired participants to help others who are suffering with mental illness. CWP has helped to contribute to positive changes in participants' mental health as a result of the social support and therapeutic activities that were made available to them, and to participants' physical health through the emphasis on self-care, which has resulted in diet and exercise changes among focus group participants. When asked what they liked most about the program, participants shared that they enjoyed engaging in the activities and field trips the most, while transitioning to an online format in response to the COVID-19 pandemic was what they liked the least. Despite overcoming challenges with program delivery during the COVID-19 pandemic, participants expressed gratitude and appreciation for how CWP has improved access to resources within the community and are thankful that they now know where to get help when they need it. However, participants shared that language barriers have created roadblocks for being able to obtain the care that

they need and recommended that CWP includes linkage Khmer-speaking health professionals to make the process of seeking care less stressful and taxing on their mental health. Additionally, participants would love to see CWP add more activities for older adults and to increase the length of field trips. Although challenges still persist for some participants, they all expressed gratitude and appreciation for how CWP has helped improve their quality of life and for CWP being an invaluable resource for the Cambodian community.

**Discussion.** Results from our evaluation showed that participation in the CWP contributed to decreased mental health stigma, social isolation, and trauma symptoms, and increased social connectedness. We also observed significant improvements in perceived physical health and overall mental health. While statistically significant changes in diet were observed, the changes were in the opposite direction, such that participants reported increased consumption of soda and fast food at Time 2. We attribute this to the ongoing COVID-19 pandemic, as participants in the last two cohorts were enrolled in the program during the height of the pandemic and when hate crimes against Asians were rampant. The increase in fast food consumption may also be attributed to convenience and the belief that ordering from a drive thru is a safer alternative to visiting the grocery store or walking into a restaurant that serves healthier options. Our inability to see an improvement in depression-related symptoms may also be related to the pandemic, as the measures used to assess this outcome variable asked participants about feelings of nervousness, hopelessness, and restlessness, among other symptoms. Symptoms that existed at baseline and that could have been improved with program services, were instead sustained because of the ongoing and changing nature of pandemic.

**Conclusion.** The CWP is the first project to be implemented by five Cambodian-serving organizations that came together with the shared value of promoting physical and mental wellness by providing refugee and immigrant families with culturally-relevant and trauma-informed services. The CWP is a the first project of its kind to examine the effects of community-defined practices on mental health among an underserved and under resourced community. Using a rigorous evaluation design, we found that culturally-relevant information and services provided by trusted program staff led to statistically significant improvements in mental health stigma, social connectedness, social isolation, trauma symptoms, and physical and mental health. Findings from the focus groups revealed that these changes have the potential to extend beyond the individual, as participants share what they learned with their family and friends. The CWP fills a gap in service for the Cambodian community and as such, the CWP collaborative is currently working hard to disseminate findings from the local evaluation with key decision makers in order to generate additional support for sustainability of the program so other community members can continue to benefit from the program.

# INTRODUCTION

Asian Americans are often referred to as a “model minority” due to some segments of the population enjoying educational and financial success. However, amongst this “model minority” are subsets—including the Cambodian population—that experience significant physical health, mental health, socioeconomic, and educational disparities. In human developmental terms, Cambodian immigrants and refugees are among the most traumatized populations in the U.S. During the Pol Pot regime that took place from 1975 to 1979, Cambodians lived through concentration camp-like conditions that included forced labor, starvation, and torture. Over 1.5 million Cambodians died during what came to be known as the Khmer Rouge or the Cambodian genocide. After escaping the atrocities of the “killing fields”, Cambodian refugees experienced further trauma in refugee camps and upon arrival in the U.S., where many resettled in poor, high-crime neighborhoods. Many were uneducated farmers, illiterate even in their native language and with no marketable skills and significant mental health problems. Although decades have passed since the war and genocide in Cambodia, a study by RAND found "shockingly high" rates of post-traumatic stress disorder (PTSD) among Cambodians in Long Beach; 62% met the DSM-IV diagnosis criteria for PTSD and 51% met diagnostic criteria for major depression (Marshall et al., 2005).

Experiences of extreme trauma can result in patterns of emotional distress, poor sleep, unhealthy diet, physical inactivity, and other health-compromising behaviors, which if left unaddressed, result in chronic illnesses. A study found that Cambodians who had been diagnosed with both depression and PTSD reported a consistent number of health conditions across the age span, while those who had no mental health conditions or only one of the two reported fewer health conditions when they were younger and more when they were older (Berthold et al., 2014). Another study found that Cambodians reported poorer health when compared to the general population, and that this disparity was only slightly reduced when the same comparison was made to other subgroups of Asian immigrants who were matched on key demographic characteristics (Wong et al. 2011). Cambodian refugees were less likely than their counterparts in the general U.S. population to have blood pressure and total cholesterol within recommended levels (Marshall et al., 2016). Cambodian-serving community-based organizations share the risk factors for poor health among the community they serve. These factors include, but are not limited to, acculturative stress, child maltreatment, financial hardship, family history of depression, inadequate parenting skills, bullying and unfair treatment at school, lack of academic support, low academic achievement, neighborhood crime and violence, poor social support, substance abuse, suicidal thoughts, and the significant stigma around mental illness that prevents Cambodians from seeking assistance.

Despite high rates of mental illness and other chronic conditions, health care utilization among Cambodians remain low. Cambodians face many barriers accessing health and social services. Limited English proficiency is by far the most significant barrier to care, followed by low health

literacy, lack of transportation, and the inability to navigate the U.S. health care system. Few culturally- and linguistically-competent providers exist due in large part to the loss of health care professionals during the Khmer Rouge. In spite of the multitude of risk factors, there exists limited linguistically- and culturally-competent health and mental health services. By and large, Cambodians remain disconnected from government sponsored and mainstream service programs. The lack of culturally- and linguistically-appropriate services is significant barrier to care among Cambodian immigrants and refugees, and to their ability to maintain good health. Mainstream providers do not understand Cambodian cultural traditions and health beliefs, and are unable to communicate with their monolingual Khmer-speaking patients. While health care providers that accept public health insurance (e.g., Medi-Cal, Medicare) have a legal responsibility to provide medical interpretation, many small practices do not have these services available. As a result, Cambodians remain severely underserved.

Community-based programs that include culturally-relevant approaches have been found to be successful in improving physical and mental health among immigrant and refugee communities. The **Cambodian Community Health Program** was a multilevel intervention that focused on improving the mental and physical health of Cambodian refugees and immigrants in Massachusetts through the collaboration of trusted community-based organizations and community leaders using a "whole community" model. Results showed that program participants reported improvements in blood pressure, blood glucose, dietary habits, and medication compliance. The **Psycho-Social-Cultural Treatment Group Program (PSCTG)** included spirituality by combining Cambodian cultural traditions and Buddhism philosophy with standard Western mental health techniques, all through the collaboration of community leaders and community-based agencies. At the conclusion of the PSCTG program, significant improvements in PTSD-related symptoms were observed among participants**. Sức Khoẻ Tâm Thần** (mental health) aimed to decrease mental health stigma and promote mental health awareness within the Vietnamese community in Texas by utilizing local Vietnamese media. In-language information was delivered by trusted community leaders during monthly radio talk shows and weekly television talk shows. Preliminary data demonstrated increased willingness of community residents to seek help, which was attributed to increased awareness and decreased mental health stigma. Findings from programs described above highlight the need for more interventions that incorporate community-defined approaches to improve the health and well-being of communities that have historically been marginalized from mainstream services.

## CALIFORNIA REDUCING DISPARITIES PROJECT (CRDP)

Purpose. Funded by the California Department of Public Health Office of Health Equity, the California Reducing Disparities Project (CRDP) aims to reduce mental health disparities by supporting the development of *community-defined evidence-based practices (CDEPs)* to demonstrate the importance of culturally- and linguistically-responsive programs and

approaches. The first phase of the CRDP focused on developing population specific knowledge about mental health challenges and community-defined solutions for each of the five priority populations (African American/Black, Asian Pacific Islander, Latino, LGBTQ, and Native American). The Asian Pacific Islander Population Strategic Planning Workgroup called for a program design that is specific to "prevention and early intervention" and that focuses on identifying and addressing the community-defined needs in a targeted API community, as voiced by community members, leaders, and stakeholders. The second phase of the CRDP is intended to develop the capacity of community-based organizations to reduce mental health disparities using CDEPs. Aligned with the five priority populations identified in Phase I, seven grantee organizations known as *Implementation Pilot Projects (IPPs)* within each priority population received funding to implement CDEPs that were designed with community input. A total of 35 IPPs were directly supported by a local evaluation team and priority population-specific technical assistance provider. CRDP-wide evaluation was conducted by a Statewide Evaluation team (SWE) led by Dr. Cheryl Grills at the Psychology Applied Research Center (PARC), a part of Loyola Marymount University.

The purpose of CDEP is to use culturally-relevant programs and strategies to address the outcomes for underserved populations set forth by the Mental Health Services Act (MHSA). Listed below are **MHSA Direct Programs and MHSA Indirect Programs/Strategies.**

**MHSA Direct Programs**

1. *Prevention* to reduce MHSA negative outcomes among people with greater than average risk of mental illness
2. *Intervention* to reduce MHSA negative outcomes among people with early onset of mental illness

**MHSA Indirect Programs/Strategies**

1. Timely access to services for underserved populations to improve access among people from underserved populations with risk, early onset, or experience of mental illness
2. Access and linkage to treatment to improve access and reduce duration of untreated mental illness among people with a serious mental illness
3. Outreach to increase recognition of early signs of mental illness to engage people who can identify signs and symptoms to help people with risk or early onset of mental illness
4. Stigma and discrimination reduction to produce changes in attitudes, knowledge, or behaviors to help people with risk, early onset, or experience of mental illness
5. Suicide prevention to produce changes in attitudes, knowledge, or behavior to help people with risk of suicide as a consequence of mental illness

Community Wellness Program (CWP). The Community Wellness Program (CWP) was developed in response to the call-to-action by the Asian Pacific Islander Population Strategic Planning Workgroup. It sought to fill a gap in service delivery for Cambodian immigrants and refugees, a community that has few culturally-appropriate mental health services, despite

having long experienced mental health disparities from past and present circumstances. The CWP was developed with input from key stakeholders within the Cambodian community, including community-based organizations that have been serving the Cambodians for more than 40 years. The program follows a strength-based model (e.g., increase life management skills and ability to cope and make healthy decisions, improve communication between family members, etc.) that empowers participants and the larger community through shared knowledge. Program content is based on the Theory of Planned Behavior and the Social Cognitive Theory, and uplifts values that are relevant to the Cambodian culture. The program design focuses on addressing culture- and population-specific issues for Cambodians, as identified by key stakeholders, and integrates key cultural elements, such as traditional food, oral history, and spiritual healers. What sets the CWP apart is its sensitivity to cultural/historical issues that are specific to Cambodian immigrants and refugees. They include immigration status, acculturative stress, discrimination, historical trauma, and cultural identity.

Due to the stigma against mental disorders within the Cambodian culture, the CWP does not focus on mental health, but rather on social, physical and emotional wellness. Figure 1 presents the CWP model. The project team took this approach for two reasons. One, focusing on mental health only may be a barrier to recruitment, as individuals may not want to enroll because they do not want to be viewed as having a mental disorder. Two, the program team views mental health as being associated with social, physical, and emotional wellness, such that poor social isolation, poor physical health, and/or emotional distress can affect one's mental health status. Therefore, activities within the CWP were designed using a holistic approach and aim to improve all three areas of wellness.

To be eligible to enroll in the CWP, individuals must: 1) self-identify as Cambodian, 2) be 18 years and over, 3) live in the greater Long Beach and Santa Ana areas, and 4) be able to commit to the program for six months. Additionally, efforts were made to serve extremely low, very low, or low-moderate income persons. Individuals were recruited through outreach and engagement at various community settings, and through referrals by staff during a visit to the partner agency office. Once enrolled, program participants were free to take part in activities at any of the four participating partner agencies: Cambodia Association of America (lead agency), The Cambodian Family (TCF), Families in Good Health (FiGH), and United Cambodian Community (UCC). Participants engaged in the CWP for a period of **six months**, during which they received

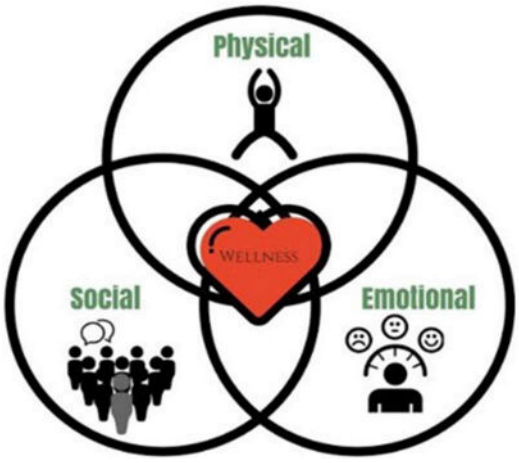


Figure 1. Community Wellness Program Model

strength-based case management, attended educational workshops, and participated in social and spiritual activities (described in more detailed below). Based on the partners' collective experiences, it was estimated that six months is sufficient to establish the changes in knowledge, attitudes, beliefs, self-efficacy and behaviors to reduce disparities and improve mental health. This process was aided by bilingual and bicultural Community Health Workers (CHWs), a program component that was adapted from the Substance Abuse Mental Health Services Administration evidenced-based Community Health Worker Model. CHWs at each agency were responsible for outreach and engagement, enrollment activities, service delivery, and data collection.

Program Components. The CWP included four components: 1) Outreach and Engagement, 2) Educational Workshops, 3) Strength-based Case Management, and 4) Social and Spiritual Activities. Each of these components is described in more detail below:

Community Outreach & Engagement: Constructs from the Theory of Planned Behavior were used to conceptualize the community outreach and engagement component of the program, whereby activities were designed to transform normative beliefs about mental illness in order to reduce stigma. CAA and its collaborative partners made sure that outreach activities and messages about mental health were linguistically- and culturally-appropriate for Cambodian adults. CHWs conducted outreach activities at churches, temples, community centers, and businesses, such as restaurants, grocery stores, and other Cambodian-serving establishments. CHWs also presented on the CWP at meetings/forums with Cambodian attendees, such as the Cambodian Community Forum and the annual Mother/Daughter Conference. During outreach activities, CHWs engaged individuals in a conversation about the importance of mental wellness and provided a description of CWP activities using print material as a visual aid. Individuals who were interested in enrolling in the program shared their contact information (e.g., name, telephone number, and email) with CHWs and were contacted no more than three days after the initial meeting. CHWs also utilized social media (Facebook) for outreach and engagement, which enabled the team to reach an even greater number of individuals. Social media was particularly useful during the height of COVID-19 pandemic, both for outreach & engagement and for service delivery.

Educational Workshops: CAA and collaborative partners conducted mental health educational workshops to increase knowledge and awareness of mental wellness and to reduce stigma against mental illness. Using constructs from the Social Cognitive Theory and Theory of Planned Behavior, workshops were designed to increase participants' self-efficacy for taking steps to manage stress and improve mental health and increase their perceived control of engaging in mental health-promoting behavior. For example, opportunities were provided for participants to build social support networks, share their stories and experiences in dealing with mental illness and other life issues. Such systems of support reduced isolation, feelings of hopelessness and helplessness and increase mental well-being. Each partner agency conducted a series of six

workshops, plus refresher courses. The CWP collaborative dedicated one full day to adapt an existing workshop curriculum to make it more culturally appropriate. For example, existing images were changed to ones that were more relatable to the Cambodian community (e.g., use of Asian vegetables) and content-heavy presentations were divided into two workshops to allow more time for Q&A. The final workshop curriculum topics included: 1) Nutrition Management, 2) Signs & Symptoms of Mental Illness Part 1, 3) Signs & Symptoms of Mental Illness Part 2, 4) Improving Interpersonal Skills, 5) Risk factors for Mental Illness, and 6) Identifying Stressors. The CWP collaborative recognized the importance of providing a safe environment and increasing ease of access to help to mitigate the transportation and stigma barriers that impede access to mental health services for the Cambodian population. As such, workshops and refresher courses were held at agency offices and included activities and break time. Each workshop was delivered by CHWs and was approximately two hours long.

Strength-based Case Management: Upon enrollment, CHWs worked with participants to complete a Wellness Plan that helped to identify needs for mental health services. During this time, CHWs also help participants to set manageable goals for physical and mental wellness. If needed, a referral or linkage was provided to appropriate health and mental health providers, including, but not limited to, in-house programs, Los Angeles County Department of Mental Health Clinics, Pacific Asian Counseling Services, and St. Mary's Medical Center for low- or no-cost health care services. The case management/navigation component of the program followed the Theory of Planned Behavior and the Strength-based Case Management (SBCM) approach to engage clients and establish trusting relationships to assist clients in shifting individual attitudes and beliefs about mental illness, thereby promoting care-seeking behavior. The SBCM approach is based on six principles: 1) people have the capacity to learn, grow and change; 2) the program focus is on strengths rather than deficits; 3) the client is the director of the helping relationship; 4) the helping relationship is primary and essential; 5) the preferred setting is the community; and 6) the community is an oasis of resources. Case management within the CWP is centered on the trusting relationship between CHWs and participants, which is needed to guide individuals in making positive changes in their lives by building on assets rather than deficits. At minimum, CHWs provided six sessions per participant. These sessions include more focused case management that range from 30 to 60 minutes in length, or brief check-in telephone calls, which also serve to remind participants about upcoming activities. Both types of sessions allow CHWs to identify additional needs and the resources in the community to address them.

Social and Spiritual Activities: The CWP collaborative implemented several mental health prevention and early intervention approaches that recognize the importance of social connection and spirituality for mental wellness. These activities reflect the collectivistic nature of the Cambodian culture by providing opportunities for group therapy. Activities under this component include:

A) Spirituality Wellness/Therapy Meditation/Buddhist Blessing Ritual/Ceremony

CAA and its partner agencies recognize the importance and power of Cambodian beliefs in achieving physical and mental well-being, including the value placed on faith and religion, such as Buddhist rituals that include meditation and blessing ceremonies. Meditation has been scientifically demonstrated to impact people's lives by restructuring the brain and reducing symptoms of illness and/or aging, regulating emotions, and to decrease anxiety. Six areas where meditation techniques have been proven to improve quality of life include: concentration and memory, addiction, pain management, aging, disease, and depression and anxiety.

Blessings within the Buddhist religion are performed as an attempt to share positive energy, to help another—in a divine sense—with a force of goodness. During Buddhist ceremonies, monks use blessed "holy water" to sprinkle on an individual's head with the belief that it will bring luck, safety, and success for the recipient. The holy water is used to protect an individual from harm and ward off evil spirits. In addition, blessings are combined with powerful mindfulness-evoking traditional prayers and chants for developing mental strength and healing. These rituals are not customary in the Western world; however, they are significant tools for promoting good physical and mental health among Cambodians. Additionally, they serve to build social connection with others who hold similar cultural beliefs. The CWP collaborative provided opportunities for all CWP participants to meditate on a weekly basis at CAA and other partner offices. Prayer and blessing services were offered jointly by all collaborative partners at agency community rooms or at local Buddhist temples on a monthly basis. Engagement in other Buddhist rituals, such as seeking refuge, making merit to Buddha, confessing faults, and calling on spirits were offered based on individual need with the assistance of the CHW. Spiritual activities harnessed the power of cultural and religious practices of importance to the Cambodian community.

B) Recreational/Physical Activities

Recreational and physical activities affect not only physical health and wellness but also mental and emotional well-being. Based on interests expressed via community input, the CWP offered physical activity held in house or at local parks and libraries. Tai Chi and yoga were offered at various skill levels—beginning, intermediate, and advanced—and during daytime and evening hours to accommodate different schedules. All classes were facilitated by experienced instructors and provided free of charge. These activities helped individuals cope with stress, loneliness, helplessness and hopelessness, strengthen respiratory and cardiovascular systems, and improve strength and flexibility.

The CWP included recreational field trips, which were based on requests by program participants. Field trips locations included museums, Chinatown, nature preserves, and shopping outlets. Field trips were designed to foster social connections and strengthen

relationships between participants and program staff, but included within each field trip are capacity-building activities, such as learning how to take public transportation and how to ask for directions. Also included in recreational activities were in-house potlucks, gardening, and walking groups.

C) Art/Craft/Music & Dance Therapeutic Classes

Arts & Crafts Therapy—often called expressive therapy—were conducted at partner agency sites. Art therapy encourages individuals to open up and share their feelings, views, and experiences is not limited by age, language, diseases or environment (Hu et al., 2021). Arts & Crafts classes, such as painting and origami, were offered weekly at CAA, FiGH, TCF, and UCC offices. For participants in Long Beach, dance classes were held at a local library and facilitated by a Khmer-speaking dance instructor.

Implementation. The CWP was collaboratively implementation by all five partner agencies. CAA, FiGH, and UCC implemented the program in its entirety (i.e., outreach & engagement, educational workshops, case management, and social & spiritual activities), while KPA conducted outreach & engagement activities only due to limited staff capacity. Each partner agency held weekly educational workshops for six weeks during the first three months of the program and refresher courses were held once a month during the remainder of the program. After the initial one-on-one meeting, each participant received at least one case management session a week. Additional case management sessions were provided as needed based on participants' need for more targeted assistance. Social and spiritual activities were provided at all four partner agencies, but the specific types of activities varied depending on participant preference. For example, CAA provided an on-site succulent-planting class, while UCC offered a Dance for Health class at a local library. Although social and spiritual activities differed across agencies, they all served to provide participants with opportunities to socialize and strengthen relationships between one another. During the COVID-19 pandemic, all program services were held via Zoom or Facebook Messenger due to state health and safety guidelines.

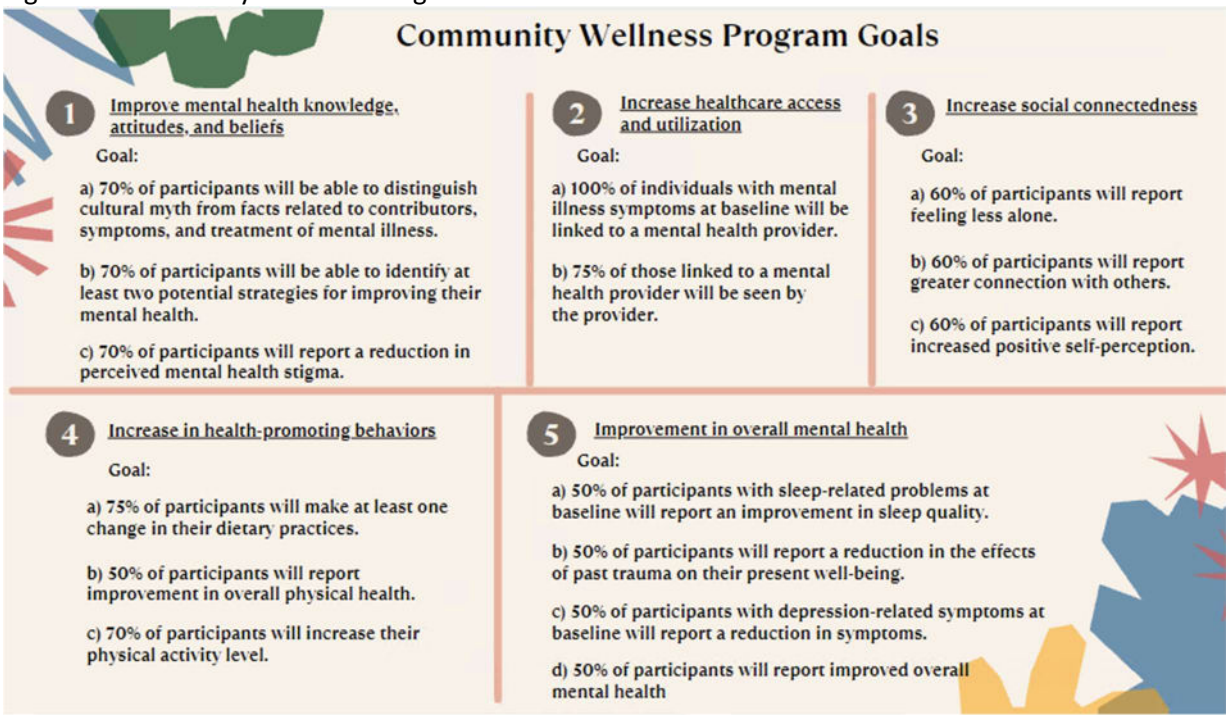
Regardless of where they enrolled, participants were able to utilize program services at any of the four partner agencies. The purpose of providing program services at multiple locations is two-fold: 1) the CWP collaborative was able to increase access to services for underserved Cambodians, particularly individuals who lack transportation and 2) participants had a larger variety of activities and workshop offerings from which to choose. Partner agencies recruited a small group of participants (Cohort 1) to pilot the implementation of program components. Data were not collected from participants in the pilot cohort.

Fidelity and Flexibility. To ensure program fidelity, implementation of CWP services and activities was discussed during project team meetings. CWP partners had the flexibility to make changes to social activities to better meet the needs and interests of participants in each cohort. These changes were not required to be adopted across all partner agencies. However,

all four partner agencies had to be in agreement with any changes to program implementation and these changes must be adopted by all CWP partners. Changes included transitioning to virtual educational workshops and social activities during the COVID-19 pandemic. Special Services for Groups, our technical assistance providers, provided a training for our CHWs on how to use Zoom and how to help participants connect to this platform. The training also included a discussion on the workshop curriculum and the appropriate length of each workshop to minimize "Zoom fatigue". Once agreed upon, these changes were implemented across all partner agencies to ensure that activities were standardized. Additional modifications to service delivery were discussed during team meetings, which were held in person monthly at the lead agency office (i.e., CAA) prior to the pandemic and then bimonthly via Zoom during the pandemic. Meeting frequency was increased due to the need for more communication between partner agencies during the transition to online implementation. Meeting more frequently also allowed program staff to share community resources with one another to better assist program participants during the pandemic. These resources included food distribution, rental assistance, and COVID-19 vaccination events.

Program Goals. The CWP was designed to reduce risk factors for mental illness and increase protective factors among Cambodians in the Long Beach and Santa Ana communities. The consequences of failing to meet these needs include: 1) Cambodians continue to have disproportionately high rates of PTSD and depression, both of which have been linked to chronic illnesses, including diabetes and cardiovascular disease; 2) mental disorders continue to be transmitted to subsequent generations which, in turn, exacerbates negative outcomes, including school failure and drop out, removal of children from their home, unemployment, homelessness, prolonged suffering, suicide, and incarcerations; and 3) Cambodians continue to suffer disproportionately from multiple chronic diseases and die 10-15 years younger than the general population. CAA and its partners aimed to break the cycle of poor physical and mental health, and negative social outcomes by empowering Cambodian immigrants and refugees to take ownership of their well-being. To that end, the CWP was designed to contribute to changes in five areas: 1) knowledge, attitudes, and beliefs about mental health; 2) social connectedness; 3) health-promoting behaviors; 4) healthcare access and utilization; and 5) overall mental health. Figure 2 presents these five areas and respective program goals.

Figure 2. Community Wellness Program Goals




## CWP EVALUATION

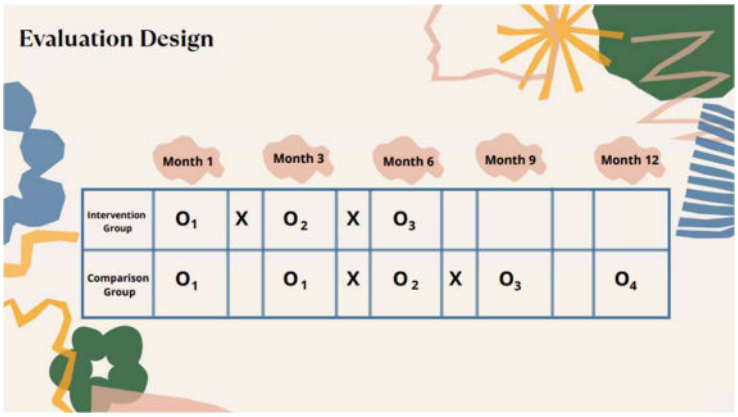
Local evaluation of the CWP was performed by the Center for Health Equity Research (CHER) at California State University, Long Beach. The local evaluation plan was developed in collaboration with CWP partners and was informed by their work within the Cambodian community. The plan took into careful consideration characteristics of the Cambodian population, such as linguistic needs and history of trauma, and how these factors may affect participants' willingness to share information. As such, evaluation activities were designed to meet the unique needs of this population, such that data collection was carried out by trusted agency staff whenever possible. Additionally, the local evaluation plan took into consideration the collaborative structure of the CWP and the agency sites within which program activities were delivered.

### Evaluation Design.

A mixed methods approach was used to assess the effectiveness of the CWP in promoting mental health and alleviating symptoms of existing mental illness among Cambodians in Long Beach and Santa Ana. Due to the close-knit nature of the Cambodian population and the tendency for individuals to share information with friends and family, it was not feasible to conduct a randomized experiment in the communities within which the program took place. Additionally, a randomized experiment would have required program services to be withheld from the control group and the CWP partners determined that this would be unethical due to high rates of mental disorders within the Cambodian population and the lack of culturally-appropriate mental health services. Thus, the CHER Evaluation Team used a quasi-

experimental design to guide program evaluation. More specifically, the local evaluation followed a nonequivalent delayed control group design with a baseline and follow-up measures at 3, 6 and 9 months.

This design allowed the intervention to be delivered later to participants who initially served as the nonintervention comparison group. The CWP was delivered to cohorts of 100 participants (or 25 at each of the four partner agencies) for a period of 6 months. For each cohort, two partner agencies served as the intervention group (n=50) and two agencies served as the comparison group (n=50). All 100 participants in each cohort were enrolled in the evaluation at the same time and all completed the baseline survey upon enrollment. However, participants in the comparison group were asked to wait 3 months before engaging in CWP services, while intervention group participants engaged in services immediately following the baseline assessment. After three months, comparison group participants completed a second baseline and then engaged in program services for a period of 6 months. The advantage of this design is that the baseline assessment prior to the intervention will allow comparison of the level of equivalence between our intervention and comparison groups. If these groups are found to be different on key variables (e.g., demographic characteristics, level of trauma, etc.) statistical procedures will be used to control for these differences. The second baseline assessment for comparison group participants will allow the CHER Evaluation Team to examine factors outside of the CWP that may contribute to changes in the outcomes of interest. Lastly, the three follow-up measures will allow for measurement of change during, immediately following, and three months after completion of the intervention to examine sustainability of any changes.




Evaluation Activities. Initial evaluation activities included finalizing data collection instruments, conducting pilot tests to ensure comprehension of survey items, and requesting Institutional Review Board (IRB) approval to carry out the evaluation of the CWP. The development of data collection instruments was a collaborative effort between the CHER Evaluation Team and the CWP partner agencies. CWP partners provided valuable insight on culturally-relevant measures of mental health status and on culturally-acceptable methods of data collection. For example, partners shared that sleep quality and social isolation were more appropriate measures of mental health status than validated scales found in extant literature. Partners also shared that community members tend to be wary of electronic data collection due to the intangible nature of online data submission. As a result, all assessments were completed using paper surveys administered by trusted program staff (i.e., Community Health

Workers). Additionally, both the CHER Evaluation Team and CWP partners found it important to examine trauma among program participants, since the majority of participants are survivors of the Khmer Rouge. The Harvard Trauma Questionnaire (Mollica et al., 1992) was used to assess trauma, but partners believed that using the questionnaire in its entirety would trigger an emotional response as questions in Part 1 ask about specific traumatic events. As such, the evaluation only assessed trauma symptoms by using Part 4 of the questionnaire that comprises of 16 items. By working closely with CWP partners, the CHER Evaluation Team was able to design data collection instruments and data collection activities that were culturally responsive to the unique characteristics of Cambodian immigrants and refugees. All data collection instruments were available in English and Khmer, and were designed to answer the following local evaluation questions:

1. Do outreach and engagement efforts tailored to dispel cultural beliefs about poor mental health and mental illness result decreased stigma against mental illness?
2. Do tailored case management and support delivered by community health workers result in improved linkage to mental health services, other medical services, and overall social support services? Do these services result in increased self-efficacy for navigating the health system and directing one's individual care?
3. Does participation culturally-relevant program activities delivered in Cambodian-serving community-based organizations result in increased knowledge about mental health and health promoting behaviors and improved social, emotional, physical wellness? Does this knowledge translate into the adoption of one or more new health-promoting behaviors?
4. Does participation in the program components result in improved mental health and increased positive feelings about oneself?

# METHODS

## Surveys.

Upon reviewing the core measures for the statewide evaluation, the CWP collaborative determined that combining both local and core measures into one survey would make the survey too lengthy and overwhelming for program participants. As such, the CWP evaluation included two surveys for each assessment, a core survey and a local survey for baseline and follow-up assessments. The local and core baseline survey consisted of 25 and 57 items, respectively. Together the baseline surveys took approximately 90 to 120 minutes to complete. The local and core follow-up survey consisted of 19 and 42 items, respectively, and together took approximately 45 to 60 minutes to complete. Convenience sampling was employed, such that all participants enrolled in the CWP were invited to participate in the evaluation. To be eligible to participate in the evaluation, participants must: 1) self-identify as Cambodian, 2) be 18 years and over, 3) live in the greater Long Beach and Santa Ana areas, and 4) be able to commit to the CWP for 6 months. Those who were excluded from the evaluation included individuals who: 1) did not self-identify as Cambodian, 2) were younger than 18 years,

3) did not live in the greater Long Beach and Santa Ana areas, and 4) were unable to commit to the 6-month program.

Surveys were self-administered in a small- or large-group format at the partner agency office. Group size depended on availability of agency staff to assist with survey completion. A small group is defined as comprising 3-6 participants and a large group is defined as comprising 7-10 participants. For large groups, a minimum of two program staff were present to clarify survey items and to ensure minimal participant interaction during survey completion. CHWs provided one-on-one assistance to participants with low literacy or visual impairment.

Participants were scheduled to meet with their respective CHW within 1-2 weeks from enrollment date to complete the baseline survey. After completing the baseline assessment, participants in the intervention group engaged in CWP activities at one or more agencies and then completed follow-up surveys at 3, 6, and 9 months to assess changes in the outcomes listed below. As described above, participants in the comparison group were asked to wait 3 months before engaging in program services, during which time CHWs remained in regular contact with participants through weekly check-in phone calls. After 3 months, comparison group participants completed a second baseline assessment and were free to engage in program services at any of the four partner agencies. Follow-up assessments followed the same timeline as the intervention group (i.e., at 3, 6, and 9 months after start of program activities). If participants were unable to attend the group data collection sessions, a CHW contacted participants via phone to schedule an in-person meeting or to administer the survey over the phone, if necessary. Baseline and follow-up surveys were administered by CHWs with support from agency staff for large groups. To ensure a high response rate and to show appreciation for time invested in data collection activities, participants received a $20 gift card incentive for each completed survey. The anticipated sample size for the local evaluation was 400 participants across four partner agencies.

Data Collection Training

Surveys were administered by trusted CHWs to allow participants to more freely respond to survey items related to mental health and trauma symptoms. While CHWs possessed the soft skills needed to work with a population that experienced significant loss (two CHWs were survivors of the Khmer Rouge), they lacked research and evaluation experience, and all were new to data collection. As such, the CHER Evaluation Team conducted a 2-day training on survey administration, which included a review of the evaluation design, data collection timeline, survey instruments, and informed consent process. CHWs also engaged in role-play exercises to practice administering baseline and follow-up surveys with feedback from the CHER Evaluation Team. In addition to the 2-day training, CHWs also completed the online CITI training on Human Subjects research as required by the IRB at California State University, Long Beach. During the COVID-19 pandemic, surveys were completed over the telephone using an online survey that was developed by the CHER Evaluation Team. Additional training and

ongoing technical assistance was provided to CHWs on how to use the Qualtrics platform for survey completion.

Focus Groups. The local evaluation of the CWP included focus groups with program participants to further examine how the program contributed to changes in physical and mental health, and how their knowledge, attitudes, and beliefs about mental illness changed as a result of program participation. The focus group also aimed to learn about participants' experience in the CWP, including what they liked and did not like about the program. Lastly, focus group participants were asked for input on additional services and/or activities they would like to see included in the program to better serve the Cambodian community. Data from the focus groups were used to support survey findings, enabling the CHER evaluation team to increase confidence in results of the evaluation.

The CHER Evaluation Team developed the focus group guide in collaboration with partner agencies, whereby agency leads (i.e., Executive Directors) and CHWs were asked contribute to a list of questions that would generate data that can help the team better understand how the CWP contributed to changes in physical and mental health. The project team reviewed a draft of the guide and provided feedback that the CHER Evaluation Team used to make revisions to the instrument. The final focus group guide consisted of 22 questions that covered 6 topics.

CWP partner agencies were asked to recruit two participants for each focus group. Focus Group #1 included participants from Cohorts 2 and 3, and Focus Group #2 included participants from Cohorts 4 and 5. To be eligible to participant in the focus group, participants must have engaged in all program components in order to provide feedback on each component. Focus groups were facilitated by a member of the CHER Evaluation Team with interpretation provided by agency staff not affiliated with the CWP to allow participants to be open and honest when sharing their thoughts about the program. Focus groups took approximately 90 to 120 minutes to complete and were audio recorded for accuracy.

CWP Database. The CHER Evaluation Team developed a program database to collect process level data, such as date, location, and attendance at workshops and social and spiritual activities. The database also collected information about case management sessions, including the type of meeting (i.e., in person or phone) and referrals, linkages, and navigation services provided to participants. Each CHW was given a username and password to log into the CWP database for data entry. CHWs were instructed to enter data no later than 2 days after which the activity occurred, since they were required to include information on successes and challenges and may forget over time. The purpose of the CWP database was two-fold: 1) it allowed the CHER Evaluation Team and lead agency to query data for quarterly progress reports and semi-annual reports, thus alleviating the burden on CHWs of having to provide these data regularly and 2) it allowed CHWs to track program participation at the individual level and follow up with participants who were not as engaged, thereby improving program participation.

## Data Analysis

*CWP Goals.* The goals of the CWP are to improve physical and mental health, and other areas that CWP partners identified as contributing factors to these two outcomes, such as diet and physical activity. To determine whether the CWP goals were achieved, we examined improvements made between the baseline and 6-month follow-up assessment across all cohorts. While maintaining physical and mental wellness is appreciable from a prevention standpoint, the intent of the CWP is to contribute to improvements in each goal. As such, individuals who were at the far end on a 5-point scale and had no room for improvement were excluded from the analysis. For goals that were measured using a single item (e.g., physical health), a direction-of-change valence was constructed by subtracting baseline score from the follow-up score. Negative values were coded as -1, indicating a reduction, while positive values were coded as 1, indicating an increase. Zero indicates no change. For goals that were assessed by more than one survey item (e.g., mental health stigma), participants were scored by calculating a mean of the survey items and a direction-of-change valence was constructed the same way (i.e., by subtracting baseline score from the follow-up score). The number of participants who showed improvements was then divided by the total number of participants in the sample, which varied for each goal.

*Treatment vs. No Treatment Analysis.* Using SPSS Version 25, we performed univariate analyses on the outcome variables to examine frequency distribution. To more thoroughly examine the direction and magnitude of change in outcome variables occurring as a result of program activities, we performed both a paired sample analysis was also conducted. The analysis included only participants enrolled at comparison sites who completed two baseline assessments at three month intervals prior to initiation of program activities, and a follow-up assessment three months after the initiation of intervention activities. For each program outcome variable, a change score was calculated between first and second baseline (prior to participation) and between second baseline and follow-up (during program implementation). Change in individual scores associated with program participation was then assessed using a paired sample t-test analysis, which compared the change measured during the first three months of observation with the change measured in the same participant during the second three months.

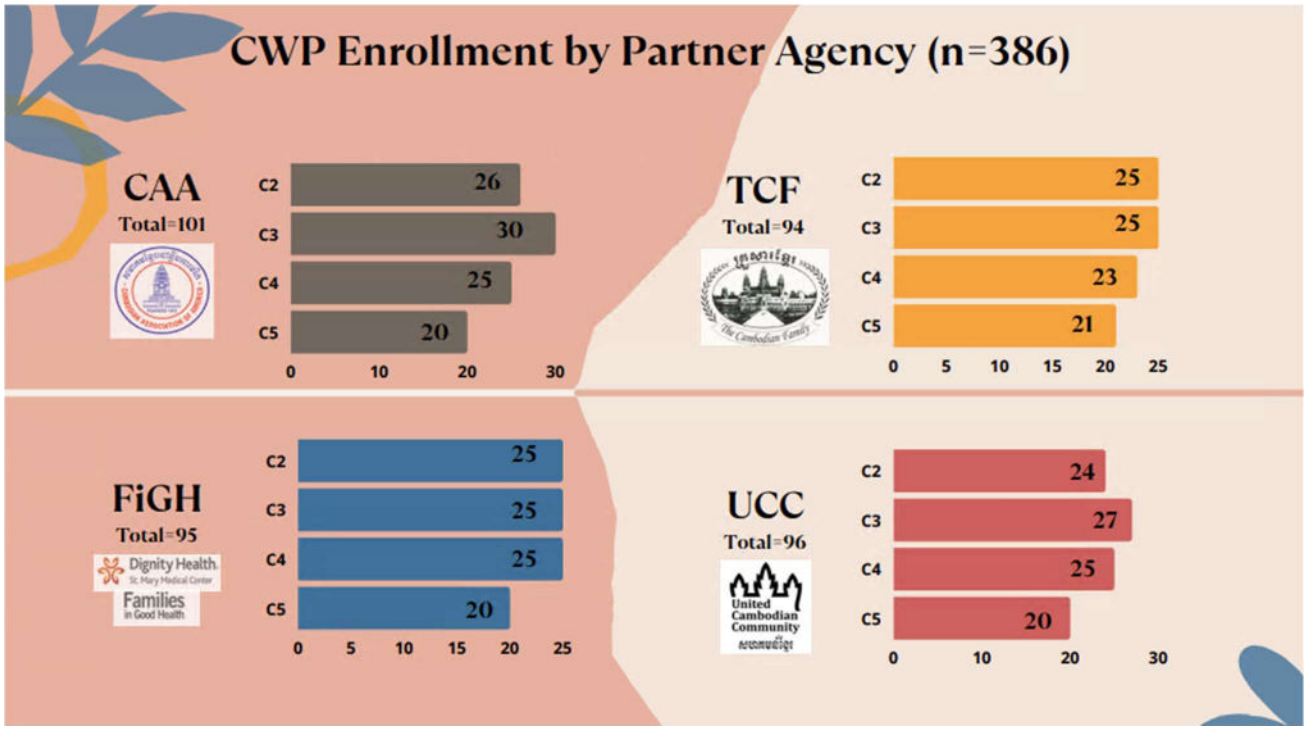
*Focus Groups.* The purpose of the focus groups was to learn about participants' experience in the CWP and to ask for suggestions for how the program can better serve the Cambodian community. As such, we did not employ a rigorous qualitative research design and data analysis plan. Focus group recordings were transcribed and synthesized by trained CHER staff. First, CHER staff organized participant responses under each section of the focus group guide. Next, themes under each section were identified and enumerated to determine overall agreement among focus group participants. Lastly, specific quotes were noted and used to support each theme.

# RESULTS

## Enrollment.

A total of 386 individuals enrolled in the CWP across four cohorts. Figure 3 presents the number of participants that were enrolled at each partner agency. All participants were invited to take part in the evaluation. Of the 386 participants who completed the baseline survey, 345 completed the 6-month follow-up assessment, yielding a completion rate of 89.4%.

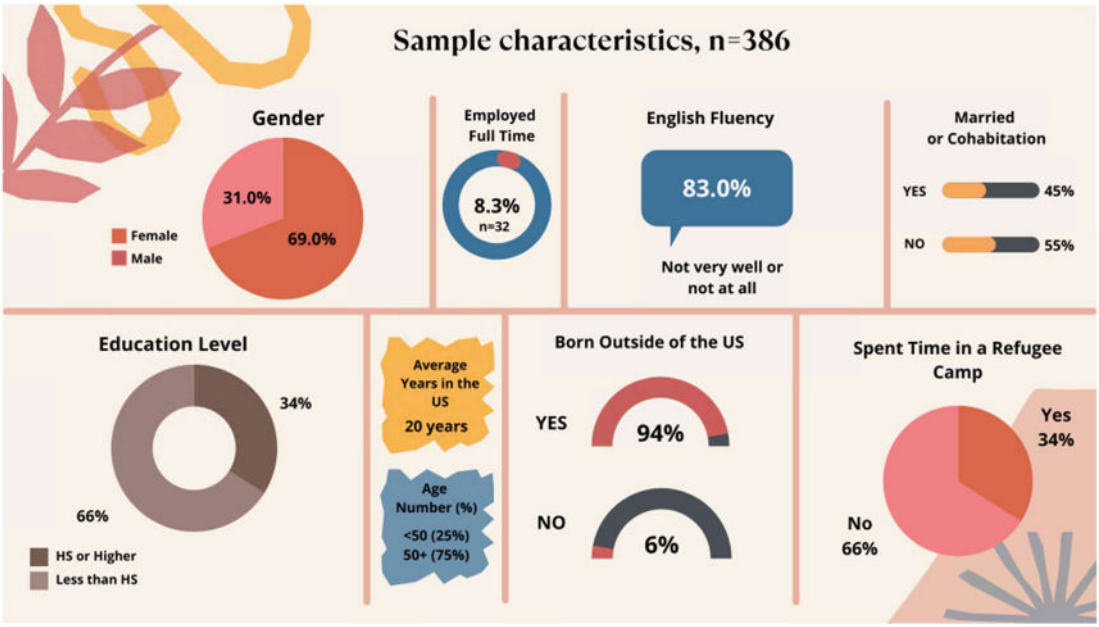
Figure 3. CWP Enrollment by Partner Agency (n=386)




## Sample Characteristics

Figure 4 presents characteristics of the sample. A large majority of CWP participants were female (69%) and were 50 years of age or older (75%). Almost 95% of participants were born outside the U.S. and more than one-third have spent time in a refugee camp. Among those who were foreign born, the average length of time in the U.S. is 20 years. Forty-five percent (45%) of participants were married or living with a partner. Two-thirds of participants reported having less than a high school education and 8.3% were employed at baseline assessment. Eighty-three percent (83%) of participants did not speak English very well or at all.

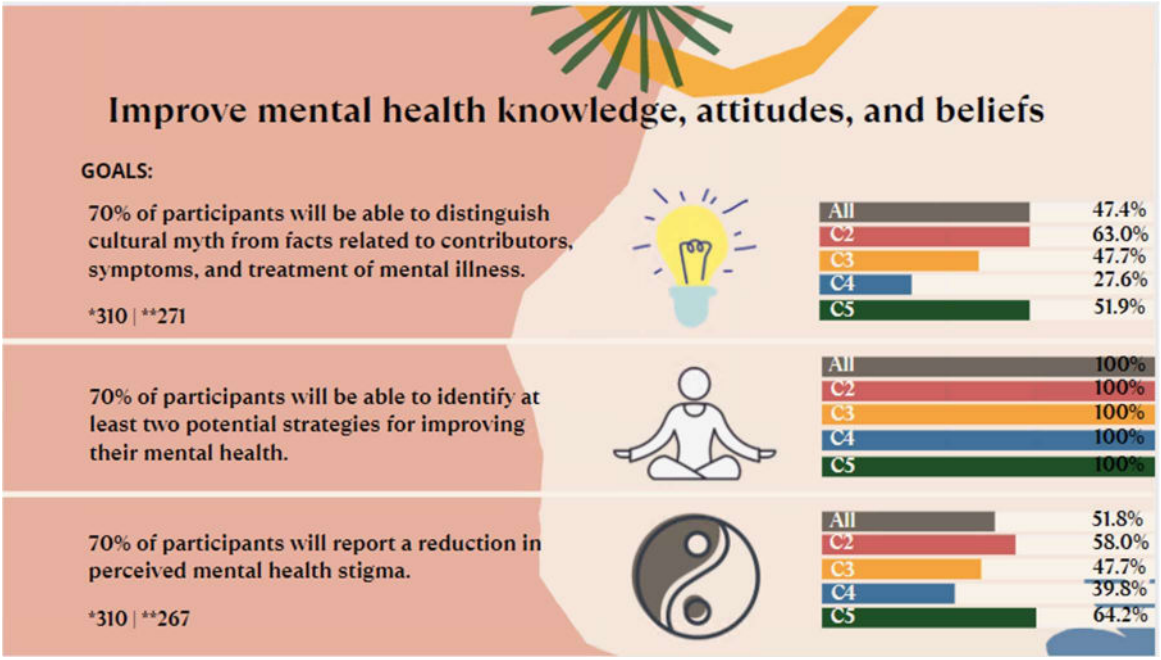
Figure 4. Sample characteristics, n=386




## Quantitative: Baseline and Follow-up Surveys

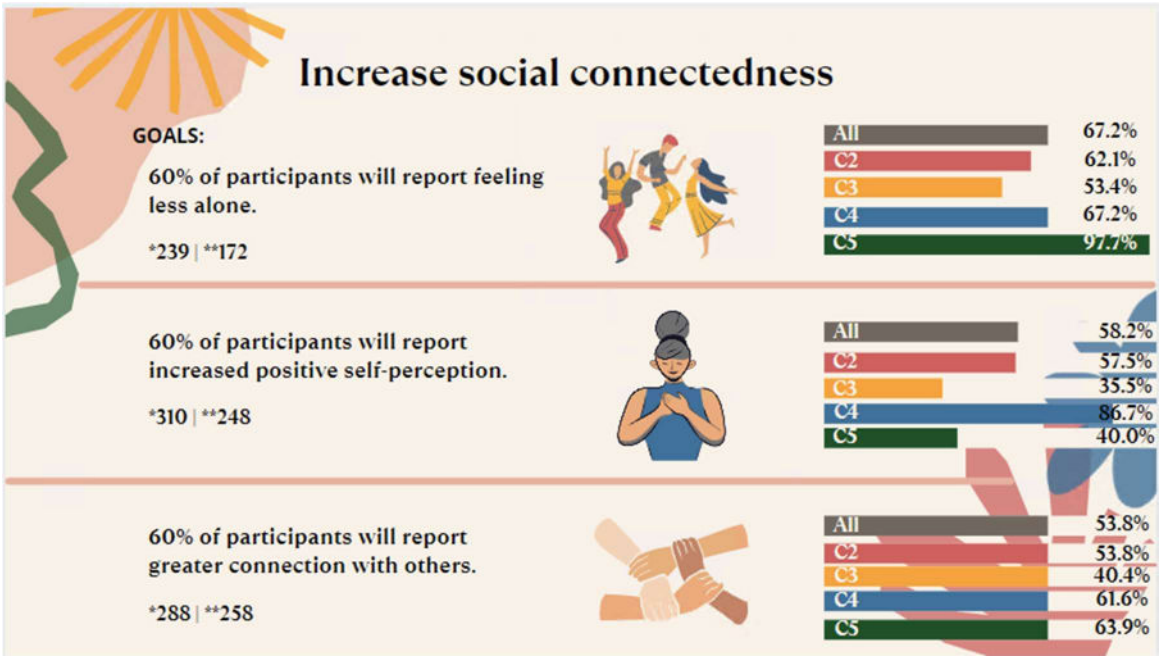
CWP Goals. Figures 5-9 present percentages of participants who reported an improvement for each CWP goal. Data are presented by cohort and for all participants combined.

Figure 5. Improvements for mental health knowledge, attitudes and beliefs



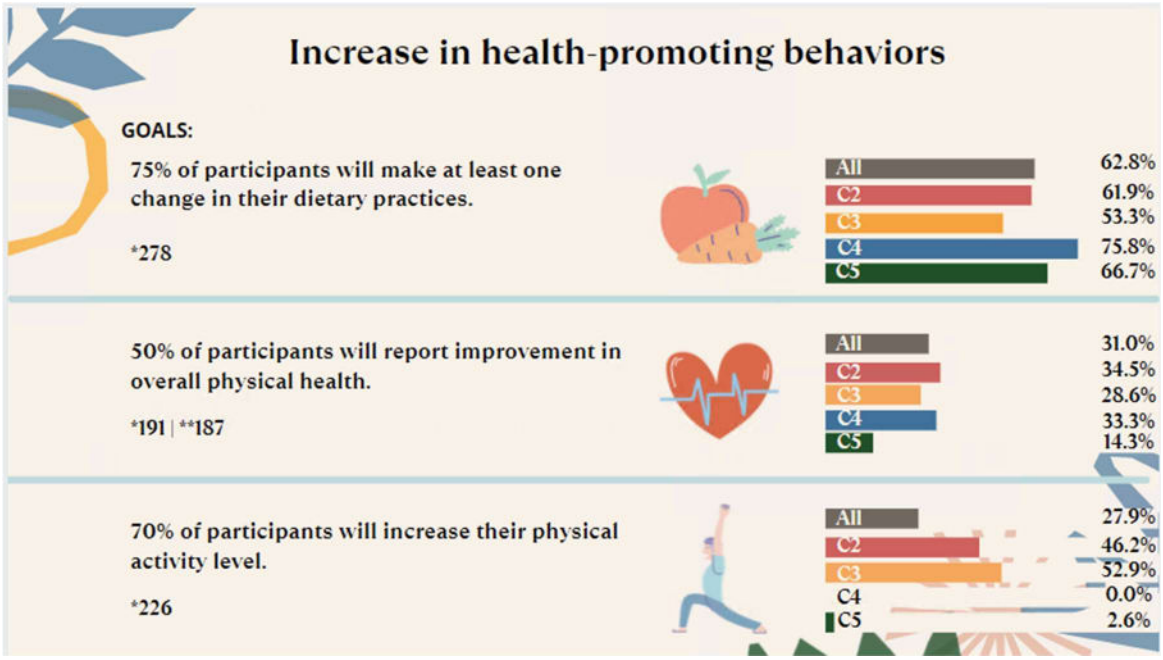

* Participants included in the analysis
** Participants excluded from the analysis

Figure 6. Increase in social connectedness




* Participants included in the analysis
** Participants excluded from the analysis

Figure 7. Increase in health-promoting behavior




* Participants included in the analysis
** Participants excluded from the analysis

Figure 8. Increase in healthcare access and utilization

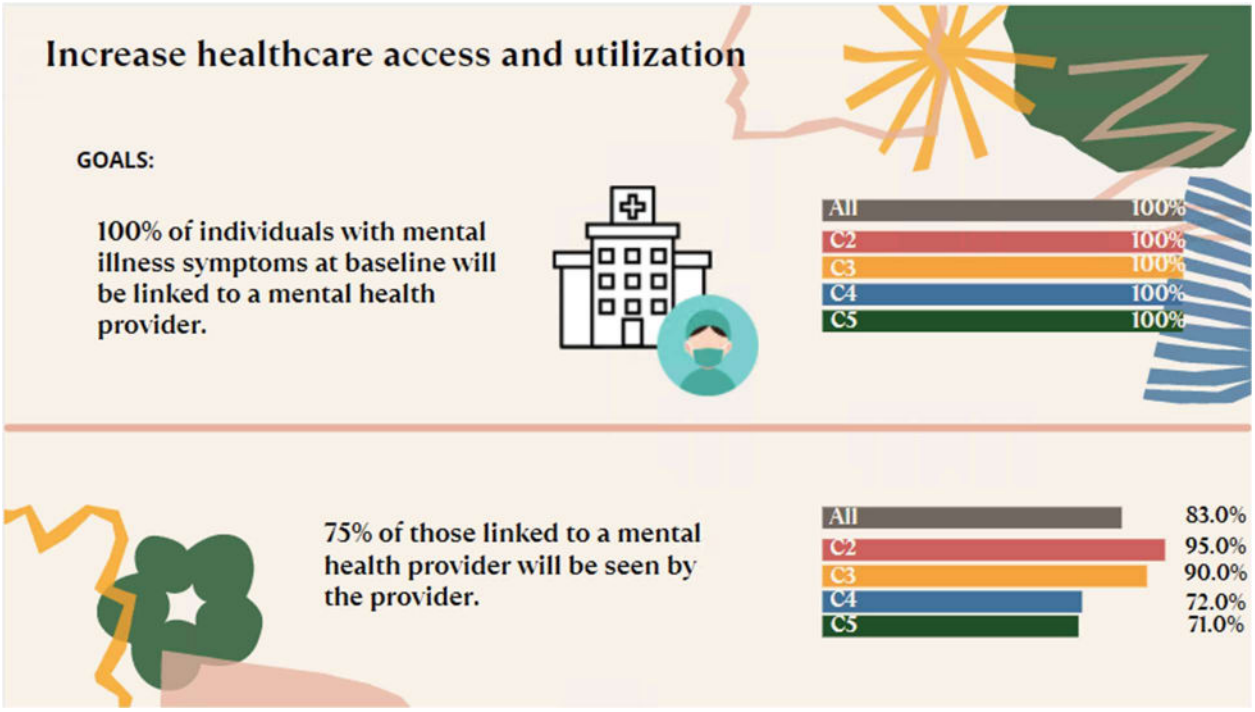
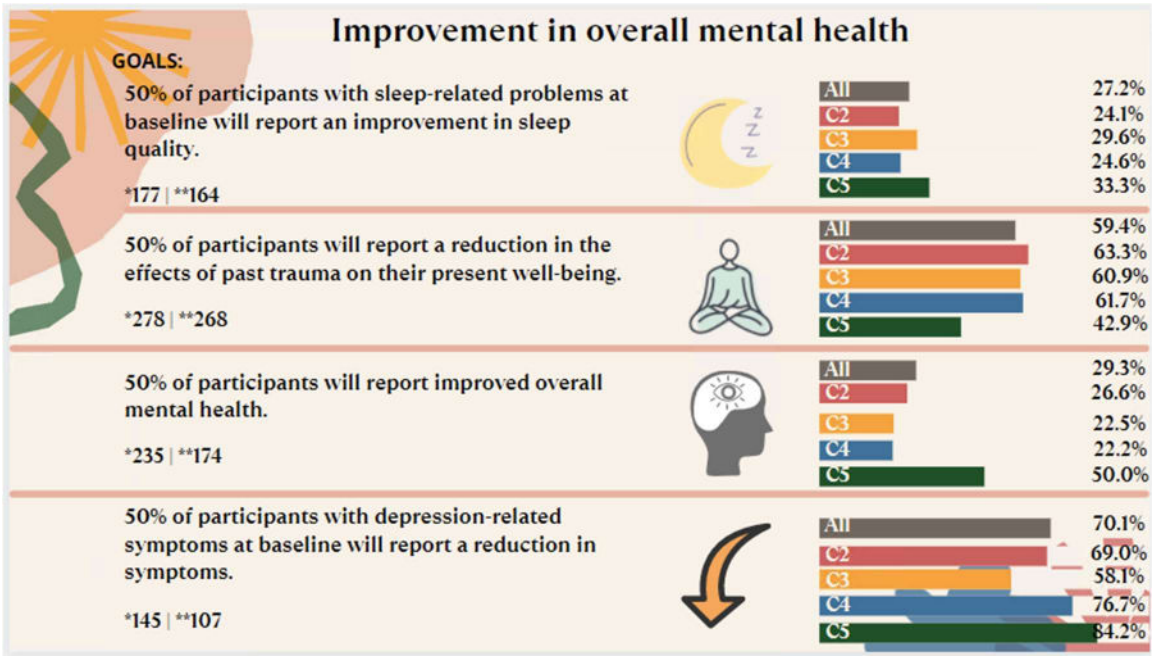



Figure 9. Improvement in overall mental health




* Participants included in the analysis
** Participants excluded from the analysis

**Mental health knowledge, attitudes, and beliefs**

A key area of focus for the CWP was reducing stigma against mental illness through community-level activities, such as community outreach and engagement, and through individual-level activities through educational workshops. Mental illness is highly stigmatized in the Cambodian culture and as such, the CWP fell short of its goals when examining changes in knowledge, attitudes, and beliefs about mental illness among all program participants. However, cohort-specific data show that participants in Cohort 2 came very close to reaching the goal 70%, where 63.0% of individuals were able to distinguish cultural myths from facts and 64.2% of participants in Cohort 4 reported a reduction of mental health stigma at 6-month follow-up. Data from workshop evaluation surveys showed that all participants were able to identify at least two potential strategies for improving their mental health, far surpassing the goal of 70%.

**Social connectedness**

Among all participants, the largest improvement was observed for individuals who reported feeling less alone at 6-month follow-up (67.2%), surpassing the goal of 60%. Almost 98% of participants in cohort 5 reported feeling less alone upon completion of the CWP, despite participating in the program during the COVID-19 pandemic when all activities were delivered virtually. While the other two sub-goals were not met, more than half of participants reported greater connection with others (53.8%) and almost 60% reported increased positive self-perception (58.2%) at 6 months. It is important to note that 86.7% of individuals in Cohort 4 reported increased positive self-perception, far exceeding the goal of 60% by 26.7 percentage points, even though the goal was not met when all participants were included in the analysis.

**Health-promoting behaviors**

It is difficult to effect health and health behavior change in older adults. This is especially true during the height of the COVID-19 pandemic when individuals were required to shelter in place, and the fear of racially-motivated attacks further prevented participants from leaving their homes. This is most evident when examining changes in physical activity, where participants who participated in the program during the pandemic (Cohorts 4 and 5) reported little to no improvement in physical activity at 6-month follow-up. While the CWP collaborative failed to meet the two other health-promoting behavior sub-goals, it is important to note that 75.8% of participants in Cohort 4 reported making at least one change in their dietary practice, surpassing the goal of 75%.

**Healthcare access and utilization**

The CWP collaborative aimed to increase access to health and social services through strength-based case management. Program participants not only received assistance from CHWs through referrals, linkages, and navigation, but they also received skills that increased their capacity to access services on their own. The CWP collaborative aimed to link 100% of program

participants with moderate to severe mental illness (assessed using the PHQ-9) to a mental health provider and this goal was achieved. Among participants who received a linkage, 83% were seen by a mental health provider, surpassing the goal of 75%.

**Overall mental health**

Within the goal of improving overall mental health are sub-goals related to sleep quality, trauma, and depression-related symptoms. Also included is a sub-goal for overall mental health that was operationalized as feeling balanced in mind, body, spirit, and soul. When examining changes for all participants combined, only two of the four sub-goals were met, such that 59.4% and 70.1% of participants reported a reduction of trauma symptoms and of depression-related symptoms, respectively, at 6-month follow-up, surpassing a goal of 50% for both. However, examining these changes by cohort revealed that the goal for overall mental health was met by Cohort 4, where 50% of participants reported an improvement at 6-month follow-up. It is also important to note that despite the stressors brought on by the COVID-19 pandemic, 76.7% and 84.2% of participants in Cohorts 4 and 5, respectively, reported a reduction of depression-related symptoms far surpassing the goal of 50%.

Paired t-tests Analysis. Results from the paired t-tests revealed that CWP participants reported statistically significant changes between Time 1 and Time 2 for seven of the thirteen outcomes included in the analysis (Figure 9).

Table 1. Mean change scores at Time 1 and Time 2 for each outcome variable

| Outcome Variable | N | Baseline 1 to Baseline 2 Mean Change | Baseline 2 to Follow-up 1 Mean Change | t | df | Sig (2-tailed) |
|---|---|---|---|---|---|---|
| Pair 1 – Myths and Non-fact Beliefs[a] | 144 | .01 | -.63 | 1.104 | 143 | .272 |
| Pair 2 – Mental Health Stigma[a] | 144 | -.10 | -1.28 | 2.967 | 143 | **.004** |
| Pair 3 – Social Isolation[b] | 155 | .1645 | -.3097 | 2.769 | 154 | **.007** |
| Pair 4 – Social Connectedness[b] | 157 | -.0340 | .2473 | -2.600 | 156 | **.010** |
| Pair 5 – Positive Self-perception[b] | 144 | -.0833 | .4028 | -.20263 | 143 | .165 |
| Pair 6 – Fruit and vegetable intake[c] | 140 | .2429 | .6857 | -.990 | 139 | .324 |
| Pair 7 – Soda and Fast Food Intake[c] | 123 | -.1463 | .4390 | -2.703 | 122 | **.008** |
| Pair 8 – Physical Health[d] | 134 | .1567 | 1.2985 | -4.109 | 133 | **.000** |
| Pair 9– Physical Activity[e] | 101 | -38.5050 | -67.9010 | 1.527 | 100 | .130 |
| Pair 10 – Sleep Quality[b] | 139 | .1007 | .1367 | -.318 | 138 | .751 |
| Pair 11– Trauma Symptoms[b] | 149 | -.0235 | -.2107 | 2.052 | 142 | **.042** |
| Pair 12 – Depression-related Symptoms[b] | 90 | -.0337 | -.0985 | .426 | 89 | .671 |
| Pair 13 – Overall Mental Health[b] | 148 | -.0878 | .3041 | -2.065 | 147 | **.041** |

[a] Number of myths, non-facts, and stigma beliefs endorsed

[b] Mean score

[c] Number of servings

[d] Single-item measure

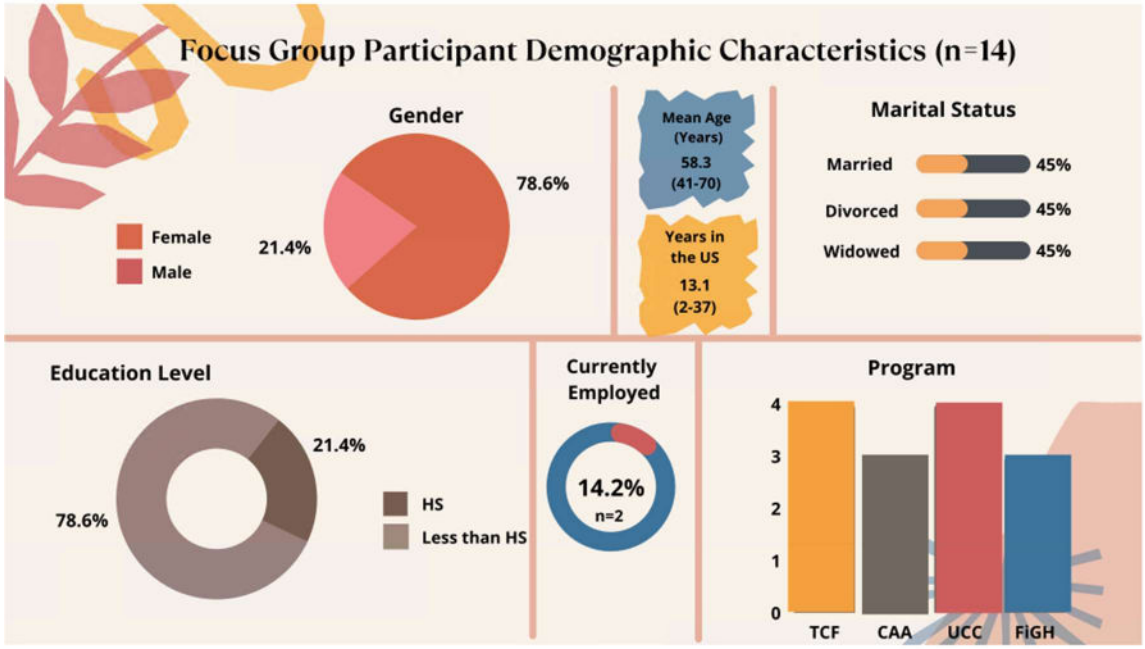
[e] Minutes per week

Results from our analysis show that the mean number of endorsed *mental health stigma beliefs* significantly decreased between Time 1 and Time 2. We observed a statistically significant decrease in mean change score for the outcome variables *social isolation* and *trauma symptoms*, and a statistically significant increase in mean change score for the outcome variables *social connectedness* and *perceived physical health*. We also observed a statistically significant increase in the mean change score for *overall mental health*. A statistically significant increase between Time 1 and Time 2 was observed for *Soda and fast food intake*, a change in the opposite direction of what was expected.

## Qualitative: Focus Groups

A total of two focus groups were held to gain greater insight of CWP participants' thoughts, opinions, and perspectives about CWP and how the program has impacted them. Focus group 1 was conducted with a total of 8 participants from Cohorts 2 and 3, and was held at CAA on January 8, 2020. Focus Group 2 was conducted with a total of 6 participants from Cohorts 4 and 5, and was held via Zoom on July 22, 2021. Both focus groups were facilitated by a member of the CHER Evaluation Team and Khmer interpretation was provided by partner agency staff not affiliated with CWP. With permission from participants, focus groups were audio-recorded for accuracy. Focus Groups 1 and 2 were 1 hour and 36 minutes and 1 hour and 25 minutes in length, respectively. Figure 10 presents demographic characteristics of focus group participants.

Figure 10. Focus Group Participant Demographic Characteristics (n=14)




Across both focus groups, almost 80% of participant were female and the average age was 58.3 years. A large majority of participants were unemployed (85.7%), married (78.6%), and had less than a high school education (78.6%). Among those who were born outside of the U.S., the

average length of time in the U.S. was 13.1 years. Representation was equally divided between CWP partners, where each agency recruited 3-4 participants for the focus group.

**Mental Health and Illness among Asian-American Communities**

The topics of mental health and mental illness among Asian cultures is highly stigmatized and can prevent members within these communities from acknowledging signs and symptoms and seeking the appropriate treatment. As a result, we aimed to gain insight from CWP participants on their thoughts and perspectives surrounding mental health. Overall, CWP participants viewed mental health as being very important. One participant stated just how important mental health is for her, and most participants echoed the same sentiment.

***"I think mental health is more important than physical health. When my mental health—like, when I'm happy, my physical health can be healthy as well. It's [physical health] good, but mental health is more important than physical health."***

**Changes in Knowledge, Attitudes, and Beliefs about mental illness**

In addition to understanding how participants viewed mental health, we also wanted to learn of any changes in their knowledge, attitudes and beliefs about mental illness that may have occurred. Although the majority of participants feel that mental health is very important, some participants shed light on their personal feelings of stigma and fear surrounding mental illness and how their feelings have changed since joining the program.

***"Before I joined the program, I was a bit scared and discriminate against people who have the mental illness, but after I joined the program, I feel sorry for the ones who have mental illness and pity them so much, and try to encourage them and give them an explanation, and to not try suicide or something like that, and if I see that the situation is getting worse, I can call to the doctor or emergency or something like that."***

The continuous focus of the CWP to engage in community outreach to spread awareness of mental health and encourage participation in its program has helped to transform the perspectives on mental health and the level of understanding among its participants.

***"My view on mental health and mental illness has changed dramatically. Before, we know that it's very stigmatized – mental health and mental illness. After I joined the program, I learned that if you have a mental illness, it doesn't mean that you're crazy. I learned that mental illness can be related to stress or feeling overwhelmed. This program changed the way that I think and the group that joined the program, we help bring that knowledge into the community to make a difference in how they view the stigma of mental illness."***

**Changes in Mental Health**

The CWP has contributed to improvements in the mental health of all participants, along with changing knowledge, attitudes, beliefs and perspectives about mental health among

participants through community outreach and education. Participants cited improved mental health as a result of being able to engage in the variety of therapeutic activities offered by the program, including dancing, meditation, and monthly field trips with a group of people with shared culture and language. For some participants, the CWP has instilled a greater sense of hope to fight through challenges and adversity.

***"The program has impacted me tremendously. Since I came to the U.S. (before I joined the program), I never felt happy. My husband had a stroke and he has since passed away. I took care of our kids and grandkids. Joining this program has pushed me to be stronger and to have hope to live."***

***"I have breast cancer and the program has had a huge impact on me. The program has helped me with case management and also with my mental health. I felt discouraged after I found out that I had breast cancer, but the program provided counseling and helped me to feel hopeful to fight cancer."***

For others, the CWP has helped them to better manage stress through healthier coping techniques.

***"Before I joined the program, I had a heart problem and when I get mad, I cannot breathe. Since joining the program, I've learned to not get mad right away and to re-think why I'm mad. I no longer have the problem of not being able to breathe. I used to have an inhaler to help me breathe when I'm mad, but the program gave me a stress ball and I've been using that instead, so I don't have to use the inhaler anymore."***

**Changes in Physical Health**

Some participants shared that engaging in program activities has contributed to improvements in their mental health, while others shared how they are leading healthier lifestyles as a result of their participation in the CWP. These responses prompted us to delve deeper into how the program has contributed to changes the health and well-being of participants. Common themes regarding changes in physical health included paying attention to self-care as well as healthful eating and regular exercise. One participant shared how their eating and exercise habits have changed as a result of what he learned while in CWP.

***"The program has helped me make changes. Before joining the program, I would eat everything because I wouldn't know if that food would affect my health – my high blood pressure, my sugar level. The Dance for Health classes helped me a lot also. I learned from the program that I need to exercise at least 30 minutes."***

Another participant shared how their physical health has improved, resulting in less frequent doctor visits.

***"Before joining the program, I had to see the doctor a few times a month, but since joining the program, I now only go once every 3 months because of the knowledge that I've gained to take better care of myself. I don't have to go as often as before."***

**Health Behavior Change**

As participants shared how the program has contributed to improvements in their mental and physical health, we wanted to learn about the specific changes that participants have made to improve their health since their involvement in the program. Participants shared that they have made changes in diet and physical activity, and some shared their new hobbies.

***"I am mostly doing exercise every day before class starts. After that I only go out to get fresh air and by doing this I get less stress and sleep better. I enjoy life right now."***

***"I used to eat anything, but now I know, 'Okay this food is not good for me,' so I choose not to eat it. Being able to identify that and work on it is important."***

***"I have a very hard time sleeping, I can only sleep 2 hours a night. Before, I had to take medication, but now I stopped. I found that drawing helps me a lot, so I draw using YouTube videos. It relieves stress and stops me thinking too much."***

**Program Contribution Healthcare Access**

We sought to gain a greater understanding of how CWP has contributed to changes in participants' ability to access services, as strength-based case management is designed to increase participants' capacity to seek services on their own. Participants shared that the CWP has helped them with obtaining services for a variety of needs from medical to governmental assistance. Participants also shared that they are more aware of resources that are available to them as a result of program participation.

***"I've been receiving services from TCF and they've been helpful. I was sick a couple of years ago and they helped me a lot with looking for doctors and many other things."***

***"CWP was the first program I've ever joined and now I'm accessing other services at UCC, like citizenship. The program is very helpful for immigrants from Cambodia who need a lot of help and support. Joining this program made me feel better and now I know about different resources available to me."***

Additionally, participants shared that the assistance they received from the program was not limited to them, but was also provided to their families. One participant shared how a family member received assistance from a CHW despite not having enrolled in the program.

***"I'm very thankful for the program. It's helped me a lot, starting with medical information because I don't know English at all. Chork [a CHW] has even helped my grandchildren. My grandson stayed in the room and didn't want to come out. Isolation. Chork talked to him and***

***he came out and now takes part in different resources. I'm very, very thankful. It has relieved a lot of my stress to see him come out of his room."***

CWP prioritized improving access to health and social services and we were thrilled to learn that participants shared that their ability to access services has improved. We also wanted to know how hard and/or easy it was for participants to access these services on their own before and after the program. Before the program, lack of transportation and limited English proficiency were the biggest barriers to accessing mainstream services. Since joining the CWP, participants are better able to access services on their own, but agreed that the language barrier still remains. One participant shared their experience with accessing resources while struggling with communication.

***"I've learned from the program how to navigate different resources. However, the language barrier is still there. For example, when I go to the specialist, my children just drop me off and the communication is still missing because of the language barrier. I filled out a form to request a Khmer-speaking interpreter, but usually it's not available for smaller clinics. Having an interpreter is very important to health and well-being because if we don't know what the doctor is saying, it will affect our health. This is true about every part of health, even mental health. I'd like to see more suicide prevention hotlines for Khmer speakers because we need it."***

**The Impact of COVID-19 on Program Delivery**

All CWP activities transitioned to online format in response to the COVID-19 pandemic. While this removed the transportation barrier that was experienced by some participants, issues with connecting to online platforms proved to be a new barrier for those with low computer literacy that significantly affected program engagement. One participant shared that he did not like online delivery of program activities and that the experience was not the same.

***"Before COVID when the program started, I joined the program and walked into the agency and there was a class of around 25 students. I liked it for that reason, I like to be with people. There are a lot of benefits from that because I got a lot of ideas from brainstorming with other people and I use that information for myself. What I like the least is right now. There are few students in the [online] class and some people don't even talk, and that's why I don't really like it. Maybe I'm more like the active students and I like that we communicate with each other."***

Despite the challenges that some participants experienced with using Zoom and a desire for in-person meetings, participants had much to share regarding what they liked about the program. Most participants emphasized their appreciation for how much the program has helped improve their mental health and for how helpful the program has been for increasing access to resources.

**Suggestions for Program Improvement.** While participants expressed their appreciation for the CWP and how it has helped improve their mental health, participants offered suggestions for how the program can better meet the needs of the community. As previously noted, many participants shared challenges related to the language barrier when accessing resources. One participant shared that more Khmer-speaking providers are needed due to privacy concerns with using interpreters.

***"For me, it's hard for me to learn English because it's hard for me to remember all the sentences, all the structure. I have one suggestion, I would like to have Khmer mental health doctor who can speak Khmer directly because I have some private personal things and I do not want to have the interpreter because too many people know about this. This is one suggestion because I found in Santa Ana, they do not have Khmer-speaking mental health providers, just Vietnamese. If it's possible, we need one for mental health."***

Another participant suggested that the CWP should include longer field trips and to consider including additional activities for older adults.

***"I would like Cal State Long Beach [CHER] to help research other activities that would help the Cambodian community besides those already included in the CWP. Older adults are at home and don't want to come out. Are there art classes available? Can we include more field trips that are longer, like an all-day trip? Field trips help with mental health, but they're so short. When mental health is bad, it affects physical health."***

Overall, participants collectively expressed gratitude in being able to participate in CWP and feel that it is an important resource for the Cambodian community.

## DISCUSSION

Results from our evaluation showed that participation in the CWP contributed to decreased mental health stigma, social isolation, and trauma symptoms, and increased social connectedness. We also observed significant improvements in perceived physical health and overall mental health. While statistically significant changes in diet were observed, the changes were in the opposite direction, such that participants reported increased consumption of soda and fast food at Time 2. We attribute this to the ongoing COVID-19 pandemic, as participants in the last two cohorts were enrolled in the program during the height of the pandemic and when hate crimes against Asians were rampant. Our CHWs shared that program participants were afraid to leave their homes for fear of being attacked, which further served as a barrier to physical activity. All of our partner agencies distributed food to the community during the pandemic, but they were not able to serve everyone. The increase in fast food consumption may also be attributed to convenience and the belief that ordering from a drive thru is a safer alternative to visiting the grocery store or walking into a restaurant that serves healthier options. Our inability to see an improvement in depression-related symptoms may also be related to the pandemic, as the measures used to assess this outcome variable asked

participants about feelings of nervousness, hopelessness, and restlessness, among other symptoms. Symptoms that existed at baseline and that could have been improved with program services, were instead sustained because of the ongoing and changing nature of pandemic.

It is important to note, however, that despite the effects of the pandemic on physical activity, diet, and mental health, participants in Cohorts 4 and 5 reported the greatest increase in social connectedness. As reported earlier, almost 70% and 98% of participants in Cohorts 4 and 5, respectively, reported feeling less alone at 6-month follow-up, higher than Cohorts 2 and 3, both of which enrolled in the CWP prior to the pandemic. Participants in Cohorts 4 and 5 also reported greater connection with others at 6-month follow-up compared to participants in the previous two cohorts. This is testament to the caring nature of our CHWs who continually check in with program participants via phone and physically-distanced home visits. Through these engagement efforts, our CHWs built trust relationships with program participants, thereby allowing program participants to share immediate needs, such as food insecurity. While program activities transitioned to a virtual format using Zoom and Facebook Messenger, CHWs made sure that activities are welcoming and fun, and served as opportunities for participants to share and learn from one other.

Focus group findings revealed many positive impacts of how the CWP influenced participants' knowledge, attitude and beliefs surrounding mental health and mental illness, and how the resources made available to them have helped to improve their mental and physical health. Since joining the program, participants shared how the program has contributed to a new understanding about mental health and mental illness and has inspired participants to help others who are suffering with mental illness. The CWP has helped to contribute to positive changes in participants' mental health as a result of the social support and therapeutic activities that were made available to them, and to participants' physical health through the emphasis on self-care, which has resulted in diet and exercise changes among focus group participants. When asked what they liked most about the program, participants shared that they enjoyed engaging in the activities and field trips the most, while transitioning to an online format in response to the COVID-19 pandemic was what they liked the least. Despite overcoming challenges with program delivery during the COVID-19 pandemic, participants expressed gratitude and appreciation for how the CWP has improved access to resources within the community and are thankful that they now know where to get help when they need it. However, participants shared that a language barrier still exists and suggested that CWP includes linkage to Khmer-speaking health professionals to address privacy concerns. Additionally, participants would love to see the CWP add more activities for older adults and to increase the length of field trips. Although challenges still persist for some participants, they all expressed gratitude and appreciation the CWP, and believed it to be an invaluable resource for the Cambodian community.

It is important to note that the COVID-19 pandemic affected CWP implementation in very profound ways. Our CHWs worked tirelessly to keep engage participants in the program, while meeting their immediate needs and adhering to the work plan to ensure program fidelity. Of the 386 participants who enrolled in the CWP, 345 participants completed the program after 6 months (89.4% completion rate), despite the transition to an online format for the last two cohorts of participants. Disinterest in online programming and an inability to connect to virtual classes were reasons for program attrition. Other reasons include illness/death, relocation, and change of employment (i.e., new schedule does not allow participation in the CWP). Despite the transition to an online format, the local evaluation revealed significant improvements in mental and physical health, as well as in mental health stigma, trauma symptoms, social connectedness, and social isolation as described above. These improvements were statistically significant and could be attributed with confidence to the CWP.

## LESSONS LEARNED

Implementation of the CWP provides valuable insight for future programs aimed at reducing health disparities within immigrant and refugees communities, particularly those who have experienced extreme trauma. We learned that providing services and program material in language and by trusted bilingual and bicultural program staff was vital to the success of the CWP. To reach those with low literacy, it was important that educational material, such as flyers and presentation slides, contain less text and more images. Transportation was a significant barrier to program engagement, as a large majority of participants were older and unable to drive. We addressed this barrier by encouraging participants to carpool, holding classes and events at convenient locations close to public transportation, and at times, by providing transportation via agency vans or private vehicles. The transition to online delivery of program services eliminated this barrier, since participants were able to take part in the workshops and classes from the comfort of their home. However, while online workshops and classes was convenient for some participants, for others, low computer literacy was a new barrier that we had to address during the pandemic. Participants with some computer literacy were provided assistance by our CHWs on how to connect to Zoom or to Facebook Messenger. This was provided individually in advance of the workshop or class, so participants were ready to connect on the day of so as to not take too much time from the session. For participants with very low computer literacy, CHWs conducted tailored workshops via telephone and participants followed along with a hard copy of presentation slides that were delivered to their home in advance.

Isolation increased exponentially during the pandemic and even more so for older participants. Those with low computer literacy were not being able to use social media or Zoom to remain connected with friends and family. Additionally, the rise in hate crimes against Asians prevented many from leaving their homes for fear of being attacked. Food insecurity, housing instability, unemployment, and the inability to assist their children with distance learning were additional stressors. Our CHWs worked tirelessly to keep participants engaged in the program,

while also helping to meet immediate needs by distributing food and personal protective equipment to help participants stay safe during the pandemic. Doing so helped to gain participants' trust, which further contributed to program engagement. However, increased trust between CHWs and program participants comes with a cost, such that it was difficult to establish boundaries. CHWs often received telephone calls from program participants after work hours and during weekends. While CHWs were instructed to set boundaries with their participants for their own well-being, they continued to answer telephone calls after work hours to avoid upsetting participants and risk damaging the trusting relationship that they worked so hard to build. We recommend that future programs establish guidelines and expectations at the onset to avoid this problem.

Related to the evaluation, we learned that data collection activities must take into account key characteristics of the community, such as history of trauma. After consulting with CWP partners, we determined that our initial plan of using handheld computer tablets would not be an acceptable method for data collection, even though it would have alleviated the staff time required for data entry. Our partners informed us that due to a history of government mistrust stemming from the Khmer Rouge, program participants would be wary of any form of electronic data collection. The intangible nature of online data entry and submission will lead participants to question where their data are going and how they are used. As such, baseline and follow-up surveys were administered on paper. When data collection transitioned online during the pandemic, the CHER Evaluation Team developed online surveys using Qualtrics. Instead of sending participants a link to the survey, however, CHWs called each participant to administer the survey over the phone and used the online surveys to record responses. In addition to the type of instrument, we learned that the environment in which data are collected also mattered. Like many Asian cultures, Cambodians value collectivism and prefer to be in a group setting. Therefore, data collection took place in small and large groups, and at partner agency offices given participants' familiarity with the space. In addition to catering to participants' preference for taking the survey with fellow participants and increasing their comfort level, administering the surveys in a group setting had other advantages, including the ability to collect many surveys at one time. However, when administering surveys in a group setting, we recommend reminding participants that there are no right and wrong answers to prevent participants sharing their response choices with one another.

The evaluation of the CWP is not without limitations. The quasi-experimental design limits our ability to conclude a causal association between program participation and outcome variables. However, we believe that the time series design of our analysis increases confidence in our ability to attribute statistically significant changes to the CWP. In designing the evaluation, it was important for us to include the unique characteristics of the Cambodian community. Our CWP partners provided valuable insight, such as the challenges of conducting a randomized controlled study due to the close-knit nature of the Cambodian community, the mistrust of government authority among Cambodian refugees that would prevent accurate data collection using computer tablets (i.e., participants would be wary of how their data are used), and the need that exists within the community that would make withholding services unethical (as

would be needed in a randomized controlled trial). Another limitation of the evaluation relates to the COVID-19 pandemic, during which all program activities were delivered online. This required participants to connect to online platforms, such as Facebook and Zoom, which inevitably excluded those with low computer literacy. While effort was made to assist participants to connect to these platforms, attendance at online workshops, classes, and social gatherings was significantly lower than when these events were held in person. This may have affected the evaluation, as not all participants had access to program activities and thus equal exposure to the intervention. Lastly, while we made every attempt to maintain program fidelity through bi-monthly meetings, during which any changes to the program were discussed and implemented across partner sites, partners had flexibility in providing specific social and recreational activities depending on participants' interests. For example, TCF provided Arts & Crafts classes, while UCC provided dance classes. These activities may have had differing effects on the outcomes of interest. While participants were able to engage in all CWP activities, participants without transportation were only able to access activities available at the agency at which they enrolled. Despite these limitations, results from the evaluation showed that the CWP contributed to improvements in physical and mental health among program participants. More importantly, it is the first project to be implemented by five Cambodian-serving organizations that came together with the shared value of promoting physical and mental wellness by providing refugee and immigrant families with culturally-relevant and trauma-informed services.

## CONCLUSION

The CWP is the first project of its kind to examine the effects of community-defined practices on mental health among an underserved and under resourced community. Using a rigorous evaluation design that took into consideration the unique characteristics of the Cambodian community, we found that culturally-relevant information and services provided by trusted program staff led to statistically significant improvements physical and mental health outcomes. Findings from the focus groups revealed that these changes have the potential to extend beyond the individual, as participants share what they learned with their family and friends. The CWP fills a gap in service for the Cambodian community and as such, the CWP collaborative is currently working hard to disseminate findings from the local evaluation with key decision makers in order to generate additional support for sustainability of the program so other community members can continue to benefit from the program.

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