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Improving Health, Diet, & Nutritional Awareness Among the Veteran Population

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Abstract

The Veterans Transition Center of California (VTC) helps empower veterans that are experiencing homelessness by supporting them with resource connections to improve their health, financial, and housing status. Veterans suffer from poor health both physically and mentally for several reasons, however, having a poor nutritional diet is a common factor that results in critical medical conditions. The purpose of this project was to increase awareness of health, nutrition, and diet among veterans by creating a resource manual full of health-forward recipes using fresh and nutrient-rich ingredients. This manual became accessible to veterans through the VTC food pantry. Two veterans attended the community meeting and 14 veterans used the pantry following the implementation of the resource manual. Additional steps to motivate nutritional health practices among veterans are to increase the production of the resource manual to expand accessibility, add recipes, and ask for veteran feedback to incorporate their personal needs.

Keywords: homelessness, veterans, nutrition, diet, health

Agency and Communities Served

The Veteran's Transition Center (VTC) of California is an agency in Monterey County that provides transitional housing to veterans experiencing homelessness through various housing programs and services. VTC's mission and vision are to empower veterans that are homeless to become independent and self-sufficient. The agency operates under the Department of Veteran Affairs (VA) guidelines and provides emergency, transitional, and permanent housing to veterans. According to the Veterans Transition Center of California (n.d.), 80 beds are available for housing veterans throughout the programs. The agency utilizes a housing-first approach where they work with the veteran to create a housing plan by connecting them to resources and benefits that are available to them. Additional services are case management, medical referrals, transportation, and an on-site pantry. Within the next two years, VTC will expand by adding a 71-unit housing complex for individuals experiencing severe homelessness (Veterans Transition Center of California, n.d.). In Monterey County, there are an estimated 13,439 veterans, 933 of those veterans are living below the poverty level, and 4,409 veterans have a disability (U.S. Census Bureau, 2021). Additionally, a survey estimated that in 2022 Monterey County had 2,047 homeless individuals and 154 of them were veterans (Applied Survey Research, 2022).

Problem Model Background and Literature Review

Problem Statement

Homelessness continues to be a housing issue that results in detrimental health consequences and veterans are a vulnerable population that is predominantly affected for different reasons. VTC and other similar organizations are working diligently to provide permanent housing for homeless veterans, however, their efforts fall short due to insufficient

space for the number of veterans affected. As stated by the U.S. Department of Veterans Affairs (2022), on any given night in 2022, there were 33,136 veterans experiencing homelessness in the United States. From this number, 19,572 of the veterans suffering from homelessness were sheltered and 13,564 of the veterans were unsheltered. According to Tsai et al. (2016), veterans have a higher risk of becoming homeless when compared to their civilian peers. The researcher found that homeless veterans share many similarities with non-veteran homeless individuals, except that veterans are more likely to be older, male, and have a higher educational background. Although the data from the U.S. Department of Veterans Affairs (2022) found an 11% decrease in homelessness among veterans, the issue continues to impact a significant amount of veterans in the U.S.

Other than focusing on housing, the VTC makes great efforts in connecting veterans to health professionals for physical and mental health services. Veterans that are experiencing homelessness battle numerous societal issues and poor nutritional health among this population is a problem that has dire consequences if not addressed. Austin et al. (1996), found that the average number of meals a homeless person consumes a day is 1.8 deriving from several different sources. The study reported that soup kitchens provide the majority, 63%, of those meals to homeless veterans. Furthermore, restaurants provided 29% of meals, 20% came from grocery stores, and 9% were from garbage cans (Austin et al., 1996). Additionally, Notz and Byers (1993), found that 52% of male homeless veterans were malnourished, 21% had a deficiency of macronutrients, and 30% of their daily calories came from alcohol consumption. This research confirms the alarming health consequences and effects of social determinants on the veteran population.

Figure 1: Problem Model

| Contributing Factors | Problem | Consequences |
|----------------------|---|-----------------------------------|
| Food Insecurity | Poor health status among veterans that are homeless | Disabilities |
| Mental Health Issues | | Increased need for acute services |
| Poor Eating Habits | | Premature mortality |

Contributing Factors

Food insecurity

Food insecurity is associated with serious health risk factors that directly affect veterans that are experiencing homelessness. The VTC provides an on-site food pantry available to its veterans, however, this resource is available specifically to VTC veterans and alumni only. Food insecurity is more prevalent in individuals suffering from long-term severe medical illnesses and minority groups from ethnic and low economic status backgrounds and has increased in families severely affected by the Covid pandemic, according to Cohen et al. (2022). The research found that food insecurity affected 49% of homeless veterans and 35% of veterans with mental health issues. Wang et al. (2015) affirmed that having a physical disability also increases food insecurity by limiting individuals from accessing, preparing, and even consuming healthy foods. Increasing or worsening chronic health complications and diseases are the ramifications of poor eating habits of food-insecure individuals.

Mental Health Issues

Mental health issues are a common prevalence among the homeless veteran population that contributes to their poor health status. The VTC collaborates with the Department of Veterans Affairs (VA) to connect its veterans to mental health services. Bettmann et al, (2022)

found that the VA provides health services to 1.2 million veterans. Of those treated, 58% were found to have a mental health disorder. Common disorders diagnosed were post-traumatic stress disorder (PTSD), anxiety, depression, and substance abuse. Relating to veterans, Carlson et al. (2013), found that exposure to traumatic events such as combat may increase the development of PTSD, a common disorder among veterans. Co-occurring disorders are also common within this population. Ding et al. (2018) confirmed that experiencing simultaneous disorders increased the risk of poor mental and physical health in the homeless population. The journal specified co-occurring disorders affect 20-50% of the homeless population. Research demonstrates the direct effect mental health illnesses have on veterans and proves the drastic need for mental health prevention and aftercare services.

Poor Eating Habits

A nutrient-deficient diet tends to be a commonality for the veteran population, leading to health illnesses and disabilities. The VTC's pantry provides an array of nutrient-rich and fresh ingredients, however, it is evident that processed, sugary, and high in calorie foods are the most popular among the veterans (Hernandez, 2023). Poor nutrition may be due to several factors. Tessier (2017), explained that veterans experiencing mental illness suffer from health issues due to poor eating habits, being overweight, and using nicotine. Black et al. (2019) reported that veterans possess substandard health statuses and habits. Research proves that diet alone can prevent chronic health conditions and obesity (Story et al., 2008). The study suggests increasing more fruits, vegetables, whole grains, and nutrient-rich foods and avoiding saturated fats, trans fats, sodium, added sugars, and excessive calorie foods to improve one's diet and overall health. However, accessing and consuming healthy foods are not as simple as it sounds. Although our food systems have had major technological advancements, processed foods tend to be an easier

and more cost-effective option for low-income families, schools, and predominantly minority-populated areas (Story et al., 2008). Conforming to unhealthy, yet convenient, foods impacts at-risk populations detrimentally with poor eating habits that can continue into future generations.

Consequences

Disabilities

Developing a new or additional disability is a consequence that poor health can lead up to. Research states that veterans with disabilities have a history of previous underlying health conditions which increases their risk of developing a disability (Littman et al., 2012). This journal highlights that preventative services are critical in preventing disabilities, however, obstacles such as inaccessibility to doctor offices, transportation, lack of women's health facilities, and limited time all inhibit veterans from obtaining preventative services. Frain et al. (2010) stated that disabilities among military personnel have been the highest within the past three decades. The research estimated that for every one death during active duty, there are 16 additional wounded soldiers and about 20% of military personnel are discharged with a mental health diagnosis. This emphasizes the high rates of disabilities that veterans develop during their military service.

Acute Care Services

An additional effect that derives from poor health among homeless veterans, is that they require a more frequent and higher level of care. Blonigen et al. (2022) confirmed that homeless individuals account for half or more of the population that has a high need for intensive care services. The study stated that veterans are directly affected as they account for a significant

portion of the homeless adult population. Similarly, Szymkowiak et al. (2017) found that homeless individuals, specifically veterans, have higher frequent emergency room visits resulting in high medical costs due to a lack of preventative services. This research states that the use of acute care services is due to several factors such as trauma, substance use, exploitation, and exposure to hazardous surroundings. Homeless veterans are super-utilizers of these services, as they lack alternative healthcare options resulting in their health status reaching dangerous levels that require immediate emergency care (Szymkowiak et al., 2017).

Premature Mortality

Early mortality is a detrimental consequence of unhealthy eating habits or malnourishment among veterans. Schinka et al. (2018) reported that individuals suffering from homelessness have an increased risk of premature death. The researchers stated that malnutrition was one of the poor nutrition-related factors that increased early mortality. Other health-related factors included environmental diseases, social inequity, and mental health disorders. Additional factors contributing to premature mortality include the use of tobacco, and alcohol, lack of exercise, and poor eating habits (Haibach et al., 2017). The study demonstrated that mortality is more prevalent among homeless veterans when compared to non-homeless veterans. The results of the study demonstrated that after an 11-year follow-up with the group, 34.9% of the homeless veteran sample died whereas, only 18.2% of the non-veteran sample died (Schinka et al., 2018). This data highlights the risk that veterans have of experiencing premature mortality.

Project Description and Implementation Process

Project Description

The focus of the project was to increase health and nutrition among VTC veterans. Increasing nutritional health can be reached by incorporating healthy foods into their daily meals. To support this goal, a recipe book full of nutrient-rich and simple-to-create recipes was created and made available at the on-site pantry for VTC veterans to access. The recipes focus on key ingredients that are commonly available in the pantry. The manual consists of 20 recipes that cover breakfast, lunch, and dinner ideas. Additionally, applying these recipes during the VTC group cooking class allows a step-by-step and hands-on approach to teaching cooking skills and the importance of cooking health-forward recipes. To support this project, an informative flyer was created and distributed to inform VTC staff members and veterans of the resource manual and the cooking class that are available to them. Lastly, The project was presented at the VTC Community Meeting to reach the VTC veterans and educate them on the importance of eating nutritional meals to increase their overall physical and mental health status.

Project Justification & Benefits

The project's objective was to improve health among veterans by refining their eating habits to incorporate a more nutrient-rich diet. The expectations were to provide a health-increasing project for veterans that has longevity and potential for future growth. As reported by Black et al. (2019), the veteran population demonstrates poor eating habits and health conditions, which are the contributing factor that the project addressed. First, the project made healthy recipes accessible to the veterans at the on-site pantry. Second, there was an opportunity to increase culinary skills through the cooking class that demonstrated the available recipes. Lastly, the project highlights the benefits of a healthy diet and brought awareness to the health risks that can develop from poor eating habits.

The project has been developed to provide a service for the agency that does not expire. Also, the project can grow by adding new recipes, incorporating inclusive recipes for individuals with food restrictions, and incorporating food alternatives for those with food allergies. Since poor eating habits are common among VTC veterans, the project helped address this issue through the support of resources, skill learning, and education. This project aligns with VTC's mission which is to empower veterans to be more self-sufficient and independent. By educating veterans on nutritional health and teaching cooking skills, they will become more independent and aware of their nutritional health.

The agency benefits from having additional support for veterans regarding their nutritional needs that is accessible at their food pantry. Having a health-forward resource manual increases the benefits that the agency has to offer to incoming veterans. Additionally, the veterans benefit from the education and skills they gained through the resources and skill-building opportunities. Overall, the project empowers VTC by increasing the services offered as they have provided services to veterans for the past 25 years (Veterans Transition Center, n.d).

Expected Outcomes & Assessment Plan

It was expected that 10 veterans would attend the Community Meeting presentation put on weekly to inform veterans of resources that are available to them. Additionally, it was expected that 15 veterans would visit the pantry once the resource manual was available for utilization. Based on the attendance during the presentation at the VTC Community Meeting and the use of the food pantry, awareness of health, nutrition, and eating habits should increase among the veterans. Attendance data will be measured by having a sign-in sheet at both the meeting and the food pantry.

Implementation Process

The focus of the project is to improve veterans' health by creating a recipe book full of healthy and nutrient-rich meals that is accessible at the VTC pantry. Collaboration with the pantry manager was the first step to implementation to inform him of the project, gain access to the pantry, and gain permission to observe the food deliveries. This aided in gaining knowledge of what are common food items available at the pantry to influence the recipes created. An important part of implementing the project was to observe Trader Joe's delivery, as this is the most popular among the veterans. Assisting as a facilitator for the VTC group cooking class was the next part of the project. This allowed a hands-on approach to demonstrating health-forward recipes and strengthening cooking skills among the veterans.

Next for implementation was creating and completing the resource manual. This task was accomplished by researching and creating healthy recipes that are in alignment with the food items available at the pantry. With the help of Canva, a graphic design platform, the recipes were designed to be visually appealing and easy to read by its reader. Once the recipes were complete, the next step was to print, laminate, and organize the book. Along with the recipes, a flyer was also created to inform veterans about the recipe resource that is available to them. This flyer is the face of the manual and was distributed throughout the VTC office and staff to reach as many veterans as possible. Once the manual was complete, it needed to be seen and approved by the VTC mentor to continue with the last few steps of implementation.

The approved and final copy of the book was placed in the pantry where it can be accessed by the veterans. The laminated copies allow veterans to take a picture of the recipes, however, printouts are also available in a separate binder, in case anyone prefers a take-home copy. The final part of the implementation was to present the project at the community meeting.

This meeting welcomes all VTC veterans and serves as an informative meeting that presents news and resources that may benefit the veterans. The goal was to inform the veterans of this newly available resource and to encourage them to improve their eating habits and diet by utilizing the resource manual.

Project Results

Following the community meeting, the results showed that two veterans were present and informed about the new resource. The following day, 14 veterans accessed the manual when visiting the pantry. The community meeting presentation did not meet the expected outcome of 10 veterans in attendance. The two veterans that were present at the meeting reacted positively and were excited about the resource book. The expectation that 15 veterans would access the pantry when the project was implemented was nearly met with 14 veterans utilizing the pantry and manual that day.

Conclusion & Recommendation

Improving nutrition, diet, and health among VTC veterans, can be done by increasing the availability of the resource manual. This can be accomplished by publishing enough manuals to have available at each housing unit. Making the manual available at the veteran's housing unit can motivate them to cook their food from scratch, assist with ingredient preparation, and save them time by not having to travel to the pantry to reach the resource. Effectiveness can also be increased by adding recipes to the book. Asking for veteran feedback on what recipes they may be interested in, can add to project improvement. Lastly, using the cookbook recipes as the class material during the VTC cooking class provides a hands-on approach and influences veterans to cook with fresh nutrient-rich ingredients rather than choosing processed and unhealthy food choices.

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Appendix A

Project Implementation Plan

| Task | Timeline | Parties Involved | Materials/ Services Needed | Completed Product |
|---|-----------------|---|--|---|
| Visit pantry and introduce self and project to pantry manager | By Feb. 9, 2023 | Myself and the pantry manager | n/a | Estimated 10 minutes to introduce myself and project and observe food items available at pantry |
| Observe a food delivery, | By Feb. 9, 2023 | Myself, VTC veterans, pantry manager and volunteers, and Trader Joe's | Note pad, phone camera | Take notes and photos of food items being delivered by Trader Joe's. Observed the delivery process |
| Begin culinary group class | Feb. 14, 2023 | Myself, case manager, VTC veterans | Food items, room/space for the class, cooking tools like an electric stove, bowls, knives, cutting boards, etc..., and sanitation/ cleaning products | Prepared and cooked a healthy nutrient-rich meal to improve cooking skills and health among veterans. |
| Check in with mentor for approval of project | Mar 28, 2023 | Myself and mentor | Appointment time, completed project | Set an appointment to sit with my mentor and show them the completed project. If he |

| | | | | |
|--|----------------|---|---|--|
| | | | | approves then I can proceed with the next steps. If not, then I will fix or change things based on my mentor's feedback. |
| Create and complete recipe binder | April 11, 2023 | Myself | Binder, the master key of recipes, printer, paper, and Canva computer program | Create a minimum of 10 healthy nutrient-rich recipes, design the recipes using Canva, laminate them and place them in a binder and print copies for veterans to take home. |
| Complete project flyer | April 11, 2023 | Myself | Canva program, printer, and paper | Design a flyer that informs readers of the recipe book and where they can locate it. This flyer will also be the face of the binder. |
| Leave recipe binder at the pantry | April 17, 2023 | Myself and the pantry manager | Recipe binder | Now I will take the completed binder to the pantry manager and place it next to the sign-in sheet for easy visibility and utilization. |
| Present the project at the Community Meeting | April 17, 2023 | Myself, the case manager supervisor, and VTC veterans | Recipe binder and flyers | I will present my project to the veterans at the community |

| | | | | |
|--|-------------------|--------|---------------|--|
| | | | | meeting. The presentation will inform them of the recipe book, where they can find it, and how the focus is to improve their health through diet and nutrition. I will also have flyers available for anyone interested. |
| Assess how many veterans attended the community meeting and accessed the pantry once the project was implemented | April 17-18, 2023 | Myself | Sign-in sheet | Provide a sign-in sheet during the Community Meeting to measure how many veterans I was able to inform about my project and how many utilized it at the pantry. |

| | | | | |
|---|-----------------------|---|---------------|--|
| <p>Collaborate with case managers to inform them of the project</p> | <p>April 10, 2023</p> | <p>Myself, case managers, case manager supervisor, and director</p> | <p>Flyers</p> | <p>I will speak to every case manager at VTC to inform them of my project this way they can inform their clients of it as well. I will distribute flyers as well for reference. The goal is to reach as many veterans as possible.</p> |
|---|-----------------------|---|---------------|--|