

# Warren J. Baker Endowment

*for Excellence in Project-Based Learning*

# Robert D. Koob Endowment for Student Success

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## FINAL REPORT

*Final reports will be published on the Cal Poly Digital Commons website  
(<http://digitalcommons.calpoly.edu>).*

### I. Project Title

Operation Nutrition: Assessment of California National Guard On Their Mission Toward Better Health

### II. Project Completion Date

March 11, 2017

### III. Student(s), Department(s), and Major(s)

(1) Nick Gusto, FSN, Nutrition Science

### IV. Faculty Advisor and Department

Kari Pilolla, FSN

### V. Cooperating Industry, Agency, Non-Profit, or University Organization(s)

California Army National Guard

### VI. Executive Summary

Operation Nutrition was executed in June 2016. A group of 22 men and women from the 49<sup>th</sup> Military Police Brigade of the California National Guard participated in our nutrition intervention. There is currently no nutrition education program in place for the California National Guard; thus, the overall goal of this project was to a pilot nutrition education program toward improving nutritional status and reducing the risk of developing Metabolic Syndrome in a pre-select group of at-risk California National Guard Members. Criteria for a Metabolic Syndrome diagnosis include having a combination of any 3 of the following symptoms: elevated measures of triglycerides, fasting blood glucose, blood pressure, and waist circumference, and reduced HDL cholesterol.

At baseline, the Nutrition Team collected data on the soldiers, including body composition using a dual-energy x-ray absorptiometry machine, height, weight, waist circumference, blood pressure, blood labs, and 3-day diet recall data. Unfortunately, baseline data revealed that two of the 22 participants already fit the diagnostic criteria for Metabolic Syndrome.

As part of the pilot intervention, a basic nutrition seminar was delivered to provide the necessary skills to promote increased health and wellness through the adoption of long-lasting lifestyle changes. This newly acquired nutrition knowledge was reinforced through hands on

experience in the kitchen that included lessons on cooking well-balanced and nutritionally sound meals. Our intention with this was to implement Cal Poly's *Learn by Doing* to provide soldiers with the means—both intangible as well as material—to improve their eating habits and to demonstrate the adoption of such practices before the end of Operation Nutrition.

Due to difficulties in maintaining correspondence and communication with the majority of participants, the project did not go as originally planned. Though 22 participants began the project, only two participants returned for follow-up. Feedback received from the participants indicated the program had a positive effect on overall nutrition knowledge despite the lack of follow-up data.

## **VII. Major Accomplishments**

(1) Implementation of the first known nutrition education program for the California Army National Guard with the potential of this program spreading throughout various military branches.

(2) Application of Cal Poly's *Learn by Doing* philosophy through student involvement with initial assessment, data collection, education, diet analysis, and meal planning for participating soldiers.

(3) Development of professional skills as this was great exposure to grant writing, working with a diverse population, clinical lab work, and execution of Operation Nutrition in and of itself.

## **VIII. Expenditure of Funds**

Central Coast Pathology Lab Blood Work

Session 1: \$1642.30

Session 2: \$158.00

Total: \$1800.30

There was a significant decrease in cost between Session 1 & 2 due to participant loss through follow up. Session 1 had 22 participants and Session 2 had two participants.

## **IX. Impact on Student Learning**

This project allowed me to demonstrate my acquired nutrition knowledge and apply it to real life situations. The project required face to face and hands on interactions with approximately twenty-two strangers, both of which are the epitome of Cal Poly's *Learn by Doing*. These soldiers started out as strangers and, by the end of the project, were considered friends. The cooperative effort between Cal Poly and The California Army National Guard was the first of its kind and was executed with military-like precision. It could not have been performed without the brilliant participation of Cal Poly Professors Dr. Kari Pilolla and Dr. Scott Reaves, as well as students alike. Many unique challenges occurred throughout the duration of this project and they were handled in a professional and timely manner. The skills developed on this journey will be used on a daily basis and endure a lifetime. Most importantly, lasting relationships were formed and it is all thanks to the Baker-Koob Endowment for student success.