

4-22-2026

Social Support and Weight Management Behaviors Lived Experiences of Overweight Native Hawaiian Women

Satu Gruenstein
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Clinical Psychology Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Allied Health

This is to certify that the doctoral dissertation by

Satu Gruenstein

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Patti Barrows, Committee Chairperson, Psychology Faculty
Dr. Courtney Prather, Committee Member, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2026

Abstract

Social Support and Weight Management Behaviors
Lived Experiences of Overweight Native Hawaiian Women

by

Satu Gruenstein

MS, Walden University, 2012

BA, University of Massachusetts, 2009

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

February 2026

Abstract

The Hawaiian Islands have an alarming concentration of obesity and related chronic health issues and many Native Hawaiian women do not have access to culturally sensitive weight loss information. The purpose of this phenomenological study was to increase understanding of the lived experiences of middle-aged Native Hawaiian women, relating to weight loss, weight management, and the impact of social support and cultural factors on those experiences. The conceptual framework for the study included the models of social support and social networks. A phenomenological research design and purposeful sampling were used to conduct semistructured interviews with eight middle-aged Native Hawaiian women, who were overweight with BMI of 25 or higher and had experienced past failure to lose weight permanently. Data collection and analysis followed Moustakas' data analysis process. The study illuminated that some narratives of some Native Hawaiian women's weight management efforts are multifaceted, culture-specific, and connected to past and ongoing traumas. The key results indicated that a lack of perceived social support may have shaped these women's health behavior, mental health, and health outcomes in negative ways. The participants shared their strong distrust in the medical establishment and their experiences of not feeling seen or heard, but they also demonstrated their resilience through strong sense of *kuleana* and by using positive self-affirmations. Findings of this study may benefit clinical and health psychology practitioners who plan weight loss interventions and weight maintenance support for Native Hawaiian women, leading to potential positive social change by providing a deeper understanding of the unique barriers experienced by this population.

Social Support and Weight Management Behaviors
Lived Experiences of Overweight Native Hawaiian Women

by

Satu Gruenstein

MS, Walden University, 2012

BA, University of Massachusetts, 2009

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

February 2026

Dedication

To Opi

Acknowledgments

This work could not have been completed without a number of people who deserve to be thanked for their support. First, I want to express my gratitude to Dr. Patti Barrows and Dr. Courtney Prather, who supported me from 2024 to 2026 as my Dissertation Committee. I also want to thank my initial Dissertation Committee, Dr. Robin Friedman and Dr. Jane Lyons, who patiently guided me through the proposal, oral defense, and data collection phases from 2018 to 2022. Additionally, I want to acknowledge my clinical supervisor, Dr. Malia Daniel, whose mentorship and support I cannot thank enough.

There are a number of medical practitioners whose contributions throughout the years have been crucial for my success yet often gone unnoticed. I want to acknowledge the significant role of all the doctors and nurses who treated me during this long journey and made it possible for me to reach my goal. I especially want to thank Dr. Danielle Stovaw at Hawaii Pacific Health and Dr. Michael Carney and his amazing team at Kapi‘olani Medical Center for Women and Children in Honolulu.

My most heartfelt thanks go to my beloved husband Opi, who remained supportive of my endeavors even when the circumstances worked against my goals.

Finally, I want to express my gratitude to the brave women who contributed to this study. Thank you for your time, openness, and willingness to participate. Through the process, I grew truly inspired by the strength and resilience I saw in all of your stories, which may be the main reason I managed to reach the finish line.

Table of Contents

Chapter 1: Introduction to the Study.....	1
Introduction.....	1
Background.....	2
Problem Statement.....	8
Purpose of the Study.....	9
Research Questions.....	10
Conceptual Framework for the Study.....	10
Nature of the Study.....	12
Definitions.....	12
Assumptions.....	14
Scope and Delimitations.....	14
Limitations.....	15
Significance.....	16
Potential Implications for Positive Social Change.....	17
Summary.....	17
Chapter 2: Literature Review.....	19
Introduction.....	19
Literature Search Strategy.....	20
Conceptual Framework.....	21
Social Support Model.....	21
Social Network Theory.....	24

Literature Review Related to Key Concepts.....	26
Defining Overweight and Obesity	27
Predictors of Overweight and Obesity in Native Hawaiian Population	28
Association Between Social Support and Health.....	32
Online Social Support and Social Media	37
Factors Contributing to Weight Management.....	38
Health Literacy, e-Health Literacy, and Social Ties.....	44
Summary and Conclusions	46
Chapter 3: Research Method.....	49
Introduction.....	49
Research Design and Rationale	49
Role of the Researcher	50
Methodology	52
Participant Selection Logic.....	52
Instrumentation	54
Procedures for Recruitment, Participation, and Data Collection.....	54
Data Analysis Plan.....	56
Issues of Trustworthiness.....	60
Ethical Procedures	61
Summary.....	63
Chapter 4: Results	65
Introduction.....	65

Setting	65
Demographics	66
Data Collection	67
Data Analysis	69
Evidence of Trustworthiness.....	73
Credibility	73
Transferability.....	73
Dependability	74
Confirmability.....	75
Results.....	75
Identified Themes	76
Summary	99
Chapter 5: Discussion, Conclusions, and Recommendations.....	101
Introduction.....	101
Interpretation of the Findings.....	102
Kuleana (Responsibility)	102
Belonging/Aloha Through Food.....	103
Food Insecurity	107
Lack of Perceived Support.....	107
Health and Mental Health	109
Distrust of the Medical Establishment.....	111
Adverse Childhood Experiences.....	112

Alcohol and Substance Abuse	115
Positive Self-Affirmations	115
Limitations of the Study.....	116
Recommendations.....	117
Implications.....	118
Implications for Positive Social Change.....	118
Conclusion	119
References.....	121
Appendix A: Study Invitation Flyer	142
Appendix B: Pre-Screening Questionnaire.....	143
Appendix C: Guiding Interview Questions.....	144
Appendix D: Counseling Referral Telephone Numbers.....	146

Chapter 1: Introduction to the Study

Introduction

Overweight, obesity, and related health issues are an acknowledged problem on the islands of Hawaii (Ing et al., 2018; Kahalokula et al., 2018; Sinclair et al., 2019). Of all Americans, Native Hawaiians exhibit with the highest rates of obesity of any racial/ethnic group (Braden & Nigg, 2016; Kahalokula et al., 2018) and live the shortest lives (Sinclair et al., 2019). Information about the health benefits of weight loss and weight management is thought to be available to all ethnic, socio-cultural, and economic groups on the Hawaiian Islands through schools and health care providers (Braden & Nigg, 2016). However, many factors have been identified for Native Hawaiians as hindering access and receptiveness to such health information. Examples of these factors include socio-economic disparities (Kahalokula et al., 2018), inter-generational trauma, language issues, intergroup biases, stress (Kahalokula et al., 2017), and inadequate health literacy (Bourgette-Henry et al., 2019; Lassetter et al., 2015; Sentell et al., 2020a; Ta Park et al., 2018). Perceived racial discrimination has also been identified as a factor significantly impacting the health behavior change outcomes of this ethnic group (Hermosura et al. 2019; Ing et al., 2019; Ta Park et al., 2018).

It has been suggested that one way of developing more efficient preventative intervention strategies would be for scholars to identify how unhealthy social behaviors develop (Greaves et al., 2017). In this study, I focused on the lived experiences of Native Hawaiian women regarding weight loss and weight management, as few studies have focused on this population in weight loss and weight management literature. There is a

need to better understand the perceived barriers for permanent weight loss and the role of social support in weight loss behaviors, as perceived by Native Hawaiian women, and within the specific context of Hawaiian culture. A better understanding of these perceived barriers may add to the knowledge base used to develop more effective and culturally sensitive weight loss interventions and supports for Native Hawaiian women.

Obesity is associated with less active and less participatory lifestyles, covert discrimination, ostracism, social isolation, economic challenges, and even job loss (Centers for Disease Control and Prevention [CDC], 2019). Potential positive social change implications of this study may include a deeper understanding of perceived barriers for permanent weight loss and the role of social support within the context of Hawaiian culture. Efforts to ameliorate overweight and obesity in Native Hawaiian women may gradually lead to less weight discrimination, less psycho-social issues, and better integration to the society. Considering the collectivistic and family-centered nature of the Native Hawaiian culture and the traditional role of women in the Native Hawaiian families (Lassetter et al., 2015; Sentell et al., 2020b), these efforts may possibly even contribute to better collective health in the island communities.

Background

The Hawaiian Islands have an alarming concentration of obesity and related chronic health issues (Ing et al., 2018; Sinclair et al., 2019), and Native Hawaiians exhibit the highest rates of obesity of any racial/ethnic group in the United States (Braden & Nigg, 2016). While health issues related to overweight and obesity are an acknowledged problem in Hawaii, there is an underrepresentation of Native Hawaiians in overweight,

obesity, and weight loss literature, as well as in the research on the predictors and consequences of overweight and obesity in Native Hawaiians (Bacong et al., 2016; Braden & Nigg, 2016; Kahalokula et al., 2019). Through this study, I contributed to the knowledge base on weight loss, weight loss maintenance, and social support, and explored the weight loss maintenance challenges experienced by Native Hawaiian women.

Social support plays a role in obesity prevention and successful long-term weight maintenance (Greaves et al., 2017; Karfopoulou et al., 2016). Other psycho-social and contextual factors contributing to successful intentional weight loss include self-regulation, self-efficacy, and dietary and lifestyle changes. Sainsbury et al. (2019) found that difficulties in emotion-regulation predicted regaining weight after initial weight loss success. In their systematic review of obesity interventions conducted between 2000 and 2012, Teixeira et al. (2015) investigated consistent individual-level mediators of weight change in adults and found that the mechanisms for successful outcomes included, i.e., higher autonomous motivation, self-efficacy, and psychological flexibility. According to Teixeira et al. (2015), self-regulation skills come to play when there is a gap between intention and behavior. Teixeira et al. (2015) also pointed out that many studies in their analysis were characterized by poor methodology, which was later confirmed by Carraça et al. (2018).

The role of social support in Native Hawaiian weight loss efforts was briefly investigated by Kahalokula et al. (2013), who conducted a quantitative lifestyle intervention study on a sample population of Native Hawaiians and Pacific Islanders and

examined the socio-demographic, behavioral, and biological factors of their study participants. The intervention involved a 3-month initial weight loss program and a following phase in which participants were divided either family/community focused intervention group or a control group that did not receive such a follow-up intervention (so called standard behavior group). Kaholokula et al. (2013) found that the initial weight loss was an important factor in sustaining motivation for weight loss maintenance. Another finding indicated that less than half of the Native Hawaiian participants (37.5%) were able to meet their weight loss goals during the intervention, which was compared to the considerably higher number of Chuukese participants (63.6%). Chuukese are a significant subgroup of Pacific Islanders residing in Hawaii, with their own distinct culture and customs. According to Kaholokula et al. (2013), explanations for the poor outcomes in the Native Hawaiian group existed, including possibly higher familiarity with the provided weight loss information (compared to the Chuukese participants) and previously failed weight loss attempts.

To investigate the causes of youth obesity in Native Hawaiian and Other Pacific Islanders (NHOPI or NHPI), Braden and Nigg (2016) performed a systematic meta-analysis of studies conducted on this group. Based on their analysis and a qualitative synthesis, Braden and Nigg (2016) presented modifiable environmental factors in Native Hawaiian obesity. These factors include pre-natal/early life risk factors, such as infant feeding mode, geographic location, education, and socio-economic disparities commonly experienced by NHOPI youth (Braden & Nigg, 2016).

Food is known to play a significant role in Native Hawaiian culture, interaction, and health (Ing et al., 2018; Sinclair et al., 2019). Wong and Kataoka-Yahiro (2017) offered a comprehensive look on nutrition and health of Native elders. In their systematic literature review of 29 studies, they found that although Native Hawaiians eat the richest diet on the islands and have the highest BMI levels, traditional Hawaiian diet programs and family support were shown to benefit and improve the health and well-being of the study participants. Wong and Kataoka-Yahiro (2017) concluded that revitalization of the traditional culture and social interaction may lead to improving the health and well-being of Native Hawaiians.

Townsend et al. (2016) provided findings of the role internalized locus of control plays in Native Hawaiian weight management. Their quantitative study examined the effectiveness of a worksite-based weight loss/diabetes prevention intervention, with a pretest-posttest design. According to Townsend et al. (2016), family support was among the factors that improved during the three-month long intervention, while internalized locus of weight control was among the factors positively associated with weight loss.

Many successful weight loss behaviors have already been identified (Soini et al., 2016), which helps scholars, practitioners, and stakeholders to design better health behavior change interventions and weight loss supports. Marks et al. (2015) maintained that a qualitative study of the subjective experiences of behavior change would be of value in this context. Greaves et al. (2017), too, suggested that one way to develop more efficient preventative intervention strategies would be for scholars to identify how unhealthy social behaviors initially develop. Kulik et al. (2014) encouraged scholars to

investigate what the ideal amount, medium, nature, and origin of social support are, to enhance social support for weight loss or maintenance. The relationship between social support and weight maintenance has been investigated in quantitative studies (Karfopoulou et al., 2016; Kim et al., 2017), but a more thorough understanding of the role of social support in behavioral lifestyle changes that contribute to weight loss and maintenance has also been called for (Bishop et al., 2013). Most recently, Kaholokula et al. (2018) have called for more culturally sensitive and effective research in which the uniqueness of the NHPI as a socio-ethnic group and the need to design more tailored health promotion and health behavior interventions for this population would be acknowledged and better catered for.

While overweight and obesity are recognized as a severe public health issue in the United States, the common treatments have been designed mainly around short-term weight loss goals (Marks et al., 2015). Intervention approaches are typically based on strict and quick dieting along with exercise, with the underlying assumption that once the goal weight is reached, a person will have the motivation and self-discipline to maintain it. Research shows that the human body often adapts to weight changes hormonally in counterproductive ways; the lost weight, and possibly even more, is quickly gained back after the weight loss goal has been reached and, in turn, a sense of failure, lower self-esteem, anxiety, and depression is assumed to make weight loss even a harder goal than before (Marks et al., 2015; Soini et al., 2016). None of this appears to apply well to the lifestyle of islander women, in which family responsibilities take precedence over self-care, sharing heavy meals is considered hospitable and caring, and larger body size is

widely accepted and sometimes even revered. The Hawaiian Islands have an alarming concentration of obesity and related chronic health issues (Ing et al., 2018; Sinclair et al., 2019), with Native Hawaiians exhibiting the highest rates of obesity of any racial/ethnic group in the U.S. (Braden & Nigg, 2016). Nevertheless, it has not been explored what might motivate Native Hawaiian women in terms of weight loss, and the role of social support in health behavior change has not been investigated in this population.

Additionally, the approaches stemming from the Western research and health promotion tradition may not be the most effective with the NHPI population, as they are not sensitive to the cultural values, practices, and other contextual factors prevailing in Hawaii (Kaholokula et al., 2018).

Instead of focusing on short-term behavior, highlighting the benefits of larger lifestyle changes and weight control as an ongoing process may be more efficient and successful (Teixeira et al., 2015). Successful treatment of obesity, as well as long-term weight management require motivation, flexibility, and sensitive support systems (Soini et al., 2016). Focus on body acceptance (Teixeira et al., 2015), peer support groups (Marquez et al., 2016; Soini et al., 2016; Teixeira et al., 2015), and culturally sensitive prevention programs (Kaholokula et al., 2018; Marquez et al., 2016) have proven to be helpful in permanent weight control efforts.

It has not yet been addressed in research literature how the above findings may apply to Native Hawaiian women and their weight loss behaviors. The lived experiences of Native Hawaiian women have not been explored regarding the relationship between weight loss management and social support. While contextual and behavioral predictors

of obesity in Native Hawaiians have been investigated in some older quantitative studies (Goldman et al., 2012; Kaholokula et al., 2013), there is a gap in the literature exploring the perceptions and experiences of Native Hawaiian women and the relevance of social support in their weight management behaviors.

Overweight and obesity related health issues are an alarming problem on Hawaii islands (Ing et al., 2018; Sinclair et al., 2019). This study was needed to add to the knowledge base of health behavior change. Barriers for permanent weight loss and the role of social support in weight loss behaviors, as perceived by Native Hawaiian women, and within the specific context of Hawaiian culture, need to be better understood. Information needs to be gathered in culturally sensitive and respectful ways that are congruent with the preferred ways NHPI share information (Kaholokula et al., 2018). By exploring and learning from the lived experiences of these women through semi-structured interviews, as suggested by Kaholokula et al. (2018), more effective and culturally sensitive weight loss interventions and supports can be developed for this population. This, in turn, may lead to improved public health on the islands, as Hawaiian women are known to rely on social networking when it comes to health literacy and gathering and confirming health information (Sentell et al., 2020a; Sentell et al., 2020b).

Problem Statement

Native Hawaiian women are exposed to culture and lifestyle of the island state that has an alarming concentration of obesity and related chronic health issues (Ing et al., 2018; Rougée et al., 2016), with Native Hawaiians exhibiting the highest rates of obesity of any racial/ethnic group in the U.S. (Braden & Nigg, 2016; Kaholokula et al., 2018;

Rougée et al., 2016). Whereas less than 30% of American adults are known to be obese, up to 70% of Native Hawaiian women meet the criteria (Rougée et al., 2016; Kaholokula et al., 2018). Some island traditions and values involve calorie rich everyday diet and a sedentary lifestyle, in which gaining weight may be considered normal as people age (Braden & Nigg, 2016). Many Native Hawaiian women do not have access to weight loss information, choose to ignore it for various reasons, or do not have trust in the information provided by Western health providers. Conversely, they may perceive the information from their peers and elders as more trustworthy than that originating from healthcare providers (Bacong et al., 2016; Braden & Nigg, 2016). It has been suggested that one way to develop more efficient preventative intervention strategies would be for scholars to identify how unhealthy social behaviors develop (Greaves et al., 2017). It has also been suggested that the health promotion strategies developed in the West do not serve the NHPI population well as they ignore the values, traditions, and information sharing customs of the island culture (Kaholokula et al., 2018). More research is needed on the lived experiences of Native Hawaiian women, regarding health behavior. Furthermore, according to Kaholokula et al. (2018), researchers should utilize the preferred information sharing strategies of this population, such as semi-structured interviewing.

Purpose of the Study

There is a need for increased understanding about the social support and cultural factors affecting weight loss. The purpose of this phenomenological study was to understand the lived experiences of middle-aged Native Hawaiian women, relating to

weight loss, weight management, and to the impact of social support on those experiences and processes.

Research Questions

What are the lived experiences of overweight Native Hawaiian women regarding weight loss, weight management, and social support in these processes?

How do Native Hawaiian women describe cultural factors that contribute to weight management?

Conceptual Framework for the Study

The conceptual lens for the study included the models of social support and social networks. According to the social support model, social support may take varying forms, including emotional, tangible or intangible, informational, or companionship support (Uchino, 2009). Regardless of how social support manifests, there is often a significant difference between the perceived social support and the actual received social support (Uchino, 2009). This difference has interested scholars of health behavior change, as it is believed to explain some change resistance and levels of motivation (Uchino, 2009).

According to Rieger (2018), Greaves et al. (2017), and Karfopoulou et al. (2016), social support not only plays a role in obesity prevention and successful long-term weight maintenance but is a predictor of positive health outcomes. Carraça et al. (2018) found social support as non-significant as a predictor of successful weight loss but stated that many psychosocial factors have not been investigated enough to be drawn reliable conclusions about. Holt-Lunstad and Uchino (2015) called for health behavior research on perceived relationship quality, and specifically support responsiveness, because

subjective interpretations of support responsiveness may have an impact on health behavior outcomes. Thus, exploring how the study participants perceive their social support may shed light to their health behavior challenges, including weight management failures.

The social networks model, often called social network theory, views and explains behavior by breaking social relationships into so called nodes and ties. Nodes refer to the individual actors in the network system, and ties to the relationships between the network actors (Valente, 2015). According to this theory, network environment influences the way people act, and their position in a network has an impact on their behavior (Holt-Lunstad & Uchino, 2015). Analyzing a specific social network dynamic may help understand a person's health behavior. In the context of this study, analyzing a participant's perceived social support system may increase understanding of what role social support plays in her weight maintenance efforts.

The models of social support and social networks have often been used in the context of health behavior change and found reliable in predicting both positive and negative health outcomes (Uchino, 2009). While they are sometimes used interchangeably and are closely tied together, these two models each address in a distinct way the social and cultural factors that may contribute to success or failure in weight management. Flores et al. (2020) indicated that the classic measures of social networks and perceived social support yield no significant differences between racial and ethnic groups. Both models will be described and discussed to more detail in Chapter Two, providing a more in-depth analysis of why they were selected for this study.

Nature of the Study

This was a qualitative study using phenomenological research methods to explore the meanings of the lived experiences of overweight Native Hawaiian women. My intent was to emphasize the individual and shared experiences and perceptions of behavior and social contexts. This intent was met using the phenomenological approach that yielded rich information of the perceptions and lived experiences of the study participants (Moustakas, 1994). Data collection involved eight semi-structured interviews of overweight Native Hawaiian women that met specific criteria, such as past failure to lose weight permanently, 40-60 years of age, and residing on the Big Island of Hawaii. Data collection and analysis followed Moustakas' (1994) process.

I recruited participants from community health centers and weight loss support groups on the Big Island of Hawaii. The strategy was to gather rich, in-depth data that captured the participants' personal experiences and perceptions, regarding their culture, lifestyle, weight loss attempts, related social support, and perceived barriers to successful weight loss.

Definitions

The following terms are used in the research literature. An operational definition relevant to the proposed study is provided for each term.

Body Mass Index (BMI): As defined by Centers for Disease Control and Prevention (CDC, 2019), BMI refers to a person's weight in kilograms divided by the square of height in meters and may be used as an indicator of a person's level of body

fatness, but not as a diagnostic tool for health of an individual. BMI can also be used to screen for weight categories that may lead to health problems.

Health literacy: The person's ability to obtain, comprehend, and communicate information about health (Zudin et al., 2023).

Middle-Aged: Kokko (2018) defines middle adulthood consisting of years 35–60, with later adulthood beginning at 60 years. For this study, middle-aged is defined as 40–60 years old.

Native Hawaiian: A member of the indigenous Polynesian people whose ancestors were natives of the area which consists of the Hawaiian Islands prior to 1778 (42 U.S. Code § 3057k. <https://www.law.cornell.edu/uscode/text/42/3057k>). For this study Native Hawaiian is defined as a person who self-identifies racially, ethnically, and culturally as Native Hawaiian.

Overweight: Refers to an individual with a BMI > 25, which is considered the threshold for overweight by CDC (2019).

Perceived Social Support: Social support as subjectively experienced by the recipient of the support (Uchino, 2009).

Received Social Support: The actual support received by the recipient (Uchino, 2009).

Social Support: The experience of being valued, respected, understood, cared about, supported, and loved by other people. Social support may take varying forms, including emotional, tangible or intangible, informational, or companionship support (Uchino, 2009).

Social Networks: A system of social interactions and meaningful personal relationships that influences the way a person acts (Holt-Lunstad & Uchino, 2015).

Assumptions

When planning the study using a phenomenological approach, the primary assumptions are a belief that the researcher will have access to the targeted participants for interviews, and a belief that the participants will respond to interview prompts with transparency, honesty, and willingness to discuss their perceptions and lived experiences. I assumed the authenticity and accuracy of participants throughout the interview process and considered their subjective perspectives on their lived experiences valid and reflective of truth (Moustakas, 1994).

Scope and Delimitations

I designed the study to address a gap detected in health behavior change literature. The population of interest was chosen because of proximity and convenience, and because this group is underrepresented in health behavior research literature. Selection of participants was based on a purposeful sampling strategy. In this strategy, candidates are considered as rich sources of information having considerable experience with the phenomena being investigated (Creswell, 2013). In conjunction with purposeful sampling, I used the snowball sampling technique (Creswell, 2013) to help identify additional participants.

In this study, I focused on the relationship between perceived social supports and weight loss and weight maintenance behaviors among middle-aged Native Hawaiian women. I recruited the participants for the study from a pool of 40-60-year-old women

residing on the Big Island of Hawaii, identifying as Native Hawaiian, and self-reporting overweight or obesity (BMI > 25). Other delimitations of the study include the criteria that the participants self-reported having attempted weight loss and having experienced weight loss failure or weight maintenance failure within the past two years.

As common in qualitative research, the sample population was relatively small. Therefore, the results of the research may not be generalizable to the entire population. However, per the principles of phenomenological approach, the goal was not generalizability but to collect rich information and describe the lived experiences of the participants (Moustakas, 1994).

Limitations

Limitations of a study were understood as the restrictions over which the researcher has no control. Such limitations associated with qualitative studies are usually related to validity and reliability (Korstjens & Moser, 2018). In this study, the limitations include sample size and constraints related to methodology (Cresswell, 2013). The Hawaiian Islands are a unique socio-cultural environment with distinct history, values, behavior norms, and traditions (Kaholokula et al., 2018). The findings of this study may not be directly transferable to other ethnic populations or to other cultures or geographic locations.

An additional limitation was researcher biases. I am not Native Hawaiian and not integrated enough to the island culture to be considered local by those who are. An important part of the island culture is the local language, Hawaii Creole English, *'olelo pai ai* in Hawaiian, that is often the first language learned by *kama'aina* (locals). Not

being fluent in *'olelo* may have had an impact on the interview processes and interpretation of the data. Furthermore, I have had personal experiences with weight loss and weight maintenance behaviors that may have influenced the way I approached the topic and interpreted participant responses. To address these biases, I paid attention to transparency, recorded and transcribed all interviews, took careful notes of the research process, and used member checking to crosscheck the coding of the data (Moustakas, 1994).

Significance

In this study, the aim was to understand the lived experiences of Native Hawaiian women, relating to social support, weight loss behaviors, and weight maintenance. Conducting the proposed added data to the knowledge base on health behavior change and social support in general. Also, by conducting this study, I provided an original contribution to the research of weight loss maintenance and of lived experiences of Native Hawaiian women, as the existing health literature does not contain sufficient research to understand these behaviors in this culture. The study may be considered unique because the goal was to explore the subjective experiences and perception of a relatively unstudied population. The perceived barriers for health behavior change and the role of the social context in the change efforts of the study participants became better understood. Such insights can be added to the tools available for clinical and health psychology practitioners who plan long-term weight loss and maintenance interventions with this population.

Potential Implications for Positive Social Change

Obesity is associated with less active and less participatory lifestyle, covert discrimination, ostracism, social isolation, economic challenges, and even job loss (CDC, 2019). Positive social change may result with a deeper understanding of perceived barriers for permanent weight loss and the role of social support within the context of Hawaiian culture. Efforts to ameliorate overweight and obesity in Native Hawaiian women may lead to less weight discrimination, less psycho-social issues, and better integration to the society. Considering the collectivistic and family-centered nature of the Native Hawaiian culture, the traditional role of women as gatekeepers of health and nutrition information in the Native Hawaiian families (Lassetter et al., 2015; Sentell et al., 2020a), and the traditional information sharing dynamics in this population (Kaholokula et al., 2018), the findings of this study may contribute to better collective health in the island communities. The research outcomes can be used by public health and public policy officials to increase understanding of the lived experience of middle-aged Native Hawaiian women, regarding their health behavior change and the role of social support in their health behavior change. The collected data can be used in developing more effective health behavior change campaigns and programs. Additionally, the increased understanding may prove helpful in determining future directions for health behavior change research.

Summary

The purpose of this phenomenological study was to better understand the lived experiences of middle-aged Native Hawaiian women related to weight loss and weight

management. There appears to be insufficient information about the ways Native Hawaiian women perceive their social support and positive health behavior change mechanisms. Researchers have called for future qualitative studies that would use culturally sensitive interviewing techniques that acknowledge the local information sharing tradition (Kaholokula et al., 2018).

I conducted this study using Moustakas' (1994) phenomenological research design. The main research question addressed was: What are the lived experiences of overweight Native Hawaiian women regarding weight loss, weight management, and social support in these processes. As a conceptual framework for this study, I used models of social support and social networks. I will present a review of the related research literature in Chapter 2.

Chapter 2: Literature Review

Introduction

The Hawaiian Islands have an alarming concentration of obesity and related chronic health issues (Kahalokula et al., 2018; Sinclair et al., 2019), with Native Hawaiians exhibiting the highest rates of obesity of any racial/ethnic group in the United States (Braden & Nigg, 2016; Kahalokula et al., 2018). While overweight and obesity are acknowledged as a severe public health issue in the United States (Kahalokula et al., 2018; Sinclair et al., 2019), there is an underrepresentation of Native Hawaiians in obesity and weight loss literature, as well as in the research on the predictors and consequences of obesity (Bacong et al., 2016; Braden & Nigg, 2016). In this study, I explored the perceived social supports of overweight Native Hawaiian women, with the focus on how the social supports pertain to the study participants' lived experiences of weight loss and weight management behaviors.

Most theorists of health-behavior change and weight loss maintenance appear to focus on individual self-regulation and do not consider social factors, such as social support, in the equation. Social support has been found to play a role in both obesity prevention and successful long-term weight maintenance (Greaves et al., 2017; Karfopoulou et al., 2016). Social support has also been found to be an environmental factor in successful obesity treatment efforts (Soini et al., 2016). The purpose of this study was to explore the lived experiences of weight loss and weight management behaviors of middle-aged overweight Native Hawaiian women, along with the perceived social supports of the study participants.

In this chapter, I review the current research in the above-mentioned areas, including the limited research available on Native Hawaiian Women and on the factors impacting health behavior change in this population. I note a few studies on weight management after weight loss, as they pertain to the topic and target population, and explain the theoretical and conceptual framework I used in this study, in the light of existing research literature. I also review studies highlighting relevant cultural considerations.

Literature Search Strategy

To gather relevant sources for this literature review, I conducted exhaustive searches using the Walden University online library and Google Scholar. Exclusively peer-reviewed, scholarly articles were accessed using the databases EBSCOhost, PsycArticles, PsycBooks, PsycINFO, ProQuest Dissertations & Theses, SAGE, SocINDEX, Thoreau, and Pacific Islander Research Starter Collection. The list of keywords used included behavior, functional support, Hawaiian, health, health behavior, health behavior change, islander, lifestyle, Native Hawaiian, Native Hawaiian Women, NHPI, obesity, overweight, perceived support, Polynesian, social support, social networks, weight maintenance, weight management, and weight loss.

I conducted these database searches in several stages, using the above listed keywords both individually and in varying pairs and combinations, creating key phrases. Language limit qualifiers were set to English, Finnish, German, and Swedish. While a time limit qualifier was set to access sources dating only from 2016 to 2022, and eventually 2026, several older key articles were also located and accessed through

reference list reviews. After I identified the most relevant current articles on the topic, I screened the reference lists of those articles and reviewed them for additional literature of interest and pertinence. Similarly, I overlooked the time limiter when conducting database searches regarding the selected theoretical framework and seminal sources.

Conceptual Framework

In this study, I explored the lived experiences of overweight Native Hawaiian women relating to weight loss, weight management, and to the impact of social support on those experiences and processes. Therefore, I needed concepts for explaining and understanding health behavior outcomes, along with a model that addresses subjective experiences of social support. The conceptual framework for the study included the models of social support and social networks, which I will discuss below. These two models are often used in the context of health behavior change and found reliable in predicting both positive and negative health outcomes (Uchino, 2009). While they are sometimes used interchangeably and are closely tied together, these two models each address, in a distinct way, the social and cultural factors that may contribute to success or failure in weight management (Uchino, 2009). Additionally, these two models provide established concepts that are useful in analyzing the social supports and lived experiences of the study participants. These concepts include perceived social support, dimensions of functional social support, relationship quality, and social network influence.

Social Support Model

The concept of social support has been a major influence on health psychology research since 1980s, and the social support model, also referred to as social support

theory or the social support paradigm (Chouhy et al., 2020), has been widely used in the field of social sciences since the 1990s (Colvin et al., 2002). Stemming from traditions of sociology, intervention, and cognitive stress-buffering hypothesis, the model combined previous theories of belongingness and social solidarity into a new perspective on social support (Cohen et al., 2000; Lakey & Cohen, 2000) that permeates all areas of social life and across the lifespan (Chouhy et al., 2020).

Assessing Social Relationships: Types Of Measure

Based on the social support model, social relationships can be assessed as being either functional or structural measures of social support. Structural measures reflect the extent to which a person is integrated into society. Examples of such structural measures include marital status, social isolation, and aspects of social networks, such as the size and density of a network, or number of contacts. On the other hand, functional measures of social relationships reflect the functions provided by or perceived to be available from these social relationships. Functional measures include the actual received support as well as the subjective perceptions of support (Holt-Lunstad & Uchino, 2015). By gathering the subjective perceptions of the study participants, I was able to understand the social relationships of this group from a deeper perspective.

Perceived Social Support Versus Received Social Support

Social integration and relationships may be protective buffers for stress, making functional support an important concept in health behavior theory and research. However, there is often a significant difference between the perceived social support and the actual received support (Uchino, 2009). Perceived support involves a subjective expectation that

one has social support available when needed. Actual received social support can be measured objectively as a provision of some sort of functional support. These two constructs correlate only moderately, indicating that a person's perception of social support or lack thereof may not always adequately reflect the amount or the type of actually received support (Wills & Shinar, 2000). Evidence exists, however, linking perceived social support with positive health behavior change and beneficial influences on physiology (Holt-Lunstad & Uchino, 2015). As oppression and discrimination have been, and continue to be, part of Native Hawaiian transgenerational and everyday experience (Ing et al., 2018; Ing et al., 2019; Kaholokula et al., 2018), the concepts of perceived and received social support were relevant for this study.

Functional Social Support And Its Dimensions

Social relationships serve varying functions in people's lives, and the term functional social support describes this four-dimensional variability. Firstly, functional support can be *informational*, such as advice from a professional, friend, or family member. Some functional support may be *tangible*, such as direct material or financial aid, or other instrumental and practical means of support, such as a ride to a support group or an appointment. The third dimension of functional social support includes *emotional* support made available by caring and supportive individuals in a person's life. The fourth dimension, *belonging*, refers to sharing of social activities and a sense of companionship support (Holt-Lunstad & Uchino, 2015). These concepts, however, have been charted and investigated mainly from the perspective of the Western health behavior

research, which has led to inadequate understanding of Native Hawaiian social supports and, conversely, inefficient health promotion attempts (Kaholokula et al., 2018).

Relationship Quality

While the health relevance of functional social support has been well established, not all social support leads to positive health behavior or health outcomes. There are number of factors related to support providers, support recipients, support expectations and desires, as well as subjective interpretations of support responsiveness that have an impact on outcomes. An unsupportive relationship that one depends on for functional reasons may lead to poor health outcomes, and a loving relationship that may be emotionally supportive and a great source of comfort on one level, could on another level be a source of interpersonal stress and conflict, leading to lower perceived responsiveness of support and, consequently, higher risk of disease (Holt-Lunstad & Uchino, 2015). Thus, relationship quality and, particularly, increasing responsiveness and reducing negativity from the perspective of the support recipient should be of interest to researchers (Holt-Lunstad & Uchino, 2015).

Social Network Theory

Since the 1940s, scientists have been actively developing theories, algorithms, and metrics to describe social networks that influence individual and group behavior (Valente & Pitts, 2017). Emerging from that collective research, social network theory (SNT) describes the mechanisms and dynamics through which social networks influence individual and group behavior. On the most basic level, SNT views and explains behavior by breaking social relationships into so called nodes and ties. Nodes refer to the

individual actors in the network system, while ties refer to the relationships between the network actors (Valente, 2015). According to this theory, one's network environment influences the way one acts, and one's position in a network has an impact on one's behaviors (Holt-Lunstad & Uchino, 2015).

In their multisite, cross-sectional study of non-Hispanic White, non-Hispanic Black, and Hispanic young adults (N=2,793), Flores et al. (2020) examined how classic measures of social networks and perceived social support work with those racial-ethnic groups, and whether significant between-groups differences emerge when these measures are used. Using a confirmatory factor analytic model, the researchers assessed between-group differences in structural and functional support, finding evidence that the measures used were invariant across the three racial-ethnic groups and, thus, may reliably illuminate disparities between racial-ethnic groups (Flores et al., 2020).

Social networks can be useful concepts especially in program and intervention development. Forthofer et al. (2016) used formative research and social network theory to develop a community-based group walking intervention for adults in South Carolina. By using focus groups and guided discussions moderated by the researchers, they posed open-ended pre-set questions to stimulate conversation. The discussions were audiotaped, transcribed, and analyzed using NVivo Qualitative data analysis software that allows for thematic coding and exploration of social network elements, such as social relationships. Findings were further analyzed by allowing community partner review and feedback from the larger community. Forthofer et al. (2016) discovered several important themes emerging from the data. These included attitudes toward physical activity (walking),

facilitators of and barriers to walking (social supports), ideal walking program characteristics, and strategies for encouraging individuals to be more physically active. The primary finding of the study was the recurring theme of existing social networks as a supportive influence. Based on the finding, a program was developed that mobilizes, supports, and reinforces existing social networks to create more opportunities and motivation for walking. Forthofer et al. (2016) credited social network theory as fundamental to their research approach and intervention development.

While using social network theory and analysis methods has expanded recent years in public health research, and this approach has been applied to vast range of health-related issues, some of the theoretical challenges of social network theory still need to be addressed in future research (Valente & Pitts, 2017). These challenges include measuring network influences, identifying appropriate influence mechanisms, the impact of social media and computerized communications, the role of networks in evaluating public health interventions, and ethics. Pending on overcoming these challenges through further research, Valente and Pitts (2017) anticipate ever broader application of social network theory to public health topics.

In sum, analyzing a specific social network dynamic may be challenging. But it may also help understand and predict a person's health behavior, such as failed weight loss attempts and weight maintenance behavior.

Literature Review Related to Key Concepts

According to the World Health Organization reports, worldwide obesity has nearly tripled since 1975. In the most populated areas of the world, overweight and

obesity kill more people than underweight, even though obesity is shown to be preventable (World Health Organization, 2025). The U.S. is such an area, where obesity and related chronic health issues are considered a major public health problem of epidemic proportions (Braden & Nigg, 2016; Kaholokula et al., 2018; Sinclair et al., 2019). In the State of Hawaii, Native Hawaiians exhibit the highest rates of obesity of any racial/ethnic group in the U.S. (Braden & Nigg, 2016; Kaholokula et al., 2018; Sinclair et al., 2019).

Defining Overweight and Obesity

Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) was developed as a simple index of weight-for-height, to be used to classify overweight and obesity in adults. BMI is calculated by dividing a person's weight in kilograms by the square of his height in meters. An adult person with a BMI greater than or equal to 25 is considered overweight, while an adult person with a BMI greater than or equal to 30 is considered obese (World Health Organization, 2026). Some controversy exists, as it has been found challenging to determine what is abnormal and excessive for different individuals and particularly for different ethnic groups; the percentage of body fat and body fat distribution appears to differ across certain populations, especially in Asia, leading to different cut-off points for different ethnicities when determining health risks (Hunma et al., 2016). According to findings of Arigo et al. (2021), older women with higher starting BMIs, who report cardiovascular disease risk or elevated depressive symptoms or both, show BMI

variability and change patterns that may be associated with long-term negative health consequences.

Predictors of Overweight and Obesity in Native Hawaiian Population

As noted above, although Native Hawaiians exhibit epidemic rates of obesity and suffer from weight-related chronic diseases more than any other racial/ethnic group, they have not received attention in the field of health research and remain an underrepresented population (Bacong et al., 2016; Braden & Nigg, 2016; Kaholokula et al., 2018).

According to Goldman et al. (2012), predictors of overweight and obesity in this population include BMI, health status, health behaviors, such as diet, and frequency of exercise. Additionally, symptoms of psychiatric disorders (i.e., depression, anxiety, posttraumatic stress, and substance abuse and dependence) have been found to play a role as predictor variables. Goldman et al. (2012) found that in Native Hawaiian/Pacific Islander population, five main predictors were significantly associated with obesity. These include gender, race, regular exercise, difficulty sleeping, and anxiety. Compared to European Americans, Native Hawaiians/Pacific Islanders are at higher risk for obesity and associated medical comorbidities. However, Goldman et al. (2012) demonstrated that regular physical activity may ameliorate this higher risk, and cultural and environmental factors, such as greater acceptance and idealization of larger body types and lower levels of body image dissatisfaction, may have an impact on health behavior outcomes. Kroenke et al. (2020) studied the impact of social networks on Asian American and NHPI women and noted that norms for health behaviors, along with normative perceptions of an ideal

body size, may be shaped by the size, composition, and structure of social networks in this population.

McCubbin and Antonio (2012) discussed the relationship between discrimination and obesity among Native Hawaiians. Their empirical, quantitative investigation in the health risks of being overweight and obese relied on data from the 2007 Hawaiian Health Survey. The measures used included race/ethnicity, everyday discrimination, and the BMI. The authors used logistic regression analyses to determine if the experienced discrimination was significantly related to being overweight and/or obesity and, thus, a salient predictor. The study controlled for gender, age, education, income, and length of time in Hawaii. The results confirmed the negative influence of overt discrimination. However, covert discrimination tends to work the opposite way in this population group. According to McCubbin and Antonio (2012), the variability in obesity/overweight in Native Hawaiians could be explained by the protective nature of covert discrimination for this population.

Contextual and behavioral predictors of obesity in Native Hawaiians have been investigated in some past studies (Goldman et al., 2012; Kaholokula et al., 2013). Some modifiable determinants of obesity in Native Hawaiian youths have also been identified (Braden & Nigg, 2016). However, it appears that the perceptions and experiences of Native Hawaiian women have not been explored in this context.

In their systematic literature review of the existing body of research, Braden and Nigg (2016) assessed peer-reviewed studies published between 2000 and 2015, highlighting modifiable determinants and correlates of obesity in Native Hawaiian and

Other Pacific Islander (NHOPI) youth. The authors concluded that while contextual variables, such as geographic location and education, appear to play an important role, sociocultural influences, such as psychosocial factors, health behaviors, and the environment deserve to be considered too (Braden & Nigg, 2016). It may be worthwhile to apply these conclusions loosely to the obesity research of Native Hawaiian women as well.

Kaholokula et al. (2013) examined the sociodemographic, behavioral, and biological variables related to weight loss in 100 overweight/obese Native Hawaiian and other Pacific Islander (NHPI) adults. Their study utilized the randomized controlled trial of the Partnership for Improving Lifestyle Intervention (PILI) 'Ohana Project. All participants completed a 3-month weight loss program and were then into either a 6-month family/community focused weight loss program called the PILI Lifestyle Program or a standard weight loss program group. Baseline, 3- and 9-month follow-up data on socio-demographics, weight, walk test, dietary fat, exercise frequency, and blood pressure were collected. Results indicated that the same lifestyle intervention does not suit all NHs/PIs equally. Kaholokula et al., (2013) suggested that the reasons for this could stem from differences in acculturation status and social support. Also, per the study findings, initial weight loss was found to correlate with sustaining motivation toward long-term weight loss maintenance (Kaholokula et al., 2013).

In a more recent cross-case study measuring collective efficacy while attempting to understand its barriers, Butel et al. (2019) investigated and addressed childhood and youth obesity disparities in nine different NHPI communities. The researchers developed

and implemented culturally informed and relevant community-level interventions that relied on multi-level social bonding, social bridging, social leveraging, empowerment, and civic engagement. The researchers concluded that these strategies were successful in generating positive community outcomes in four out of the nine communities (Butel et al., 2019).

Walters et al. (2020) expanded on these results in their study that discusses American Indian, Alaska Native, and Native Hawaiian communities, and the need to develop culturally informed health behavior interventions that are respectful and effective. The authors call for strategies that utilize evidence-based design in unison with indigenous knowledge and health positive messages that rely on the strengths of these groups, such as relationships, community, and using narrative in communication (Walters et al., 2020).

McElfish et al. (2019) came to similar conclusion in their scoping review that investigated the best practices in participatory community research in the NHPI communities. According to the authors, the key strategies are using participants' native languages, acknowledging the geographic boundaries for each community, and allowing time to build trust between the participants and the researchers. Additionally, honoring reciprocity, social and spiritual inclusiveness, and protocols for engagement were found important (McElfish et al., 2019).

In their intersectional, mixed-methods study, Sinclair et al. (2019) explored healthy eating, physical activity, and weight among NHPI men. According to their conclusions, specific norms relating to ethnicity and gender influenced eating habits that

were also associated with obesity. Participating men identified food as an important part of their culture and identity, and themselves as main providers of that food, whereas they did not identify their own health as important. This study also showed that NHPI tendencies to follow normative behaviors can be used in promoting positive health behavior change, such as weight management and obesity prevention in this population (Sinclair et al., 2019).

Association Between Social Support and Health

Gender effects have been identified as a factor in the effectiveness of social support. Scholz et al., (2013) investigated the roles of social support and gender in maintaining a healthy diet. In their quantitative study, 252 overweight and obese participants were surveyed at baseline and 12 months later, for received and perceived social support, diet-specific received social support, and low-fat dietary choices. The findings of this study suggest that instrumental support was more beneficial for men than for women over and above individual self-regulation, and in terms of a low-fat diet 12 months later, received emotional social support was beneficial for men, but not so much for women. Also, the study found that receiving emotional social support from a female participant was perceived as more effective than receiving it from a male participant (Scholz et al., 2013).

In a quantitative study conducted on South Korean women with abdominal obesity, Cho et al. (2014) investigated the link between social support and perceived stress, as they relate to health-promoting behavior. The authors hypothesized that interpersonal support would be positively associated with health-promoting behavior and

negatively associated with perceived stress; perceived stress would be negatively associated with health-promoting behavior and mediate the association between interpersonal support and health-promoting behavior in women with abdominal obesity. A cross-sectional, correlational study design was chosen. The researchers selected a random sample of 126 with abdominal obesity from an ongoing, single-center, randomized controlled trial, used for testing the differential effects of a weight management intervention by exercise. Three measures were used in the data collection. The Health Promoting Lifestyle Profile-II (HPLP-II) was utilized to measure participants' levels of health-promoting behaviors. The Korean version of the Perceived Stress Scale (PSS) was used to assess perceptions of stress. Finally, The Interpersonal Support Evaluation List (ISEL) was used to measure the perceived social support. ISEL is a scale that consists of four 10-item subscales that correlate with the four dimensions of social support, as described by the social support model. In this scale, they included appraisal (availability of people to whom one can talk about personal problems), belonging (availability of someone with whom one can do things), tangible support (instrumental aid), and self-esteem supports (Cho et al., 2014). Using a multiple regression analysis and Sobel's test to process the acquired data, Cho et al. (2014) controlled for age, obesity-related comorbidity, postmenopausal status, and current smoking. According to the findings, a conceptual link between social support and perceived stress exists. Higher levels of interpersonal support and lower levels of perceived stress were significantly associated with higher levels of health-promoting behavior. Also, the association between interpersonal support and health-promoting behavior was significantly mediated by

perceived stress, and the association between interpersonal support and health-promoting behavior decreased when using perceived stress as one of the predictor variables in regression (Cho et al., 2014). The authors concluded that identifying the levels of interpersonal support and perceived stress among women seeking weight management interventions would be of practical significance (Cho et al., 2014). Developing strategies for enhancing social support in weight management interventions would, according to Cho et al. (2014), facilitate health-promoting behavior.

The role of social support in weight loss and diabetes prevention was discussed by Bishop et al. (2013). Their mixed-methods study examined participants' perceptions of how their involvement in a weight loss program influenced their social support persons (SSPs). SSPs' lifestyle changes were more positively influenced by their study participation, and their amount of weight loss correlated with perceived changes in SSPs' eating habits (Bishop et al., 2013), reflecting the potential power of social support networks as agents in positive health behavior change.

In a quantitative survey-based study conducted on Greek participants, Karfopoulou et al. (2016) investigated the not well understood role of social support in weight loss maintenance. According to the authors, the outcomes of previous studies with similar focus have been contradictory. Thus, their study was designed to narrow the focus and compare the social supports of the so-called maintainers and regainers of weight loss. The authors relied on the MedWeight study, which is a Greek registry of people who have intentionally lost more than 10% of their weight. From the registry, the authors selected two groups of participants: those who had been able to maintain their weight loss

for over a year (289 maintainers), and those who had regained weight (122 regainers). The study design utilized online questionnaires and telephone surveys. Perceived social support was assessed using validated scales. The results indicated that regainers received more actual support (including verbal instructions and encouragements) than maintainers, but maintainers reported receiving more perceived compliments and active participation, such as diet support. Karfopoulou et al., (2016) concluded that positive, rather than instructive, support appears to have helped the study participants in their weight loss maintenance.

According to a study conducted by Kulik et al. (2014), peer support seems to be more efficient than other types of social support, in bringing positive health behavior change to study participants. In this study, thirty-six female participants were assigned into two groups for 4 months, a standard weight loss group, and an enhanced peer support (PS) group that received skills training and practice between sessions using social networking. The participants of the PS group perceived significantly more social support and experienced higher levels of social interaction, even after the meeting frequency decreased. The findings of this study suggest that interventions that provide training in peer support skills result in greater perceived social support (Kulik et al., 2014).

In their nationwide quantitative cross-sectional study of 4672 women over 40, Ashe and Lapane (2018) noted that women appear to suffer disproportionately from obesity and food insecurity. The authors predicted that social support may play a modifying role in between obesity and food insecurity, and while they did not find their hypothesis supported, they concluded that women with limited food resources were 80%

less likely to report strong social support than women with adequate food resources (95% CI 0.11–0.36). The researchers also found that food-insecurity correlated with less reported social support and more likely obesity in the surveyed women (Ashe & Lapane, 2018).

Arroyo et al. (2020) analyzed young female college students' ($N = 637$) interpersonal communication behaviors in close relationships, regarding weight management and body image. The authors used a quantitative survey-based investigation of confirmation, self-determination, social control, social support, weight management, and body image. The results regarding social support indicated that perceived support from romantic partners was negatively associated with body dissatisfaction and predicted physical activity ($p = .05$). Perceived informational support was unrelated to each of the outcome variables. The authors note that while social support was unexpectedly unrelated to weight management and body image outcomes, it was not surprising. According to Arroyo et al. (2020), the participants were in the normal BMI range and, therefore, possibly not in need of social support in the area of weight management. As discussed by Brochu et al. (2020), being overweight or obese may lead to internalized weight bias, which in turn may manifest as perceived burdensomeness and thwarted belongingness.

In their systematic review of literature spanning over a decade, Carraça et al. (2018) summarized the evolution of weight loss research focusing on pretreatment characteristics that predict successful weight management. The authors merged the results of 37 more recent peer-reviewed studies with the results of an earlier systematic review from 2005 with 29 studies, providing a critical appraisal and an analytic synthesis

of the 76 pretreatment predictors of weight loss and/or maintenance tested in the studies included in the overall review (N = 66 studies). The authors found that many psychosocial factors have not been investigated enough to draw reliable conclusions about. Social support was, according to Carraça et al. (2018), among the factors that were identified as non-significant predictors. The authors concluded that assessing such psychosocial predictors, that were determined as non-significant in their meta-analysis, could nevertheless prove helpful in treatment planning by increasing self-awareness and by supporting individual weight loss processes (Carraça et al., 2018).

Online Social Support and Social Media

In today's world, online interaction has become the norm and an important part of social networking. Social media and the internet are not only sources for information (functional social support), but also forums for people to seek emotional and belonging support. Consequently, online relationships and networks have become increasingly important influencers of decision-making and behavior. The anonymity provided online is a factor that has been found to lower the threshold of reaching out and participating in information seeking and networking (Marks et al., 2015). However, online support and social media may also be sources of misinformation, sometimes leading to negative changes in health behaviors, or preventing positive change. Therefore, as a form of information support, online networks and social media supports typically require a reasonable level of health information literacy from the user, along with ability to apply critical thinking skills (Marks et al., 2015).

Web-based interventions for weight loss and weight maintenance offer a convenient option for women in rural areas or otherwise isolated, and they have been proven effective in achieving weight loss (Hageman et al., 2019). Online and text-message based peer support has been found to motivate African American women in weight loss and weight management, leading to a statistically significant change in weight (Lee et al., 2018). In their secondary analysis of clinical trial data of 201 rural women, Hageman et al. (2019) examined participant weight change and user engagement in a website feature designed to support weight loss and weight maintenance by means of messaging and self-tracking. The authors discovered that being engaged online was significantly associated with weight loss and successful long-term weight loss maintenance (Hageman et al., 2019).

Factors Contributing to Weight Management

Although many successful weight loss behaviors have already been identified, a specific need has arisen to understand why some people succeed in their weight management after weight loss, while others fail. According to Carraça et al. (2018), the key psychosocial factors that contribute to long-term weight management should be deeper explored. Marks et al. (2015) maintained that qualitative study of the subjective experiences of behavior change would be of value in this context.

The common treatments targeting overweight and obesity have focused mainly on short-term weight loss goals (Marks et al., 2015). Intervention approaches are typically based on strict and quick dieting along with exercise, with the underlying assumption that once the goal weight is reached, a person will have the motivation and self-discipline to

maintain it. Such focus often leads to a phenomenon called yo-yo-dieting, in which the body adapts hormonally to the strict dieting in counterproductive ways; the lost weight, and possibly even more, is quickly gained back after the weight loss goal has been reached (Sainsbury et al., 2019). In turn, this may lead to a sense of failure, lower self-esteem, anxiety, and depression, making weight loss even a harder goal than before (Marks et al., 2015; Soini et al., 2016). New research findings suggest that instead of focusing on short-term behavior, highlighting the benefits of larger scale lifestyle changes and weight control as an ongoing process may be more efficient and successful (Teixeira et al., 2015). Successful treatment of obesity, as well as long-term weight management require motivation, flexibility, and sensitive support systems (Soini et al., 2016). Focus on body acceptance (Teixeira et al., 2015), peer support groups (Marquez et al., 2016; Soini et al., 2016; Teixeira et al., 2015), and culturally sensitive prevention programs (Kaholokula et al., 2018; Marquez et al., 2016) have proven to be helpful in permanent weight control efforts.

In their quantitative cross-sectional study of low-income American women, Richardson et al. (2015) investigated the relationship between perceived stress, unhealthy eating behaviors, and severe obesity. The authors calculated participants' BMI and used structural modeling to differentiate indirect and direct pathways from stress to weight status. Cognitive restraint, emotional eating, and uncontrolled eating were examined along with diet quality as the indirect pathway, while unmeasured risk factors independent of diet were charted as the direct pathway. Richardson et al. (2015) used the 14-item Perceived Stress Scale, that is a validated measure of the degree to which

situations are appraised as stressful. Eating behaviors were measured using the 8-item Three-Factor Eating Questionnaire and a dietary recall at the intake. The data was analyzed using SEM, a pathway-based statistical analysis approach. The findings show that perceived stress was positively and significantly associated with uncontrolled eating and emotional eating. Higher stress was not associated with weight status through eating behaviors and diet quality. Independent of eating behaviors and diet quality, stress was positively and significantly associated with severe obesity. According to Richardson et al. (2015), the results indicated that improving stress management skills may improve eating behaviors and reduce severe obesity in low-income women.

Greaves et al. (2017) suggested that one way to develop more efficient preventative intervention strategies would be for scholars to identify how unhealthy behaviors and other sources of tension develop in childhood, and what the role of parenting interactions is in the process. Kulik et al. (2014) encouraged scholars to investigate what the ideal amount, medium, nature, and origin of social support are, to enhance social support for weight loss or maintenance. Karfopoulou et al. (2016) and Kim et al. (2017) conducted quantitative studies investigating the relationship between social support and weight maintenance, but a more thorough, in-depth understanding of the role of social support in behavioral lifestyle changes that contribute to weight loss and maintenance has also been called for (Bishop et al., 2013). It has been suggested that a qualitative approach may be useful when doing research among the NHPI population, as it is better suited to the information sharing style, traditions, and dynamics of this group,

and to understanding the experiences of Native Hawaiian participants (Kahalokula et al., 2018).

In another study utilizing the PILI@Work Program mentioned above, Townsend et al. (2016) evaluated the effectiveness of a diabetes prevention program designed for Native Hawaiian-serving worksites in Hawai'i. The researchers addressed obesity disparities and factors associated with weight loss at post-intervention, such as weight, blood pressure, physical activity and functioning, fat intake, locus of weight control, social support, and self-efficacy, using regression analysis. Townsend et al. (2016) found that several of these factors improved pre- to post-intervention, including family support. One of the factors significantly associated with 3-month weight loss was internalized locus of weight control (Townsend et al., 2016).

Howiecka et al. (2021) investigated the role of post-therapeutical support in obesity treatment. The findings of their randomized controlled 30-month long study showed that participants who received 18 months of psychological support after a successful weight loss intervention of 12 months managed to maintain their weight loss significantly better than the control group that did not receive psychological support as a follow-up. The authors concluded that post-therapeutical support may significantly increase successful long-term weight loss maintenance (Howiecka et al., 2021).

Gettens et al. (2018) investigated the role of partner autonomy support (encouragement to be oneself) in women's motivation for weight related health behavior change and psychological well-being. The researchers conducted two studies in which autonomy support was measured in different ways: a cross-sectional design was used to

collect the male partners' reports regarding their encouraging supportive behavior; and a longitudinal home environment-based behavioral weight loss intervention design was conducted to measure female participants' perceptions of their partners' supportive behavior. According to the authors, partner autonomy support was associated with greater weight loss and increased motivation for health behavior change, especially in women with greater baseline BMI (Gettens et al., 2018).

Adverse childhood events (ACEs), such as physical or emotional neglect, physical, sexual, or emotional/verbal abuse, household dysfunction, or witnessing traumatic events, have been linked to poor health factors and outcomes, such as eating disorders and obesity (Soares et al., 2021). In their quantitative study of 3,354 Asian, Native Hawaiian, and Pacific-Islander (NHOPIs) women, Hayes et al. (2017) investigated the relationship of ACEs to smoking, overweight, obesity and binge drinking. Hayes et al. (2017) utilized data from the 2010 Hawaii Behavioral Risk Factor Surveillance System (BRFSS) survey and analyzed the relationship between the participants' ACEs score in relation to adulthood health behavior outcomes, including obesity, and race/ethnicity. Covariates used were age, race/ethnicity, education, emotional support, healthcare coverage, and other health outcomes. The findings indicate that obesity in Asians/NHOPIs was significantly related to household dysfunction, and physical, verbal, and sexual abuse. Hayes et al. (2017) concluded that ACEs prevention optimizes not only childhood health, but also later health behavior outcomes, including obesity.

In their qualitative study, Okihiro et al. (2016) explored the psychosocial stress experiences of low-income, rural women in Hawaii. The authors recruited Native Hawaiian and Other Pacific Islander thirty-six women, aged 18–35 years, at a community health center and created four focus groups to elicit information about women's stress. Key themes from the focus group data were identified and used to generate further discussion. The transcribed discussions were analyzed using narrative approach, based on grounded theory, with emphasis on stress and coping. Okihiro et al. (2016) found seven main stressor themes emerging from the following discussions. These included intimate relationships (limited partner assistance), gender stereotype; family and home life (feeling like an outsider, lack of respect); childrearing; time for self; neighborhood environment (i.e., not feeling part of the community); workplace; and finances. Several of these themes illuminate sociocultural factors leading to feeling isolated, unsupported, and discriminated, even within the family context. The results were used in developing a culturally sensitive, community-relevant scale for rural women in Hawaii that takes multicultural family conflicts, perceived lack of support, and perceived community discrimination into consideration (Okihiro et al., 2016).

Puhl et al. (2017) examined the role of weight stigmatization in the weight maintenance efforts of a national sample of 2,702 American adults with diverse ethnic backgrounds. The findings of their survey-based quantitative inquiry indicated that both experienced and internalized weight stigma contributed to sustaining weight loss in the study participants. The authors concluded that more studies are needed to understand the

roles that weight stigma and subjective perception of one's own weight play in weight loss maintenance (Puhl et al., 2017).

Health Literacy, e-Health Literacy, and Social Ties

Health literacy is yet another factor considered important in weight loss efforts and successes (Bourgette-Henry et al., 2019; Marks et al., 2015). Lassetter et al. (2015) has investigated health literacy and obesity among NHPs in the United States. In this study, some factors modestly explaining health literacy differences in these populations were identified, including age, income, education, and BMI. According to Lassetter et al. (2015), these factors explained 19.95% of the combined variance in health literacy related scores. The purpose of the study was to describe relationships between demographic characteristics, BMI, and health literacy among NHPs. Lassetter et al. (2015) surveyed 364 NHP adults using Newest Vital Sign (NVS), a health literacy tool; height and weight measurements; and a demographic questionnaire. After the researchers conducted a cross-sectional analysis, their findings indicated that 45.3% of the participants had at least a possibility of low health literacy, with lower NVS scores associated with increased BMI and increased age. A significant gender difference was also detected, as women scored significantly better than men. Lassetter et al. (2015) suggested that weight loss interventionists working with Native Hawaiian populations may want to consider educating clients to read nutrition facts labels and to apply the information when making food choices.

With their mixed methods study conducted on O'ahu, Bourgette-Henry et al. (2019) aimed to improve NHOPI women's health literacy and cardiovascular disease

awareness, which they assessed as low compared to other groups. The participants' (N=20), whose ages ranged from 28-69, were recruited from the community for the eight-week program, in which their knowledge levels, health perceptions, and behaviors were evaluated using pre-and post-tests, established surveys, and implementation of a CVD risk reduction program. The findings indicated that all the participants' health awareness and health literacy significantly increased as a result of the intervention (Bourgette-Henry et al., 2019). According to the authors, when working with NHOPIs, it is important to design projects that allow collaboration between health educators and community organizations, acknowledgement of cultural knowledge, and incorporation of health literacy (Bourgette-Henry et al., 2019).

A definition provided by Hayat et al. (2017) described eHealth literacy as a form of health literacy and ability to seek, find, understand, and appraise health information from electronic sources. According to Hayat et al. (2017) it also includes ability to apply online information to addressing health issues. Previous research suggested that when sharing and receiving health information, people rely not only on real-life interpersonal ties, but also on their online interpersonal supports (Hayat et al., 2017). Health information received through online networking sources may be perceived as informational or emotional social support.

Hayat et al. (2017) provided one of the first empirical and systematic investigations into the role of social support in eHealth literacy. Their research demonstrated that social ties may potentially compensate significantly for low eHealth literacy. Hayat et al. (2017) examined the correlation between eHealth literacy and

perceived health outcomes by conducting a randomized telephone survey of 819 Israeli adults, using a dual-frame design and incorporating two selection stages. The data was analyzed using two regression models. The authors' goal was to look at how the relationship is moderated by the availability of help, by relatable ethnicity, and by finding peers with similar health issues. Perceived eHealth literacy was assessed using the eHealth Literacy Scale (eHEALS), a scale consisting of eight items on a five-point Likert scale. Respondents self-reported their identity, and other variables were measured using tailored survey questions, also using a five-point Likert scale. The findings of the Hayat et al. (2017) study showed that the perceived health outcomes for individuals with objectively low eHealth literacy can be significantly enhanced, if online support is readily available when needed. Also, locating others online with similar health concerns can have a positive impact on the perceived health outcomes for people with low eHealth literacy. Thirdly, finding ethnically similar others online makes a significant difference for ethnic minorities in improving their perceived health outcomes. However, the authors emphasized that while it may be possible to increase the perceived health outcomes for individuals with low eHealth literacy, the gap between people with low and high eHealth literacy remains (Hayat et al., 2017).

Summary and Conclusions

Native Hawaiian women residing on the Hawaiian Islands exhibit high rates of overweight and obesity, with an elevated risk for obesity related illnesses (Braden & Nigg, 2016; Kahalokulu et al, 2018; Sinclair et al., 2018). There is an underrepresentation of Native Hawaiians in obesity and weight loss literature, and the predictors and

consequences of obesity in this population are not well understood (Bacong et al., 2016; Braden & Nigg, 2016). Research on the health behavior change and health behavior outcomes of Native Hawaiian women appears scarce.

The models of social support and social networks have been found reliable in the context of health behavior change, predicting health outcomes (Uchino, 2009). These two models provide the conceptual framework useful in analyzing the social supports and lived experiences of this study's participants. According to Holt-Lunstad and Uchino (2015), relationship quality should be of interest to researchers in health behavior research. Valente and Pitt (2017) identified challenges in social networks model and called for further research on social network influences. While challenging, analyzing social supports and social network dynamics may help to understand and predict a person's health behavior, such as failed weight loss attempts and weight maintenance behavior. Recent reviews on multi-level interventions with NHPI show that the key to change in these communities is to develop culturally grounded, respectful strategies that rely on the existing strengths of the community values and traditions (Kaholokula et al., 2018; McElfish et al., 2020).

In the literature review, I discussed the most relevant body of work relating to weight loss, social support, and Native Hawaiian women's health behavior. Social support is an important environmental factor in obesity prevention and successful long-term weight maintenance (Greaves et al., 2017; Karfopoulou et al., 2016), as well as in successful obesity treatment efforts (Soini et al., 2016). It is not known how Native

Hawaiian women experience their social support relating to health behavior change and health outcomes. With the present study, I aim at partially filling this void.

The literature review section covered predictors of overweight and obesity in Native Hawaiians, associations between social support and health, health literacy, and factors contributing to weight loss and weight maintenance. Previous research has shown that stress in NHOPIs (Richardson et al., 2015) and adverse childhood experiences in the general population may increase poor health outcomes, such as obesity and overweight (Hayes et al., 2017).

In Chapter 3, I will discuss the research methodology for the study and justify the methodological choice. I will also discuss the ethical issues and procedures related to the chosen method in the following chapter.

Chapter 3: Research Method

Introduction

The purpose of this phenomenological study was to understand the lived experiences of middle-aged Native Hawaiian women, relating to weight loss and weight management, and the impact of social support on those experiences and processes. Social support is an important environmental factor in obesity prevention and successful long-term weight maintenance (Greaves et al., 2017; Karfopoulou et al., 2016), as well as in successful obesity treatment efforts (Soini et al., 2016). It is not known how Native Hawaiian women experience their social support relating to health behavior change and health outcomes. I designed the present study to partially fill this gap.

In this chapter, I discuss the selected research design, the rationale behind the choice, and the role of the researcher in the study. I will explain the methodology in terms of the procedures for recruitment, along with participation, and data collection. I will also discuss a plan for data analysis, issues of trustworthiness, and ethical procedures, and provide a summary of the research method.

Research Design and Rationale

I was driven by two research questions. These were:

Research Question 1: What are the lived experiences of overweight Native Hawaiian women regarding weight loss and weight management, and social support in these processes?

Research Question 2: How do Native Hawaiian women describe cultural factors that contribute to weight management?

The central phenomena I was interested in were the lived experiences of Native Hawaiian women, as they relate to weight loss, weight management, and perceived social support. Understanding these experiences and perceptions may be helpful in developing effective and culturally sensitive interventions for positive health behavior change.

To conduct the study, I used a transcendental phenomenological approach that attempts to capture and illuminate the experience of the human subject (Moustakas, 1994). This approach uses processes of epoché (avoiding preconceived judgments and assumptions), phenomenological reduction, imaginative variation, and synthesis, to describe and analyze participants' personal experiences (Moustakas, 1994). By using epoché and honoring participants' own meaning-making processes and outcomes, a researcher can obtain participants' true descriptions of the meaning of an experience that may then be reduced to the essence of the experience (Moustakas, 1994). Because my aim was to explore the lived experiences and subjective perceptions of the participants, the transcendental phenomenological approach appeared to be a well-suited method of inquiry.

Role of the Researcher

Qualitative approach relies on the researcher being a crucial instrument for the data gathering and analysis processes (Creswell, 2013). In this study, my role was to design the study, collect rich data by observing, interviewing, and exploring the lived experiences as they were described by the participating women, transcribe the interviews, code the data, find emerging themes, analyze the data, interpret what emerged, and report the potential findings, all while avoiding assumptions and preconceived notions about the

phenomenon under study (Moustakas, 1994). In this role, I related to the participants as equal co-researchers whose voice and truths I honored and focused on (Moustakas, 1994). Furthermore, I ensured during the participant screening process that no prior professional or personal relationships existed between myself and the participants of this study.

I have lived and worked in Hawaii since 2016 in varying professional roles providing behavioral change support, therapy, and crisis interventions. While considering myself a guest on the islands and by no means an expert in Native Hawaiian culture, I have gained some understanding of the challenges and pressures experienced by the local Native Hawaiian women. I have learned how crucial their role is as community gatekeepers of health information. I have noted many intriguing differences to my own Finnish background culture, that is less collective, but also similarities in social behavior and social dynamics between these two cultures that exist on the opposite sides of the globe. For example, a distrust in outside authorities and in information introduced from top-down seems to exist in both cultures, possibly stemming from their long histories of being oppressed by invaders. An example of the striking differences between the two cultures is the level of support Native Hawaiian women seem to receive from their immediate and extended family. Compared to their counterparts in Finland, where families and transgenerational ties are not as tightly knit, these islander women appear to have ample concrete and emotional support from their social support network, along with informational support for their health decision making from their trusted and respected elders. These observations piqued my initial interest in social support as it relates to

health behavior change in general, whereas my own past weight loss struggles led me to narrow the topic down to weight loss and weight maintenance behaviors.

Understanding that my background may have an influence on how the topic is approached and the interviews conducted, I acknowledged that personal beliefs, biases, preconceived assumptions, and subliminal goals may impact interpretations of the data, as well as the conclusions of the findings. To manage these biases, I took appropriate measures commonly used in phenomenological studies, including journaling and other ways of documenting, as well as practicing self-awareness.

Methodology

Participant Selection Logic

In this study, I explored the lived experiences of middle aged Native Hawaiian women who reside on the Big Island of Hawaii and self-identify as having failed weight loss experiences in the past five years. Eligible participants were Native Hawaiian; 40-60 years of age; overweight or obese (with a BMI of 25 or greater); and reporting an event they experienced and perceive as a weight loss failure during the past 2 years. Weight loss failure in this context was defined as an event the participant herself perceived as failure to either a self-initiated weight loss attempt, an attempt to lose weight through a weight loss program, an attempt to lose weight as recommended and supervised by a doctor or an advanced registered nurse practitioner (ARNP), or an attempt to maintain the weight loss after initial success. According to Moustakas (1994), the essential criteria for locating and selecting participants for a phenomenological study include that they all have experience of the phenomenon under study, they are interested in the topic and

willing to participate in a potentially long, detailed interview, and they are willing to be audio recorded.

To locate potential participants, I used purposeful sampling. This strategy involves the researcher selecting the participants based on whether they share significant and meaningful experience regarding the topic of the study and phenomenon of interest (Creswell, 2007; Yüksel & Yıldırım, 2015). I created a study invitation flyer, describing the purpose of the study (Appendix A), including researcher contact information, so that interested women were able to reach out to the researcher directly, at which time I used the pre-screening questions (Appendix B) for the initial screening. The pre-screening questions addressed candidate's age, ethnicity, BMI, weight loss history, and willingness and availability to participate via Zoom. The BMI was assessed using a standard table (included in Appendix B). After requesting and gaining permission to distribute the flyers, I physically posted them at Big Island community health centers that had active weight loss support programs at the time. I also posted the flyer online, with a link provided to Big Island support group facilitators and medical personnel willing and interested in sharing it.

Because this primary method did not yield enough participants, I used snowball sampling as a follow-up method for participant recruitment. In snowball sampling, I encouraged a few participants to inform other potentially suitable participants about the study (Creswell, 2013; Yüksel & Yıldırım, 2015).

I recruited participants from community health centers and weight loss support groups on the Big Island of Hawaii. To have a sample size large enough to gather

detailed and rich data, I recruited eight participants. This sample size is typically used to meet saturation of data, which means that no more relevant new information is emerging from the data (Creswell, 2013).

Instrumentation

For this study, I drafted and planned a list of pre-screening questions (Appendix B) and a list of guiding interview questions (Appendix C). The purpose of the guiding questions was to keep the interviews on track, to ensure that both research questions were covered, and to guide myself so that I could obtain the same type of information from each participant. Depending on the participant, I did not ask some of the questions during the interview if the critical information already emerged without asking in a previous part of the interview. I occasionally asked follow-up questions, to accomplish the goal of evoking a comprehensive account of the participant's experience regarding the topic. In the spirit of phenomenology, I designed the questions to be open-ended and supportive of an informal and interactive interview (Moustakas, 1994; Salazar et al., 2015; Taylor et al., 2015).

Procedures for Recruitment, Participation, and Data Collection

I scheduled and conducted the interviews as I found and recruited qualified participants. I set a mutually agreeable time with each selected participant and, due to COVID-19 restrictions, conducted the interviews via Zoom. I sent an email invite to each woman, accommodating the convenient time for her. Each audio-recorded interview lasted approximately an hour.

During the pre-screening phone calls, I introduced the voluntary nature of the interviews, confidentiality, and consent to each participant. Before each interview, I emailed the consent form to the selected participants. They could sign it electronically, and it included instructions for participants to retain a copy for their records. The form provided my contact information, along with the contact information of the Walden University representative.

As an integral part of the phenomenological process, I used member checking. This method involves sharing summaries of acquired data with the interviewee, so that the researcher can receive clarification confirmation and feedback (Chang, 2014). When discussing the informed consent, I informed the participants that I would send them a summary of their interview for review, and they would then be able to provide corrections, clarifications, or additional information if needed, as I explained in the consent form.

In case the recruitment resulted in too few participants, the follow-up plan was to use a snowball sampling method. Since this turned out to be the case, I asked three participants if they knew others who might qualify for the study and be willing to participate, and if the participants could forward the flyer link and my contact information to those others.

For audio-recording and transcribing the interviews, I used the Zoom and its audio-transcription feature. The interviews were semi structured with guiding interview questions that were open-ended and addressed the research questions for the study. I used

follow-up prompts during the interview as needed, to encourage participants to clarify and expand on their responses.

Data Analysis Plan

I used Moustakas' (1994) phenomenological steps to data analysis for this study. After gathering the data using semi structured interviews, I transcribed the collected data verbatim. This means that I made the audio files of the interviews readable, accessible, and to facilitate analysis by transcribing their contents word-to-word and formatted and edited without interpretation or altering (Walden University Writing Center, 2020).

I hand coded the data and used Moustakas's (1994) transcendental phenomenological analysis as the data analysis method. This method derives research evidence from gathered first-person accounts of life experiences (Moustakas, 1994). To gain an understanding of the shared messages and underlying nuances emerging from the interviews, I organized the collected data by coding and by sorting them according to the emerging themes.

As phenomenological data analysis focuses on rich and detailed description of lived experiences, uncovering the essence of the experience instead of deriving explanation for the experience, Moustakas (1994) identified four processes to assist in this type of data analysis. These processes are called Epoche, phenomenological reduction, imaginative variation, and the synthesis of meanings and essences.

Epoche, also called bracketing, is used in setting aside and avoiding researcher preconceptions, biases, and judgement, attempting to see things as they appear, and rooting the process on the topic and research question (Moustakas, 1994). It involves

bracketing the researcher's detected predispositions regarding the phenomenon, while considering the unique, novel way the phenomenon is described by the participant (Moustakas, 1994).

The second major process, phenomenological reduction, is used to describe participant's experience of a phenomenon using textural language, with focus on the qualities or features of that particular experience (Moustakas, 1994). An important part of phenomenological reduction is the horizontalization of the individual experiences, in which the process of the participant's description of their experience is seen as equal in value along with other statements or accounts of other participants. The process of phenomenological reduction leads to identifying invariant constituents of the experience (Moustakas, 1994).

The third major process of phenomenological data analysis, imaginative variation, includes systematic construction of possible structural meanings hidden behind the textural surface; lifting up underlying themes related to the phenomenon under study; and considering the universal structures at play. Through consideration of different perspectives, the researcher open-mindedly respects the complete nature of each participant's experience and arrives at structural descriptions of an experience.

The final step of the process is synthesis of meanings and essences (Moustakas, 1994). This involves synthesizing discovered texture and structure into an expression, the true essence of the lived experience of the interviewee, while formulating common meanings that reflect the essence of the experience (Moustakas, 1994; Yüksel &

Yıldırım, 2015). Discrepant cases will be acknowledged and analyzed as valuable contributions.

According to Moustakas (1994), there are eight main steps to the process of transcendental phenomenological analysis, as follows:

1. Listing and Preliminary Grouping: This initial step of data analysis, also called horizontalization, refers to the listing and sorting of every relevant expression to the experience under study;

2. Reduction and Elimination: During this second step, the Invariant Constituents are separated from the other expressions by testing them against two requirements:

(a) Does it contain a moment of the experience that is a necessary and sufficient constituent for understanding it?

(b) Is it possible to abstract and label it?

Statements that do not meet the two requirements or are vague, overlapping, or repetitive, are eliminated, unless they can be presented as more exact descriptions.

Remaining expressions that can be abstracted and labeled are categorized as horizons of the experience, and those that remain can be determined as the invariant constituents of the experience;

3. Clustering and Thematizing the Invariant Constituents: During this step of data analysis, the invariant constituents of the experience are clustered into themes, creating the core thematic labels for the phenomenon under study;

4. Final Identification of the Invariant Constituents and Themes by Application-

Validation: With this step, each invariant constituent and their accompanying theme are checked against the interview transcript of each study participant, using the following criteria:

- (a) Are the invariant constituents and accompanying theme explicitly stated in the complete transcription?
- (b) Are they compatible if not explicitly expressed?
- (c) If they are not explicit or compatible, they are not relevant to the co-researcher's experience and should be deleted.

5. Using the relevant, validated invariant constituents and themes, an Individual Textural Description of the experience is constructed for each participant. It includes verbatim examples from each of their transcribed interview;

6. An Individual Structural Description of each participant's experience is constructed based on the Individual Textural Description and Imaginative Variation;

7. During this step, a Textural-Structural Description of the meanings and essences of the experience, which incorporated the invariant constituents and themes, is constructed for each participant;

8. The last step of this type of data analysis involves creating a Composite Description of the meanings and essences of the experience under study, which reflects the commonalities of the group as a whole (Moustakas, 1994, pp. 121-122).

Issues of Trustworthiness

Issues of trustworthiness in qualitative research include credibility, transferability, confirmability, and dependability. Credibility refers to the researcher's confidence in the truthfulness and accuracy of the study's findings (Korstjens & Moser, 2018). To establish credibility, I used saturation of data and member checking. To have a sample size large enough to gather detailed and rich data, I used a sample size of eight participants to meet saturation of data, which meant that no more relevant new information was emerging from the data (Creswell, 2013). Member checking is a method of sharing summaries of established data, interpretations, and conclusions with each participant, so that the researcher can gain feedback (Chang, 2014). In the case of this study, I provided a summary of each participant's data to them after the data analysis phase, giving them an opportunity to assess and correct any misinterpretations or to add information that they left out of the interview.

Transferability refers to the degree to which the study's findings are applicable to other contexts, populations, and situations (Korstjens & Moser, 2018). Using the phenomenological approach does not aim at transferability in the same sense quantitative studies do. Instead, the objective is to describe not just behavior and experiences, but to include the context as well, so that thick, rich, and meaningful descriptive data emerges (Cope, 2014; Korstjens & Moser, 2018).

Dependability typically refers to consistency and reliability as to how possible it is for other researchers to repeat the study with consistent findings (Cope, 2014; Korstjens & Moser, 2018). This cannot be accomplished for a phenomenological study,

as no other researcher can repeat the study and obtain consistent findings. With this study being a dissertation, some measures ensuring dependability were in place through committee reviews. I described the research steps I took throughout the process through notes, checklists, audio files, and other suitable means, to ensure that I kept the records in a reliable way (Korstjens & Moser, 2018). To ensure dependability, I provided an audit trail by keeping notes and a journal throughout the data collection and data analysis stages, which also contributed to confirmability of the study. Using these techniques provided a rationale for my decisions and interpretations and showed that the findings reflected participants' responses and not my own assumptions or beliefs.

Confirmability refers to the neutrality of the study's findings, placing the focus on the potential researcher biases (Cope, 2014; Creswell, 2013). To ensure quality and transparency of qualitative research, reflexivity and being self-aware are considered integral (Korstjens & Moser, 2018). Reflexivity refers to the critical self-reflection processes of the researcher that may include reflections about one's role as researcher, one's own thoughts, preconceived notions, and prejudices, and the relationship with the study participants, along with how these factors impact the participants' answers to interview questions, or the process of data analysis (Cope, 2014; Korstjens & Moser, 2018). In the case of this study, I used a research diary to examine my own conceptual lens, assumptions, preconceived notions, values, and how these affect the process.

Ethical Procedures

This study was based on semi-structured interviews involving human beings, which may create ethical dilemmas. To ensure that it met the Ethical Standards for

psychology research, provided by The American Psychological Association [APA] (2010), I obtained Walden Institutional Review Board approval before conducting the study. The IRB approval number is: 06-10-22-0244498.

I also obtained an informed consent from each selected participant, which included consent for audio recordings. I informed the selected participants of the nature of the study, the voluntary nature of participation, and the participants' right to withdraw from the study at any time without retaliation (APA, 2010).

To reach potential participants, I used a recruitment flyer (Appendix A). The flyer described the purpose and nature of the study and the participation criteria. It also explained the measures taken to ensure the confidentiality of participants.

To protect the participant privacy and confidentiality, I stored all participant data, including consent forms and other confidential data, locked in a file cabinet at my home office. The audio recordings, interview transcripts, and other electronic data I password protected and saved in a separate external drive that I also locked in the file cabinet. I remain the only person with access to the information, and the data, including the recordings, will be destroyed by shredding or permanent electronic deletion after five years per Walden University research guidelines.

To protect participant anonymity and confidentiality, I conducted the interviews free from distractions or interruptions. I assigned a number for each selected participant, so I did not have to use names for identification purposes. I was the only person handling the participant information, pre-screening potential participants by phone to ensure that

candidates qualified as participants, and determining that I did not have a prior personal or professional relationship with them.

If a participant was to become distressed during the interview, the interview was to be immediately terminated. I created a plan to debrief the distressed participant by explaining that the intent was not to cause her any emotional stress, and if she needed to speak with someone, she should call one of the numbers from the list of counseling contacts (Appendix D) I provided with the Consent Form.

Should a participant withdraw from the study, she had the right to do so at any time during the course of the study. Participation was voluntary, as indicated in the consent form. I needed to consider whether recruiting a replacement participant was necessary at the time of the withdrawal. When I could not achieve data saturation without a replacement, I was to recruit a new participant.

Summary

This chapter provided a description of the research design and methodology, researcher's role, issues of trustworthiness, and ethical procedures for the planned study. The purpose of the study was to use a transcendental phenomenological approach to explore the lived experiences of middle-aged Native Hawaiian women regarding social supports and how their perceived social support relates to their weight loss and weight maintenance efforts. The goal of the study was to increase understanding of the role of perceived social support in positive health behavior change among this population. Considering the purpose and the goal of the study, the choice of methodology appeared justified.

When discussing the methodology of the study, I reviewed the proposed recruitment and sampling strategies first, including purposeful sampling and, if necessary, snowball sampling (Creswell, 2007; Yüksel & Yıldırım, 2015). I also discussed participant selection, introducing the Study Invitation Flyer (Appendix A), the Pre-Screening Questionnaire (Appendix B) that I used to determine whether candidates qualify for the study, the rationale for the sample size and saturation, and the proposed interview questions (Appendix C). Next, I covered plan for data management and data analysis, following Moustakas (1994) phenomenological data analysis model. Lastly, I addressed the issues of trustworthiness and the ethical procedures needed. In the next chapter, I will describe the processes of the study, along with the results of the data analysis.

Chapter 4: Results

Introduction

The purpose of this phenomenological study was to understand the lived experiences of middle-aged Native Hawaiian women, relating to weight loss and weight management, and the impact of social support on those experiences and processes.

Through this study, I sought to answer the following research questions:

Research Question 1: What are the lived experiences of overweight Native Hawaiian women regarding weight loss, weight management, and social support in these processes?

Research Question 2: How do Native Hawaiian women describe cultural factors that contribute to weight management?

In this chapter, I provide information on the setting and demographics of the study and a detailed explanation of the steps for data collection and analysis. I will discuss the evidence of trustworthiness and, lastly, the results of the study.

Setting

Recruiting for this research study took place in the summer and fall of 2022, during the COVID-19 pandemic. I designed all interviews to be conducted via Zoom to accommodate the Department of Health COVID-19 guidelines at that time. While not in COVID-lock-down any longer, all but two participants were staying home and either working remotely or not employed during the interviews. After I completed the first seven interviews via Zoom, due to a number of unqualified candidates, I used snowball sampling as a follow-up method for participant recruitment for the last three interviews.

After completing their interviews, two participants withdrew their consent over the phone: one right after the interview was finished, another participant a week after the interview date. One participant stated that she felt uneasy about disclosing more than she had anticipated and did not want her interview to be used in the study. The other participant said she was concerned about being recognized by her responses, and the island community being small, she did not want her family dynamics to become public. The data from these two interviews are not included in this data analysis.

Demographics

I described the criteria to participate in this phenomenological study in the study invitation flyer (Appendix A) and screened all interested candidates over the phone during initial contact, using the pre-screening questionnaire presented in Appendix B. The criteria required that participants were female volunteers of 40-60 years of age who identified as Native Hawaiian; had a BMI higher than 25; were willing to participate in an approximately hour-long interview via Zoom; and had, during the past 2 years, tried to lose weight without success, or had had initial success with weight loss and then struggled maintaining the weight loss. The average age of the eight participants was 54 years, ranging from 46 to 65. If a candidate did not know their exact BMI, I calculated it for them during the phone conversation, using the calculator available on CDC website (Link provided in Appendix B). The BMI range for the eight participants was 32-40, with the average BMI being 38, indicating obesity at the higher end of the obesity category (World Health Organization, 2026). All participants reported multiple weight loss failures

and failures to maintain any successful weight loss. Two participants had had bariatric surgery in the past but reported failure(s) to maintain weight loss after the surgery.

Out of 12 women who initially reached out, ten were interviewed, and two later withdrew consent. All eight remaining participants reported belonging to the expected age-bracket and residing on Big Island and self-identified as Native Hawaiian. I collected no other demographic information during the pre-screening. To protect their confidentiality, all eight participants were given a number (P1, P2, P3, etc.).

Data Collection

After I received the Walden University Institutional Review Board approval (Approval Number 06-10-22-0244498), I emailed the study invitation flyer (see Appendix A) to four Big Island community health centers that had active weight loss support programs at the time of recruitment and had given permission to distribute the flyer. I also emailed an online link to two support group facilitators and to medical personnel willing and interested in sharing it. I used this purposeful sampling strategy to locate potential participants that would share a significant and meaningful experience regarding the topic of the study. Due to challenges finding the last three participants, the data collection spanned from the end of June 2022 through October 2022. I found the last three participants using the snowball method, with participants sharing the link to the study invitation flyer and my contact information in their Facebook groups and other social media.

As instructed in the study invitation flyer, the interested women reached out to me directly, at which time I used the pre-screening questions (Appendix B) for the initial

screening. Those qualifying participants who were interested in participating after the initial phone call received an email with the consent form. I would then review the consent form with them either over the phone or at the beginning of the Zoom interview. I thanked the participants were thanked for their willingness to participate, reiterated the purpose of the study, explained the reasons for audio recording the interview, and discussed the voluntary and non-compensated nature of their participation. I reviewed the protective measures designed to ensure their privacy and confidentiality, as well as how I would store the collected data in a secure manner. I gave each participant time to read the consent form and ensured they could ask questions any time during the study, before and after they acknowledged their consent by returning it via email. The interview sessions ranged from 55 minutes to 96 minutes, with an average time of 68 minutes. I was the only person participants met with for the interview and all clarifying follow-up interaction.

Other than two participants withdrawing their consent after the interview, there were no unusual circumstances encountered during the data collection. I used the recording feature of Zoom to record the data. After going over the items on the consent form (Appendix A), I gave no additional standardized instructions to the participants.

The interviews followed the Guiding Interview Questions (see Appendix C) with minimal follow-up questions needed. I used short prompts (“tell me more about X,” or “I’d like us to go back to Y”) only occasionally, to guide the participants back to the interview questions, if they had meandered far from the desired topic. In general, the participants appeared to be mindful of the topics discussed and eager to talk about their

experiences. Oftentimes, I skipped some of the guiding interview questions because responses were already provided in the previous section of the interview.

Data Analysis

I used Moustakas' (1994) phenomenological steps to data analysis for this study, as planned. After gathering the data using semi structured interviews, I used the Zoom transcribing feature to transcribe the audio files of the interviews into readable and accessible electronic data. I removed all identifying data from the transcripts and identified each interview file with the participant number. I corrected spelling and punctuation errors of the transcriptions, to ensure clarity and readability, but I did not alter spoken grammar to maintain the authenticity of the participant experience and expressions. I then saved the audio and text files with the consent forms in an external drive that is easy to keep password protected and stored separately in a locked file cabinet.

I read each interview transcript several times before attempting to code the content. Only after conducting five interviews of first-person accounts of life experiences, I started the hand coding process of the data. This coding process allowed sorting of the data according to the emerging themes while also looking for a point of saturation, as the interviews continued.

I used bracketing (Epoche), as described by Moustakas (1994), in an attempt to set aside and avoid researcher preconceptions, biases, and judgement, and an attempt to see things as they appear, and ensure the process was rooted on the topic and research question. This helped me approach each interview and transcript as a unique, novel

description of the phenomenon. I used the process of phenomenological reduction to describe each participant's experience of a phenomenon using textural language, with focus on the qualities or features of that particular experience (1994). To construct possible structural meanings hidden behind the textural surface (imaginative variation), I lifted up underlying themes from the text, related to overweight, weight loss, weight loss failures, social support, and cultural factors relating to those topics, considering any universal structures emerging. I considered different perspectives without losing sight of the cultural aspects of the study, while trying to respect the complete nature of each participant's experience. This process, slowly, led to specific structural descriptions of experience. Finally, in an attempt to synthesize the meanings and essences, as described by Moustakas (1994), I synthesized discovered texture and structure into an expression. This could be understood as the true essence of the lived experience of the interviewee, while formulating common meanings that reflect the essence of the experience (Moustakas, 1994; Yüksel & Yıldırım, 2015). While all the women interviewed spoke with a unique voice and told a different life story, no discrepancy arose from the essence of their experiences.

The main steps to Moustakas (1994) process turned out as follows:

1. Listing and Preliminary Grouping: This initial step of data analysis, also called horizontalization, refers to the listing and sorting of every relevant expression to the experience under study. This step allowed me to use open coding and identify concepts and categories by dividing the interview transcripts into smaller invariant constituents. I could lift segregated quotes and expressions from the

interviews, to elicit codes. For example, there were a large number of references to food, meals, and eating in varying contexts. All these became a category of its own initially.

2. Reduction and Elimination: During this second step, I separated the Invariant Constituents from the other expressions by testing them against two requirements:

(a) Did it contain a moment of the experience that is a necessary and sufficient constituent for understanding it? (b) Was it possible to abstract and label it?

During this step, I removed quotes and expressions that did not meet the two requirements or were vague, overlapping, or repetitive. Expressions that I could abstract and label, I removed, categorizing them as horizons of the experience, and determined as the invariant constituents of the experience (Moustakas, 1994).

This step was time-consuming and required a lot of back-and-forth, but it also solidified what part of the interview content was truly relevant in light of the interview questions.

3. Clustering and Thematizing the Invariant Constituents: During this step of data analysis, I clustered the invariant constituents of the experience, initially into eleven themes, creating the initial core thematic labels for the phenomenon under study (Moustakas, 1994).

4. Final Identification of the Invariant Constituents and Themes by Application-Validation: With this step, I checked each invariant constituent and their accompanying theme against the interview transcript of each study participant,

and if the invariant constituents were not relevant to the participant's experiences, I eliminated them (Moustakas, 1994).

5. Using the relevant, validated invariant constituents and themes, I constructed an Individual Textural Description of the experience for each participant. It included verbatim examples from each transcribed interview, as suggested by Moustakas (1994).

6. I constructed an Individual Structural Description of each participant's experience based on the Individual Textural Description and Imaginative Variation (Moustakas, 1994).

7. I constructed a Textural-Structural Description of the meanings and essences of the experience, which incorporated the invariant constituents and themes, for each participant (Moustakas, 1994).

8. The last step involved creating a Composite Description of the meanings and essences of the experience under study, which reflected the commonalities of the group as a whole (Moustakas, 1994). This step led to the final nine themes that emerged from the study. As an example, the large category consisting of textural references to food and eating became two thematic composite descriptions that better reflected the essence of the common experience of the study participants: Belonging/Aloha through Food, and Food Insecurity.

Nine overarching and often overlapping themes emerged for the research questions of the study. I will discuss them in the results section of this chapter.

Evidence of Trustworthiness

Issues of trustworthiness in qualitative research include credibility, transferability, confirmability, and dependability.

Credibility

Credibility refers to the researcher's confidence in the truthfulness and accuracy of the study's findings (Korstjens & Moser, 2018). To establish credibility, I used saturation of data and member checking. To have a sample size large enough to gather detailed and rich data, I continued recruiting study participants to meet saturation of data, which was accomplished at the sample size of eight. To add to the credibility by gaining feedback during the data analysis process, I used member checking as a method of sharing summaries of established data, interpretations, and conclusions with each participant, and gaining feedback from the participants (Chang, 2014). I provided a summary of each participant's data to them via email after the data analysis phase, giving them an opportunity to assess and correct any misinterpretations or to add information that they left out of the interview. I solicited feedback via phone, email, or text, depending on the preferred method by the participant.

Transferability

Transferability refers to the degree to which the study's findings are applicable to other contexts, populations, and situations (Korstjens & Moser, 2018). While using the phenomenological approach does not aim at transferability in the same sense quantitative studies do, I attempted some potential for transferability by providing thick, rich, and meaningful descriptive data that included the context on these essential elements (Cope,

2014; Korstjens & Moser, 2018). I wrote the descriptions with enough detail for the reader to obtain a vivid depiction of the study and the participants' experiences. Although the study and the conclusions reached can not be transferred to other locations, populations, and individuals, the detailed description of the study methodology and data analysis process may help with a similar study being replicated by others elsewhere (Cope, 2014; Korstjens & Moser, 2018).

Dependability

Dependability typically refers to consistency and reliability as to how it is possible for other researchers to repeat the study with consistent findings (Cope, 2014; Korstjens & Moser, 2018). While this is not possible to accomplish in a phenomenological study, as no other researcher can repeat the study exactly and obtain consistent findings, I took some measures to ensure dependability. I established an audit trail throughout the data collection and data analysis process through notes, checklists, audio files, and a researcher journal, to ensure that the records are kept in a reliable way (Korstjens & Moser, 2018). With this study being a dissertation, some additional measures ensuring dependability were in place through committee reviews. The research steps I took throughout the process through the above listed means contributed not only to the dependability but also the confirmability of the study. Using these techniques, I can provide a rationale for my decisions and interpretations and demonstrate that the findings reflect participants' responses and not my own assumptions or beliefs (Cope, 2014; Korstjens & Moser, 2018).

Confirmability

Confirmability refers to the neutrality of the study's findings, with focus on the potential researcher biases (Cope, 2014; Creswell, 2013). To ensure quality and transparency of qualitative research, I used critical self-reflection (reflexivity and being self-aware) throughout the data analysis process (Cope, 2014; Creswell, 2013; Korstjens & Moser, 2018). This included reflections about my role, thoughts, preconceived notions, and prejudices, as well as my relationship with the study participants, along with how these factors impacted the participants' answers to my questions, or the process of data analysis. To accomplish this, I used a daily journal to examine my conceptual lens, assumptions, preconceived notions, values, and how these affect the process, as suggested by Moustakas (1994). I also discussed her assumptions and conclusions extensively with my mentors, to ensure that there was plenty of sounding board to maximize self-awareness and avoid misconstruing the participants' experiences.

Results

There were two central research questions that formed the basis for this study:
Research Question 1: What are the lived experiences of overweight Native Hawaiian women regarding weight loss, weight management, and social support in these processes?

Research Question 2: How do Native Hawaiian women describe cultural factors that contribute to weight management?

These questions laid the foundation needed to elicit a deeper understanding of the experiences shared by the study participants. The process revealed several emerging and

overlapping themes. While every participant's experience appeared different and unique in many ways, after analyzing the interviews, I found little non-conforming data regarding the final themes. I identified no discrepant cases per se, as the participants all discussed the nine main themes in one way or another. The differences were a matter of degree or perspective on each theme, and I included a brief introduction to these differences in the description of themes below.

Identified Themes

Nine themes emerged in the final analysis: (a) kuleana (responsibility), (b) belonging/aloha through food, (c) food insecurity, (d) lack of perceived support, (e) health and mental health, (f) distrust of the medical establishment, (g) adverse childhood experiences, (h) alcohol and substance abuse, and (i) positive self-affirmations. The quotes I used to illustrate this analysis include verbatim without being edited for grammar or style.

Theme 1: Kuleana

Kuleana is a Hawaiian word that could be roughly translated as responsibility and privilege. This theme emerged from the participants' responses to questions about their background, their personal weight loss journey, what had created challenges for their weight loss or weight maintenance, and how the Native Hawaiian culture had contributed to their weight loss attempts. Seven participants identified as primary caregivers, either to their own children, grandchildren, parents, or other family members. These participants indicated that there was no other option, and the caregiver role was socially expected. P1

stated, “In our culture family is important everything. I have two grandkids living with me right now. And I babysit three others. Is what we do in my family.”

While P2 did not identify any direct dependents living with her, she expressed her kuleana was work and earning money to support extended family. She, too, indicated that there was an internalized societal expectation to provide support to others. She stated:

There are many people relying on me. Need to keep getting the paycheck you know. Stay healthy. And. And I need to have energy. I have so many people relying on that. My auntie takes care of my younger brother who’s got disability and mental health. So I need to send her money. And I pay rent for my sister. I need to.

Stress, the apparent flipside of kuleana, was brought up in this context by all eight participants, either directly or by indirectly referring to the experienced pressure. Stress was talked about early on, in response to the first guiding interview question. Seven participants discussed stress organically as they were narrating their background and discussing their social support history. The eighth participant initially brought up stress as an element of her weight loss failures and then expanded it to her family relationships. P3 said, “The expectations are there. You can’t hide it. It’s me or nobody else. So I just have to you know bite my tongue and do it.” (P3) Similarly, P4 stated,

My daughter kind of lost it. She’s. Don’t even know where she is. She’s had a drug problem since she was in her teens. So. It was my kuleana of course to take in the kids. All four of them. What else could I do.

P7 said, “I have to take care of my son’s children. Whether I like it not. Otherwise they’d be taken in by the state.”

According to P8, the stress from meeting the kuleana can become overwhelming at times. She said,

My mom and me, we fight a lot. She not the easiest roommate. And every day she say you can just leave. It’s her house. But I know she couldn’t take care of herself or anything. She has Parkinson’s and other health stuff. So we stay me, and the kids. And I think she expects it. It’s my kuleana. It’s what she taught me all growing up you know. We have to take care of family. I admit it, I’m so tired sometimes I just cry.

All eight women referred to stress that stems from the societal expectations of kuleana, something that they have learned growing up. The findings indicate that these women had internalized the societal expectations early on in their youth. P5 stated,

I was raised to take care of my mom and dad. No option. And I want to take care of them. I love them and yeah. It’s my responsibility. But it’s stressing because I have my kids too. They are teens now so it’s getting easier. But it’s still like being in the middle and everyone needs me always.

According to the results of this analysis, kuleana was a mindset for the participants. While the women appeared to understand its heavy and stressful nature, it was also seen as a given, something unchangeable.

Theme 2: Belonging/Aloha Through Food

Theme 2 emerged from participants' responses to questions about their family background, personal weight loss journey, supports, and how the Native Hawaiian culture has contributed to their weight loss and maintenance. While all eight participants acknowledged the role food and eating habits may have played in the weight gain and weight loss failures, they also emphasized the meaning of food as a social clue. The cultural meaning of sharing food was discussed by all eight participants. The analysis of these descriptions indicated that while this theme is closely related to Theme 1 (Kuleana), it deserves its own category. Demonstrating belonging and inclusion through shared meals is seen as a significant part of Native Hawaiian culture, not merely a responsibility. Also, showing *aloha* (love/caring) by preparing and sharing food or goods with others emerged as an important cultural value. P1 said, "My family has always loved to eat. Well, we're Hawaiian so we love to eat. We get together, we eat. That's how we come together." P2 stated, "I still take food when I visit family. And I send money so that they can get the food they need if I can't go because of work. It's important." According to P3, "Food's aloha. Food's love. That's how we show love and respect. You give food." P7 said, "Everyone show love by sharing food," "I don't have a lot of money but if I go somewhere with friends or family I make musubis¹. I always bring musubis."

Several participants discussed their memories around food in their childhood homes. Those memories had more personal variations than most thematic descriptions that emerged from interviews. The common denominator was the association between food and positive emotions and belonging. P2 explained,

When I was growing up real small we lived on Maui with my Tutu and she was a good cook. My mom was a good cook too but she liked drugs more. We'd eat together on the lana'i. I remember eating on my Tutu's lap and she would feed me and my sisters and my brother. She would make lau lau² and we sat and made a mess with it. But she would just smile and wipe my face. When I was in middle school I lived with her for a while. I was getting big already then. And insecure. If I said something about being fat, Tutu said to me I am beautiful. My Tutu used to tell me I am beautiful no matter what.

P5 said,

My earliest memories are about food. I watched my mom and my aunties cook. They would pound poi³ and and smoke fish and pig meat and all that. Traditional stuff. My uncles would hunt for pigs every week. So lots of meat always. There was never any lack of food when the family got together. Like cousins and others. Always people. And food to eat. Manapua⁴. Poke⁵. Not always the healthiest food, I guess. But it was family.

P8 said,

There wasn't always enough food at home when I was growing up. But I stayed with my auntie or grandma if it got bad at my parents' house. I learned to stuff myself when there was food available. Like a little hamster. Maybe I started gaining weight because of that. I remember the good times better. When there was

food and no worry. Everybody happy. Food makes everyone happy and get along. When I lived with my mom and dad. If mom was cooking something I knew they were not drinking. Those were good times. There was nothing to be afraid of.”

A significant finding was that food was associated with belonging to the Hawaiian culture and being at home. This was mentioned by five participants and implied in passing by two others. P4 said,

You don't know how important it is to spend time with your family and share food until you move away. I worked in the mainland for many years. It was hard to be away. It's not the same over there. I felt so good coming back home. Like belonging. The first day after I came back we went to beach and had a party. My cousins brought so much food. My auntie's huli huli⁶ sauce oh my god. There's no describing it, da best. I was back home.

Some participants also discussed the changed beauty standards and the changed expectations regarding social eating. These were mentioned in response to the question about potential barriers to weight loss (Q4) and the question about the role of the Native Hawaiian culture in the participants' weight loss attempts (Q10). A finding of this study was that the participating women had experienced a shift in collective beauty standards during their life span, from acceptance of all shapes and sizes to perceived non-tolerance of a larger body. P6 explained,

So when I grew up, my Hawaiians out of the family said, and the history that we learned in school was being big was beautiful. It was the most beautiful thing in the world, meaning eating, eating your poi, your pork. I'll leave you eating and

you're happy. Back then the bigger you are, the more beautiful you are. Eating wasn't a problem until the Westerners came, you know, and brought back their food.

- 1) *Musubi*: a popular Hawaiian snack made by layering cooked rice, Spam, and nori.
- 2) *Lau lau*: a traditional Hawaiian dish and cooking method that involves wrapping meat or fish in leaves and steaming or baking it.
- 3) *Poi*: a Hawaiian dish made from the fermented root of the taro plant baked and pounded to a paste.
- 4) *Manapua*: a soft, fluffy bun stuffed with a variety of fillings, such as pork, chicken, Portuguese sausage, custard, or sweet potato.
- 5) *Poke*: reef fish (such as ahi tuna or octopus) massaged with sea salt, seaweed, and crushed nuts, seasoned with soy sauce, sesame oil, scallions, and red chili pepper flakes, and served with a variety of toppings.
- 6) *Huli huli*: a traditional sauce featuring pineapple juice, soy sauce, sesame oil, garlic, and ginger. Huli is the Hawaiian word for “turn,” referring to the many times the chicken is turned while grilling.

Theme 3: Food Insecurity

A significant theme piercing through all interviews was food insecurity. Finding and affording healthy foods were described as barriers to weight loss. Seven out of the eight participants talked to a great length about how challenging it is to eat healthily. Only one participant stated that she was usually able to purchase what she wanted, and that she knew she was privileged in that respect. All eight participants mentioned the high food prices on the island and how convenient eating at fast food establishments can be. Most participants also expressed being aware of the potential health consequences of resorting to fast food regularly. P1 stated, “I know I shouldn’t but it’s the best option when I don’t have time. It’s the easiest. I don’t have time for cooking now that I have all the grandkids to take care of.” P2 said,

I can be so good for days and days and then I have a double shift. I get so tired and hungry if I'm working doubles. There's nobody at home to cook for me and no energy after a double shift. And I mean no self-control on those days absolutely none. No way I could ever drive past McDonald's on those days.

Convenience and access were mentioned by most participants as reasons to eat unhealthy foods. According to P3,

When I was growing up, it was just island life, and you could just go and pick up food from your backyard. Now it's a frigging bankruptcy to get something good to eat. Even the cheap stuff is really expensive nowadays. I'd like to eat better but some days I don't have enough money for anything else than something from Seven Eleven. Like a musubi and a soda. It's like next to my house so it's easy. Not healthy but easy.

P5 stated,

I'd like to cook more to eat healthier you know. But it's cheaper to get some grab and go you know. When I get home, I rather sleep than cook something that nobody in my house eats anyway. I need my sleep.

All eight women mentioned affordability as a big barrier for ideal diet. This was brought up in responses to the guiding questions about background (Q1), about barriers to weight loss (Q4), and recent challenges (Q10). Less expensive food was mentioned by seven women in response to the question how they could be better supported when they want to lose weight (Q11). P4 said,

I fuel myself with coffee. Yeah. I run on coffee and snacks. That's all I can afford. Sometimes a bento plate if I have extra money. But usually I have to think of the kids first. Their food comes first. And they are so picky.

P7 said,

I'm on a budget and it's hard. With the cost of everything. Especially food I mean. I can't afford good healthy food. If you want to diet, it's really expensive you know. All the bad stuff costs less. Seriously. I can feed my family at some drive through for a lot less than it costs to get some decent meat for home cooked meal. So we don't eat a lot of meat. If I cook at home it's noodles or rice. And the grandkids they like burgers and fries.

P8 concluded,

Have you seen what vegetables cost? I only eat vegetables when I get them from my auntie. She has a garden and she brings me stuff for free sometimes. Tomatoes and sweet potatoes and onions and fruits. But she doesn't come to town often. It's the fast food you just start eating and just eating and the cheapest meals you could find. And you know where it all goes.

P6 explained,

I went to college on Oahu. Almost thirty years ago. That's when everything started. Because to be honest, the cheapest meal for a single college person was that dollar burger at Jack in a Box and McDonald's. You know what I mean, like the fast food was the cheapest meals that you could afford. So, then you don't eat. I didn't eat like that when I was at home. You know there wasn't

any home cooked meals, there wasn't any you know. I went to the store to go buy me mango, or something. You know, fresh. It was expensive. I was like, Oh, my God! I could just walk behind my yard, pick a mango and eat it. You know what I mean, and I'm walking into the store like holy cow. Five dollars a mango, you know, like whoa, you know, and at the time. It was expensive, you know. I mean it. But so that's what started it. This is the fast food you just start eating and just eating, and the cheapest meals you could find. And organic wasn't even mentioned yet. Or you know all these healthy options wasn't mentioned yet. So of course, I'm seventeen, eighteen going on, and all. It was just fast food. It was just ridiculous, because it's all I could afford. It was cheaper to buy a burger than it was to go by ingredients to make a stew.

While this theme emerged as strong, and while the responses of all eight women were aligned, it needs to be noted that perspectives on food insecurity are subjective and may be biased. It is possible for access to food to be misjudged for a number of reasons, f. ex., misinformation, misunderstanding, helplessness, and mental health issues.

Theme 4: Lack Of Perceived Support

From the participant responses to the interview question asking how they could be better supported when wanting to lose weight (Q11), a common theme of lacking perceived support emerged. The findings indicate that the participating women viewed their social support either non-existing or inadequate. Four participants expressed that they had nobody in their life supportive of their health and weight loss efforts. P2 said, I wish I had somebody who supported me. Like I support others.” P3 stated,

There are all these expectations of how I should do and be. Who I should take care of. And what is okay to eat and what is not. If there was somebody who'd take some of that burden off sometimes. Maybe I could manage to lose some weight and get healthier. But I don't have that.

P1 described, "I'm all alone in this weight loss. My husband doesn't care. He's retired and only cares about his truck. And he should. He is overweight too. If we drop dead who's gonna care for the grandkids." P7 said,

I have zero support right now. I have my cousins but they don't live near me. It's hard to think of healthy eating and such when there's no support. I mean here in everyday life. It's like never ending. My husband tries to help if I ask him. But I don't want to ask him. I really don't want to. We didn't sign up to take on my son's kids. But there was nobody else. We're stuck.

Two participants mentioned their perception of not being taken seriously by those who supported them. P4 stated, "It would be nice to be taken seriously when I say I'm in pain." P5 said, "I would like to find a good support group. Where I wouldn't feel judged or that I'm doing things wrong."

When asked about what ideal support for weight loss and weight maintenance would look like, seven participants had similar ideas about getting a break from their everyday duties. P5 said, "Maybe if I could get my parents into some assisted living arrangement every now and then. I don't have the money. But one can dream." P4's dream was to "...have someone else do the shopping and driving kids around. It's so hard for me physically.

Someone to do the cooking sometimes so we wouldn't be eating so much junk." P8 stated,

Best support would be a break. I mean I haven't had a break for many years. If I could get someone to help with my mom and kids for a few days. I could get a breather and think about myself and my needs. But then I would be a bad daughter. And I don't want my mom to think that. Last time my sister came over and stayed with mom so I could get to the beach with my kids. It was just for a day. My mom was upset for a week after that and we got into a big fight. I always end up eating comfort food after our fights. She doesn't understand why I would want to lose weight. Because she's obese too and fine with it.

A finding relating to this theme was not only the lack of perceived support but the shared dream of having one's efforts acknowledged, rewarded, and reciprocated. This desire was articulated in different ways by the participants, but the expressions used most often were, "It's always me," and "I wish I didn't have to do everything myself/alone." P6 explained,

Instead of me cooking for everybody to lose weight. It's always me, even with my friends. It's always me initiating everything. I wish somebody would sometimes initiate. Till today it's always me with my kids, with my husband, with my friends. It's always me initiating everything instead of somebody coming. Hey, let me take you. Let me hold your hand, help you through it. I think it's because of my demeanor, and because I'm a leader, not a follower. So it's hard for me, because sometimes I just wish somebody would just take

the reigns, you know. And you know, cook for me. I always have to go for everybody. And think of things that are healthy things or non-carb things or no sugar things. It gets overwhelming.

Theme 5: Health and Mental Health

A significant finding was that the lived experiences of all the eight participants of the study discussed some type of health challenges. Health and mental health issues emerged as a strong common theme from the interviews. In response to the questions about background (Q1) and barriers to weight loss (Q4), all eight participants talked about the various health issues they had encountered during their adult lives, mentioning high blood pressure, diabetes, heart disease, back and knee pain, and mobility issues. Six participants reported mental health challenges, such as depression, anxiety, and panic attacks. Two participants identified as having a diagnosed eating disorder. P1 stated, I don't even remember how many drugs I'm supposed to take. My back is killing me most days." All eight women discussed emotional eating, usually describing it as a form of "comfort-eating." P8 said,

Because of my weight I have high blood pressure and diabetes. Need to take some meds for those. I was prescribed oxy for my knee pains and got you know addicted. So I have to be careful now. Don't want to do the rehab again. I take some depression and anxiety meds. But mainly I medicate myself by eating. You know. Emotional eating. I eat when I'm happy and I eat when I'm sad. A beer or two. It works better than meds.

Fluctuating between restrictive eating and over-eating appeared a common experience reported by five participants. P7 contemplated having a bulimia diagnosis when in her teens, stating,

I had bulimia when I was young. Maybe I still do, don't know. I swear the pills I was prescribed for depression made me want to eat more. But I don't have that need to purge anymore. I think it was the pills that made me bulimic. My therapist said that was not true. So what do I know. Right.

P2 stated, "I'm on some meds for my anxiety, and I think they make me more tired. So I don't take them regularly. Which is not good, but I can't feel that way every day." P2 later clarified,

I was bulimic as a teenager and there was a lot of shame in my eating habits. Because I would hide it from others. But I got help from a school nurse. It wasn't known those days what was wrong with me. I got meds for anxiety and it helped. Now I know it was bulimia.

Depression, anxiety, and other mental health issues were described by all eight participants. P3 stated, "I was diagnosed with depression when I was eighteen. I haven't felt normal ever since. It's like I stopped moving when I got the medication. I don't have the energy to move." P4 said, "I have diabetes and chronic back pain and other joint pain. It's sometimes hard to get out of the car if we drive long distance. Sometimes I get so anxious I get panic attacks." P5 disclosed,

I have a heart condition, high blood pressure, and diabetes. I know I should eat better and lose weight just for that. But it's not that easy. I have had panic

attacks thinking about what will happen to the kids if something happens to me.

P6 talked about growing frustrated with the debilitating back pain she developed due to her weight, her inability to permanently lose weight to ameliorate the pain, and the experience of bariatric surgery.

Within those years the doctors kept on telling me I needed to lose weight. I needed to lose weight, so they gave me pills after pills or places to go, and things to do and stuff like that, and I couldn't wait. I just couldn't. So one doctor recommended bariatric surgery. So for six months I went into the program the bariatric program. It was very strenuous. They have to make sure your side psychologically. Well, a lot of classes. I did it. I got in. Actually, I did it by myself. So I was actually on a walk by myself. I did it by myself, and I did it one because of my back. One reason was diabetes, and the other was. I was just obese, so I was like. Let's do this. I want to be skinny for the first time, you know. So I did. I did it. It was the most hardest year of my life. My husband cried because I couldn't eat. I couldn't move. I couldn't get out of bed. I was in the er every other week because I was so dehydrated because I couldn't eat or drink anything enough to hold things down. I would throw up. It was they did tell us they did warn us. There is a fifty percent chance that you would have problems, and there was a fifty percent chance that you would be great. I was the one that had problems until today. I still do. I would say, a couple of years of very, very hard, but everybody's like Oh, you look good. I

was like I don't care if I look good. My husband was crying because he had to literally take the blender and blend all my food in order for me to actually drink a lot of chicken, or anything for me to eat, to actually get something inside my body and make sure I have electrolytes or take me to the ER, so that I can get hydrated again with the saline. You know it took a toll on us as a family. And to be honest, it didn't help at all with my back. I got back surgery after back surgery, cutting my nerves. Eight, in fact, and it didn't help. So today I still have problems. But it got worse. I went through a lot of physical therapy. But I think they pushed too hard and they made it worse. Yes, they pushed you so hard to get better that they didn't recognize that they were actually hurting you more. If I could say this, I wouldn't do it again. I wouldn't do bariatric surgery. Don't recommend.

Theme 6: Distrust of the Medical Establishment

Based on the participants' descriptions of their experiences with medical practitioners, a theme of distrust emerged. The finding was that the study participants shared a strong lack of confidence in doctors and medicine in general. It was demonstrated not only by distrust in doctors and in information provided at medical establishments. Experiences of not being heard and/or seen in a supportive manner were discussed by seven participating women who reported that seeking medical help was typically the last resort for them. P1 stated that she has not seen a doctor for several years, even though she has medical insurance. She said she takes her grandchildren to their annual check-ups but avoids making appointments for herself. Six other participants

described similar experiences and attitudes. One participant explained that she worked in the medical field and received medical insurance through work but avoided making medical appointments unless she felt it was absolutely necessary. P1 stated,

I've had some bad experiences. The good thing is that I've been healthy. But I'd have to be in pretty bad shape to go to see a doctor. I go to the ER before I go to a doctor." "I talk to my friends and aunties, and I have a cousin who's a nurse. So if I get sick I get help that way. Good support.

When asked to expand on her bad experiences, P1 said,

I always, always felt worse about myself after seeing my doctor. So I switched to another doctor. She was nice but the nurse at her office was not. All that weighing every time. They would go like what I should do, and when I couldn't, I'd be lectured. I don't need to be told I'm obese. I know I'm obese. For heaven's sake. I know.

When discussing where one looks for information regarding health and diet (Q7), all eight participants shared similar stories about being reduced to a one-dimensional (overweight or obese) being. Two participants contemplated how the negative experiences had probably resulted in what they described as low self-esteem. Three women made the connection between their practitioner's attitude and the distrust in the information disseminated by practitioners. According to P2,

My doctor referred me to a nutritionist and a weight loss coach and those have been okay. But I don't know. My PCP is kind of old school with everything. Like everything that's wrong with me is always wrong because I'm obese.

Like my menopause issues. I got all kinds of issues. All because of my weight. And guess what. I lost weight and nothing changed. So it was menopause. I just don't trust her anymore.

P4 said, "I get lots of information from my doctors. And the weight loss group. But I'm not sure it's all like accurate." Similarly, P5 stated, "My doctor is nice and you know supportive. She's not an actual doctor but a nurse. But she like a doctor at a real clinic and sees patients. I like her. But I can't tell her everything, you know." P6 explained,

It's always the same. I'll be honest with you. I took my kids to the nutritionist. For me and my kids and it's always the same. They all say the same thing, you know. Don't eat this. Don't eat that. Carbs is bad. You need to eat protein this much. Yeah, it's like, Oh, God! [...] Yeah, it's not real support.

Several women narrated their experience of not being heard within the medical establishment. According to P3,

I have diabetes now, so I have to see a doctor all the time. She's nice and all that. But I can tell that she can't really see me you know. Like really. She's not listening. I've tried to tell her some of my medical problems, but I don't know. It's like once you're fat they give one diagnosis, that's it. For me it's my weight and diabetes. All I'm getting is instructions on how to deal with my diabetes. What to eat and what not to eat. How much I should be exercising every week. I can't exercise because of the pain I'm having. But the doctor doesn't hear me. It's like. She thinks losing weight is the answer to everything. Jeez.

Similarly to others but more concisely, P7 said, “I don’t go to doctors. For me that is. They don’t listen to me anyway.”

When describing her experience with mobility issues and trying to find help for herself, P6 said, “You know to start on that handicap sign. Sometimes it’s too far, you know. She [medical staff] told me how you don’t lose weight if you park close to the handicap place. And I was like holy crap.” P6 further clarified, “They just don’t get the pain you know. They don’t care.” The sentiments were echoed by P8, who stated:

Every single time I’ve been to the doctors he says the same thing. You need to lose weight. Blah blah blah. It’s like. Don’t they ever listen. I mean I’ve seen this one doctor for four years now. He knows that I have been trying. But it’s like he doesn’t remember. Or care. It’s just like he’s barking orders. And he’s not that skinny either. So, I don’t think he knows what the hell he’s talking about.” (P8)

While one participant said she relies on internet sources, seven participants mentioned a specific family member or a friend they would go to for health information, rather than rely on doctors and nurses. P7 said,

I have so many health issues. Too many. And I do a lot of searching online. So I know what I need. Usually. My granddaughter had some stomach issues, and I took her to the doctor. Such a circus. No help at all. Me and my cousin started looking online and she figured out what she needed. Just switching some foods. And now she’s much better. My cousins are the best support.

P4 stated, “I usually talk to my mom and my aunties first because they know their stuff. They’ve been through so much more than I have. And they check everything online too. So, it’s like a support group also. Just better.”

Theme 7: Adverse Childhood Experiences

Theme 7 emerged early in the interviews as one common denominator for the participants’ narratives. When responding to the prompt to talk about their family and background regarding weight and weight loss, all participating women described some sort of adverse childhood experience, ranging from poverty and emotional or physical neglect to varying forms of abuse or exposure to abuse. While some of these experiences were mentioned only briefly in passing, half of the participants discussed the experiences to some length, and two women even contemplated the potential connection between the abuse and their later weight gain trajectory.

Six participants talked about being raised by someone other than their birth parents, including grandparents and aunties. Five participants reported having experienced disruptions in their childhood family living arrangements. Seven participants discussed witnessing drug and/or alcohol use of a family member growing up. Four participants reported experiences that could be categorized as emotional or mental abuse.

All eight participants mentioned receiving physical discipline as children. P3 said, “If you got into trouble you knew you’d get lickings. And if you got into big trouble you’d get major lickings.”

Four participants talked about having experienced sexual abuse by a family member or a trusted adult as children, and how there had been no support or even acknowledgement for the abuse. P2 stated,

I was molested all through elementary. Off and on. By an uncle who lived with us. But I couldn't talk to my mom about it. I remember that I tried once and she got well [paused]. She got so upset I didn't go to her after that. I learned to keep things to myself.

P4 drew a connection between her experience and later drug use, stating,

I trusted him because he was my coach, and you know he just took advantage of my being so young I guess. I don't know. That's how I got into doing drugs. You want to numb yourself. When nobody believes you.

This theme was tied to the role of the Native Hawaiian culture in the participants' lived experiences. The culture of silence regarding some adverse childhood experiences, mainly sexual abuse, was discussed by five participants. P1 said, "Everybody knows but you don't talk about it. You just don't. You got to respect the family." According to P2, "You can't bring shame to your ohana." P3 said, "We all knew what Grandpa was and what he did. But nobody ever said anything. Auntie said that if we talk, the state social workers will get us." P7 discussed how the abuse was ignored, saying,

We [Hawaiians] have this tradition of kids sleeping together. You know. Not just siblings but all the extended family kids. It's the way we grew up when families were visiting each other. So me and my sisters were always sleeping in the same room, the same mattress with my older cousins. One cousin

started having sex with me when I was still like eleven and he was sixteen or something. I think he molested my little sister too. Not sure. Was long time ago. We never talked about it. You couldn't talk about it because you'd get lickings. My tutu [grandmother] would get furious. She'd call us liars. You just had to not think about it. Not think about it. I never thought about how bad it was until I had kids of my own.

The term "hush hush" was used by all five participants who discussed this topic. P6 said, "There's a lot of looking the other way." This was echoed by P7 who stated, "You had to pretend that all was pono [good/righteous]. Because it's family stuff and you don't crap on family."

Some participants contemplated the connection between their weight loss struggles and their experiences of not being supported in childhood. P3 said, "I sometimes wonder, you know, that maybe if I had had therapy as a child. Would anything be different? I mean with my weight and such." P8 stated,

I know I do emotional eating. I overeat when things get tough or when I'm stressed out. I mean it's not the best coping thing. But I guess that's how I learned to cope as a child. With all that shit my mom put me through. She was not a supportive mom. Emotionally. But she would always have cookies or something.

Theme 8: Alcohol and Substance Abuse

All eight participants disclosed some past alcohol or substance abuse that, in their opinion, had impacted their weight loss journey negatively at some point. Six women

reported they witnessed drug or alcohol use in their childhood home and grew up sensing it was, as P7 described it, “a normal way of coping,” or as P8 stated, “part of being an adult.” All participants reported having used alcohol or drugs during their teenage years or young adulthood. Two women said they had experienced addiction and rehab counseling, one for alcohol and one for pain meds.

Six women reported currently using alcohol and/or recreational drugs on occasion. P1 said, “I grow my own *pakalolo* [cannabis]. It helps with my back pain.” P3 said, “I know I’m not supposed to drink because of my diabetes. But I sometimes do just to take the edge off.” P2 stated,

I don’t drink a lot. Only when I’m with friends. I don’t think it’s the best idea to drink when you’re on anxiety meds. Or trying to lose weight. But I do get high sometimes. I mean, dealing with my menopause.

P6 said, “I have a medical marijuana card. For my back pain.” According to P8, “A beer or two. It works better than meds.” P5 explained,

I have so much stress from home and work that sometimes I need to unwind. I go out with friends. Or I chill on the beach. Nothing major. Because I can’t get drunk. You know having the kids and my parents. But if my sister can stay home with them, I can do something. I know it’s not good for my weight, but oh well.

Theme 9: Positive Self-Affirmations

An unexpected theme that emerged from the interviews was positive self-affirmations. The participants were all women with challenging childhoods or other

adversities. Yet, while talking story, they all used self-affirmations that reflected positive self-worth or strength. For example, P1 said repeatedly during the interview, “I can do anything. If I don’t who will.” Examples of other note-worthy affirmations included P2 stating, “I am beautiful. My Tutu used to tell me I am beautiful no matter what.” P3 said, “My weight says nothing about me. I’m much more than my weight.” On several occasions, P4 stated, “I’m my own best resource.” P5 said, “This is my life, I’m making my own mistakes. At my own pace.” P7 exclaimed several times, “My body is amazing as is.” P8 said, “I’m strong. I’ve gotten through so much shit.” When talking about her leadership role in her family, P6 said, “Even if I feel weak, I think sometimes I see strength in me. It’s tremendous. Tremendous.”

Considering that several participants mentioned wanting to lose weight and having low self-esteem, their interviews did not reflect it. All participants used positive self-talk that reflected body-acceptance and confidence in self.

Summary

In Chapter 4, I presented the common themes that emerged from the conducted interviews. The purpose of this phenomenological study was to explore the lived experiences of overweight Native Hawaiian women, using Moustakas’ (1994) phenomenological data analysis plan. Two research questions guided this exploration: What are the lived experiences of overweight Native Hawaiian women regarding weight loss, weight management, and social support in these processes? And how do Native Hawaiian women describe cultural factors that contribute to weight management?

I used the narrative responses to identify specific themes commonly emerging throughout the study. The nine major themes I identified in the final analysis were: (a) kuleana (responsibility), (b) belonging/aloha through food, (c) food insecurity, (d) lack of perceived support, (e) health and mental health, (f) distrust of the medical establishment, (g) adverse childhood experiences, (h) alcohol and substance abuse, and (i) positive self-affirmations. These underlying themes were present in some significant way in the narrative responses of all eight participants, representing the essence of experience universal for the interviewed women.

In the next chapter, I will provide a summary of the findings and an interpretation of the results, a discussion of the limitations of the research, suggestions for future research directions, implications for creating positive social change, and a conclusion discussing the essence of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Native Hawaiian women are exposed to culture and lifestyle of the island state that has an alarming concentration of obesity and related chronic health issues (Ing et al., 2018; Rougée et al., 2016), with Native Hawaiians exhibiting the highest rates of obesity of any racial/ethnic group in the United States (Braden & Nigg, 2016; Kaholokula et al., 2018; Rougée et al., 2016). The purpose of this study was to contribute to the knowledge base of and support efforts to develop more efficient preventative intervention strategies by identifying how unhealthy social behaviors develop in this population group, and by illuminating the values, traditions, and information sharing customs of the island culture.

This chapter contains discussion and recommendations for future research relating to the research questions that I answered in this study:

Research Question 1: What are the lived experiences of overweight Native Hawaiian women regarding weight loss, weight management, and social support in these processes?

Research Question 2: How do Native Hawaiian women describe cultural factors that contribute to weight management?"

A phenomenological qualitative research approach was appropriate in interpreting the descriptive investigation of the phenomena and understanding the essence of the collected data (Moustakas, 1994). I interviewed eight participants and provided rich descriptions of their experiences relating to weight loss, weight management, social support, and the cultural factors that they perceived as contributing to their weight

management. I identified nine themes as emerging from the data in the final analysis: (a) kuleana (responsibility), (b) belonging/aloha through food, (c) food insecurity, (d) lack of perceived support, (e) health and mental health, (f) distrust of the medical establishment, (g) adverse childhood experiences, (h) alcohol and substance abuse, and (i) positive self-affirmations. In Chapter 5, I will interpret the findings of this study, discuss the limitations of this study, make recommendations for further research, and provide potential implications of this study, along with a conclusion to this research.

Interpretation of the Findings

While each participant gave a unique rich description of their weight loss journey, and the contributing factors first appeared different for each account, some commonalities and parallel experiences soon started to emerge during the final data analysis. The findings of this study included nine identified themes that represent the essence of the participants' experiences. I will discuss these themes in the following sections.

Kuleana (Responsibility)

Early on in the interviews, a strong theme of perceived responsibility started to shine through the women's descriptions of their backgrounds, weight loss journey, and cultural factors they perceived as barriers to their success in weight loss and weight maintenance. All eight participants reported family and other responsibilities and expressed internalized obligation to care for the needs of others. Societal expectations for caregiving and taking care of the needs of others were articulated by all eight women but often expressed as either the women's own desire or decision or simply a necessary task

that nobody else would take on. Experiences of exhaustion and occasional overwhelm described by the study participants echoed the ways NHPI participants in previous studies describe the impact of cultural *Kuleana* on caregiver health and wellbeing (Jackson et al., 2024; Playdon et al., 2023.) Recent research literature has highlighted not only the cultural significance of *Kuleana* but also the *Kuleana*-reinforcing role of the community and social support network for NHPI women (Jackson et al., 2024; Playdon et al., 2023).

In their multimethod study on unpaid NHPI caregivers of people living with Alzheimer's disease and related dementias (ADRDs), Jackson et al. (2024) identified three cultural values related to caregiving as described by the study participants, connection to cultural practices, the importance of community to both their own health and that of the people they cared for, and emphasizing the positive impact of large support networks. The concept of *Kuleana* relating to caregiving was described as an important value in this context (Jackson et al., 2024). The concept of *Kuleana*, emphasizing the culturally reinforced and internalized sense of responsibility, was described similarly by the eight participants of the present study.

Belonging/Aloha Through Food

Based on the findings of this study, I concluded that belonging through food and expression aloha (caring/love) through food are important cultural traditions, This conclusion is consistent with the existing literature that has well documented the significance of food in Native Hawaiian culture, interaction, and health (Ing et al., 2018; Playdon et al., 2023; Sinclair et al., 2019). The importance of sharing meals together with

family and friends was mentioned as a significant cultural factor by all eight women when they discussed their backgrounds and the impact of culture on their health behavior.

In the present study, it should be noted that while the participating women expressed their concerns about eating unhealthy food under other circumstances, they did not appear to perceive eating unhealthy food as an equally regrettable problem in the context of sharing the meal socially with family and friends. Participants perceived sharing food as a positive factor, aligning with Wong and Kataoka-Yahiro (2017), who in their systematic literature review found that although Native Hawaiians eat the richest diet on the islands and have the highest BMI levels, traditional Hawaiian diet programs and family support benefit and improve the health and well-being of the study participants. Wong and Kataoka-Yahiro (2017) concluded that revitalization of the traditional culture and social interaction may lead to improving the health and well-being of Native Hawaiians.

The participants of the present study expressed nostalgia and longing when discussing their childhood delicacies, traditional foods, and food memories. They also expressed desire to improve their own health as well as the health of others through traditional Hawaiian meal preparation practices and local ingredients. These findings supported the notions of belonging through food and showing love through sharing food. Playdon et al. (2023) studied the cultural influences on diet, food choices, and eating habits of NHPI women relocated in the state of Utah. One finding of their study was that the NHPI community expresses sentiment (love and care) through food, “refusing food could be interpreted as disrespectful, and it is common for women to cook and provide

for others before themselves” (p. 30). In Hawaiian language, the word *Kuleana* has numerous meanings, ranging from responsibility to privilege, and from concern to right (Pukui, 1986). In the present study, the concept of caring merges with the theme of *Kuleana*, in which the participating women express their internalized responsibility to care for others.

As discussed in Chapter 2, with respect to health behavior, social support can be tangible, informational, or emotional. These different types of social support may have a positive or a negative impact on the wellbeing of an individual, depending on the type of relationship he or she has with the person or social network providing the support and how he or she perceives the support (Lam et al., 2023). Reinforcing cohesive and supportive social networks through food traditions and through sharing of food appeared important to the participants of the present study. These findings were consistent with the recent quantitative studies on NHPI neighborhood cohesion and health (Lee et al., 2022; Wang et al., 2022). Lam et al. (2023) found neighborhood cohesion beneficial for the overall health of social network members in the NHPI populations, as well as in increasing the positive health behaviors occurring within those social networks. Wang et al. (2022) found high social cohesion associated with reduced obesity odds and increased sufficient physical activity odds and concluded that enhancing social connectivity might promote healthy weight management behaviors among NHPI individuals.

Relating to the concept of Belonging, social cohesion reflects the bonds and sense of solidarity and belonging within a group, such as a community, neighborhood, or an ethnic group. Fonseca et al. (2019) studied the varying ways the concept of social

cohesion has been defined and what characteristics have been used to construct those definitions in past theoretical and empirical studies. Based on their findings, the researchers created an open generic social cohesion framework to characterize social cohesion as a complex and dynamic concept that has three main layers: the individual; institutions; and community. This framework was useful for me in interpreting the results of the present study. To simplify this complex and thorough framework model, factors like self-motivation, perceptions, norms and values, participation, and performance contribute to one's experience of social cohesion on the level of the individual. At the level of institutions, the framework model narrows factors down to conflict management and decision making, human rights, and environment that includes structures, norms, and values. At the level of community, identified factor clusters include social environment, relationships and ties, and process performance and goal attainment (Fonseca et al., 2019). These factor clusters can be found playing a role in the lived experiences of the women participating in the present study. Using the social cohesion framework model, several of the themes that emerged can be better understood, starting from Belonging/Aloha Through Food (individual level experience), to Food Insecurity (community level issue), Lack of Perceived Support (individual level experience), Health and Mental Health (impacts on the levels of individual and institutions), and Distrust of the Medical Establishment (institutional level issue). This indicates that social cohesion is an important part of the social support experience for Native Hawaiian women and possibly potential key to constructing solutions for effective health behavior change programs.

Food Insecurity

A significant finding of this study highlighted the harsh reality of food insecurity experienced by islander women. Most participants discussed their challenges and inconveniences of finding healthy foods, and all participants pointed out the high prices of healthy snacks or ingredients used in healthy cooking. This finding is consistent with the existing literature on NHPI nutrition and health which has confirmed the connection between food insecurity and overweight/obesity in this population (Long et al., 2023; Long et al., 2022; Yoshida & Maddock, 2020). The correlation between food insecurity and health issues has been demonstrated in a number of recent studies on the United States mainland (McCullough et al., 2022; Molitor & Kehl, 2023; Walker et al., 2024).

While food insecurity is an issue impacting participating women on the individual and family level, using the social cohesion framework model presented by Fonseca et al. (2019), it can be interpreted as a community level issue negatively impacting whole neighborhoods. High food prices and lack of access to healthy foods decrease the social cohesion of whole communities while also having an impact on the health and mental health of the individual community residents.

Lack of Perceived Support

From the findings of the study, I concluded that a lack of perceived support plays an important role in the participants' core experience and health outcomes. While my conclusion is supported by the existing literature (Conceição et al., 2020; Denche-Zamorano et al., 2024; Layous & Nelson-Coffey, 2021), it does not mean no social support exists. Instead, it indicates that the actual support received by the recipient

(which involves the experience of being valued, respected, understood, cared about, supported, and loved by other people) is not perceived as such, is not adequate or sufficient, or does not meet the expectations of the recipient (Uchino, 2009). The finding of this study was that the participating women experienced most areas of their social support lacking. The experiences of not being respected and not having their efforts acknowledged were a big part of this finding.

The impact of perceived social support on physical and mental health outcomes, as well as personal resources, has been well documented (Conceição et al., 2020; Denche-Zamorano et al., 2024; Layous & Nelson-Coffey, 2021). Also, the existing literature indicates that partner autonomy support (encouragement to be oneself) plays a significant role in women's motivation for weight related health behavior change and psychological well-being, especially in women with greater baseline BMI (Gettens et al., 2018).

Based on the studies of psychosocial stress in NHPI women in Hawaii, stressors these women experience include intimate relationships (limited partner assistance), gender stereotype; family and home life (feeling like an outsider, lack of respect); childrearing; time for self; neighborhood environment (i.e., not feeling part of the community); workplace; and finances (Okiihiro et al., 2016). Researchers have illuminated sociocultural factors leading to feeling a lack of perceived social support, feeling isolated, unsupported, and discriminated, even within the family context (Okiihiro et al., 2016). The experiences of the participating women in this current study strongly aligned with these previously identified stressors. For NHPI women in particular,

researchers have shown the correlation between positive health outcomes and the experience of a supportive social network (Lam et al., 2023; Wong & Kataoka-Yahiro, 2017). Conversely, the concept of social cohesion seems to come to play in this equation, especially if a woman feels isolated and/or not supported by her immediate support network, whether her family or community. Expectations and perception of the support received are key here. In their interviews, the women participating in the present study demonstrated a discrepancy between the lived experiences and the received support, leading to descriptions of inadequate social cohesion. As an example, even when medical care was available, the lived experience was that it was not adequately caring, respectful, or understanding. As another example, the cultural expectation of shared meals with extended family came across consistently and appeared nostalgized and/or internalized through a sense of belonging. Yet, several of the interviewed women discussed the pressure they experienced relating to those shared meals, the perceived lack of satisfactory frequency for them, having to contribute without reciprocation or support from family members, and feeling disappointment and self-blame for it. These experiences reflect fractures in the social cohesion experienced by the participating women.

Health and Mental Health

A finding of this study was that all participants reported significant, often lifelong health and/or mental health issues ranging from high blood pressure, diabetes, heart disease, back and knee pain, and mobility issues to mental health challenges, such as depression, anxiety, panic attacks, and eating disorders. While the sample size was small,

and it is beyond the scope of this study to speculate on the direct causes of these health issues in the sample, the findings were consistent with the existing literature. As highlighted by Bourgette-Henry et al. (2019), Braden and Nigg (2016), Cutrer-Párraga et al. (2024), Hermosura et al. (2019), Ing et al. (2019), Kaholokula et al. (2013), Kaholokula et al. (2017), Kaholokula et al. (2018), Lassetter et al. (2015), Park et al. (2024), Sentell et al. (2015); Ta Park et al. (2018), and Walters et al. (2020), NHPI women face a great number of risk factors for both physical and mental health issues. Also, seeking help for these issues is impacted by a number of barriers that include negative attitudes and perceptions, such as stigma and shame (Burrage et al., 2021; Cutrer-Párraga et al., 2024; Masuda et al., 2024). Furthermore, the impact of colonization, historical trauma, and cultural loss, as well as discrimination has also played a role in shaping the negative health outcomes in this population (Park et al., 2024; Subica et al., 2024). Finally, traumatic events, financial strain, housing instability and food insecurity all negatively affect mental health (Walker et al., 2024).

Looking at this theme through the models of social support and social networks, again, questions about social cohesion can be raised. While the transgenerational trauma of Native Hawaiians is acknowledged as significantly impacting the health and mental wellbeing of this population, it is also acknowledged that, until recently, the impact of this trauma has been mostly overlooked (Subica et al., 2024). According to the findings of Keaulana et al. (2024), today's world does not sufficiently acknowledge the needs of Native Hawaiian women and the structural, institutional, interpersonal, and internal causes of their hurt and suffering. Using Fonseca et al.'s (2019) social cohesion

framework model, it could be asked what the institutional and community influences are for the individual health and mental health in NHPI communities. Environmental structures, norms and values that characterize the social cohesion experienced by individuals are created at the levels of the community and its institutions (2019). The responses of the women interviewed for this study reflect their experiences with some of these environmental structures, norms and values, and also how those structures, norms, and values impact the women's motivation for health behavior change.

Distrust of the Medical Establishment

The interviewed women all expressed some level of distrust in the medical establishment. All eight participants described experiences with medical practitioners that had resulted in low self-esteem and distrust in the information disseminated by medical practitioners. The experience of not being seen and heard appeared common. This finding is consistent with the existing literature that indicates the approaches stemming from the Western research and health promotion tradition may not be the most effective with the NHPI population, as they are not sensitive to the cultural values, practices, and other contextual factors prevailing in Hawaii (Kaholokula et al., 2018; Wills et al., 2023). Again, looking at this as a reflection of social cohesion, trust in others and trust in institutions are some of the factors considered when measuring the social cohesion of a community (Fonseca et al., 2019). Not acknowledging cultural values and practices may be counterproductive on several levels. The health of an individual is impacted, as her perceptions, norms and values are being dismissed, which in turn reduces her self-motivation, participation, and performance in positive health behaviors. On the level of

the community, lack of trust will reduce participation, potentially leading to further increase in health and mental health disparities. When an individual's trust in the medical establishment is weakened, the cycle keeps repeating itself at the institutional level, because implementing practices aligned with the local cultural values and norms may be seen as time consuming, challenging, or inefficient.

The existing research recognizes that context-specific research practices, culturally responsible research ethics, and scientific communication are crucial when investigating the health needs and disparities of indigenous groups like the NHPs (Wells et al., 2024). Masuda et al. (2024) suggested that the preferences of indigenous groups, such as Native Hawaiians, should be heard and relied on when providing mental health treatment. Furthermore, understanding the cultural risk factors that may influence NHP health while also understanding the importance of social networks in the local communities has been called for (Willingham et al., 2025; Wills et al., 2023).

Adverse Childhood Experiences

In this study some adverse childhood events (ACEs), such as physical or emotional neglect, physical, sexual, or emotional/verbal abuse, household dysfunction, or witnessing traumatic events, were reported by all eight participants. Most participants reported having experienced multiple ACEs through their childhood, all participants reported physical abuse, and 4 participants reported sexual abuse. A common experience reported was that the abuse was not believed, it was ignored by the caregivers and support network, and/or the participant was told not to talk about it, which all in turn further amplified the trauma experience and lack of perceived social support.

This finding is consistent with the existing literature on ACEs. Childhood adversity has been linked to poor health factors and outcomes, such as cancer, heart disease, and poor self-rated health (Perrins et al, 2024), eating disorders and obesity (Chu & Chu, 2021; Hayes et al., 2017; Mathieu et al., 2022; Soares et al., 2021; Zhou et al., 2024), and mental illness, violence, and substance use (Perrins et al., 2024; Walker et al., 2024). Conversely, buffering effects of positive childhood experiences have been found. Lynne et al., (2025) demonstrated that positive childhood experiences counterbalanced some of the impact of ACEs in highschoolers (N = 24,772 with 1% NHPI), indicating that intervention strategies that increase positive childhood experiences in adolescents' immediate environments promote better outcomes for youths exposed to ACEs.

ACEs do not impact the individual only but may have a significant ripple effect on the family unit and social network of the individual who has experienced adversities. Several empirical studies have shown that parents' experiences with the initial ACEs can increase their children's risk of experiencing ACEs and may lead to eventual negative health outcomes in the children (Perrins et al., 2024). An example of this type of collectively impactful transgenerational ACEs amongst the NHPI is the historical trauma carried and transmitted through generations by Native Hawaiians (Keaulana et al., 2024).

Due to the factors discussed above, the impact of ACEs on the experience of the participating women cannot be underestimated. In the light of the “hush-hush culture”, as five participants called it, and the strong cultural pressure to protect abusers that are considered family, the resilience of these women needs to be acknowledged. This part of the Native Hawaiian culture may reflect a potential negative side of social cohesion

worth looking into more closely. On the one hand, strong family cohesion may increase one's sense of belonging, one's feelings of being supported and, thus, one's mental wellbeing. On the other hand, the negative impact of ACEs later in life is well documented (Chu & Chu, 2021; Hayes et al., 2017; Mathieu et al., 2022; Perrins et al., 2024; Soares et al., 2021; Walker et al., 2024; Zhou et al., 2024). Additional trauma caused by a caregiver dismissal of the abuse has been demonstrated as well (Jouriles et al., 2022).

In their qualitative study looking at the impact of historical trauma on Native Hawaiian women of all ages, Keaulana et al. (2024) highlighted the varying forms of hurt caused by the trauma, as experienced by the participating Native Hawaiian women. Keaulana et al. (2024) also pointed out institutional inertia commonly noted in Hawaii. In this context, institutional inertia refers to the stagnant situation that allows the abuse experienced by Native Hawaiian women and girls to be systematically ignored on the levels of the community and institutions. Keaulana et al. (2024) emphasized the inability of the state government and legislative bodies to take responsibility by continuing to perpetuate the "hush-hush culture" on an institutional level. The social cohesion in this type of cultural environment that accepts violence against women benefits one social group while deeply hurting another. Furthermore, signaling through legislation that abusers are worthier than the abused discourages girls and women from speaking up, seeking support, and creating change.

Alcohol and Substance Abuse

A significant theme that emerged from the data was the past alcohol or substance abuse reported by all participants. All women expressed that their own alcohol or substance use or witnessing alcohol or substance abuse of a loved one or a caregiver had impacted their weight loss journey at some point. This finding is consistent with the existing literature that indicates ACEs have been linked with greater likelihood of harmful alcohol and drug use (McCollum et al., 2024). It has also been indicated that the historical trauma experienced by this population makes them vulnerable to alcohol and substance misuse (Williams et al., 2021).

Keaulana et al. (2024) discussed the internalized hurt expressed by Native Hawaiian women, stating that several of these women brought up health and social behavioral issues, commonly including substance misuse and domestic violence. The interviewed women expressed that these issues had “deeply affected their self-esteem, mental health, and the choices they made throughout their lives” (p. 14). This echoes the responses generated by the women of the present study. However, while alcohol and substance misuse may have impacted the participants’ experience, sense of self, and health behavior, their resilience shone through in their ability to self-affirm, as I describe in the next section.

Positive Self-Affirmations

An unexpected finding of this study was that despite their life challenges, childhood adversities, financial shortcomings, and health problems, all the eight participants expressed an underlying positive outlook on many aspects of their lives.

While they would acknowledge their overweight or obesity, they would also acknowledge their self-worth and abilities and express those using strong and often repeated self-affirmations. Some of these affirmations were also related to self-acceptance and positive body-image. In the existing literature researchers have noted that normative perceptions of an ideal body size may be shaped by the size, composition, and structure of social networks in this population (Kroenke et al., 2020). It has also been suggested that cultural and environmental factors, such as greater acceptance and idealization of larger body types and lower levels of body image dissatisfaction within the NHPI population, may have an impact on health behavior outcomes (Abdoli et al., 2024; Goldman et al., 2012). These types of environmental factors are examples of positive impact social network cohesion can have on the level of an individual. Considering the body image issues prevalent in the Western world, it would be interesting to better understand the origins of the low levels of body image dissatisfaction among Native Hawaiian women.

Limitations of the Study

I understand the limitations of this qualitative study as the restrictions over which I had no control as the researcher, such as restrictions related to validity and reliability (Korstjens & Moser, 2018). In this study, the main limitations included sample size and constraints related to phenomenological methodology (Cresswell, 2013). I determined the sample size of eight to be sufficient, as I reached reasonable saturation after eight interviews. As I expected, the findings of this study may not be directly transferable to other ethnic populations or to other cultures or geographic locations, which can be seen

as a limitation. Also, this study being qualitative, generalizability was not its goal and should not be used as a measure for validity.

Additional limitations I noted during the process were researcher inexperience with the Moustakas' model and researcher biases. Those included my not being local or speaking the local dialect, as well as my personal experiences with weight loss and weight maintenance behaviors that may have influenced the interviews and the data analysis process. It is possible that some information provided by the participants was impacted by the dynamics of the interview sessions, or that the participants self-censored their responses. To address these restrictions as planned, I paid attention to transparency, recording and transcribing all interviews, taking careful notes of the research process, and using member checking to crosscheck the coding of the data (Moustakas, 1994). Two participants declined to participate in the member checking process citing their busy schedules. Two participants never responded to the requests to participate in the member checking process. Four participants engaged in a rigorous back-and-forth process during which some minor clarifications were made to the direct quotes at their request. This study could have been strengthened if all the participants were available and willing to engage in member checking.

Recommendations

In the present qualitative study, I explored the lived experiences of a small sample of overweight middle-aged Native Hawaiian women and specifically their experiences with social support and weight management behaviors. Future researchers on this topic could take a quantitative approach with a larger sample, to further confirm the connection

between ACEs and weight management challenges later in life. Future researchers could also look into the strong distrust in the medical establishment that emerged in this study, to better understand the underlying reasons for it. This type of research could be designed to rely on the concept of social cohesion and investigate its role in motivating health behavior change on the individual level. Also, future researchers could explore the dynamics and structure of the social networks that Native Hawaiian women grow up in, to better understand the origins of their high self-worth, self-acceptance, and resilience, and to design interventions that better use those culturally relevant supportive mechanisms that boost resilience.

Implications

My aim with this study was to understand the lived experiences of Native Hawaiian women, relating to social support, weight loss behaviors, and weight maintenance. Conducting the study added data to the knowledge base on health behavior change and social support in general. Also, by conducting this study, I made an original contribution to the research of weight loss maintenance and of lived experiences of Native Hawaiian women, as the health literature does not contain sufficient research to understand these behaviors in this culture. The insights can be added to the tools available for clinical and health psychology practitioners who plan long-term weight loss and maintenance interventions with this population.

Implications for Positive Social Change

Obesity is associated with less active and less participatory lifestyle, covert discrimination, ostracism, social isolation, economic challenges, and even job loss (CDC,

2019). Positive social change may result with a deeper understanding of perceived barriers for permanent weight loss and the role of social support within the context of Hawaiian culture. Efforts to ameliorate overweight and obesity in Native Hawaiian women may lead to less weight discrimination, less psycho-social issues, and better integration to the society. Considering the collectivistic and family-centered nature of the Native Hawaiian culture, the traditional role of women as gatekeepers of health and nutrition information in the Native Hawaiian families (Lassetter et al., 2015; Sentell et al., 2020a), and the traditional information sharing dynamics in this population (Kaholokula et al., 2018), the findings of this study contribute to better collective health in the island communities. The research outcomes can be used by public health and public policy officials to increase understanding of the lived experience of middle-aged Native Hawaiian women, regarding their health behavior change and the role of social support in their health behavior change. The collected data can be used in developing more effective health behavior change campaigns and programs. Additionally, the increased understanding may prove helpful in determining future directions for health behavior change research. As expressed by Keaulana et al. (2024), there is urgency for change to heal Native Hawaiian women with radical aloha and support that it is more inclusive of their needs.

Conclusion

In the present qualitative phenomenological study, I sought to explore the lived experiences of a small sample of overweight Native Hawaiian women and specifically their lived experiences with social support relating to their weight management

behaviors. The participating women shared willingly and generously, providing rich accounts of their experiences. I confirmed that the factors impacting these women's weight management efforts are multifaceted, culture-specific, and connected to past and ongoing traumas. My findings indicated that a lack of perceived social support may have shaped these women's health behavior, mental health, and health outcomes in negative ways. The participants shared their strong distrust in the medical establishment and their experiences of not feeling seen or heard, but they also demonstrated their resilience through strong sense of *kuleana* and by using positive self-affirmations.

References

- Abdoli, M., Scotto Rosato, M., Desousa, A., & Cotrufo, P. (2024). Cultural differences in body image: A systematic review. *Social Sciences (2076-0760)*, *13*(6), 305. <https://doi.org/10.3390/socsci13060305>
- Arigo, D., Ainsworth, M. C., Pasko, K., Brown, M. M., & Travers, L. (2021). Predictors of change in BMI over 10 years among midlife and older adults: Associations with gender, CVD risk status, depressive symptoms, and social support. *Social Science & Medicine*, *279*. <https://dx.doi.org/10.1016/j.socscimed.2021.113995>
- Arroyo, A., Burke, T. J., & Young, V. J. (2020). The role of close others in promoting weight management and body image outcomes: An application of confirmation, self-determination, social control, and social support. *Journal of Social and Personal Relationships*, *37*(3), 1030–1050. [10.1177/0265407519886066](https://doi.org/10.1177/0265407519886066)
- Ashe, K. M., & Lapane, K. L. (2018). Food insecurity and obesity: Exploring the role of social support. *Journal of Women's Health*, *27*(5), 651–658. [10.1089/jwh.2017.6454](https://doi.org/10.1089/jwh.2017.6454)
- Bacong, A. M., Holub, C., & Porotesano, L. (2016). Comparing obesity-related health disparities among Native Hawaiians/Pacific Islanders, Asians, and Whites in California: Reinforcing the need for data disaggregation and operationalization. *Hawaii Journal of Medicine & Public Health*, *75*(11), 337-344.
- Bishop, J., Irby, M. B., Isom, S., Blackwell, C. S., Vitolins, M. Z., & Skelton, J. A. (2013). Diabetes prevention, weight loss, and social support: Program participants' perceived influence on the health behaviors of their social support

- system. *Family & Community Health: The Journal of Health Promotion & Maintenance*, 36(2), 158-171. <https://doi.org/10.1097/FCH.0b013e318282b2d3>
- Bourgette-Henry, S. J., Davis, A., Flood, J., Choi, S. Y., & Bourgette, A. (2019). The Wahine Heart Wellness Program: A community approach to reducing women's cardiovascular disease risk. *Hawai'i Journal of Health & Social Welfare*, 78(11), 341–348. <https://pmc.ncbi.nlm.nih.gov/articles/PMC6848000/>
- Braden, K. W., & Nigg, C. R. (2016). Modifiable determinants of obesity in Native Hawaiian and Pacific Islander youth. *Hawai'i Journal of Medicine & Public Health: A Journal of Asia Pacific Medicine & Public Health*, 75(6), 162-171.
- Brochu, P. M., Veillette, L. A. S., Serrano, J., & Seidl, M. (2021). It's interpersonal: Internalized weight bias and suicidality are associated indirectly via perceived burdensomeness and thwarted belongingness. *Stigma and Health*, 6(3), 287–295. <https://doi.org/10.1037/sah0000264>
- Burrage, R. L., Antone, M. M., Kaniaupio, K. N. M., & Rapozo, K. L. (2021). A culturally informed scoping review of Native Hawaiian mental health and emotional well-being literature. *Journal of Ethnic & Cultural Diversity in Social Work*, 30(1), 13–25. <https://doi.org/10.1080/15313204.2020.1770656>
- Butel, J., Braun, K. L., Nigg, C. R., Davis, J., Boushey, C., Guerrero, R. L., Bersamin, A., Coleman, P., Fleming, T., & Novotny, R. (2019). Implementation strategies and barriers to Native Hawaiian and other Pacific Islanders community interventions: A cross-case study of the Children's Healthy Living program. *Asian American Journal of Psychology*, 10(3), 282–291.

<https://dx.doi.org/10.1037/aap0000135>

- Campos, B., Yim, I. S., & Busse, D. (2018). Culture as a pathway to maximizing the stress-buffering role of social support. *Hispanic Journal of Behavioral Sciences*, 40(3), 294–311. <https://doi.org/10.1177/0739986318772490>
- Carraça, E. V., Santos, I., Mata, J., & Teixeira, P. J. (2018). Psychosocial pretreatment predictors of weight control: A systematic review update. *Obesity Facts: The European Journal of Obesity*, 11(1), 67–82. <https://doi.org/10.1159/000485838>
- Centers for Disease Control and Prevention (CDC). (2019). Overweight and obesity. www.cdc.gov/obesity/
- Chang, D. F. (2014). Increasing the trustworthiness of qualitative research with member checking. *Increasing the Trustworthiness of Qualitative Research with Member Checking*, [Conference presentation]. <https://doi.org/10.1037/e530492014-001>
- Cho, J. H., Jae, S. Y., Choo, I. L. H., & Choo, J. (2014). Health-promoting behaviour among women with abdominal obesity: A conceptual link to social support and perceived stress. *Journal of Advanced Nursing*, 70(6), 1381–1390. <https://doi.org/10.1111/jan.12300>
- Chouhy, C., Cullen, F. T., & Lee, H. (2020). A social support theory of desistance. *Journal of Developmental and Life-Course Criminology*, 6(2), 204–223. <https://doi.org/10.1007/s40865-020-00146-4>
- Chu, W. W., & Chu, N.-F. (2021). Adverse childhood experiences and development of obesity and diabetes in adulthood—A mini review. *Obesity Research & Clinical*

Practice, 15(2), 101–105. <https://doi.org/10.1016/j.orcp.2020.12.010>

Cope, D. G. (2014). Methods and meanings: Credibility and trustworthiness of qualitative research. *Oncology Nursing Forum*, 41(1), 89-91.

<https://doi.org/10.1188/14.ONF.89-91>

Cohen, S., Underwood, L.G., & Gottlieb, B. H. (2000). *Social support measurement and intervention: A guide for health and social scientists*. Oxford University Press.

Colvin, M., Cullen, F. T., & Thomas, V. V. (2002). Coercion, social support, and crime: An emerging theoretical consensus. *Criminology*, 40(1), 19-42.

<https://doi.org/10.1111/j.1745-9125.2002.tb00948.x>

Conceição, E. M., Fernandes, M., de Lourdes, M., Pinto-Bastos, A., Vaz, A. R., & Ramalho, S. (2020). Perceived social support before and after bariatric surgery: association with depression, problematic eating behaviors, and weight outcomes.

Eating & Weight Disorders, 25(3), 679–692. <https://doi.org/10.1007/s40519-019-00671-2>

Creswell, J. W. (2013). *Qualitative inquiry & research design*. (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Cutrer-Párraga, E. A., Allen, G. E. K., Miller, E. E., Garrett, M. F., Conklin, H., Franklin, C. N., Norton, A., Hee, C., & Coffey, B. K. (2024). Perceptions and barriers about mental health services among Pacific Islanders: An interpretative phenomenological analysis. *Journal of Counseling Psychology*, 71(2), 89–103.

<https://doi.org/10.1037/cou0000719>

- Denche-Zamorano, Á., García-Paniagua, R., Pastor-Cisneros, R., Pereira-Payo, D., & Pérez Gómez, J. (2024). Influence of physical activity level and perceived social support on mental health and psychological distress in women with menopause problems. *Psychology, Health & Medicine*, 29(8), 1493–1511.
<https://doi.org/10.1080/13548506.2024.2347522>
- Flores, M., Ruiz, J. M., Goans, C., Butler, E. A., Uchino, B. N., Hirai, M., Tinajero, R., & Smith, T. W. (2020). Racial-ethnic differences in social networks and perceived support: Measurement considerations and implications for disparities research. *Cultural Diversity & Ethnic Minority Psychology*, 26(2), 189–199.
<https://doi.org/10.1037/cdp0000283>
- Forthofer, M., Burroughs-Girardi, E., Stoisor-Olsson, L., Wilcox, S., Sharpe, P. A., & Pekuri, L. M. (2016). Use of formative research and social network theory to develop a group walking intervention: Sumter County on the Move! *Evaluation and Program Planning*, 58, 28–34.
<https://doi.org/10.1016/j.evalprogplan.2016.05.004>
- Fonseca, X., Lukosch, S., & Brazier, F. (2019). Social cohesion revisited: a new definition and how to characterize it. *Innovation: The European Journal of Social Sciences*, 32(2), 231–253. <https://doi.org/10.1080/13511610.2018.1497480>
- Gettens, K. M., Koestner, R., Carbonneau, N., Powers, T. A., & Gorin, A. A. (2018). The role of partner autonomy support in motivation, well-being, and weight loss among women with higher baseline BMI. *Families, Systems & Health*, 36(3), 347.
<https://doi.org/10.1037/fsh0000362>

Goldman, R., Madan, A., Goldman, R. L., Borckardt, J. J., Grubaugh, A. L., Tuerk, P.

W., & ... Milsom, V. A. (2012). More than black and white: Differences in predictors of obesity among Native Hawaiian/Pacific Islanders and European Americans. *Obesity*, *20*(6), 1325-1328.

<https://doi.org/10.1038/oby.2012.15>

Greaves, C., Poltawski, L., Garside, R., & Briscoe, S. (2017). Understanding the challenge of weight loss maintenance: A systematic review and synthesis of qualitative research on weight loss maintenance. *Health Psychology Review*, *11*(2), 145-163.

<https://doi.org/10.1080/17437199.2017.1299583>

Hageman, P. A., Mroz, J. E., Yoerger, M. A., & Pullen, C. H. (2019). User engagement associated with web-intervention features to attain clinically meaningful weight loss and weight maintenance in rural women. *Journal of Obesity*, 2019.

<https://doi.org/10.1155/2019/7932750>

Hawaii Revised Statutes, Title 1. General Provisions, § 10-2. (2024).

<https://law.justia.com/codes/hawaii/title-1/chapter-10/section-10-2/>

Hayat, T. Z., Brainin, E., & Neter, E. (2017). With some help from my network: Supplementing eHealth literacy with social ties. *Journal of Medical Internet Research*, *19*(3), e98. <https://doi.org/10.2196/jmir.6472>

Hayes, D., Remigio-Baker, R., & Reyes-Salvail, F. (2017). The relationship of adverse

childhood events to smoking, overweight, obesity and binge drinking among women in Hawaii. *Maternal & Child Health Journal*, 21(2), 315–325.

<https://doi.org/10.1007/s10995-016-2116-8>

Hermosura, A. H., Haynes, S. N., & Kaholokula, J. K. (2018). A preliminary study of the relationship between perceived racism and cardiovascular reactivity and recovery in Native Hawaiians. *Journal of Racial and Ethnic Health Disparities*, 5(5), 1142–1154. <https://doi.org/10.1007/s40615-018-0463-4>

Holt-Lunstad, J., & Uchino, B. N. (2015). Social support and health. In K. Glanz, B. K. Rimer, K. ' . Viswanath (Eds.), *Health behavior: Theory, research, and practice* (pp. 205-222). San Francisco, CA, US: Jossey-Bass.

Hunma, S., Ramuth, H., Miles-Chan, J. L., Schutz, Y., Montani, J.-P., Joonas, N., & Dulloo, A. G. (2016). Body composition-derived BMI cut-offs for overweight and obesity in Indians and Creoles of Mauritius: comparison with Caucasians. *International Journal of Obesity*, 40(12), 1906–1914.

<https://doi.org/10.1038/ijo.2016.176>

Howiecka, K., Glibowski, P., Skrzypek, M., & Styk, W. (2021). The long-term dietitian and psychological support of obese patients who have reduced their weight allows them to maintain the effects. *Nutrients*, 13(6), 2020.

<https://doi.org/10.3390/nu13062020>

Ing, C. T., Antonio, M., Ahn, H. J., Cassel, K., Dillard, A., Kekauoha, B. P., & Kaholokula, J. K. (2019). An examination of the relationship between discrimination, depression, and hypertension in Native Hawaiians. *Asian*

American Journal of Psychology, 10(3), 249–257.

<https://doi.org/10.1037/aap0000151>

Ing, C. T., Miyamoto, R. E. S., Fang, R., Antonio, M., Paloma, D., Braun, K. L., & Kaholokula, J. K. (2018). Comparing weight loss–maintenance outcomes of a worksite-based lifestyle program delivered via DVD and face-to-face: A randomized trial. *Health Education & Behavior*, 45(4), 569–580.

<https://doi.org/10.1177/1090198118757824>

Jackson, A. M., Muller, C. J., Okamoto, S. K., Weaver, R. H., Kim, S. M., Haakenstad, M., Pfeaster, C., Cachola, Z., Oshiro, A., Ideue, K., Schoenberg, N., & Sinclair, K. (2024). Health and well-being of family ('ohana) caregivers of Native Hawaiian and Pacific Islander adults living with Alzheimer's disease and related dementias. *Journal of Transcultural Nursing: Official Journal of the Transcultural Nursing Society*, 10436596241286232.

<https://doi.org/10.1177/10436596241286232>

Jouriles, E. N., Sitton, M. J., Adams, A., Jackson, M., & McDonald, R. (2022). Non-supportive responses to adolescents who have experienced sexual abuse: Relations with self-blame and trauma symptoms. *Child Abuse & Neglect*, 134, 1–

9. <https://doi.org/10.1016/j.chiabu.2022.105885>

Kaholokula, J. K., Townsend, C. M., Ige, A., Sinclair, K. A., Mau, M. K., Leake, A., & ... Hughes, C. (2013). Sociodemographic, behavioral, and biological variables related to weight loss in Native Hawaiians and other Pacific Islanders. *Obesity*, 21(3), E196-E203. <https://doi.org/10.1002/oby.20038>

- Kaholokula, J. K., Antonio, M. C. K., Townsend Ing, C. K., Hermosura, A., Hall, K. E., Knight, R., & Wills, T. A. (2017). The effects of perceived racism on psychological distress mediated by venting and disengagement coping in Native Hawaiians. *BMC Psychology*, 5. <https://doi.org/10.1186/s40359-017-0171-6>
- Kaholokula, J. K., Ing, C. T., Look, M. A., Delafield, R., & Sinclair, K. (2018). Culturally responsive approaches to health promotion for Native Hawaiians and Pacific Islanders. *Annals of Human Biology*, 45(3), 249–263. <https://doi.org/10.1080/03014460.2018.1465593>
- Kaholokula, J. K., Okamoto, S. K., & Yee, B. W. K. (2019). Special issue introduction: Advancing Native Hawaiian and other Pacific Islander health. *Asian American Journal of Psychology*, 10(3), 197-205. <https://doi.org/10.1037/aap0000167>
- Karfopoulou, E., Anastasiou, C. A., Avgeraki, E., Kosmidis, M. H., & Yannakoulia, M. (2016). The role of social support in weight loss maintenance: Results from the MedWeight study. *Journal of Behavioral Medicine*, 39(3), 511-518. <https://doi.org/10.1007/s10865-016-9717-y>
- Keaulana, S., Keli'iholokai, L., Lee, R., Coleman, P., Kipapa, M. L., Ho-Lastimoso, I., & Chung-Do, J. J. (2024). Revealing 'Eha: A qualitative project on historical trauma experiences among wāhine. *Behavioral Sciences (2076-328X)*, 14(12), 1238. <https://doi.org/10.3390/bs14121238>
- Kim, H., Faw, M., & Michaelides, A. (2017). Mobile but connected: Harnessing the power of self-efficacy and group support for weight loss success through mHealth intervention. *Journal of Health Communication*, 22(5), 395-402.

<https://doi.org/10.1080/10810730.2017.1296510>

Kokko, K. (2018). Adult development. In M. Bornstein (Ed.), *The SAGE encyclopedia of lifespan human development* (pp. 60-61). SAGE Publications, Inc.,

<https://www.doi.org/10.4135/9781506307633.n28>

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *The European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>

Kroenke, C. H., Le, G. M., Conroy, S. M., Canchola, A. J., Shariff-Marco, S., & Gomez, S. L. (2020). Egocentric social networks, lifestyle behaviors, and body size in the Asian Community Health Initiative (CHI) cohort. *PLoS ONE*, 15(5), 1–13.

<https://doi.org/10.1371/journal.pone.0232239>

Kulik, N. L., Fisher, E. B., Ward, D. S., Ennett, S. T., Bowling, J. M., & Tate, D. F. (2014). Peer support enhanced social support in adolescent females during weight loss. *American Journal of Health Behavior*, 38(5), 789-800.

<https://doi.org/10.5993/AJHB.38.5.16>

Lakey, B. & Cohen, S. (2000). Social support theory and measurement. In S. Cohen, L. G. Underwood, & B. H. Gottlieb, B. H. (Eds.), *Social support measurement and intervention: a guide for health and social scientists* (pp. 29-52). Oxford University Press.

Lam, E. L., Kandula, N. R., & Shah, N. S. (2023). The role of family social networks in

cardiovascular health behaviors among Asian Americans, Native Hawaiians, and Pacific Islanders. *Journal of Racial and Ethnic Health Disparities*, 10(5), 2588–2599. <https://doi.org/10.1007/s40615-022-01438-9>

Lassetter, J. H., Clark, L., Morgan, S. E., Brown, L. B., VanServellen, G., Duncan, K., & Hopkins, E. S. (2015). Health literacy and obesity among native Hawaiian and Pacific Islanders in the United States. *Public Health Nursing*, 32(1), 15–23. <https://doi.org/10.1111/phn.12155>

Layous, K., & Nelson-Coffey, S. K. (2021). The effect of perceived social support on personal resources following minor adversity: An experimental investigation of belonging affirmation. *Personality & Social Psychology Bulletin*, 47(7), 1152–1168. <https://doi.org/10.1177/0146167220961270>

Lee, Y. J., Braun, K. L., Wu, Y. Y., Hong, S., Gonzales, E., Wang, Y., Hossain, M. D., Terada, T. M., & Browne, C. V. (2022). Neighborhood social cohesion and the health of Native Hawaiian and Other Pacific Islander older adults. *Journal of Gerontological Social Work*, 65(1), 3–23. <https://doi.org/10.1080/01634372.2021.1917033>

Lee, S., Schorr, E., Chi, C.-L., Treat-Jacobson, D., Mathiason, M. A., & Lindquist, R. (2018). Peer group and text message–based weight-loss and management intervention for African American women. *Western Journal of Nursing Research*, 40(8), 1203–1219. <https://doi.org/10.1177/0193945917697225>

Long, C. R., Narcisse, M.-R., Bailey, M. M., Rowland, B., English, E., & McElfish, P. A.

(2022). Food insecurity and chronic diseases among Native Hawaiians and Pacific Islanders in the US: Results of a population-based survey. *Journal of Hunger & Environmental Nutrition*, 17(1), 53–68.

<https://doi.org/10.1080/19320248.2021.1873883>

Long, C. R., Narcisse, M.-R., Selig, J. P., Willis, D. E., Gannon, M., Rowland, B., English, E. S., & McElfish, P. A. (2023). Prevalence and associations between food insecurity and overweight/obesity among native Hawaiian and Pacific Islander adolescents. *Public Health Nutrition*, 26(7), 1338–1344.

<https://doi.org/10.1017/S1368980023000769>

Lynne, S. D., Fagan, A. A., Counts, T. M., Bryan, J. L., Kidd, J., & Fogarty, K. (2025). Buffering effects of positive childhood experiences on the association between adolescents' adverse childhood experiences and delinquency: A statewide study.

Child Abuse & Neglect, 163. <https://doi.org/10.1016/j.chiabu.2025.107325>

Marks, D. F., Murray, M., Evans, B., & Estacio, E. V. (2015). *Health psychology: theory, research, and practice* (4th ed.). London: Sage.

Marquez, B., Dunsiger, S. I., Pekmezi, D., Larsen, B. A., & Marcus, B. H. (2016). Social support and physical activity change in Latinas: Results from the Seamos Saludables trial. *Health Psychology*, 35(12), 1392-1401.

<https://doi.org/10.1037/hea0000421>

Masuda, A., Nakamura, L., Preston-Pita, H., Hermosura, S., Morgan, L., Stueber, K., Spencer, S. D., Qina'au, J., & Austin-Seabury, A. A. (2024). Native Hawaiians'

views on depression and preferred behavioral health treatments: a preliminary qualitative investigation. *Journal of Behavioral Health Services & Research*, 51(2), 203–218. <https://doi.org/10.1007/s11414-023-09874-z>

Mathieu, J., Brunaud, L., Reibel, N., Moukah, D., Witkowski, P., Lighezzolo-Alnot, J., Quilliot, D., & Ziegler, O. (2022). Low resilience in severe obesity: Marker of adverse childhood experiences and current psychological disorders. *Eating and Weight Disorders*, 27(8), 3507–3519. <https://doi.org/10.1007/s40519-022-01488-2>

McCollum, D. C., Teeters, J. B., Moskal, K. R., & Woodward, M. J. (2024). Does social support moderate the association between adverse childhood experiences and substance-related problems? *Substance Use & Misuse*, 59(2), 269–277. <https://doi.org/10.1080/10826084.2023.2269570>

McCubbin, L. D., & Antonio, M. (2012). Discrimination and obesity among Native Hawaiians. *Hawai'i Journal of Medicine & Public Health : A Journal of Asia Pacific Medicine & Public Health*, 71(12), 346–352.

McCullough, M. L., Chantaprasopsuk, S., Islami, F., Um, C., Rees-Punia, E., Wang, Y., Leach, C., Sullivan, L., & Patel, A. V. (2022). Socioeconomic and geographic predictors of poor diet quality in a large U.S. cohort of adult men and women. *Cancer Epidemiology, Biomarkers & Prevention*, 31(7), 1512–1513. <https://doi.org/10.1158/1055-9965.EPI-22-0479>

McElfish, P. A., Yeary, K., Sinclair, K. A., Steelman, S., Esquivel, M. K., Aitaoto, N., Kaholokula, K., Purvis, R. S., & Ayers, B. L. (2019). Best practices for

- community-engaged research with Pacific Islander communities in the US and USAPI: A scoping review. *Journal of Health Care for the Poor & Underserved*, 30(4), 1302–1330. <https://doi.org/10.1353/hpu.2019.0101>
- Molitor, F., & Kehl, S. (2023). Disparities in perceived availability of healthful foods, dietary behaviors, diet quality, and obesity among mothers from low-income households: Additional evidence in the call for broader approaches to obesity prevention. *Health Equity*, 7(1), 235–242. <https://doi.org/10.1089/heq.2022.0127>
- Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage Publications, Inc.
- Okihiro, M., Duke, L., Goebert, D., Ampolos, L., Camacho, C., Shanahan, N., ... Kaholokula, J. K. (2016). Promoting Optimal Native Outcomes (PONO) by understanding women’s stress experiences. *Journal of Primary Prevention*, 38(1–2), 159–173. <https://doi.org/10.1007/s10935-016-0460-5>
- Park, S., Waters, S. F., Barrow, N., Richardson, M., Eti, D., Linares, A., Seia, J., Rodela, K., & Yen Nguyen-Truong, C. K. (2024). Multigenerational Native Hawaiian and Pacific Islander families’ perspectives on health and well-being. *Counseling Psychologist*, 52(7), 1006–1037. <https://doi.org/10.1177/00110000241279594>
- Perrins, S. P., Vermes, E., Cincotta, K., Xu, Y., Godoy-Garraza, L., Chen, M. S., Addison, R., Douglas, B., Yatco, A., Idaikkadar, N., & Willis, L. A. (2024). Understanding forms of childhood adversities and associations with adult health outcomes: A regression tree analysis. *Child Abuse & Neglect*, 153, 106844. <https://doi.org/10.1016/j.chiabu.2024.106844>

- Playdon, M., Rogers, T. N., Brooks, E., Petersen, E. M., Tavake-Pasi, F., Lopez, J. A., Quintana, X., Aitaoto, N., & Rogers, C. R. (2023). Sociocultural influences on dietary behavior and meal timing among Native Hawaiian and Pacific Islander women at risk of endometrial cancer: a qualitative investigation. *Cancer Causes & Control*, 34(1), 23–37. <https://doi.org/10.1007/s10552-022-01628-0>
- Puhl, R. M., Quinn, D. M., Weisz, B. M., & Suh, Y. J. (2017). The role of stigma in weight loss maintenance among US adults. *Annals of Behavioral Medicine*, 51(5), 754–763. <https://doi.org/10.1007/s12160-017-9898-9>
- Pukui, M.K. (1986) *Hawaiian Dictionary: Hawaiian-English, English-Hawaiian. Revised and enlarged edition*. Honolulu, HI: University of Hawaii Press
- Richardson, A. S., Arsenault, J. E., Cates, S. C., & Muth, M. K. (2015). Perceived stress, unhealthy eating behaviors, and severe obesity in low-income women. *Nutrition Journal*, 14, 1–10. <https://doi.org/10.1186/s12937-015-0110-4>
- Rieger, E., Sellbom, M., Murray, K., & Caterson, I. (2018). Measuring social support for healthy eating and physical activity in obesity. *British Journal of Health Psychology*, 23(4), 1021–1039. <https://doi.org/10.1111/bjhp.12336>
- Rougée, L. R., Miyagi, S. J., & Collier, A. C. (2016). Obstetric obesity is associated with neonatal hyperbilirubinemia with high prevalence in Native Hawaiians and Pacific Island Women. *Hawai'i Journal of Medicine & Public Health: A Journal of Asia Pacific Medicine & Public Health*, 75(12), 373–378.
- Salazar, L. F., Mijares, A., Crosby, R. A., & DiClemente, R. J. (2015). Qualitative research strategies and methods for health promotion. In L. F. Salazar, R. A.

- Crosby, & R. J. DiClemente (Eds.), *Research methods in health promotion., 2nd ed.* (pp. 209–255). Jossey-Bass/Wiley.
- Sainsbury, K., Evans, E. H., Pedersen, S., Marques, M. M., Teixeira, P. J., Lähteenmäki, L., Stubbs, R. J., Heitmann, B. L., & Sniehotta, F. F. (2019). Attribution of weight regain to emotional reasons amongst European adults with overweight and obesity who regained weight following a weight loss attempt. *Eating and Weight Disorders, 24*(2), 351–361. <https://doi.org/10.1007/s40519-018-0487-0>
- Scholz, U., Ochsner, S., Hornung, R., & Knoll, N. (2013). Does social support really help to eat a low-fat diet? Main effects and gender differences of received social support within the Health Action Process Approach. *Applied Psychology: Health & Well-Being, 5*(2), 270–290. <https://doi.org/10.1111/aphw.12010>
- Sentell, T., Agner, J., Pitt, R., Davis, J., Guo, M., & McFarlane, E. (2020a). Considering health literacy, health decision making, and health communication in the social networks of vulnerable new mothers in Hawai‘i: A pilot feasibility study. *International Journal of Environmental Research and Public Health, 17*(2356), 2356. <https://doi.org/10.3390/ijerph17072356>
- Sentell, T., Kennedy, F., Seto, T., Vawer, M., Chiriboga, G., Valdez, C., Garrett, L. M., Paloma, D., & Taira, D. (2020b). Sharing the patient experience: A “Talk Story” Intervention for heart failure management in Native Hawaiians. *Journal of Patient Experience, 7*. <https://doi.org/10.1177/2374373519846661>
- Sinclair, K. A., Pritchard, D., & McElfish, P. A. (2019). An intersectional mixed methods approach to Native Hawaiian and Pacific Islander men’s health. *Asian American*

- Journal of Psychology*, 10(3), 268–281. <https://doi.org/10.1037/aap0000156>
- Soares, S., Rocha, V., Kelly-Irving, M., Stringhini, S., & Fraga, S. (2021). Adverse childhood events and health biomarkers: A Systematic Review. *Frontiers in Public Health*, 9. <https://doi.org/10.3389/fpubh.2021.649825>
- Soini, S., Mustajoki, P., & Eriksson, J. G. (2016). Weight loss methods and changes in eating habits among successful weight losers. *Annals of Medicine*, 48(1-2), 76-82. <https://doi.org/10.3109/07853890.2015.1136428>
- Soini, S., Mustajoki, P., & Eriksson, J. G. (2018). Long-term weight maintenance after successful weight loss: Motivational factors, support, difficulties, and success factors. *American Journal of Health Behavior*, 42(1), 77–84. <https://doi.org/10.5993/AJHB.42.1.8>
- Subica, A. M., Soakai, L., Tukumoeatu, A., Johnson, T., & Aitaoto, N. (2024). Trauma and mental health in Pacific Islanders. *International Journal of Social Psychiatry*, 70(5), 861–873. <https://doi.org/10.1177/00207640241236109>
- Ta Park, V. M., Kaholokula, J. K., Chao, P. J., Antonio, M., & Kaholokula, J. K. (2018). Depression and help-seeking among Native Hawaiian women. *Journal of Behavioral Health Services & Research*, 45(3), 454–468. <https://doi.org/10.1007/s11414-017-9584-5>
- Taylor, S. J., Bogdan, R., & DeVault, M. L. (2016). *Introduction to qualitative research methods: a guidebook and resource* / Steven J. Taylor, Robert Bogdan, Marjorie L. DeVault (Fourth edition.). Wiley.
- Teixeira, P. J., Carraça, E. V., Marques, M. M., Rutter, H., Oppert, J.-M., De

- Bourdeaudhuij, I., ... Brug, J. (2015). Successful behavior change in obesity interventions in adults: a systematic review of self-regulation mediators. *BMC Medicine*, 13, 84. <https://doi.org/10.1186/s12916-015-0323-6>
- Townsend, C. M., Miyamoto, R. S., Antonio, M., Basques, D., Kaholokula, J. K., Zhang, G., &... Braun, K. L. (2016). The PILI@Work Program: a translation of the diabetes prevention program to Native Hawaiian-serving worksites in Hawai'i. *Translational Behavioral Medicine*, 6(2), 190-201. <https://doi.org/10.1007/s13142-015-0383-3>
- Uchino, B. N. (2009). Understanding the links between social support and physical health: A life-span perspective with emphasis on the separability of perceived and received support. *Perspectives on Psychological Science: A Journal of The Association for Psychological Science*, 4(3), 236-255. <https://doi.org/10.1111/j.1745-6924.2009.01122.x>
- Valente, T. W. (2015). Social networks and health behavior. In K. Glanz, B. K. Rimer, K. ' . Viswanath, K. Glanz, B. K. Rimer, K. ' . Viswanath (Eds.), *Health behavior: Theory, research, and practice* (pp. 205-222). San Francisco, CA, US: Jossey-Bass.
- Valente, T. W., & Pitts, S. R. (2017). An appraisal of social network theory and analysis as applied to public health: Challenges and opportunities. *Annual Review of Public Health*, Vol 38, 38, 103–118. <https://doi.org/10.1146/annurev-publhealth-031816-044528>
- Walker, D. O. H., Rabelo, V. C., Stewart, O. J., & Herbert, D. N. (2024). Social

determinants of mental health: the roles of traumatic events, financial strain, housing instability, food insecurity, and commute time. *Journal of American College Health*, 72(9), 3591–3602.

<https://doi.org/10.1080/07448481.2023.2185454>

Walters, K. L., Johnson-Jennings, M., Stroud, S., Rasmus, S., Charles, B., John, S., Allen, J., Kaholokula, J. K., Look, M. A., de Silva, M., Lowe, J., Baldwin, J. A., Lawrence, G., Brooks, J., Noonan, C. W., Belcourt, A., Quintana, E., Semmens, E. O., & Boulafentis, J. (2020). Growing from our roots: Strategies for developing culturally grounded health promotion interventions in American Indian, Alaska Native, and Native Hawaiian communities. *Prevention Science*, 21(Suppl 1), 54–64. <https://doi.org/10.1007/s11121-018-0952-z>

Wang, M. L., Narcisse, M., Alatorre, S., Kozak, A. T., & McElfish, P. A. (2022). Neighborhood social cohesion and physical activity and obesity outcomes among Native Hawaiian and Pacific Islander individuals. *Obesity (19307381)*, 30(1), 249–256. <https://doi.org/10.1002/oby.23298>

Wells, R. K., Torres, A., Mau, M. K., & Maunakea, A. K. (2024). Racial–ethnic disparities of obesity require community context-specific biomedical research for Native Hawaiians and Other Pacific Islanders. *Nutrients*, 16(24), 4268. <https://doi.org/10.3390/nu16244268>

Williams, I. L., Laenui, P., Makini Jr, G. K., & Rezendes III, W. C. (2021). Native

Hawaiian culturally based treatment: Considerations and clarifications. *Journal of Ethnicity in Substance Abuse*, 20(4), 559–593.

<https://doi.org/10.1080/15332640.2019.1679315>

Willingham, M. L., Jr, Teria, R. S., Dulana, L., Badowski, G., & Cassel, K. D. (2025).

Evaluating health status and risks among Native Hawaiian and Pacific Islander communities in Hawai'i: a respondent-driven sampling approach. *Cancer Causes & Control: CCC*. <https://doi.org/10.1007/s10552-024-01956-3>

Wills, T. A., Kaholokula, J. K., Pokhrel, P., & Pagano, I. (2023). Ethnic differences in respiratory disease for Native Hawaiians and Pacific Islanders: Analysis of mediation processes in two community samples. *PloS One*, 18(8), e0290794.

<https://doi.org/10.1371/journal.pone.0290794>

Wills, T. A., & Shinar, O. (2000). Measuring perceived and received social support. In S. Cohen, L. Gordon, & B. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 86-135). New York: Oxford University Press.

Wong, K. A., & Kataoka-Yahiro, M. R. (2017). Nutrition and diet as it relates to health and well-being of Native Hawaiian kūpuna (elders): A systematic literature review. *Journal of Transcultural Nursing*, 28(4), 408.

<https://doi.org/10.1177/1043659616649027>

World Health Organization. (2026). BMI Classification.

<https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/body-mass-index>

World Health Organization. (2025). Obesity and Overweight.

<https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>

Yoshida H, & Maddock JE. (2020). Relationship between health behaviors and obesity in a sample of Hawai'i's 4 most populous ethnicities. *Hawai'i Journal of Health & Social Welfare*, 79(4), 104–111.

Yüksel, P. & Yıldırım, S. (2015). Theoretical frameworks, methods, and procedures for conducting phenomenological studies in educational settings. *Turkish Online Journal of Qualitative Inquiry*, 6(1), 1–20. doi.org/0.17569/tojqi.59813

Zhou, Y., Sun, Y., Pan, Y., Dai, Y., Xiao, Y., & Yu, Y. (2024). Association between adverse childhood experiences and obesity, and sex differences: A systematic review and meta-analysis. *Journal of Psychiatric Research*, 180, 56–67.

<https://doi.org/10.1016/j.jpsychires.2024.09.042>

Zudin, A. B., Abubakirov, A. S. & Tsyganok, R. S. (2023). Approaches to the definition and essence of the health literacy concept. *Здоровье Мегалополиса*, 4(1), 105–113.

<https://doi.org/10.47619/2713-2617.zm.2023.v.4i1;105-113>

Appendix A: Study Invitation Flyer

Would you be willing to share your experiences about weight loss attempts?

Our interview will follow the Hawaiian talk story tradition.

You may qualify for this study if:

- *You are a woman between 40-60 years*
- *You are overweight (with BMI of 25 or above) and have experienced an event you perceive as a weight loss failure during the past 2 years*
- *You are Native Hawaiian*
- *You are willing to participate in an interview via Zoom*

The purpose of the study is to collect and describe experiences of middle-aged Native Hawaiian women living on Big Island. The study will focus on your story: what your experience has been with weight loss attempts and social support. Sharing your story may help others. It may also help health care professionals design more effective services in Hawaii.

What you will be asked to do:

If you agree to take part, you will be asked to participate in one audio recorded interview that will last about 60 minutes. The interview will be conducted at a time convenient for you, via Zoom. After the data is analyzed, I will email a summary of the interview for your review. All information will be kept confidential and used for the purpose of the study only.

This research project is part of a dissertation study conducted by Satu Gruenstein, a Walden University doctoral candidate. If you are interested and think you may qualify, please contact Satu at (xxx)xxx-xxxx or by e-mail at xx@xxxxxx

Appendix B: Pre-Screening Questionnaire

1. Does your age fall between 40 and 60?
2. Do you identify as a Native Hawaiian woman?
3. Do you have a BMI higher than 25? (If needed, ask for their height and weight and use the chart/calculator below to calculate whether their BMI qualified them for the study.)
4. During the past two years, have you experienced an event you perceive as a weight loss failure? Or during the past two years, have you had initial success with weight loss and then struggled maintaining the weight loss?
5. Are you willing to participate in an approximately hour-long interview via Zoom?

Online BMI Calculators available at:

https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html

<https://www.medicalnewstoday.com/articles/bmi-for-women#bmi-calculator>

https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html

Appendix C: Guiding Interview Questions

1. What can you tell me about your family and background regarding weight and weight loss?
2. Tell me about your own personal weight loss journey.
3. If you have been successful in your weight loss in the past, what do you think contributed to your success? What feelings did it generate?
4. When you haven't been successful in your weight loss, what do you think contributed to your failure? What kinds of barriers did you experience?
5. How has the experience affected you? What feelings did it generate?
6. Please, describe how people in your life support your weight loss efforts.
 - ❖ What kind of support have you received from family regarding weight loss and weight maintenance?
 - ❖ What kind of support have you received from friends regarding weight loss and weight maintenance?
7. Where do you look or who do you trust for information regarding health and diet?
8. What other types of support have you received regarding weight loss and weight maintenance?
9. Describe the challenges you have encountered most recently regarding your weight.
10. What are your thoughts on how your Native Hawaiian culture has contributed to your weight loss attempts?

11. Tell me about how you could be better supported when you want to lose weight?
12. Is there anything else that you would like to share with me that would help me further understand your experiences regarding your weight loss journey?

Appendix D: Counseling Referral Telephone Numbers

Hawaii State Crisis Hotline Numbers:**Hawai'i CARES (Coordinated Access Resource Entry System)**

Call 808-832-3100 (Oahu) or 1-800-753-6879 for neighbor islands

When you call Hawai'i CARES, you will be connected with a local crisis counselor who will ask a bit about you, what your needs are, and how they can help.

Crisis Text Line

Text ALOHA to 741741

If you prefer texting over talking, the Crisis Text Line connects you with a crisis counselor who will invite you to share at your own pace.

National Suicide Prevention Hotline 1-800-273-8255