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Public Health Leaders' Perceptions of and Attitudes Concerning Eating Disorders

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Abstract

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MSN, California State University, Chico, 2009

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Dissertation Submitted in Partial Fulfillment

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Abstract

Eating disorders are associated with high mortality rates. Most eating disorder prevention research is conducted within the fields of psychology and psychiatry, not in public health. This gap in public health research can lead to insufficient attention to the root causes of eating disorders and minimal upstream prevention efforts. The purpose of this phenomenological study was to identify public health leaders' perceptions of and attitudes concerning eating disorders as a public health issue. Objectification theory was used to describe how societal expectations have created an environment in which people's self-worth is based on their outward physical appearance. Ecological theory was used to identify environmental factors that influence the development of eating disorders. Public health leaders at local public health departments throughout California were invited to participate in the study, as they hold significant public health positions in the state. Data were collected using open-ended questions. Results were coded and analyzed via thematic analysis. NVivo 11 software was used for data management. Theoretical saturation was reached after 6 interviews when the information was redundant and no new themes were revealed. Emerged themes included observations from the participants that eating disorders are not considered a public health issue. The participants did not view eating disorders as a significant problem and they noted that they do not monitor the rates of these illnesses. They expressed interest in exploring the public health role in eating disorder prevention. Public health educators, researchers, and leaders can use these results to assess the burden of eating disorders and recognize ways to address this health threat at the macro level. In doing so, they will affect positive social change.

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Dedication

This dissertation is dedicated to the many people who struggle or have struggled with eating disorders and to the public health professionals who work tirelessly to create supportive environments that promote and protect health for all vulnerable populations.

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I wish to thank Dr. Vasileios Margaritis and Dr. Melody Richardson-Jones. Your expertise in research and scholarship have proven to be valuable resources and your guidance throughout this process has been instrumental to my success in realizing my goals. Through your direction, I have grown tremendously as a scholar and a researcher.

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Finally, I wish to thank those participants who volunteered to take time out of their busy work schedules to share their thoughts about this topic with me. Your interest and your responses have provided valuable insight that can help address this serious health threat.

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Chapter 1: Introduction to the Study

Introduction

In 2014, the National Institutes of Mental Health (NIMH) reported that 2.7% of adolescents between the ages of 13 and 18 will experience an eating disorder. Eating disorder rates are increasing among both men and women in western, and more recently, in nonwestern cultures (Smink, van Hoeken, & Hoek, 2012). Of the three types of eating disorders, anorexia nervosa, bulimia nervosa, and binge eating, binge eating is the most common (Hudson, Hiripi, Pope, & Kessler, 2007). Eating disorders have a high mortality rate, especially for those suffering from anorexia, and they often go untreated (Arcelus et al. Hudson et al., 2007; Smink et al., 2012).

While genetics are linked to the development of eating disorders, other environmental factors also play a role (Mazzeo & Bulik, 2009). In 2003, Morris and Katzmann reported a link between exposure to thin ideal beauty images presented in the media and body dissatisfaction in children and adolescent girls. Pervasive thin ideal images are also associated with self-objectification (Harper & Tiggemann, 2008). Body dissatisfaction and objectification have both been identified as risk factors for eating disorders for those who are vulnerable, including those who are genetically predisposed to eating disorders, experience depression, have perfectionist tendencies, thin ideal susceptibility, or low self-esteem (Anschutz, Engels, & Van Strien, 2008; Mazzeo & Bulik, 2009; McLean, Paxton, & Wertheim, 2013; Slater & Tiggemann, 2010; Urquhart & Mhalynuk, 2011).

Prevention measures that focus on environmental influences may make a difference in the development of these disorders. In one program, media literacy interventions were associated with reduced body dissatisfaction (McLean et al., 2013). In another program, interventions not only helped establish weight control strategies but were also protective against eating disordered behaviors (Stice, Rohde, Shaw, & Marti, 2013).

Some obesity prevention efforts can result in harmful outcomes. Puhl, Peterson, and Luedicke (2012) found that obesity prevention messages that placed blame for excessive weight on the individual were stigmatizing. Stigma is generally recognized by public health practitioners as a threat to well-being, and stigmatizing people who are obese does not motivate weight-loss behaviors (Puhl & Heuer, 2010). There has been a tendency to blame the victim who is obese rather than identify the environmental, social, and cultural factors that affect weight and shape (Ferrari, 2011).

Practitioners from specialty disciplines such as psychology, psychiatry, and nutrition are already engaged in eating disorder prevention research, but there are few studies from the public health perspective (Austin, 2012). This dissertation explored the attitudes and perceptions of public health leaders about eating disorders as a public health issue. Insight gained from this study identified a baseline of readiness to address this issue and explored the potential for public health practitioners to move forward on this health threat at the macro-system level.

This chapter will include a review of the background of the literature related to eating disorder prevention and a statement of the problem this study explores, as well as a

description of the purpose of the study and the research question. Two theoretical frameworks were used as foundations of the study. The methodology of the study, along with definitions of key terms, acknowledgement of assumptions, scope and boundaries, and limitations will be presented. This chapter will conclude with the significance of this study, including how the findings might contribute to social change.

Background

Austin (2011) advised public health practitioners to recognize the link between obesity and eating disorders and include eating disorder prevention and cross-cutting solutions into the current public health efforts that currently address obesity only. Eating disorders and obesity are illnesses that fall on a spectrum of eating and weight-related disorders (Sanchez-Carracedo, Neumark-Sztainer, & Lopez-Guimera, 2012). Previous efforts focused only on obesity prevention and involved strategies that promoted weight control, diet, and increased physical activity (Sanchez-Carracedo et al., 2012). These interventions had the potential to cause harm to those vulnerable to eating disorders because they were developed and implemented by providers whose expertise was obesity but had no understanding of eating disorders (Sanchez-Carracedo et al., 2012).

Sanchez-Carracedo et al. (2012) explored the possibility of combining obesity prevention and eating disorder prevention strategies. Based on the relationship between socio-environmental influences and these disorders, Sanchez-Carracedo et al. (2012) suggested that those who work in obesity prevention and those who work in eating disorder prevention adopt an integrated approach to address environmental factors associated with both of these health threats. Sanchez-Carracedo et al. (2012) investigated

barriers to such an integrated strategy. Obesity prevention and prevention of eating disorders often are addressed within separate disciplines and often professionals from these different disciplines do not interact with each other. In addition, Sanchez-Carracedo et al. (2012) suggested that researchers explore the effect that efforts to address one of these conditions has on the other, for example, assessing the impact that promoting weight-reduction and exercise might have on eating disorders.

This link between the environment and eating disorders is supported by objectification theory constructs. Dakanalis and Riva (2013) used objectification theory to explain the relationship between socio-cultural influences and the development of eating disorders. The researchers noted that the media had linked thinness to happiness, prestige, and desirability. Exposure to ultra-thin models wad determined to be associated with increased body dissatisfaction and exposure to images of western-ideal beauty through television and print advertisements was correlated to increased incidences of eating disorders (Dakanalis & Riva, 2013).

Harper and Tiggemann (2008) also looked at the effects of self-objectification. The study explored the effect print images of thin women had on mental health, particularly when the images included attractive men who were showing attention to a thin woman in the picture (Harper & Tiggemann, 2008). During the experiment, researchers showed 90 women. The participants were divided into three groups. One group was shown advertisement images of thin models, another group was shown advertisements with thin women who were being gazed upon or touched by an attractive man, and the control group was shown images that were advertisements with no images

of people included (Harper & Tiggemann, 2008). The data collected included measures of self-objectification, body dissatisfaction, anxiety, and mood. Women exposed to the images of thin women scored higher on self-objectification, appearance anxiety related to weight, body dissatisfaction, and poor mood (Harper & Tiggemann, 2008). The images of thin women pictured with attractive men elicited the same results as the images of thin women without men.

Harper and Tiggemann (2008) reported that their study demonstrated that self-objectification can result from understated cues such as thin ideal images in the media. The researchers suggested that the relationship between thin ideal images and self-objectification be further investigated and that future studies explore the effect of prolonged exposure to these images and possible correlations with serious mood disturbances or eating disorders. These findings support the link between ecological influences of the media and thin ideal (including its application to men) to objectification and risks for development of eating disorders.

Exposure to these influences does not result in disordered eating behaviors in everyone; however, those who internalize the thin ideal and use that unrealistic ideal as a measure for evaluation of their own bodies are at risk of developing eating disorders (Dakanalis & Riva, 2013).

Problem Statement

In 2014, the World Health Organization (WHO) identified public health efforts as those that are carried out to "…prevent disease, promote health, and prolong life among the population as a whole" (para. 1). Eating disorder prevention can be considered a

public health strategy to promote and protect the public's health. Sanchez-Carracedo et al. (2012) stated that body image and self-acceptance are important factors in the prevention of eating disorders. These factors are not only influenced by talk about weight within the home environment but also by the broader environment that may include peers who are dieting, the media, and internalization of society's thin ideal (Harper & Tiggemann 2008; Linde, Wall, Haines, & Neumark-Sztainer, 2009; Morris & Katzman, 2003; Neumark-Sztainer et al., 2010). Those who have a genetic predisposition for eating disorders are especially vulnerable to these environmental factors (Mazzeo & Bulik, 2009).

The development of an eating disorder has been associated with a multitude of factors. Internal factors such as depressed mood, impaired emotional regulation, weight concerns, body dissatisfaction, and impulsivity as a coping strategy to stress have been associated with eating disordered behavior (Linde et al., 2009; Waxman, 2009; Zeeck, Stelzer, Linster, Joos, & Hartmann, 2011). Linde et al. (2009) identified concerns about weight as the greatest predictor of unhealthy weight control behaviors.

However, the time of day and day of the week may also influence binge eating behaviors. In a study by Smyth et al. (2009), binge eating and purging occurred more often between 6 PM and 9 PM, which was reported to be when the perception of stress was more keenly felt by the participants, and during the weekend, a time that was associated with less structure and reduced social connectedness (Smyth et al., 2009).

Researchers have identified external factors including the home environment, attitudes about weight and bias against fatness, and media thin ideals to be associated

with increased risk for developing eating disordered behaviors. Almeida, Savoy, and Boxer (2011) identified weight stigmatization as a predictive risk factor, along with other personal factors such as depression and anxiety, among participants who engaged in binge eating behaviors. Talk of weight and teasing about weight in the home environment correlated to body dissatisfaction and extreme weight control behaviors including binge eating (Neumark-Sztainer et al., 2010). In addition, Mazzeo and Bulik (2009) described a correlation between genetics and the environment that can result in an increased risk for eating disorders among those who are already vulnerable. Individuals with eating disorders who also have parents with the same vulnerability face a double risk, as they are not only genetically predisposed but they may also be exposed to environmental risk factors in the home if the parent is engaging in high risk behaviors (Mazzeo & Bulik, 2009). People who are predisposed for eating disorders can find themselves in risk cycles as they are exposed to high risk environments where their peers are also focused on weight and thinness and engaged in disordered eating behaviors (Mazzeo & Bulik, 2009).

The thin ideal message has been associated with development of impaired body image (Juarascio et al., 2011). Media images of thin-idealized women, even on a subtle level, were associated with body dissatisfaction, anxiety, negative mood, and self-objectification (Harper & Tiggemann, 2008). Anschutz et al. (2008) identified a relationship between body dissatisfaction and exposure to thin ideal media. In addition, emotional eating and restrained eating were found to be associated with susceptibility to the thin ideal messages that are delivered through the media (Anschutz et al., 2008).

Anschutz et al. (2008) identified a link between cultural appearance ideals presented through the media and eating behaviors.

Eating disorder prevention is a public health issue. Public health practitioners have the capacity to implement macro-level interventions to prevent eating disorders by focusing on environmental issues such as thin ideal images used in the media and the dieting industry's promotion of unhealthy eating practices (Austin, 2012). Yet Austin (2012) identified a lack of participation among public health practitioners in the primary prevention of eating disorders, noting that most research on primary prevention of eating disorders is conducted by those in the fields of psychology and psychiatry. This can lead to insufficient attention to the some of the root causes of eating disorders and a lack of upstream prevention efforts. As public health practitioners become more aware of risk factors beyond genetics, school nurses and others who work with adolescents in the community can consider how the media, impaired self-esteem, and stressful events increase risk, and engage in evidence-based prevention efforts and early intervention (Coombs, 2011).

In 2005, O'Dea called on public health practitioners to not cause harm in their efforts to combat the obesity epidemic, noting that messages designed to encourage dieting and weight control can also contain a meaning that stigmatizes an overweight or obese person as an out-of-control failure. When obesity prevention programs are developed by practitioners who are not knowledgeable about eating disorders, unintended harm can result to those who are most vulnerable to developing an eating disorder (Sanchez-Carracedo et al., 2012).

Public health professionals who design and implement obesity prevention programs may have no experience or training in body image or eating disorders (Sanchez-Carracedo et al., 2012). In fact, Yager and O'Dea (2009) found that health educators had higher rates of eating disordered attitudes and unhealthy weight control behaviors themselves. In addition, public health professionals and eating disorder specialists generally do not travel in the same circles such as conferences and professional organizations, resulting in little opportunity for integration between specialties (Sanchez-Carracedo et al., 2012). These factors could result in obesity prevention strategies that create harmful effects to those who are most vulnerable to developing eating disorders.

While it was clear that public health practitioners could play an important role in health protection and disease prevention by addressing environmental factors associated with eating disorders, I did not find any research regarding the current perceptions and attitudes of the decision makers within public health agencies about this topic. Austin (2011) addressed myths that might be factors in the omission of public health research on eating disorder prevention, but this commentary did not include a description of research that identifies the current attitudes and perspectives of the leaders in public health on this topic.

Purpose of the Study

The purpose of this qualitative phenomenological study was to identify perceptions and attitudes of public health leaders related to eating disorders as a public health issue and determine their perspectives on whether or not prevention of eating

disorders can fit into a public health strategic plan to promote health and wellness among the populations they serve.

Research Questions

The main question for this qualitative inquiry was "What are the public health leaders' perceptions of and attitudes concerning eating disorders as a public health issue?" I explored this question through the inclusion of the following subquestions:

- Do public health leaders identify eating disorders as a public health issue?
- Do public health leaders believe that primary prevention can impact the prevalence of eating disorders?
- Do public health leaders recognize a role for themselves in the implementation of public health strategies to prevent eating disorders?

Theoretical Framework for the Study

Ecological theory and objectification theory were the theoretical foundations for this study. Ecological theory can be used to explain how environments impact health behaviors and how interventions need be developed to address various levels of environmental influence (Sallis, Owen, & Fischer, 2008). Objectification theory can serve as a useful framework for identifying influencing factors as well as predicting eating disordered symptoms (Dakanalis & Riva, 2013; Fredrickson & Roberts, 1997). I applied the constructs of objectification theory and ecological theory to demonstrate how the macro-level approach might help public health practitioners reduce the incidence of eating disorders.

The structural model of health behavior, developed by Cohen, Scribner, and Farley (2000), served as the ecological theory for this study. I selected the structural model of health behavior as the theoretical framework because this theory included a description of four factors in the environment that affect behaviors of entire populations (Cohen et al., 2000). These factors are: availability of products that impact health, physical structure of the environment, social structure such as social norms and laws, and messages from the media and cultural practices that influence behaviors (Cohen et al., 2000). Individual factors do not exist in isolation from the others, rather, they often interact with other elements in the environment to influence health behaviors (Cohen et al., 2000). It is important for public health practitioners to keep these constructs in mind when considering macro-level prevention interventions because these structural factors can be addressed through policy changes that can influence health behaviors at the population level (Cohen et al., 2000).

The other framework I referenced as I conducted this research was objectification theory. Fredrickson and Roberts (1997) presented this theory to explain how social acculturation has influenced the development of the self-identification of girls and women. As girls develop, they learn from society that their bodies are for the primary purpose of providing pleasure to others (Fredrickson & Roberts, 1997). It is culturally acceptable for men to openly gaze at women's bodies and for the media to frequently use women's bodies for marketing purposes (Fredrickson & Roberts, 1997). Beauty was described by Fredrickson and Roberts as a commodity and sexuality was noted as giving women power.

Exposure to an objectifying environment results in women objectifying themselves. They begin to view themselves as objects and engage in continual monitoring of their bodies (Fredrickson & Roberts, 1997). This self-objectification can lead to feelings of shame, increasing anxiety, and can impair a woman's ability to be intuitive to her own body cues, such as hunger and satiety (Fredrickson & Roberts, 1997). These factors can worsen during key developmental periods such as puberty, when a girl is developing a woman's figure, and during middle-age, at which time a woman may feel she is no longer attractive.

This gender-based oppression can threaten overall health as it increases risk for sexual victimization and mental health problems such as depression, sexual dysfunction, and eating disorders (Fredrickson & Roberts, 1997). Vulnerability to this objectification may vary by social class, race, and sexuality. For example, women of African American heritage might resist such objectification in response to historical racial oppression, but as they move up into a higher social status these constructs can begin to have an impact (Fredrickson & Roberts, 1997).

Objectification theory concepts can be used to explain how societal influences create an environment where girls and women are viewed as objects whose value is based on their physical beauty and their ability to please others (Fredrickson & Roberts, 1997). This objectification can result in feelings of inadequacy, shame, and anxiety. Slater and Tiggemann (2010) tested the constructs of objectification theory and found that they also applied to objectification of men and boys as well as to women and girls. This

objectification may result in the development of an eating disorder (Fredrickson & Roberts, 1997).

Nature of the Study

This research was a qualitative design study. Qualitative methods of inquiry can be used to seek an understanding of the perspective of those who are experiencing a phenomenon (Rudestam & Newton, 2007). Qualitative methodology employs a constructivist approach to research which is based on the idea that knowledge is revealed through the perspective of others (Creswell, 2009; Rudestam & Newton, 2007). This was an appropriate fit for this study as I sought to gain an understanding of the perceptions of public health leaders about eating disorders as a public health issue and their attitudes about the public health role in the primary prevention of eating disorders.

I used the phenomenological method in this research. This method of research allows researchers to obtain insight into the perspectives of a group of individuals who share a common experience (Creswell, 2013). Due to the limited amount of research on this topic, I determined that preliminary research was needed. I decided to focus my study on the current thoughts among public health leaders about eating disorder prevention. Once this is better understood, I can conduct further research to identify ways to increase the level of public health leader involvement in this area.

For this study, public health leaders in the state of California were asked to share their personal insights into the idea of eating disorders as a public health issue. I obtained the sample for this study by using a purposeful sampling approach. Maxwell (2013) explained that this sampling approach is used by researchers to obtain data in order to

answer the research question from a select group of participants when such data might not be obtained from randomly selected subjects. Researchers can use the purposeful sampling technique to obtain an in-depth perspective of a particular phenomenon (Patton, 2002). Creswell (2013) and Patton (2002) noted that the sample size for a phenomenological study is generally small and will be determined as the data is analyzed, ensuring that saturation of the information is confirmed. I expected that this might occur with a minimum of six to 10 participants. Data was collected from interviews with public health leaders in California until saturation was reached. I noted that saturation had been obtained when the information being gathered became redundant and no new information was revealed.

Definitions

There were certain terms included in this dissertation that were defined to minimize the potential for confusion or misunderstanding concerning the findings and their implications or recommendations made based on these findings. For the purposes of this research, the following definitions were used for the key terms of the study:

Eating disorder: Defined by the American Psychological Association (2014) as including anorexia nervosa, bulimia nervosa, and binge eating.

Macro-level strategies: Systems oriented interventions that affect whole populations such as laws, policies, economics, and mass media (Austin, 2012).

Public health leaders: Listed by the American Public Health Association (2014) as those public health practitioners in leadership or administrative positions including public health directors, health officers, and managers.

Self-objectification: Described by Harper and Tiggemann (2008) and Fredrickson and Roberts (1997) as a person's self-concept based on physical appearance that result in viewing oneself as an object.

Thin ideal: The societal value of thinness (Juarascio et al., 2011).

Weight stigmatization: A negative bias against fatness (Almeida et al., 2011).

Assumptions

One assumption I made of this study was that public health leaders would be generally concerned with improving the health and well-being of the populations they serve. This could not be confirmed because asking the question would have most likely elicited a positive response from the participants. I also assumed that the participants would be sincere in their responses. One way I tried to ensure this was to assert that their responses would be kept confidential and that only aggregated information would be reported. Another assumption I made was that the public health leaders would operate on a population-based level using interventions at the macro-environmental level. This level of intervention is standard for public health practice. Patton (2002) noted that purposeful sampling is used by researchers to obtain information-rich data. I assumed that by incorporating purposeful sampling, the sources would provide rich information that would be useful in answering the research question.

Scope and Delimitations

My intention for this qualitative study was to develop an understanding of public health leaders' perceptions and attitudes related to eating disorder prevention. The participants were Californian public health leaders who responded to a recruitment flyer

that was sent to health officers at each local public health department in California. Only public health practitioners in a leadership position such as health officers, public health directors, and public health managers were included in the invitation. This study only included leaders employed at a local public health agency within the state of California. All participants spoke English fluently. Any public health leader who had not been in a leadership position at a local public health agency in California for at least one year was excluded. There were no exclusions based on race, gender, or age of participants.

Limitations

There were limitations associated with this study. Creswell (2013) cautioned that researcher bias can present a threat to qualitative research. While I made every effort to maintain objectivity while collecting and analyzing my data, my own biases about this topic may have influenced my data collection or the analysis process. Creswell advised that participants in a phenomenological study be selected through purposeful sampling in an effort to ensure that the participants have similar experiences. For this study, the participants were all public health leaders at local health departments. This sampling approach might have limited the findings as Creswell further noted that purposeful sample selection does not allow for diverse or extreme perspectives. The results of this study only described the attitudes and perspectives of the participants, and should not be transferred to the greater population of public health leaders.

Creswell (2013) noted that trustworthiness of the findings in a qualitative study is dependent upon the credibility of the data collection and the reliability of the results. As noted above, I used purposeful sampling for this study. Purposeful sampling can

strengthen the results of a phenomenological study as it is derived from information rich data (Patton, 2002). I validated the data with the participants during the interview and I incorporated intercoder agreement to confirm the accuracy of the findings. Creswell advised that researchers triangulate validate strategies to strengthen trustworthiness. In addition to obtaining participant checking and interrater reliability, I also refer back to the theoretical frameworks to confirm that the findings related to the theoretical constructs.

Significance

Eating disorders are serious illnesses that can result in long term health problems and even death (Office of Women's Health, 2009). Mehler (2001) noted that purging can result in multiple health problems. Electrolyte imbalances might occur. Dental and oral problems can include enamel erosion, dental caries, and periodontitis. Esophageal complications might involve erosion and ulcerations. Gastrointestinal issues can result in disruption of the function of the colon. In addition, restricting can result in hormonal shifts, osteoporosis, and cardiac damage (Mehler, 2011). Eating disorder relapse is common and can result in chronic eating disordered behaviors (Herzog & Eddy, 2009). Anorexia nervosa often results in low body mass index (BMI) over the lifetime while binge eating disorder is associated with high BMI throughout life (Hudson et al., 2007).

There are indications that prevalence of these life-threatening illnesses are increasing. In a review by the Agency for Healthcare Research and Quality (AHRQ) (2009) of hospitalizations for eating disorders between 1999 and 2006, the number of admissions increased by 18% during that time period. While 89% of the hospitalizations were female patients, there was a notable 37% increase in hospitalization rate among

male patients (AHRQ, 2009). In addition, admission rates of individuals under the age of 12 increased by 119% (AHRQ, 2009). Twenty-four percent of those children and adolescents hospitalized had cardiac dysrhythmias and four percent experienced liver or kidney failure (AHRQ, 2009).

This research may have significant implications for social change. Austin (2012) noted that, "there is enormous potential for growth in the scope and diversity of eating disorders prevention research strategies, particularly those targeting the macro environment" (p. 5). Public health strategies traditionally address the macro-system to approach population-level issues. These strategies may include laws and policies that focus on economic influences and cultural norms such as mass media and the dieting industries (Austin, 2012). By considering the potential for macro-level prevention efforts, public health practitioners can become valuable partners in the campaign to prevent eating disorders.

Identifying health problems in the community and seeking insight into innovative solutions to health problems are two of the ten essential services of the public health system (Centers for Disease Control and Prevention, 2014). Yet, Austin (2012) noted that public health professionals have been largely absent from the discussion about eating disorder prevention. By identifying the attitudes and perspectives of public health leaders about eating disorders as a public health issue, the findings of this research offer a snapshot of these leaders' current views about how eating disorder prevention fits into public health strategies to protect health and promote wellness. With eating disorders described as the most deadly of all mental illnesses (Smink et al., 2012), with an

increasing prevalence rate (AHRQ, 2009; Smink et al., 2012), the findings of this study could lead more public health practitioners to work alongside other professionals to address this deadly health threat at the macro-level.

Summary

Eating disorders are associated with high mortality rates for those who are affected by them and the incidences of this illness are increasing (Smink et al., 2012). Public health practitioners can provide a unique population-based perspective on this health threat (Austin, 2012). It is important to understand where the leaders of local public health agencies currently stand in regards to eating disorder prevention so that steps can be taken to promote the implementation of collaborative, interdisciplinary efforts. This qualitative phenomenological study serves as the first step toward gaining a better understanding of public health leaders' attitudes toward this issue in order to determine what is needed to take the next step toward prevention of this serious health threat.

The next chapter will include descriptions of previous research on the topic of eating disorders, specifically related to public health and prevention. Strengths and weaknesses of these studies will be explored and themes will be described. Areas that needed further examination will also be revealed. Through a review of the literature, I will explain the need for this study in greater detail and the application of the chosen theoretical frameworks will be clearly explained.

Chapter 2: Literature Review

Introduction

The environment can impact at risk populations for developing eating disorders, yet psychology, psychiatry, and nutrition are the primary specialty areas that are engaging in researching eating disorder prevention (Austin, 2012; Mazzeo & Bulik, 2009). Public health practitioners, those specialists who focus on the health impact of environmental factors among populations, have had minimal representation in the exploration of the primary prevention of this health threat (Austin, 2012).

This review of the literature includes an exploration of what was known in regards to the prevalence of eating disorders, risk factors, objectification, early intervention and prevention, controversial issues, integrating prevention measures, and public health leaders' attitudes toward implementation of evidence-based practices. The studies included in this review were accessed through the CINAHL, PubMed-MedLine and Cochrane databases. Search terms used included: *eating disorders, eating disorders and public health, eating disorders and prevention, eating disorders and obesity, eating disorders and societal, objectification theory,* and *objectification theory and eating disorders.* I also conducted searches for current research on eating disorder prevention through the Google Scholar and Yahoo search engines. In an effort to keep the review current, I focused on including literature which had been published within the past five years. I included research published earlier when I determined it was important to include as seminal work. Seminal documents included a 1997 description of objectification theory by Fredrickson and Roberts and an exploration of the effect of self-objectification

on performance by Quinn, Kallen, Twenge and Fredrickson (2006). In addition, literature older than five years was included due to a limited availability of current research on this topic. I also cited information from selected textbooks used during my doctoral program, some of which were published more than five years ago. The publication dates of resources in my literature review ranged from 1997 to 2014 with the majority having been published in 2009 or later.

Prevalence Rates of Eating Disorders

Eating disorders include anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified which includes binge eating disorder without purging. Anorexia nervosa is defined as a self-induced malnutrition to the point that health is impaired. Bulimia nervosa is associated with uncontrolled binging partnered with purging, and (Academy for Eating Disorders, 2011; Herpertz et al., 2011). With a lifetime prevalence rate of 0.6 to 4.5%, eating disorders have been described as rare within the general population, however these conditions affect over 10 million people in the United States at any one time and they can be fatal (Hudson et al., 2007; Novotney, 2009; Smink et al., 2012).

Anorexia nervosa is associated with the highest mortality of all eating disorders (Smink et al., 2012). Zhao and Encinosa (2009) reviewed eating disorder-related hospitalization data between 1999/2000 to 2005/2006 and documented an 18% increase in hospitalizations for eating disorders in that time (Zhao & Encinosa, 2009). Hospitalization rates increased by 16% for females and 37% for males. The authors did

not explore the reasons for this increase, however they did note that eating disorders are generally underreported in the discharge data.

The most common diagnosis in 2005/2006 was anorexia nervosa at 37%; 24% of hospitalized patients had a diagnosis of bulimia nervosa (Zhao & Encinosa, 2009). Twenty-four percent of the hospitalizations in 2005/2006 included cardiac dysrhythmias as a secondary diagnosis, 29% had fluid and electrolyte imbalances, and 21% had either nutritional, endocrine, or other metabolic disorders (Zhao & Encinosa, 2009). The length of the hospital stay and rate of death remained unchanged during this time period (Zhao & Encinosa, 2009).

Data collected from the national comorbidity survey replication study of 9,280 adults revealed that the prevalence of eating disorders ranged from 0.6 to 4.5% of those surveyed (Hudson et al., 2007). The median age of onset of an eating disorder was between 18 to 21 years old, however anorexia was noted to begin at an earlier age (Hudson et al., 2007). Binge eating was linked with severe obesity and was found to be the most common disorder (Hudson et al., 2007). Over 50% of participants with anorexia nervosa and nearly 95% of people with bulimia nervosa also met criteria for another mental illness such as mood impairment, anxiety, impulse control, or substance abuse. Comorbidity was particularly prevalent among those with bulimia nervosa (Hudson et al., 2007). Those participants with a diagnosis of more than one mental illness were more likely to experience role impairment that could impact treatment-seeking behavior (Hudson et al., 2007). Only 50 to 63.2% of the participants with an eating disorder had

sought treatment, and those that did were most likely to seek treatment with a general practitioner.

In a study that surveyed 4,746 middle school and high school youths, more than 40% of the girls and nearly 25% of the boys had impaired body image and more than 30% of the girls and 25% of the boys reported that weight and shape impacted their self-evaluation (Ackard, Fulkerson, & Neumark-Sztainer, 2007). Nearly 10% of the girls and over 12% of the boys indicated they had engaged in extreme weight loss behaviors such as purging, laxative use, or excessive exercise (Ackard et al., 2007). However Ackard et al. (2007) noted that patients with an eating disorder may not seek treatment due to lack of awareness or failure to recognize the problem. Treatment providers were encouraged to screen their patients for eating disorders (Ackard et al., 2007; Hudson et al, 2007).

In a longitudinal twin cohort study of 2,881 women, 59 reported bulimia nervosa symptoms at least once a week for three months, however two-thirds of these women had not been diagnosed through their healthcare provider (Keski-Rahkonen et al., 2009). Bulimia nervosa can become chronic, with over 40% of patients reporting still experiencing symptoms after five years (Keski-Rahkonen et al., 2009). Early identification and intervention of pre-clinical symptoms can help reduce the risk of a full onset eating disorder (Ackard et al., 2007).

Smink et al. (2012) found eating disorders to be increasing among 15 to 19 year old girls over recent decades. The authors questioned whether the increase in this age group was due to earlier onset or improved identification of this disorder. Smink et al. also noted that males were more likely to engage in binge eating. In addition,

globalization and media influences have been associated with increased rates in non-Western countries (Smink et al., 2012).

Theoretical Foundation

Objectification Theory

Objectification theory can be used to help understand how an appearance-focused culture and perceptional factors—such as believing that the primary purpose of a person's body is for the sexual pleasure of others—can impact mental health (Fredrickson & Roberts, 1997). In addition, this theory can be used to explain how external variables such as societal expectations and psychological variables such as body shame or appearance anxiety can result in the manifestation of an eating disorder (Dakanalis & Riva, 2013)

Fredrickson and Roberts (1997) noted that society has predominantly sexualized women throughout the years. Women's bodies have been prominently displayed in mass media, often with just a part of their body shown, without including their head. Pervasive sexual images of women presented through the media have created a culture in which women are viewed as sexual beings whose sole purpose is pleasing others (Fredrickson & Roberts, 1997). Women are more likely to receive uninvited sexual gazes from men in public, making women feel uncomfortable. While not all men objectify women, this perspective that the woman's body is to be looked at by men leads to oppression of women (Fredrickson & Roberts, 1997). With the media increasingly displaying the male body, often as bare-chested men with muscular physiques, the constructs of objectification theory have been found to apply to men as well as women (Dakanalis &

Riva, 2013). Dakanalis and Riva (2013) found this to be particularly applicable to homosexual men.

A woman's life experiences can be impacted by her appearance. Fredrickson and Roberts (1997) noted that women who are considered attractive are more likely to be more popular, have more dates, move up in social status and even advance higher in the workplace. Fredrickson and Roberts explained that appearance becomes a commodity. Women can feel pressured by society to be attentive to their appearance. Girls are enculturated into objectification early through societal pressures to focus on their outward appearance (Fredrickson & Roberts, 1997). Over time, societal perceptions of a person can become internalized, resulting in self-objectification, which is when the individual treats themselves as an object (Fredrickson & Roberts, 1997).

Fredrickson and Roberts (1997) noted that self-objectification can lead to constant monitoring of one's own outward appearance. These interrupting thoughts of body image can manifest in gender-specific psychological experiences including shame, anxiety, impaired motivational states, and alienation from body states (Fredrickson & Roberts, 1997). Shame arises when one's feelings about outward appearance is globalized to measure one's overall sense of value. If a woman does not meet society's often unrealistic expectations for appearance, she may feel that she is an overall failure (Fredrickson & Roberts, 1997). Fredrickson and Roberts explained that anxiety arises from negative experiences related to appearance. This can range from appearance anxiety about how one looks to safety anxiety and fear of sexual victimization and assault, then blaming the victim based on what they were wearing (Fredrickson & Roberts, 1997).

Motivational stress can arise when a woman who is engaged in daily activities is interrupted by comments about her appearance. This can impact productivity and motivation (Fredrickson & Roberts, 1997). The final manifestation noted by Fredrickson and Roberts (1997) is an impaired ability to perceive physiological cues from the body for hunger, satiety, or sexual response.

Slater and Tiggemann (2010) explored how objectification theory applied to 714 adolescent boys and girls, ages 12 to 16 years old. The researchers sought to verify the objectification theory variables of body shame, appearance anxiety, and disordered eating among adolescents and to explore the differences in these variables between genders (Slater & Tiggemann, 2010). In this study, self-objectification was measured using a body surveillance scale. This scale was used by the researchers to measure body surveillance behaviors as a manifestation of self-objectification (Slater & Tiggmann, 2010). The researchers also measured BMI, body shame, appearance anxiety, and disordered eating (Slater & Tiggemann, 2010). The participants completed a questionnaire that measured these theoretical variables. Data were analyzed using Pearson correlations. While the results indicated higher levels of body surveillance among the girls, the sequence of self-objectification resulting in body shame, appearance anxiety, and disordered eating were present for both genders (Slater & Tiggemann, 2010).

A study by Quinn et al. (2006) was conducted with 83 women to assess the impact that objectification has on performance. Measures included BMI, body shame, and sense of self. While wearing either a sweater or a bathing suit in a room with a full

length mirror, the participants were asked to complete a color identification task. The researchers found that women who engaged in self-objectification by wearing the bathing suit had poorer responses to the simple task of determining colors. No differences were noted for varying BMI or ethnicity. The results substantiated that objectification has a negative impact on performance (Quinn et al., 2006).

Juarascio et al. (2011) conducted a study to explore the impact of internalization of the thin ideal on body image and disordered eating behaviors among college women. The study initially involved 80 women, 79 of which completed the study. Measures included body image, disordered eating behavior, and thin ideal internalization. The Implicit Relational Assessment Procedure (IRAP), an assessment tool used to measure beliefs, was used in this study to predict disordered eating and body dissatisfaction through internalization of the thin ideal (Juarascio et al., 2011). The study results further supported existing evidence that internalization of the thin ideal is associated with poor body image and the IRAP was found to be a reliable screening tool that could be used to identify freshman who may be at risk for body image dissatisfaction and disordered eating behaviors (Juarascio et al., 2011).

Dakanalis and Riva (2013) explained the impact mass media has on body image and eating disorders by using objectification theory as a framework. The authors used the constructs of the objectification theory, including internalization of images in the media of western ideals of beauty and body shame to describe the pathway that results in the development of eating disordered behaviors.

An experimental design study by Harper and Tiggemann (2008) sought to assess the impact of the media on self-objectification, mood, appearance anxiety, and body image. Ninety female participants, between18 and 35 years of age, were randomly assigned to one of three groups. One group viewed a set of advertisement images that included a thin and attractive female, another group viewed advertisement images of an attractive thin model who was being looked at or touched by a man, and the third group viewed advertisements that did not include images of any people (Harper & Tiggemann, 2008). The researchers measured self-objectification, appearance anxiety, negative mood, and body dissatisfaction. They used one-way analysis of variance and analysis of covariance to analyze the effect of viewing thin ideal images (Harper & Tiggemann, 2008). The researchers found that women who viewed the thin ideal images had a more negative mood as well as increased self-objectification, weight-related anxiety, and poor body image (Harper & Tiggemann, 2008). The findings indicated that even subtle cues resulted in self-objectification (Harper & Tiggemann, 2008). These findings supported the hypothesis that viewing the thin ideal images in the media would result in self-objectification as well as increased appearance anxiety, negative mood, and poor body image (Harper & Tiggemann, 2008).

Practitioners need to recognize that some members of society are more vulnerable to media messages that promote the thin ideal. Anschutz et al. (2008) included 163 university women in a study to examine how these vulnerabilities can result in disordered eating behaviors. Susceptibility to thin ideal media messages was measured by using the Sociocultural Attitudes Towards Appearance Questionnaire-III. The researchers also

measured body dissatisfaction and eating styles. Fifty percent of the participants reported their current body figure did not match their ideal body image (Anschutz et al., 2008). Body dissatisfaction was associated with restrained eating, which the researchers defined as deliberately eating less to not become heavier, and emotional eating, defined as wanting to eat when irritated (Anschutz et al., 2008). Emotional eaters and external eaters, those who eat when the food looks or smells appealing, were found to be vulnerable to external cues such as thin ideal portrayed in the media (Anschutz et al., 2008). In addition, higher BMI measurements were also associated with restrained and emotional eating behaviors (Anschutz et al, 2008).

Susceptibility to the thin ideal was associated with restrained eating and emotional eating (Anschutz et al., 2008). Thin ideal susceptibility was also related to a high level of body dissatisfaction which in turn was highly associated with restrained eating and moderately associated with emotional eating behaviors (Anschutz et al., 2008). These findings indicate that thin ideal susceptibility is both directly and indirectly related to restrained eating behaviors, therefore cultural standards of beauty presented in the media can result in disordered eating for those who are susceptible (Anschutz et al., 2008).

Ecological Theory

Ecological theory is used to explain how the environment impacts public health and can be used to guide public health interventions to address these environmental factors (Cohen et al., 2006). Cohen et al. (2006) described a model that includes four structural factors that public health practitioners can focus intervention upon in order to

influence behavior change. The first factor is the consumer products that can influence health outcomes (Cohen et al., 2006). These products can be either protective or cause harm. Food and pharmaceuticals are included in this category. Policies that impact economics can influence these availability of these products (Cohen et al., 2006). The second factor is the impact that physical structure has on health and safety (Cohen et al., 2006). Again, these can be either protective or harmful. Such factors might include zoning regulations, structural design of communities, and building plans (Cohen et al., 2006). The third factor category is social structures (Cohen et al., 2006). These include laws and policies that influence behaviors which can result in changing cultural norms (Cohen et al., 2006). The fourth factor is messaging through the media and within the cultural itself (Cohen et al., 2006). Marketing creates the image of social norms and influences consumer decisions. Young people are especially susceptible to being influenced by these external messages (Cohen et al., 2006). These four factors can be combined in a way that allows for synergistic influences which can produce a stronger impact on behavior change (Cohen et al., 2006). For this study, ecological factors that influence objectification and thin ideal can be considered for macro-level prevention strategies.

Risk Factors

A case control study was conducted by Krug et al. (2013) to assess the early influences of individual, family, and social factors on the development of eating disorders or obesity. The study included 152 participants who completed a self-administered survey, 45 of the participants had an eating disorder, 65 were obese, and 42 served as

controls (Krug et al., 2013). The researchers used chi-square tests were used categorical analysis, analysis of variance to analyze clinical variables, and multinomial regression to analyze predictor of eating disorder, obesity or healthy control participants (Krug et al., 2013). The researchers observed that obese participants were older and had a lower level of education than those with an eating disorder or in the control group. Krug et al. (2013) noted that teasing, family relationships and mass media affected eating behaviors among those with an eating disorder and that these factors were shared risk factors for both obesity and eating disorders. These shared risk factors serve as a caution to practitioners that addressing only one health threat may result in the development of another weight-related disorder (Krug et al., 2013). Krug et al. suggested integrated interventions that address overlapping factors without prompting weight loss pressures such as dieting or teasing as a cost-saving and effective approach to prevent a range of weight-related disorders.

Individual Risk Factors

Waxman (2009) conducted a meta-analysis of the literature to examine the role impulsivity plays in the development of eating disorders. Self-report and behavioral and psychological measures were used to assess for impulsivity, defined as behaviors that lack conscious judgment in response to a situation (Waxman, 2009). The most commonly used instruments for measurement of impulsivity were the Barrett Impulsiveness scale and the Eyseneck Impulsiveness questionnaire (Waxman, 2009). Of the 12 studies Waxman reviewed, impulsivity was noted to be highest among the binge-eating groups and lowest in those who restricted their eating (Waxman, 2009). Waxman encouraged

providers to assess for impulsivity in addition to treating an underlying eating disorder (Waxman, 2009).

Smyth et al. (2009) conducted a study of 133 patients with bulimia nervosa to examine how impact binge and purge behaviors are distributed over time of day and day of the week. The participants were interviewed and completed questionnaires to obtain data about diagnosis and psychopathology, affect, stress, and self-destructive behavior (Smyth et al., 2009). The results revealed that positive affect was highest during the week and lowest on Sunday and negative affect was high throughout the week and weekend. Smyth et al. identified diurnal affect patterns during the day with positive affect peaking at 4:00 pm and negative affect continuing to rise into the evening. Work-related stress was highest during the work week and interpersonal stress was noted across the week and into the weekend. Stress peaked between 6 to 8 pm and was at the lowest levels in the morning (Smyth et al., 2009).

Binging and purging behaviors peaked at 1:00 pm and in the evening between 7 to 9 pm. These peaks correlated to lunch and dinner but not breakfast (Smyth et al., 2009). Purging was higher during the week while binging peaked on the weekends. Smyth et al. (2009) found that binging and purging was highest during high stress times. Negative affect was high while positive affect was low during these times of increased binging and purging behavior (Smyth et al., 2009). This information can be used to inform development of intervention strategies (Smyth et al., 2009). Supporting positive mood during the high stress such as seeking support from family or friends or implementing

self-management strategies may prove to be beneficial in reducing binging and purging behaviors (Smyth et al., 2009).

Family Influences

The family environment can influence development of eating disorders. Gillett, Harper, Larson, Berrett and Hardman (2009) conducted a study to compare rules within 51 eating-disordered and 51 non-eating-disordered families, each living with a female between the ages of 13 and 25. This totaled to 322 subjects. Families who screened positive for substance use were excluded from the study (Gillett et al., 2009).

Patients completed a questionnaire and family members completed a survey. The Family Implicit Rules Profile (FIRP) was used to identify constraining and facilitative rules. Constraining family rules include rigid boundaries and stifle thoughts and feelings whereas facilitative rules involve appropriate monitoring and facilitate negotiation and expression of feelings (Gillett et al., 2009). Gillett et al. (2009) used analysis of variance to analyze the data. The researchers found eating-disordered families to have lower FIRP scores than the non-eating disordered families, which confirmed the primary hypothesis (Gillett et al., 2009). The researchers reported that this did not seem to vary based on type of eating disorder, however families whose daughters were in an inpatient program had higher scores for facilitative family rules than those whose daughters were in outpatient programs (Gillett et al., 2009). Gillett et al. suggested that treatment programs include family interventions that promote facilitative rather than constraining rules.

Neumark-Sztainer et al. (2010) looked at associations between family weight talk, such as teasing about weight or talk about dieting, and disordered eating. Such talk may

be intended to promote healthy weight but can produce harmful results (Neumark-Sztainer et al., 2010). The study included 365 high school aged students who were involved in a school-based weight reduction program for girls who were either overweight or at risk of overweight. The researchers measured body satisfaction, weight control behaviors and binge eating, along with an assessment of family weight talk.

Neumark-Sztainer et al. (2010) found that more than 65% of the mothers engaged in talk about her own weight and 50% encouraged their daughters to diet. Forty percent of fathers either engaged in talk about his own weight or encouraged his daughter to diet. This type of talk was associated with unhealthy weight control behaviors and binge eating (Neumark-Sztainer et al., 2010). Neumark-Sztainer et al. noted family teasing in 60% of the families which was positively correlated with higher BMI scores. Family teasing was most strongly associated with extreme weight control behaviors and binge eating (Neumark-Sztainer et al., 2010). While other outside factors may also influence development of eating disorders, the findings of this study can be used to help families realize their role in preventing disordered eating behaviors (Neumark-Sztainer et al., 2010).

Societal Factors

Bair, Kelly, Sardar and Mazzeo (2012) conducted a cross-sectional study among 421 undergraduate college females to explore the impact the internet may have on eating disorder behaviors and attitudes. The researchers developed a questionnaire survey instrument to measure exposure to media (television, internet and magazines), attitudes about body image, and symptoms of eating disorder (Bair et al., 2012). The researchers

also implemented an Eating Disorder Inventory to measure eating disorder symptoms. Bair et al. found that more participants used the internet rather than magazines or television and that the personal mobile device was the most common source of internet access. Correlations between type of media and eating disorder symptoms were identified using Pearson correlation analysis. The researchers identified an association between exposure to appearance-oriented images through either the internet or television and body dissatisfaction (Bair et al., 2012). Bair et al. found this to be mediated by thin ideal internalization. The researchers noted no association of body dissatisfaction and viewing of images in magazines. This may be due to changes in how young adults access media with an increased use of internet media rather than print media (Bair et al., 2012). Bair et al. explained that the findings revealed the impact visual media can have on eating pathology and provides insight into the use of the internet as a tool to reach this population for prevention efforts.

In a meta-analysis review, Urquhart and Mhalynuk (2011) used a socio-cultural perspective to explore the literature to determine how emotional eating, body dissatisfaction, dieting, perfectionism, fat talk, weight stereotypes, media, and the "superwoman" ideal impact development of eating disorders and obesity. These factors may trigger vulnerable people who are perfectionists, have low self-esteem or are prone to depression to engage in binge eating behaviors (Urquhart & Mhalynuk, 2011). Comprehensive strategies need to be implemented to prevent both obesity and eating disorders. These efforts should promote healthy lifestyles and address the eight social and cultural thoughts and behaviors associated with both of these health threats.

Stigma

Almeida et al. (2011) conducted a study with 99 adult bariatric patients and 100 undergraduate students to explore the impact of weight-related stigma on binge eating. The researchers measured community risk factors, social support, body dissatisfaction, weight stigma experiences, binge eating, negative coping skills, and psychological adjustment (Almeida et al., 2011). Almeida et al. found that binge eating was directly correlate with high BMI scores and weight stigma was found to be associated with binge eating. Almeida et al. noted that overall, stigma had a greater association with increased binge eating behaviors than other risk factors.

Racial and ethnic culture may influence risk for development of eating disorders (Quick & Byrd-Bredbenner, 2014). In a cross-sectional study of 1,445 female students from three American colleges, Quick and Byrd-Bredbenner (2014) found that black students had lower rates of disordered eating attitudes and behaviors than white students. Although the African American women often had higher BMI measurements than the white women, they had higher self-esteem and were less likely to compare themselves to thin ideal images in the media or experience body dissatisfaction than white women (Quick & Byrd-Bredbenner, 2014). Women of Asian descent had the lowest scores for self-esteem and viewed themselves as heavier than their actual size (Quick & Byrd-Bredbenner, 2014).

Linde et al. (2009) conducted a longitudinal study over a five year period to explore predictive factors for initiation and persistence of unhealthy weight control behaviors. The study involved questionnaires which were completed by middle school

and high school age students, this included 1,106 boys and 1,362 girls. Linde et al. measured both personal and socio-environmental factors and unhealthy weight control behaviors. Personal factors that Linde et al. measured included self-esteem, depressed mood, weight concerns, body dissatisfaction, level of importance placed on weight or shape, recognition of benefits of healthy eating, and concern given to health. Socio-environmental factors that the researchers measured included family connectedness, mother or father's concern about weight, friends who were dieting, weight-related teasing, and exposure to dieting or weight loss magazines (Linde et al., 2009). Linde et al. analyzed the data using odds ratio and logistic regression to determine association between baseline predictor and change over time. By the end of the five years, nearly half of the boys and three-fourths of the girls had engaged in unhealthy weight control behaviors. The researchers found that personal factors were more predictive of unhealthy weight control behaviors than socio-environmental factors (Linde et al., 2009). They identified that weight concern was a major predictor of unhealthy weight control behaviors. Linde et al. also noted that peer dieting and reading weight loss magazines were predictive of unhealthy weight control behaviors in boys. These findings support efforts to address unhealthy weight control behaviors universally in schools so as to reach high risk populations and to focus on the topic of weight concerns and promotion of self-acceptance for maximum efficiency (Linde et al., 2009).

Puhl et al. (2012) conducted a study designed to assess how the public perceives obesity prevention campaigns, particularly focusing on whether these messages are helpful or stigmatizing. The researchers presented advertisements to the 1,014

participants and asked their opinions about motivation or stigmatizing effect. The participants indicated a desire to comply with the messages in all the campaigns except the ones they identified as stigmatizing (Puhl et al., 2012). Puhl et al. found that the public was receptive to messages that promoted fruits and vegetables yet participants described messages that were considered stigmatizing to be least motivating (Puhl et al., 2012). These results can help to guide development of public health campaigns so the messages are non-stigmatizing (Puhl et al., 2012). Those who are creating these campaigns should use messages that describe specific behaviors that improve health and avoid messages that place blame on a person who is overweight or unhealthy (Puhl et al., 2012).

Early Intervention and Prevention

A 10-year longitudinal study was conducted by Neumark-Sztainer, Wall, Larson, Eisenberg, and Loth (2011) to explore how weight-control behaviors established in adolescence impact adult behaviors. The researchers included 2,287 young adults in the sample, 55% of the participants were female and 48% were white. This group age ranged between 12 to 13 years old at initiation of the study and 22 to 24 years old at the end of the study. The researchers collected data about demographics, dieting, unhealthy or extreme weight control behaviors, and binge eating (Neumark-Sztainer et al., 2011).

Analysis of the data revealed a high prevalence of unhealthy weight loss behaviors and that engaging in these behaviors early in life are associated with long-term unhealthy behaviors into adulthood. Nearly 50% of the girls and one-fourth of the boys reported dieting within the past year (Neumark-Sztainer et al., 2011). One out of five

adult females reported using extreme measures to control weight and use of pills increased three-fold for both females and males over the 10 year period (Neumark-Sztainer et al., 2011). Neumark-Sztainer et al. (2011) called for efforts to be made to prevent adolescents from engaging in unhealthy weight loss behaviors to prevent long-term disordered behaviors in adulthood.

Legenbauer, Schutt-Stromel, Hiller, and Vocks (2011) conducted a pre-post study to explore the impact of body image therapy in women who had been diagnosed with an eating disorder. Fifty-five women participated in an outpatient body image treatment program that included 10 group sessions with a trained therapist (Legenbauer et al., 2011). The sessions included role playing and Socratic dialogue to address dysfunctional thoughts and beliefs, exposure to full-length mirror and video feedback, addressing body-related avoidance, and promoting positive body-related behaviors (Legenbauer et al., 2011). Due to drop-out and missing information, data from 41 of the participants was analyzed. Legenbauer et al. found that dysfunctional thoughts about body and self-esteem, social comparison and shape concern were reduced at the end of the session series. This reduction in dysfunctional thought processes was associated with reduced eating disorder symptoms (Legenbauer et al., 2011).

Coombs (2011) conducted a case study to explore the role of school nurses in response to an eating disorder diagnosis and eating disorder prevention. A 16 year old female presented with extreme weight loss. The general practitioner diagnosed anorexia nervosa. The patient attended weekly therapy sessions and was referred to a consultant pediatrician. The school nurse monitored the patient's weight and diet which was

determined to be chaotic due to skipped meals coupled with purging. She was eventually referred to a nutritionist. Nurses may be the first to identify a student with an eating disorder. They need to be aware of risk factors and early symptoms (Zhao & Encinosa, 2009). In addition, nurses may be called upon to work as part of a multi-disciplinary team to support the patient who has an eating disorder and their family (Zhao & Encinosa, 2009). School nurses are also in a position to raise awareness about eating disorders within the general community (Zhao & Encinosa, 2009).

Shaw, Stice, and Becker (2009) conducted a meta-analysis of eating disorder prevention programs to identify effective strategies. Fifty-one percent of the programs reviewed had reduced at least one eating pathology (Shaw et al., 2009). Factors that the researchers associated with effective programs included targeting high-risk populations, working with adolescents over the age of 15, and using trained interventionists. The researchers noted that intervention content that was most effective addressed body acceptance and dissonance induction which impacted body dissatisfaction and internalization of thin ideal (Shaw et al., 2009). Shaw et al. (2009) identified specific programs as being successful. The Body Project and the Sorority Body Image Program, used cognitive dissonance to empower girls to take a stand against the thin ideal (Shaw et al., 2009). The Healthy Weight Intervention also used cognitive dissonance but focused on making gradual changes to diet and exercise routines. Girl Talk was a peer-to-peer support group that focused on body acceptance, and healthy weight loss behaviors, and media awareness (Shaw et al., 2009). The Student Bodies program focused on cognitive-

behavioral approach whereas the Weigh to Eat program was based on a social-cognitive strategies (Shaw et al., 2009).

Austin et al. (2007) conducted a randomized controlled-trial study to assess the effectiveness of 5-2-1 Go!, a school-based overweight prevention program, in reducing the incidence of disordered weight-control behaviors. This study involved 749 girls and 702 boys from 16 middle schools. The overweight prevention program included modules on nutrition and physical activity for the school's use and curriculum from The Planet Health which includes messages about healthy eating, physical activity and television viewing (Austin et al., 2007). The intervention group participated in the obesity prevention program while the control group only worked with the module that addressed school policies and environment (Austin et al., 2007). Austin et al. analyzed the results analyzed using multivariate logistic regression models. The researchers found that two years after the intervention was initiated, disordered eating behaviors were reported by 3.6% of the girls in the control schools but reported in only 1.2% of the girls in the intervention group (Austin et al, 2007). Austin et al. found the overweight prevention program to be protective against disordered eating behaviors.

Berger et al. (2011) conducted a pre-post control study to explore the realities of implementing a primary prevention program for eating disorders. A school-based primary prevention program was developed in Germany by the authors to prevent anorexia nervosa. This program was named PriMa, meaning Primary Prevention of Anorexia Nervosa. Berger et al. included 42 schools in the study to evaluate the effectiveness of the program. Twenty schools incorporated the program and 22 were controls. The study

involved 1,006 girls from the various schools. This program was designed to be presented by the teachers and include all girls in the school. It included nine lessons, the first three presented normal behavior, the second three addressed subclinical behaviors, and the last three addressed clinical issues (Berger et al., 2011). The girls in the schools with the program demonstrated improved eating attitudes and improved self-esteem (Berger et al., 2011). The program was then expanded to additional schools. Evaluation of these programs revealed that girls and boys who participated in the program had increased knowledge about eating and physical activity (Berger et al., 2011). Berger et al. reported that the evaluation data revealed that both students and teachers accepted the program and those who progressed with it had fun.

Gauvin and Steiger (2012) evaluated the effectiveness of a government sponsored body image program in Quebec. This program was designed to encourage organizations to minimize the pressures for thin ideal in the media by presenting images that include a variety of shapes and sizes, and avoid the use of images that promote extreme thinness (Gauvin & Steiger, 2012). After the campaign was in place for six months, the researchers evaluated the population's response. They surveyed 1003 community members about their awareness and impressions and their willingness to follow the recommendations for healthy eating and weight-control behaviors that do not include excessive practices (Gauvin & Steiger, 2012). Gauvin and Steiger conducted logistic regression analysis which indicated 35% of the respondents were aware of the campaign and nearly 33% thought the campaign would help alert people to the risks of disordered eating. In addition, Gauvin and Steiger identified that women and people with a higher

education level were more aware of the campaign while men and those with a lower education level were less likely to recognize the campaign messages.

McLean et al. (2013) conducted a study among seventh grade girls in Melbourne, Australia to examine how media literacy and media exposure are correlated to eating disorder risk factors such as internalization of media ideals, comparison of appearance, and body dissatisfaction. For this study, the researchers measured media literacy using the Media Attitudes Questionnaire. They also measured body dissatisfaction, internalization of thin ideal, and appearance comparison and took demographics and exposure to media into consideration (McLean et al., 2013). Results revealed that media literacy and body dissatisfaction were inversely related and body dissatisfaction was impacted by factors including internalization, appearance comparison and body mass index (McLean et al., 2013). The researchers found that media literacy and exposure were indirectly linked to body dissatisfaction. These findings verified a relationship between media literacy and eating disorder risk (McLean et al., 2013).

Controversial Issues

Focus on Obesity

Darby et al. (2009) conducted two cross-sectional studies in South Australia to measure the changes in prevalence of obesity and eating disorder behavior comorbidity over a 10 year period. The researchers conducted structured interviews with 3001 participants in 1995 (71.5% response rate) and 3,047 participants in 2005 (63.1% response rate). The surveys used by the researchers included demographic information, height and weight, and assessed for binge eating, purging and excessive dieting or fasting

behaviors (Darby et al., 2009). Darby et al. analyzed the data using multinomial logistic regression to determine changes from 1995 to 2005 at a 95% confidence interval (Darby et al., 2009). They found that rates of comorbidity increased more than rates of obesity or eating disorders alone (Darby et al., 20009). They also noted a 4.5 fold increase in eating disorder behaviors and obesity comorbidity in the 10 year span between 1995 and 2005 (Darby et al., 2009). There was a 3.1 fold increase in eating disorders without obesity and a 1.6 fold increase in obesity without eating disorders during the same time period (Darby et al., 2009). While most of the subjects identified with a comorbidity were female, there was an increase of comorbidity among males over the 10 year span. Darby et al. recommended implementation of integrated public health interventions that promote healthy eating and include enjoyable physical activity along with a healthy body image without focusing on weight control measures (Darby et al., 2009).

A study conducted by Zachrisson, Vedul-Kjelsas, Gotestam, and Mykletun (2008) in Norway revealed that increases in obesity rates did not result in increases in eating disorders. The researchers compared responses to Survey for Eating Disorders questionnaires by two samples, sample one was surveyed in 1991 and had 1,849 respondents (74.9% response rate) and sample two was surveyed in 2004 and had 1,521 respondents (45.8% response rate). Participants self-reported their height and weight. Zachrisson et al. found that rates of obesity and overweight doubled over the time span. Eating disorder rates remained unchanged at 10% over a lifetime and four percent at the time of each survey (Zachrisson et al., 2008). In both surveys, the odds of reporting an eating disorder was increased among those who were either obese or overweight,

however the odds of an obese or overweight person experiencing a lifetime eating disorder had decreased from 1991 to 2004 (Zachrisson et al., 2008). The authors noted that this result is provisional due to the small sample size.

In 2005, Neumark-Sztainer called for an integrated approach to promote prevention of both obesity and eating disorders. They explained that these are both weight-related disorders. Neumark-Szgtainer (2005) noted that integrated prevention is an efficient and effective way to address two overlapping health threats. This requires those who work in the two specialty areas to recognize the serious nature of both problems and for professional organizations to network between these two fields (Neumark-Sztainer, 2005). This approach can promote healthy physical and social environments that support physical activity and healthy eating as well as minimize stigma by supporting diversity among body shapes and sizes (Neumark-Sztainer, 2005). Practitioners developing prevention programs will need to provide consistent messaging to address both of these weight-related disorders (Neumark-Sztainer, 2005).

Drummond and Hare (2012) conducted an international survey among nutrition educators, mostly in universities and internship programs, to explore their beliefs about eating disorders among dieticians. Fourteen of the 39 countries approached participated. Seventy-seven of the respondents reported that eating disorders were a concern among their students. Only 15% of the programs offered counseling to students with an eating disorder and only eight percent had a screening program in place to identify a student with an eating disorder (Drummond & Hare, 2012). Concerns about risk to the public when a nutritionist or nutrition student has an active eating disorder were equally split

between yes, no or don't know (Drummond & Hare, 2012). Drummond and Hare suggested that increased awareness of this problem can bring about conversations regarding policies designed to ensure public safety while also supporting the rights of the individual student or dietician.

Yager and O'Dea (2009) surveyed 502 health and physical education teachers to assess for disordered eating or physical activity practices. Their responses were compared to responses by non-health and physical education participants. The researchers used a questionnaire that assessed perceptions about body weight and desired body weight. Excessive exercising was assessed using the Obligatory Exercise Questionnaire. The participants' age, gender, height and weight were also obtained. Yager and O'Dea asked participants to disclose any history of eating disorders. The researchers analyzed the data using descriptive statistics, analysis of covariance, and one-way analysis of variance. They analyzed categorical data using Pearson's chi-square (Yager & O'Dea, 2009). The comparisons between the two groups revealed that health and physical education teachers reported higher rates of past or current eating disorders and had worse body image, elevated rates of disordered eating, dieting, and body dissatisfaction than the non-health and physical education participants (Yager & O'Dea, 2009). The teachers also earned higher scores for excessive exercise (Yager & O'Dea, 2009). The authors expressed concern that unhealthy attitudes and perspectives of these teachers could be passed on to their students.

Crow, Eisenberg, Story and Neumark-Sztainer (2008) identified that even subsyndromal eating disorders present an increased risk for suicide ideation and suicide

attempts. Their study involved surveying 4,746 students in grades seven through 12 using the Project EAT survey instrument. The researchers included weight status, unhealthy weight control behaviors, body satisfaction, depressive symptoms and suicidal thoughts or attempts as measures in this study (Crow et al., 2008). Crow et al. used chi-square tests to analyze the data. One fourth of the students who were surveyed reported suicidal ideation and one tenth reported they had attempted suicide (Crow et al., 2008). The researchers noted a strong correlation between suicidal behaviors and extreme weight control behaviors, less extreme weight control behaviors and body dissatisfaction among both boys and girls (Crow et al., 2008). Crow et al. suggested that prevention measures that promote improved body image among the youth may have an effect of overall well-being.

Obesity Screening in Schools

Soto and White (2011) noted that BMI screening has been a controversial issue due to concerns about stigma associated with weight and the unintended development of teasing, poor body image, and disordered eating behaviors. Soto and White responded to these concerns by recommending practices for school nurses who conduct BMI screenings in the school setting that minimize the risk of harm to children. Nurses can collaborate with school phycologists and counselors to ensure sensitivity and to include health promotion measures (Soto & White, 2011). Staff and teachers should receive sensitivity training to protect children during the screening process and parents should receive education about how to promote health for their child without instituting a dangerous weight loss regimen at home (Soto & White, 2011). In addition, school nurses

can advocate for policies that promote health and wellness in the school setting (Soto & White, 2011).

Grimmett, Croker, Carnell, and Wardle (2008) explored the psychological impact of advising parents of a child's weight after conducting weight screening. They collected data from 358 children and 287 parents using questionnaires that included questions about feeding practices, perceptions of the child's weight, child's body esteem and dietary practices and weight-related teasing (Grimmett et al., 2008). In their analysis of the data, Grimmett et al. found that 65% of the parents indicated that they desired feedback about their child's weight. Most children did not experience any changes in their feeding patterns however parents of the overweight girls did implement dietary restrictions (Grimmett et al., 2008). Fifty percent of parents of overweight students reported that their child improved their health behaviors. While most students indicated that they enjoyed the process, there was a small number of students who described the experience as distressing for them (Grimmett et al., 2008). One parent reported that their child cried when he read the letter from the school about his weight. Another child reported that they did not want other children to know their weight. Grimmett et al. noted that this serves as a reminder for sensitivity and caution when conducting the screenings and sharing the findings with the family.

Integrating Prevention Interventions

Ferrari (2011) presented a discussion on how health promotion messages can address both eating disorder prevention and obesity prevention through a systems-thinking approach. Ferrari noted that when these two disorders are considered as co-

existing on the same weight-shape spectrum, practitioners from both sides can connect together and transition from setting individual goals to creating common goals to prevent these two health threats.

Sanchez-Carracedo et al. (2012) also called for an integrated prevention strategy. This is especially important when considering environmental strategies (Sanchez-Carracedo et al., 2012). Messages need to be coherent rather than conflicting so that the public is not confused (Sanchez-Carracedo et al., 2012). Lack of expertise about the other disorder can impact efforts to prevent these conditions. For example, Sanchez-Carrecedo et al. noted that often those who create obesity prevention programs have no knowledge about eating disorders and their strategies can result in an environment that presents increased risk for eating disorders. Professionals should utilize a systems-thinking approach when designing prevention programs to consider how their interventions might impact other disorders (Sanchez-Carracedo et al., 2012).

As advised by Ferrari (2011), common goals need to be developed. Environmental strategies are needed for both obesity prevention and eating disorder prevention (Sanchez-Carracedo et al., 2012). In addition, practitioners need to cross boundaries and learn about these other conditions on the weight-shape spectrum. This could include jointly attending conferences to learn new research on these topics (Sanchez-Carracedo et al., 2012).

Stice et al. (2012) reviewed an integrated prevention program implemented among first and second year college students. Healthy Weight 2 is a four-hour prevention program designed to prevent obesity and eating disorders (Stice et al., 2012). Participants

in the study included 398 women ages 17 to 20 years old. Stice et al. tested participants for onset of eating disorders and subclinical disordered eating symptoms as well as weight and dietary changes (Stice et al., 2012). The researchers found a 60% reduction in development of eating disorders among the participants. Those with eating disorder symptoms or elevated BMI at the initiation of the program demonstrated the greatest impact (Stice et al., 2012). Stice et al. noted that other effects were minimal, indicating that adding nutritional information to the program may have weakened its impact.

Leaders' Attitudes

There are 2,800 local public health departments and 51 state health departments in the United States (Pomeranz, 2013). Local and state public health professionals across the country address public health issues in a variety of ways, including collaborating with local legislators, agencies, and community members to influence policies and regulations that impact health (Pomeranz, 2013). In looking at public health strategies to address obesity, Pomeranz (2013) noted that policy development is an effective strategy to address the ecological factors that can impact health such as societal and economic influences. Public health leaders have the authority to make decisions about which policy issues within the agency mandates will be addressed (Pomeranz, 2013). Support from elected officials can help to strengthen the authority placed upon the agency (Pomeranz, 2013).

Understanding the perceptions and attitudes of public health leaders related to the prevention of eating disorders helps to determine their interest in impacting policy change to address this issue and their willingness to take on potential economic and political

challenges they may face in this effort. The evidence is clear that ecological factors influence the development of eating disorders in vulnerable populations and that this is a health threat that needs to be addressed. The purpose of this study was to explore these leaders' perceptions of eating disorders and determine their attitudes concerning engaging in a macro-level approach to eating disorder prevention.

Leaders can influence the organizational environment just as the organizational culture can influence decisions made by the leader (Aarons, 2005). The diffusion of innovation theory includes attributes associated with innovation (Rogers, 2005). One attribute of particular importance is how well an innovation matches the adaptor's norms and the norms within the organization (Rogers, 2005). Noting that attitude toward innovation influences whether or not there will be a change in practice, Aarons (2005) conducted a study to measure attitudes of mental health providers about evidence-based practice. Four domains can impact decisions to adopt an evidence-based practice (Aarons, 2005). These domains include the appeal of the practice, requirements associated to the acquisition, openness to change within the organization, and perceptions related to how much the new practice deviates from the current practice (Aarons, 2005). The attitude toward adopting a new evidence-based practice can be measured using the Evidence-Based Practice Attitude Scale which measures these four domains (Aarons, 2005). A practitioner who scores high on this scale will likely be an innovator who would be more likely to adopt the new practice (Aarons, 2005).

The results of Aaron's 2005 study served as a guide for my own study by offering insight into factors associated with adoption of a new practice as I explored the attitudes

and perspective of the public health leaders about prevention of eating disorders as a public health issue. During my exploration into attitudes of and perceptions concerning eating disorder prevention, these domains helped me understand principles involved in making change. This might also be helpful in future studies related to how public health leaders can act as innovators in influencing change within their profession related to eating disorder prevention.

Summary of Literature Review

The findings from the literature review can be used to demonstrate the threat eating disorders pose based on the increasing prevalence and the serious health consequences related to this health condition (Ackard et al., 2007; Hudson et al, 2007; Keski-Rahkonen et al., 2009; Smink et al., 2012; Zhao & Encinosa, 2009). Individual, familial, and societal risk factors were presented. Issues related to stigma and objectification were also discussed. Early intervention and prevention programs were presented. Controversial issues such as obesity prevention efforts and BMI screenings in schools were reviewed.

Recommendations were made for integrating eating disorder and obesity prevention programs (Ferrari, 2011; Sanchez-Carracedo et al., 2012; Stice et al., 2012). Finally, the impact of leaders' attitudes about adoption of evidence-based practices was reviewed (Aarons, 2005).

The literature provided evidence-based justification for including eating disorder prevention strategies into programs that public health practitioners design to promote and protect health of populations. The importance of exploring leaders' attitudes about

adoption of evidence-based practices was clearly described by Aarons (2005). In the next chapter, I will discuss the research methodology I used to explore public health leaders' perceptions of and attitudes concerning eating disorders.

Chapter 3: Research Method

Introduction

This dissertation study was designed to explore the perceptions and attitudes of public health leaders related to eating disorders and the role of public health in the prevention of this health threat. In this chapter, I will describe the research design, the role of the researcher in the study, the research methodology, and issues of trustworthiness of the study.

Research Design and Rationale

I conducted this study to gain an understanding of public health leaders' perceptions of and attitudes concerning eating disorder prevention. Little was known about the public health perspective related to eating disorder prevention. A qualitative study can serve as a beginning point for more in-depth studies in the future (Salazar et al., 2006). This is why I chose to conduct a qualitative study. Follow-up studies might be conducted to explore how to address any identified perceptional or attitudinal barriers to the incorporation of eating disorder prevention into public health strategic planning.

I used a phenomenological design to explore the research question: "What are the public health leaders' perceptions of and attitudes concerning eating disorders as a public health issue?" The goal of a phenomenological study is to illuminate the point of view of those who share similar experiences (Salazar et al., 2006). The goal of this study was to reveal current perceptions of and attitudes concerning eating disorders. Creswell (2013) advised that researchers use the phenomenological design when seeking to gain an understanding of essential themes and collective perspectives associated with a common

lived experience. For this study, the common phenomenon under investigation was working as a public heath leader at a public health agency. Educators and practitioners might use this insight to identify ways that eating disorder prevention could be integrated into the public health strategies already being implemented that address other weight related health concerns.

Role of the Researcher

Maxwell (2013) explained that researchers who conduct qualitative studies are the instrument as they filter data through their own perspectives which are based on previous life experiences. For this qualitative study, I was the instrument for the data collection. Creswell (2013) advised that researchers acknowledge how their personal perspectives might impact the study. I have experiences from the perspective of a public health practitioner and a consumer. I am a public health nurse and a community health/public health nurse educator. I also have a loved one who has struggled with an eating disorder. Learning about this disease and its contributing factors brought my attention to this issue. Maxwell instructed researchers to use "critical subjectivity" (p. 45) when processing data to avoid bias. I kept this in mind as I collected and analyzed the data to avoid skewing the results with my personal biases on this topic. I was aware that my knowledge about this topic could aid me during the data collection and data analysis phases, but I was mindful that I could not allow my personal beliefs to impact the research process.

In my role as interviewer, I made an effort to create an atmosphere of trust in the interview so that participants would feel at ease. Creswell (2013) advised that a differential in power between the interviewer and the participants can threaten the data

collection process as the interviewer could be perceived by the interviewee to have more power and it could impact the participant's willingness to openly respond to the interview questions. I made special effort to equalize this power distribution by allowing the participants to be active participants in the collection of the data.

The participants of my study were all professionals who worked in my own field of public health. Some of the subjects I approached knew me through past employment or current collaborations. I asked those participants if they had any concerns or hesitations about my role as investigator for this study. In addition, the recruitment flyer included a statement indicating that this research was being conducted outside of my role as public health nurse or nurse educator. I did not include any current California State University, Chico school of nursing students, or faculty in the study, which ensured that the participant pool did not include anyone who I supervise or who works within my current place of employment.

Methodology

Participant Selection Logic

Phenomenological research requires purposeful sampling in order to include only those participants who have experienced the common phenomena that is being studied (Creswell, 2013). The common experience for this study was serving in a leadership role at a public health department. Public health administrators within local health departments served as the participant pool for this study. These leaders were responsible for making innovative and best-practice health administration decisions about programs, funding, and standards based on current and reliable evidence (APHA, 2015).

In qualitative research, descriptive data are collected from a narrow geographical range to allow the researcher to begin to identify patterns that could later be tested for its application to a wider population (Salazar et al., 2006). I narrowed this study to a smaller geographic region by selecting a single state. California has 65 local health departments (National Association of County and City Health Officials, 2015). For these reasons, the choice of participants was limited to current public health leaders who worked at a local public health department within the state of California. I selected this method of sampling because Patton (2002) advised that purposeful sampling allows the researcher to collect "information-rich data (p. 46).

I obtained approval through Walden's IRB. The approval number was 09-10-15-0329003. Once I obtained IRB approval, I recruited potential participants by using a flyer that I sent to the health officers at each local health department in California. I asked the health officers to share the recruitment flyer with potential participants at their agencies.

The California Health Officers Directory was available to the public through the California Department of Public Health (CDPH) website. The California Conference of Local Health Officers (CCLHO) developed a directory that included the names and contact information of health officers at each of the local health departments within California (California Department of Public Health, 2015). The members of CCLHO are those health officers who are legally appointed by California statute to address matters affecting health within the county and city health departments in the state (CCHLO, 2015). I was able to narrow my pool to only those public health leaders in local health

departments within the state of California by accessing potential participants through the CCLHO list on the CDPH website.

The number of participants in a phenomenological study can range from a single-digit number to triple-digit numbers (Creswell, 2013), although Patton (2002) noted that the sample size for qualitative research is usually small. While there are no specific criteria for selecting a sample size, I knew I would have an adequate number of participants once the data had reached saturation. Patton (2002) explained that saturation is achieved when the data becomes redundant and no new information is revealed. Researchers should seek this level of saturation to ensure that enough data had been collected to adequately capture the participants' experiences (Rudestam & Newton, 2007). Creswell (2013) and Salazar, Crosby, and DiClemente, (2006) suggested that researchers include between six to 10 participants before the researcher could expect to note any redundancy in the responses. I was able to reach saturation after interviewing six participants.

Instrumentation

Patton (2002) advised that researchers use a standardized interview guide to help keep the interview focused on the research question and subquestions. The questions in the guide should be open-ended and include a wrap up question that invites the participants to share any information that had not been obtained through the previous questioning (Patton, 2002). I created a standardized interview guide (Appendix A) that included questions that were based on the research question and subquestions. I also included a final question which provided a final opportunity for the participants to add

any additional thoughts they wanted to be included in the data. Patton also cautioned that a standardized interview guide could constrain the participants' responses so I planned to allow participants to elaborate on their responses.

I designed the first two questions to ensure that I would apply the inclusion and exclusion participation criteria. I did not want to interview a participant if they were not currently in a leadership role or had not been in a leadership role for at least one year, they would not be interviewed. If that situation arose, I planned to ask them to suggest an alternate leader within the agency who might qualify for the study. I designed the next three questions to assess the participant's level of training or education and past experiences with eating disorder prevention programs. I designed questions six through eight to specifically address the three subquestions of the study. As noted earlier, I included the final question to allow the participants an opportunity to provide additional information that they felt should be included in the study. I included open-ended questions with the intention of eliciting rich responses from the participants. Rudestam and Newton (2007) encouraged researchers to allow the participants to expand on their responses to ensure that the data is rich and captures their true intentions, therefore I prompted the participants to elaborate upon their responses during the interviews.

Procedures for Recruitment, Participation, and Data Collection

I conducted face-to-face interviews and telephone interviews for data collection. Creswell (2013) noted that telephone interviews are an appropriate means for interviewing participants who are not readily accessible to the interviewer due to distance

and cost for travel. I remained aware that using only a telephone did not allow me to view the participants' visual cues which could reduce the richness of the data I collected.

I approached each local public health department within the state of California with an invitation to participate. The CDPH website provided a public directory of the health officers at all local health departments within California (CDPH, 2015). I sent recruitment flyers to the health officers whose names and contact information were listed on the California Health Officers Directory. The flyer included an invitation for public health leaders to participate as well as a description of who would qualify as a public health leader for the purposes of this study. The health officers were encouraged to share the recruitment flyer at their agencies.

I included instructions on the flyer for public health leaders who were interest in participating in the study to contact me either by email or telephone call. I sent a copy of the informed consent to those who expressed an interest. I instructed them to review the terms of the consent and to return an email back to me with the words "*I consent*" to indicate their statement of consent. Potential participants had the opportunity to ask me questions about the study prior to our interview if they wished. I asked them to commit to the study only after they had the opportunity to review the consent form and had consented to be a participant. Once the participants had reviewed the informed consent and indicated their consent to participate by sending an email to me with the words "*I consent,*" I set up an appointment for the interview at their convenience. I sent them a reminder about our interview the day prior to our appointment.

Creswell (2013) advised that researchers keep in mind the importance of setting a comfortable environment and trusting tone for the interviews. I conducted face-to-face interviews at the participant's worksite whenever possible. I also traveled to a conference of health officers to be available for a face-to-face interview with one of my participants. For those participants who declined a face-to-face interview, I asked them if they would be receptive to using a virtual format which would allow us to see each other during the interview. None of the participants selected the virtual option. A phone interview was the last choice and three of the participants indicated that was their preferred option. I was aware that telephone interviews could make it difficult to assess the participant's attitude about the interview process over the phone. To offset this potential barrier, I knew to listen carefully for non-verbal cues that might indicate any unease during the interview.

I began the interview at the appointed time by first introducing myself and thanking them for their willingness to participate in my study. I asked each participant if they were in a space where they felt comfortable participating in the interview. I reminded them of their rights according to the informed consent to which they had previously reviewed. I also explained to them that the interview was expected to take approximately 20 to 30 minutes and that their participation was voluntary. I reminded the participants that they could decline further participation at any time. In addition, I advised them that their information would be kept confidential and that the results would only be reported in aggregate or anecdotal format. I also asked permission to record the interview. I found that recording allowed me to focus on the interview process rather than trying to write each participant's responses while conducting the interviews. I was able to

successfully record four of the six interviews but two were not recorded. I did not record one of the interviews because I had technical difficulties. I did not record the other because I had accidentally turned off the recorder at the beginning of the interview.

I conducted member checking during the interview process to confirm that the data collected reflected their intended perceptions. Creswell (2013) noted that the member checking step helps to ensure the validity of the data analysis. At the end of the interview, I thanked the participants and informed them that I would be sending them an executive summary of my findings. After the end of each interview, I transcribe the data verbatim for analysis.

Data Analysis Plan

Data analysis is a complex process that required organization, ongoing processing of the data as it was being collected, and interpretation of the meaning of the data as themes began to emerge (Creswell, 2013). Miles, Huberman, and Saldana (2014) cautioned that researchers should expected to spend up to seven times the number of hours processing and analyzing the data for each hour the researchers spends collecting the data from the field. I found this to be a correct estimation of time commitment for data analysis.

I found that organization was critical throughout the data analysis phase. Creswell (2013) and Miles et al. (2014) advised that researchers have an organizational plan so that data would be safely and securely stored yet easy to access. I had a system in place that allowed me to organize the data into groups as I collected it while also keeping it secure. I also backed up my work so that I would not lose any data due to computer

malfunctioning. I instituted my organizational strategy on day one, when the first piece of data was collected, and I continued to process data throughout data collection and analysis process. Miles et al. (2014) noted that this process helps researchers identify if any information is missing during data collection.

I used NVivo11 computer software. I had used this data management software package in the past for practice exercises and noted the many features this program had to offer. NVivo11 software allows researchers to create files for each interview and created nodes for each interview question (QRS International, 2011). I found this software package to be intuitive and easy to use. I converted the recordings into text and entered them into the computer. Miles et al. (2014) advised that researchers code the data as they are entering it into the database. By coding the data as I entered it, I was able to begin looking for meaning, relationships, and groupings. Miles et al. explained that first cycle coding should be focused on how the data could be sorted and the second cycle of coding helps to identify the emerging themes from the groupings. First cycle coding can include common terms and phrases used by the participants, topics, perceptions, attitudes, and even emotions (Miles et al., 2014). I used sub-coding for more detailed categorizing. I then looked for emerging themes and subthemes. Miles et al. explained that secondary coding is done to group the sorted data into pattern codes including categories, explanations, and relationships. I thought of these themes as patterns and considered how they related to the variables and to the overall process. I also noted patterns of similarities and differences between the variables, and I identified patterns of timing that occurred during the interview process. I will discuss these in more detail in Chapter Four.

Issues of Trustworthiness

Trustworthiness is critical in research as it verifies the integrity of the findings, yet it may be challenging to uphold in qualitative research due to its subjective nature and involvement of the researcher in the data collection process (Creswell, 2013; Patton, 2002). I implemented numerous actions to foster trustworthiness in my study.

Patton (2002) noted that a researcher's credibility is one way of demonstrating trustworthiness. I was aware of my own opinions about this topic and I remained mindful about how my involvement in the data collection and analysis stages might impact the results so that I would minimize producing biased results.

In qualitative research, trustworthiness and validity are interrelated (Creswell, 2013). Validity of phenomenological research is dependent upon the researcher attaining "information-rich" data (Patton, 2002, p. 46). Data richness provides power to a study (Patton, 2002). I sought to ensure that my study included information-rich data by collecting data from participants who I selected using a purposeful sampling method. Miles et al. (2014) noted that one threat of qualitative research is having a narrow sample. Patton (2002) cautioned against gathering data that is superficial. With this in mind, I asked open-ended questions which I designed to glean in-depth information from the participants. I also encouraged the participants to elaborate on their responses. I sought to access information-rich data that was not superficial and that captured their true intentions. Miles et al. (2014) advised that researchers keep the research question in mind throughout the data collection process. I accomplished this by preparing questions for the interview guide that I had directly derived from the interview question and subquestions.

Researchers can include participant feedback to ensure that the data they collect reflects the participants' true essence (Creswell, 2013). I incorporated member checking into my data collection process. I confirmed with the participants that I did indeed capture their thoughts. I did not want to introduce bias into the process by influencing their responses.

Researchers can also increase the credibility of the data analysis by implementing an external checking process to verify if there is agreement between the two coders (Houser, 2015; Miles et al., 2014). Miles et al. (2014) noted that this intercoder agreement can be used to confirm that the definitions and meanings are clearly identified. If any discrepancies between the two coders are identified, they would need to be re-evaluated (Miles et al., 2014). My dissertation chair served as a second reviewer to confirm intercoder agreement.

I also wanted to evaluate the plausibility of my analysis. Implausible conclusions can lead to substantive insight which would need further exploration (Miles et al., 2014). Miles et al. (2014) advised that researchers explore the findings to determine if they make sense and to be open to the possibility that they may uncover unexpected results (Miles et al., 2014). I did uncover surprising results but none that didn't make sense. Implausible conclusions can lead to substantive insight which would need further exploration, but again, I did not identify any results that seemed implausible (Miles et al., 2014).

Summary

This qualitative study had a phenomenological design. I used interview methodology to explore the perceptions and attitudes of public health leaders about eating

disorders. Administrators at the local health departments within the state of California were invited to participate in this study. I interviewed each participant either through face-to-face contact or by telephone. The participants were asked open-ended questions designed to elicit data that would answer the research question: “What are the public health leaders’ perceptions of and attitudes concerning eating disorders as a public health issue?” The responses were transcribed verbatim, coded and analyzed thematically using NVivo11 software package. Trustworthiness was strengthened in a number of ways. The data was collected until saturation of the information was confirmed through redundant responses. Member checking was conducted at the time of the interviews to confirm that the data represented their intent. The data analysis process included a second reviewer to establish intercoder agreement, thus strengthening validity of the results.

Chapter 4: Results

Introduction

Purpose of Study

Researchers in the fields of psychiatry or nutrition conduct most eating disorder prevention research (Austin, 2012). While it is clear from the literature that public health practitioners play an important role in health protection and disease prevention at the macro level, and that people who are genetically predisposed to eating disorders are especially susceptible to triggering environmental factors (Mazzeo & Bulik, 2009), the current attitudes of and perspectives concerning eating disorder prevention among the decision makers within public health agencies is not currently adequately understood. There is a gap in the literature related to this valuable insight. The purpose of this study was to explore the views of public health leaders related to the prevention of eating disorders.

Research Questions

The primary research question for this study was "What are the public health leaders' perceptions of and attitudes concerning eating disorders as a public health issue?" I designed the subquestions to obtain the data needed to answer the primary question (Rudestam & Newton, 2007). The following subquestions were used to guide the interviews:

- "Do public health leaders identify eating disorders as a public health issue", which was designed to explore whether or not public health leaders identify eating disorders as a public health issue.

- "Do public health leaders believe that primary prevention can impact the prevalence of eating disorders", which was developed to explore public health leaders' perceptions about the impact primary prevention has on the prevalence of eating disorders.
- "Do public health leaders recognize a role for themselves in the implementation of public health strategies to prevent eating disorders", which was designed to explore public health leaders' thoughts about the role of public health in eating disorder prevention.

This chapter includes a description of the demographics and characteristics of the participants and an account of the data collection and data analysis processes. The chapter will also include a report on the trustworthiness of the research and a discussion of the findings.

Participant Demographics

The APHA (2014) defined public health leaders as public health directors, health officers, and managers. This qualitative study included one public health director, four public health officers, and one manager. The participants worked in local public health departments throughout California. All had at least one year of experience as a public health leader. Four participants were female and two were male. The participants ranged in age between 37 to 65 years old, and four were between the ages of 47 and 55 (all inclusive).

The public health director held a master's degree in public health (MPH) and a master's degree in public administration, the health officers were all physicians with an

MD degree who also all held MPH degrees, and the manager was a registered nurse with a bachelor of science degree and served as the director of the public health nurses.

Five of the participants reported that they had some formal education about eating disorders in general, either in medical school or nursing school. Two had engaged in additional learning about eating disorders for personal reasons. All reported that they have had either little or no training or education on eating disorder prevention.

Characteristics of Participants

Table 1 contains a summary of the characteristics of the study participants.

Table 1

Characteristics of Participants

Characteristic	Number of individuals
Male	2
Female	4
Profession Type	
Registered Nurse	1
Physician	4
Health Educator	1
Position Held	
Health Officer	4
Director of Public Health	1
Director of Public Health Nursing	1

Data Collection

Number of Participants

The study included six volunteers who participated in the interview process. All volunteers met the inclusion criteria of being a public health leader in a local public health department in the state of California, speaking English, and having served in the public health leader role for at least one year. None of the volunteers were excluded. Two additional public health leaders initially volunteered but were not included because they did not respond to invitations to set an interview date.

Location, Frequency, and Duration of Data Collection

I obtained the data for this study by conducting interviews with public health leaders who worked at local public health agencies in the state of California. I sought permission for human subject research through the Walden University IRB prior to the initiation of any outreach efforts. I obtained IRB approval on September 10, 2015 (approval # 09-10-15-0329003). I then sent recruitment fliers (Appendix B) by email to the health officers at each local health department in the state of California. I found a list of health officers was publically available on-line through the CDPH. I included a request in the email message that the attached flyer be shared with public health leaders at their respective local health departments. The recruitment flyer included a brief explanation about the study, a description of who could qualify as potential participants, and my contact information.

A total of eight people responded to the recruitment outreach. All those who expressed interest in participating in the study were provided an electronic copy of the

informed consent. Eight volunteers responded to the informed consent with the words "I consent" as per the instructions provided to them in the informed consent document. Two potential subjects consented to the terms of the study but did not respond to my efforts to schedule a time for the interview. Six participants agreed to an interview date and time. The interviews occurred over a time period of two months, from September 2015 to November 2015, due to sporadic interest expressed by potential participants.

I offered the participants various options for the interview setting, either in person, using virtual technology such as Skype or Google Hangouts, or by phone. Three of the interviews were conducted face-to-face, one in a secluded room at a conference, and two at the participants' work offices. The other three participants stated they preferred to be interviewed by phone. None of the participants chose to participate in a virtual face-to-face interview, although this option was offered. In each setting, privacy was ensured so the participants could feel comfortable answering the questions. The participants were reminded that their participation was entirely voluntary and that they could opt to not answer any of the questions or they could stop the interview at any time.

They were also informed that their individual responses would remain confidential and would only be reported in aggregate format or as quotes. No names would be associated with the study. None of the participants expressed concern about my role as a nurse educator or public health nurse. I advised them that I was conducting the study as a Walden University doctoral student.

The six interviews occurred between September 23rd and November 13th, 2015. Each interview lasted between 15 and 32 minutes. The participants were advised that for

the purposes of the study, the term “eating disorder” referred to the three conditions recognized by the APA (2014), which were anorexia nervosa, bulimia nervosa, and binge eating. I used an interview guide (Appendix A) to ensure that all participants were asked the same questions. Follow up questions were asked when clarification was needed. Member-checking was conducted during each interview. I paraphrased the responses back to the participants to confirm that the information gathered was reflective of each participant’s thoughts. The participants were advised that an executive summary would be provided to them.

Data Recording

All participants agreed to be audio-recorded during the interview. I recorded four of the interviews using a digital audio recorder but two were not recorded due to technical difficulties. The recorder had been set up for one interview, however I had inadvertently turned the recorder off right as the interview began. Another interview was not recorded because the equipment was not functioning properly. Data were also recorded through hand-written notes. These notes proved to be particularly helpful for data collection of those interviews which had not been audio recorded.

Each interview was transcribed in a Word document, and uploaded into NVivo 11 software package. The recorded interviews were transcribed verbatim. The recordings were first uploaded into a Dragon NaturallySpeaking 12.5 translation software package. This process was of limited use due to inaccurate transcription results. I needed to rewrite those transcriptions word-for-word while listening to the interviews from the audio recording. This method provided an accurate transcription of the interviews. The two

interviews that were not recorded were transcribed from the handwritten notes that I had taken during the interviews.

I assigned an alpha-numeric code to the data to secure the participants' privacy. No names were associated with the interviews. All electronic files remain stored on a password protected computer in password protected documents. All paper files remain stored in a locked file box. The only people who have access to the data are myself and the dissertation chair. These files will be kept in a secure location for five years, in accordance with the IRB application. They will be destroyed after the five year period has passed.

Variations from Original Data Collection Plan

The recruitment process proved to be more difficult than had been originally anticipated. I made efforts to obtain a letter of cooperation with a public health agency to allow me to access potential participants. The APHA declined the request noting that they could not release their membership contact information. They suggested that I contact the CCLHO. There was no response from CCHLO to the requests I sent to them by email. I then reached out to the Directors of Public Health Nursing (DPHN) for the state of California. The president of the DPHN expressed an interest in supporting the recruitment efforts but later determined that she was not able to speak on behalf of each individual public health agency and therefore declined to sign the letter of cooperation. I eventually carried out the participant recruitment by contacting each health officer individually.

The second challenge was recruiting an adequate number of participants. I received feedback from the my recruitment efforts that many public health leaders did not feel this was a public health issue or that they had little knowledge about the topic. I was able to respond to these concerns by explaining that the purpose of the study was to explore what their thoughts were on the topic, no matter their level of knowledge concerning eating disorders. Another barrier for my volunteers was lack of time to participate in the study due to their busy schedules. I was able to eventually reach a sufficient number of participants as I saw that the themes remained contained within the trends I had identified and no new information emerged from the final interviews. This allowed me to confirm that I had achieved data saturation.

Data Analysis

Coding Process

I uploaded the transcripts into the NVivo 11 software package. This allowed me to code, categorize, and highlight themes. First, the interviews were sorted into each interview question. Questions one and two were designed to confirm that the participants met the inclusion requirements. All research participants met the requirements. Questions three and four were designed to determine the level of training and education each participant had related to eating disorders and eating disorder prevention. Question five was designed to explore if any of the participants had been involved in any eating disorder prevention programs. Questions six through eight were specifically directed at the three subquestions of the study. Question nine offered an opportunity for the

participants to include any additional information that had not been captured through the other questions.

Specific Codes, Categories and Themes

I coded the data and sorted them into nodes. These nodes were then categorized into themes under the categories of public health leaders' perceptions of and attitudes concerning eating disorders (Table 2).

Table 2

Node Themes and Categories

Perceptions of eating disorders	Attitudes concerning eating disorders
Cultural Aspects	Barriers to public health eating disorder prevention program
Food as medicine	Funding
Label food good or bad	Limited Resources
Media	Not a public health issue
Power of eating behaviors	Priorities
Problem in US	Eating disorder prevention and public health
Social messages	Equity
Knowledge about eating disorders	Gender
Balance	Target populations
Complex	PH Structure
Don't know	Evidence-based strategies
Health threat of eating disorders	Surveillance
Personal experiences	Strategies
Psychological issue	Access to care
Relationship with Food	Avoid triggers
Obesity	Body image
Spectrum	Educate about healthy eating
	Integrate with existing public health program
	Lifestyle
	Partnerships
	Policy
	Raise awareness about signs of eating disorders
	Stigma

I categorized perceptions nodes to reflect the way the public health leaders think of eating disorders and I sorted attitude nodes to help identify how their thoughts concerning eating disorders might impact their behavior.

Perceptions.

The perception-based nodes included:

1. Cultural Aspects. This category including themes such as food as medicine, food as good and bad, media, power associated with eating behaviors, problems in the United States, and impact of social messages. Three participants made reference to social or cultural issues. These included observations that Americans have a dysfunctional relationship with food and a focus on body appearance and thinness, noting that food serves as a convener, bringing people together but medicalizing food, labeling food as good or bad, has created a dysfunctional relationship with food, and looking at social norms.

2. Knowledge about Eating Disorders. This category including themes of balance, complex, don't know, health threats, personal experiences, psychological issue, and relationships with food. As noted earlier, most participants had some formal training about eating disorders, two engaged in additional learning for personal reasons either their own personal experiences or the experiences of friends and family. Little to none had training or education about prevention of eating disorders. The most common themes about understanding included two participants who identified eating disorders as

complex, related to dysfunctional relationship with food, and balance between food and balanced lifestyle. Most identified eating disorders as a mental health issue where the interventions are focused on individuals. Two stated they didn't know much on the topic.

3. Obesity, including the spectrum of disordered eating. Each participant discussed obesity issues. Public health leaders identified obesity as a public health issue while most viewed eating disorders to be only a mental health issue. Many participants identified that public health professionals are focused on obesity but not on eating disorders due to the high prevalence of obesity. The rates of eating disorders was not known to the participants. Some participants noted that eating disorders and obesity are on the same spectrum. Many identified that eating disorder prevention programs could be tied to current obesity prevention programs and include messages about healthy eating and promoting a healthy relationship with food.

Attitude.

The attitude-based nodes were comprised of the following sections:

1. Barriers to Public Health Eating Disorder Prevention Programs. This category included themes of funding, limited resources, not a public health issue, and priorities. Common barriers I identified through the interviews included eating disorders not being seen as a public health issue, and the need to prioritize due to restricted funding and limited resources. Five of the respondents indicated that eating disorders are not a public health issue. Participants described funds as limited, siloed, and directed towards programs that effect large numbers in the population. The workforce has been cut, there is high turn-over and staff training needs. There are too many other high priority issues

competing for these limited funds and resources. One participant noted that by integrating strategies into existing programs, financial barriers are reduced. Another also encouraged leveraging existing money and staff. Others suggested partnerships with stakeholders and other agencies.

2. Eating Disorder Prevention and Public Health. All participants contributed to the discussion about public health and eating disorder prevention. During the process of the interview, many came to decide that public health approaches could have an impact and should play a role in eating disorder prevention. They noted that eating disorders have not been part of the discussion but determined that they should be included in the public health conversation.

3. Equity which included gender issues and target populations. Three of the participants spoke about issues related to equity including target populations served and gender. This theme became evident during the final interview when the participant noted that the privileged and affluent are generally not in the public health lens. Other participants had also noted that eating disorders are generally found among young, medium to upper socio-economic level Caucasian females. One participant noted that males are also struggling, another was not sure about including males in outreach efforts. The equity issue was most prominent when participants identified that eating disorders are not part of the public health surveillance nor part of the public health conversation.

4. Public Health Structure, such as evidence-based practices and surveillance. Leaders noted that public health functions at the system-level. Statutory requirements must be fulfilled. Evidence from the literature is used to determine best practices and to

minimize harm. All those interviewed discussed the importance of epidemiology for assessment to identify health problems, to set priority areas, and to identify possible protective factors. Many noted that eating disorders are not on the public health radar, they are outside of usual surveillance. Public health monitors other measures. Those at the highest-risk are not monitored. Participants stated that they would be supportive of public health prevention programs if the prevalence of eating disorders was found to be at a significant level. Most did not think the rates of eating disorders are significant enough to warrant a public health program.

5. Leaders identified strategies to address eating disorders including access to care, avoiding triggers, body image, education about healthy eating, integrating with existing public health programs, addressing lifestyle, influencing policy, raising awareness about signs and symptoms, and upstream approaches.

In the next section, I will explore the themes listed in Table 2 and discuss how they relate to the research question and subquestions.

Results

Subquestion One

I designed Subquestion One to explore whether or not public health leaders identify eating disorders as a public health issue. I found that three themes emerged from the data regarding this question. The first was that eating disorders have not been considered to be a public health issue, instead eating disorders are mental health issues that require treatment rather than prevention. The second was that public health leaders felt that the problem is not perceived as significant to warrant attention in light of other

competing health issues. The third theme was that the incidences of eating disorder are generally not tracked by public health. The following paragraphs will provide evidence from the data to support how these themes were identified.

Each of the participants observed that eating disorders are considered to not a public health issue. Statements to demonstrate this include “It’s not considered a population issue” (P5), “It’s not an issue in public health” (P5), “I think of eating disorders as something somebody works with their health care provider” (P4), “Part of the issue is that it is not in the current culture of public health” (P2), “…haven’t been brought into the mainstream public health vernacular” (P1), “Not in the conversation in public health circles” (P3), “In twelve years of being in public health or so, you know, we have not really discussed what is our role within eating disorders” (P4).

Many of the participants noted that public health practitioners view eating disorders to be strictly a mental health issue. Comments included “That’s my opinion, that it’s seen as a mental health issue” (P5). One stated “Eating disorders are not perceived as a mental health issue” (P6), and later asked “What is a mental health issue and what is a public health issue?” (P6). The mental health conditions that were identified as public health issues are the severe conditions that impact the ability to function within society such as schizophrenia, bipolar disorder, substance use, and suicide. Moderate mental health concerns such as eating disorders or depression were not seen as public health priorities. Interventions for eating disorders were seen as being treatment at the individual level. “…direct one on one counseling” (P5), “… more at the intervention level” (P5).

In regards to the tracking of eating disorders, all of the participants noted that public health does not monitor this health threat. Examples of this observation are "I don't see anorexia and bulimia on the radar of public health officials" (P1), "Often times it doesn't come up on our radar" (P1), and "Eating disorders are hidden to public health" (S6), "…blind spot in public health about the burden of eating disorders" (P6). In addition, Public health leaders noted that there are many competing issues for public health attention and that given the limited resources, eating disorders are not identified as a high priority. One participant commented "Other issues feel more immediate" (P3). High priority public health issues were identified as health equity, access to care, obesity, diabetes, chronic diseases, communicable diseases, and disaster.

One participant, however, noted that eating disorders need to be brought into the public health conversation. This participant stated that eating disorders are relatively common, can range from moderate to life-threatening, and have an impact on both individuals and families. This participant explained that their opinions were based on observations, education, and conversations they had over the years as a practitioner and a public health leader.

As the interviews progressed, participants reflected on their observations that eating disorders are not currently a part of the public health approach. Their comments included "I mean, actually until you asked me for this interview I hadn't really thought about it" (P5), and "You know it's interesting, until you had raised it, I don't really think of it as a core public health issue" (P4), "Why haven't we talked about this?" (P3). They started to identify ways that public health practitioners could begin to be engaged in

primary prevention interventions. One commented, “eating disorders are like many public health problems that we didn’t initially call a public health problem” (P1), another noted “…we have a health and wellness component within our department that focuses on, you know, early nutrition… I could see it as an off-shoot of some of the programs we already have” (P4). By the end of most interviews, the participants expressed interest in exploring eating disorders as a public health issue. One remarked “You know, I guess I see it from the standpoint of really coming back to that true primary prevention and starting when people, when people are young…if their focus is on that primary prevention at an early age, that just seems to be a natural niche” (P5).

Subquestion Two

I designed Subquestion Two to explore public health leaders’ beliefs about the impact primary prevention has on the prevalence of eating disorders. Many expressed that they did not know the rates of eating disorders but would be interested to find out the prevalence in their areas. Four of the participants stated that they believed primary prevention would have an impact on the prevalence of eating disorders. One participant identified that abnormal relationship with food is “… a contributing factor to eating disorders” (P2). Another (P4) stated they would look to the research to learn how evidence-based interventions could impact the development of eating disorders. One public health leader advised “you really would need to have some solid measures in place” (P5). Another stated “principles that apply to all prevention apply to eating disorders” (P6).

Subquestion Three

I designed Subquestion Three to explore if public health leaders' recognize a role for themselves in the implementation of public health strategies to prevent eating disorders. Responses to this question varied considerably. One respondent who originally stated that eating disorders are not a public health issue replied "I think they could have a role. Yah, definitely …can be that primary prevention and really focusing on youth and education… definitely yes. I think that public health could have a role in that" (P5). One respondent noted that while they supported the idea "I think it's a great idea" (P1), indicating that they thought they would likely need to find support through a private funding source due to the current infrastructure not being set up to support such a program.

One participant had multiple ideas including looking to other countries to see what is working there, such as policies about BMI standards among models. "…in Europe this was put into place which I thought was phenomenal. There was a lot of very unhappy people, but they said, you know, this is a public concern" (P2). Public health practitioners could also develop guidelines for community education programs about nutrition and maintaining a balanced lifestyle "…so there are societal supports that can be done as well" (P2). This participant also noted that activities should be fun and not promote unhealthy behavior. These activities should not trigger those who have a tendency or have already developed an eating disorder. "Promoting activity that is fun, that doesn't focus on a competition um where it would stimulate people to take health

risk in order to beat the other person losing weight. So we don't want to promote unhealthy activities trying to win the competition" (P2).

One participant stated that the public health role in preventing eating disorders "…goes along with everything else we try to do with clients and the community. Look at causes, alleviate causes" (P3). One stated that it "invites us to think about the system as a whole, policies, the environment, more holistically" (P6), further stating that it was "…difficult to know if I don't know the prevalence locally" (P6). Another replied "I don't know what our role is. I think that is one of the things that has yet to be defined" (P4).

Another theme related to eating disorder prevention revolved around the relationship between eating and health, this included the focus on obesity and issues of dysfunctional relationships people have with food. Obesity continues to be a major topic of concern for public health. The term "obesity" was mentioned 20 times by the participants during these interviews about eating disorders. Comments included "…quite frankly, even in prevention-based training, a lot of what you hear about is obesity prevention" (P5), and "I know our obesity levels in our community, our smoking rates, our cancer rates, etcetera. I don't, I cannot tell you what our eating disorder rates are" (P4).

While eating disorders may be off the radar, obesity remains a public health priority, as evidenced by this participant's description of one of their prevention programs "…we have a health and wellness component within our department that

focuses on you know early nutrition. We work with the schools, right, on what's appropriate diets for kids, and not having a lot of fast foods, and things" (P4).

Not knowing the rates of various health threats impacts which programs will be implemented, "…all funded is driven by what is the big issue in a population. You know, that's why there's a lot of obesity prevention funding" (P5). A participant noted that public health departments "…tend to be now addressing obesity and diabetes…addressing epidemic of over eating in this era. Eating disorders are hidden to public health, (as the) distribution is in the communities in which we are not normally engaged, such as the privileged and affluent" (P6).

While all of the public health officials indicated that they had prevention programs for obesity, some noted that eating disorders and obesity are interrelated. One participant stated that they are "…tied up together, eating disorders and obesity" (P3). The following passage is an example of a participant's views about this point:

> …the larger issue is America's dysfunctional relationship with food umm, and America's obsession with body appearance and being skinny. And it's interesting because so often, among the health officers, if you are asking me, if you would replace eating disorder with obesity, which of course can just be the result of an eating disorder, umm then health officers will say 'Yes, of course we need to address obesity', but when you say anorexia and bulimia, the answer is 'No, that's not even on our radar.' But my opinion is that it's all part of the same spectrum. Whether you're at the anorexia end of the spectrum or whether you're at the overeating, obesity end of the spectrum, or what, you know, even just educating people about healthy eating and food and healthy lifestyles, I think it's all part of the same problem (P1).

One participant also commented about how healthy relationships with food are part of the equation. They expressed concern "…about making the focus on food. And, looking at microscopically everything that's eaten" (P2). They noted that "An unbalanced

diet, no matter how healthy in individual foods, is not healthy" (P2). They suggested that someone who is concerned about their child's weight "…maintain a balanced lifestyle. Be active, you know, get her rest, um, be social. But within the context of a balanced, complete life…really look at promoting a healthy relationship with food…so that it maintains its proper place in her life and doesn't become the focus" (P2).

Discrepant Cases

While most participants initially did not feel that eating disorders were a public health concern, one participant identified throughout the interview that public health has a role for primary prevention of eating disorders. This participant explained that they had learned about eating disorders through professional and personal experiences over the years, although they had not struggled with it personally. They had concluded that the culture about food has changed from a convener to being medicalized. This participant had a clear vision about how public health can integrate eating disorder prevention into existing nutrition, education and lifestyle education. This participant also identified that integrating eating disorder prevention into existing programs would help strengthen the program and allow it to be sustainable. "By integrating it you reduce barriers because if you're developing a program or even a grant, the grant may have specific goals but you can shape your program to integrate this. Another reason for integrating it is it won't be a program that comes to an end and that's it" (P2). This participant was also able to view the larger picture, seeing the strategies holistically, identifying cultural, legislative, and global factors that can influence eating disorder.

Some participants indicated interest from the beginning but identified barriers. When asked if they would consider implementing an eating disorder into their public health department's strategic plan, one participant said "Probably not" (P1) primarily due to budget constraints. Towards the end of the interview, this same participant replied "I think it's a great idea" (P1), noting that funding would still be an issue. Another participant indicated that they would support a prevention program but that public health is "not paying attention to eating disorders" (P3) and that there are other priorities. This participant asked "Why haven't we talked about this?" (P3), stating that it "goes along with everything else we are trying to do for the community" (P3).

Other participants began to explore public health concepts in relation to eating disorders for the first time as they processed their responses to the interview questions. One participant initially noted that "…it's not considered a population issue" (P5), but at the end of the interview stated "I think they could have a role. Yah, Definitely. I just don't think it's been brought to anyone's attention" (P5). Another participant who acknowledged that within public health they are "…not having dialogue that eating disorders have been a priority" (P6), by the end of the interview began to speak about how to integrate prevention into existing program. This participant stated "In terms of resources, prevention focus on eating disorders would find a place in existing public health structure in healthy eating and active living. What is called obesity prevention, close enough if really looking at healthy eating including messages on eating disorders" (P6). The following passage serves as another example of the transition:

> You know it's interesting. Until you had raised it. I don't really think of it as a core public health issue, but do, you know, we have a health and wellness

> component within our department that focuses on you know early nutrition. We work with the schools, right, on what's appropriate diets for kids, and not having a lot of fast foods, and things. But it would be somewhat easy to incorporate in those nutrition. You know, what is appropriate eating habits and styles. You know. And so people start to maybe recognize binge eating early on, or, you know bulimia. And they could talk body image as well with anorexia. So, I could see it as an off-shoot of some of, some of the, um, programs that we already have. (P4).

The similarities and discrepancies between these participants could illustrate a path practitioners might follow as they gain understanding of the impact of eating disorders on populations, how eating disorders can be considered a public health issue, and how public health could play a role in eating disorder prevention.

One participant disclosed that they had a personal history of having had an eating disorder. This participant reported that they had a good understanding about eating disorders and that they had strong feelings about the issue from a personal perspective. They expressed that they would be supportive of a public health prevention program. The participant's observations confirmed what others had also indicated, that eating disorders are not part of the conversation in public health. They noted from a professional perspective that public health departments are working under tight budgets at a time when there are many competing health issues, making eating disorders are a low priority for public health.

Evidence of Trustworthiness

Credibility

I was mindful during the interviews of the need to not interject my own opinions about the topic during the interview process. I noticed that the participants wanted to

engage in a conversation with me about the topic and hear my thoughts. I needed to explain that my role as a researcher was to collect their thoughts and not bias the process by engaging in a dialogue about the topic during the data collection phase. I included a statement in my verbal instructions to explain that I would not engage in a conversation during the interview, instead I would prompt them to help elicit their input on the topic. This seemed to clarify my role as the researcher and aid their understanding of the researcher-participant relationship during the interviews.

I incorporated two strategies to increase the validity of my findings. As a researcher conducting a qualitative, phenomenological study, I sought to collect information-rich data to help me answer my research question, as recommended by Patton, 2002. I kept to my plan of having a narrow participant pool by only reaching out to public health leaders who worked at local public health departments in California. During the interviews, I asked open-ended questions to allow the participants to elaborate as they shared their insight on the topic, as was advised by Patton (2002) and Rudestam and Newton (2007). I asked them to elaborate on their responses if I felt clarification was needed. These steps allowed me to gain information-rich data that I have used to answer my research question as it relates to public health leaders in the state of California. I found that participating in the interviews prompted them explore their own thoughts about eating disorders and public health in a way they had not previously considered. This was an unexpected finding. There were no conclusions that seemed to be implausible.

I also wanted to ensure the data I was gathering truly reflected the thoughts of the participants. I used two methods of external validation to strengthen the findings. I utilized member-checking strategies during the interviews by using active listening and reflecting back to the participants what I thought their answers meant, as suggested by Miles et al. (2014). This approach allowed them to either confirm that my understanding about their views was accurate or they would clarify their responses. After I completed the data collection and analysis, I shared my coding and categorizing with my dissertation chair to confirm inter-coding agreement. This process did not reveal any discrepancies between the two coders' analysis of the data. I will send an executive summary of the findings to each participant.

Summary

This chapter contained a presentation of the themes that emerged to answer the research question, "What are the public health leaders' perceptions of and attitudes concerning eating disorders as a public health issue?" I will review each subquestion in this summary.

In general, public health practitioners had not viewed eating disorders as a public health issue, rather it had been seen as a mental health issue that requires individual interventions. Most had some level of education or training about eating disorders but little to no education or training about eating disorder prevention, and none had been involved in implementing an eating disorder prevention program. One point commonly noted by the participants was that eating disorders are not part of the public health

discussion. These conditions are not currently tracked by public health, so the burden is unknown to them.

Upon reflection during the interview process, participants began to consider that this could possibly be a public health issue. They explored how eating disorder prevention could fit with current public health strategies that address wellness and balanced lifestyle, specifically in the areas of nutrition and physical activity. They often started by considering strategies such as early identification and promoting access to care, but then began thinking about primary prevention approaches such as working with the youth and looking at body image.

By the end of the interviews, most participants expressed a belief that primary prevention could impact the prevalence of eating disorders. Ideas included integrating eating disorder prevention into existing programs and partnering with agencies such as mental health and other stakeholders including pediatricians and schools. Others stated they could not know if prevention efforts would make a difference or not. They expressed a desire to know what the rates were in their regions.

Some participants identified roles that public health leaders could play in eating disorder prevention. These included community education, identifying and alleviating causes, developing guidelines and policies, and approaching existing programs holistically. Others were not able to identify a specific role, stating that would still need to be defined.

I identified barriers to integrating eating disorder prevention into public health planning. These barriers included other competing health concerns that are mandated and

have a greater impact on the community, budget cuts and restricted funds, and other limited resources. Public health leaders concluded that they would like to be more informed about the prevalence of this condition in their communities and they would want to identify evidence-based prevention interventions that have been proven to be effective.

In the next chapter, I will present an interpretation of the findings. I will also review limitations of the study and I will offer recommendations for future research. In addition, I will explore implications for social change based on the findings.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This qualitative study revealed important information about public health leaders' perceptions of and attitudes concerning eating disorders that can contribute to social change in prevention practices related to eating disorders. As noted earlier, eating disorders can be fatal. They are also associated with multiple health problems ranging from dental and oral problems, esophageal damage, gastrointestinal complications, to changes in hormones, osteoporosis, and cardiac damage (Office of Women's Health, 2009).

Eating disorder rates range from 0.6 to 4.5% with 2.7 % of adolescents who will live with a life-long eating disorder (Hudson et al., 2007). This equates to over 10 million people across the United States who are experiencing an eating disorder at any one time (National Institutes of Mental Health, 2014). Hospitalization rates for eating disorders have increased by 18% between 1999 and 2006 with hospitalizations of children under the age of 12 increasing by 119% in that same time period (AHQR, 2009). Eating disorders are a significant health threat and warrant public health attention to institute prevention measures to protect vulnerable populations at the macro level.

Eating disorders are not only a mental health issue. There are multiple factors outside of individual genetic factors that are associated with the development of eating disorders. These factors include exposure to thin ideal images in the media, teasing, a culture of perfectionism and shaming, weight stigmatization, fat talk, and marketing of dieting and unhealthy weight-control practices (Austin, 2012; Bair et al., 2012; Krug et

al., 2013; Linde et al., 2009; Urquhart & Mhalynuk, 2011). For those who are already vulnerable, these modifiable environmental factors can result in the development of an otherwise preventable life threatening illness. These correlations are supported by the constructs of objectification theory, including the influence of appearance on personal identity and worth, and ecological theory, which examines how environmental factors such as the media, social norms, and products, impact health outcomes (Fredrickson & Roberts, 1997; Cohen et al., 2006).

Key findings of the study

The purpose of this study was to explore the public health leaders' perceptions of and attitudes concerning eating disorders as a public health issue. The research question was "What are the public health leaders' perceptions of and attitudes concerning eating disorders as a public health issue?" The data provided findings that answered the primary research question and subquestions. The first subquestion was "Do public health leaders identify eating disorders as a public health issue?" The data revealed that eating disorders have not been considered a public health issue, rather they are only considered a mental health issue. In addition, the rates of eating disorders are not prevalent enough to warrant public health attention in comparison to other health issues. As a matter of fact, eating disorder rates are not even monitored by public health. These three themes indicate that eating disorders are not generally seen as a public health issue.

The second subquestion was "Do public health leaders believe that primary prevention can impact the prevalence of eating disorders? The data indicated that most participants were unsure of the baseline rates of eating disorders, making it difficult for

them to determine how rates would be impacted by primary prevention efforts. As they reflected on the idea of primary prevention of eating disorders, most felt that such efforts would probably impact the prevalence. One participant could not say how public health could be involved but wanted to explore findings from evidence-based prevention programs targeted towards eating disorders. None of the participants had awareness of any evidence-based prevention programs such as those cited in the literature review.

The third subquestion was "Do public health leaders recognize a role for themselves in the implementation of public health strategies to prevent eating disorders?" Nearly all of the participants identified some role that public health professionals could play in the prevention of eating disorders. The ideas ranged from education about eating disorders and early identification to incorporating body image education in current obesity prevention efforts, and even implementing policies that address unhealthy BMI measures in models. The participants saw a role in working with youth, particularly among female populations. Others identified the need to collaborate with community partners including mental health programs, primary care providers, school nurses, and community groups who work with youth. These ideas are related to the prevention programs described by Ferrari (2011) and Sanchez-Carracedo et al. (2012), both of whom promoted integrated prevention strategies.

Ferrari (2011) observed that obesity prevention and eating disorder prevention efforts were often conducted independently of each other and lead to conflicting messages. Implementing a systems-thinking approach would allow for shared goal-setting and planning, a greater understanding of how each specialty area collects and uses

data, and creates a stronger voice for the populations they serve (Ferrari, 2011). Sanchez-Carracedo et al. (2012) noted that eating disorders and obesity fall on a spectrum of eating and weight-related problems and that combining the efforts of obesity prevention experts with eating disorder prevention experts can produce greater outcomes. Many of the risk factors and protective factors are shared between both populations and efforts to influence environmental factors can be streamlined.

Interpretation of the Findings

The participants noted that public health professionals do not generally view eating disorders as a public health issue. This finding confirms the observations made by Austin (2012), that public health practitioners are not engaged in eating disorder prevention research. Instead, most researchers in this area of prevention are from the fields of psychology or psychiatry. These are disciplines that focus on individual prevention strategies rather than prevention at the macro level. Public health is the discipline that addresses health threats by targeting environmental factors and impacting changes in social norms (Austin, 2012). This evidence supports previous findings in the literature and confirms the need to engage in efforts to bring public health practitioners on board with primary prevention of eating disorders.

The second finding was that public health practitioners thought primary prevention might be beneficial but were unsure of the impact primary prevention would have on rates of eating disorders. Reasons for this uncertainty included not knowing the prevalence of this health threat in their jurisdiction and the lack of information being disseminated about effective, evidence-based primary prevention strategies to public

health leaders. This reveals a need to communicate with public health decision makers about the burden of the illness and a need to bring practitioners from across a variety of disciplines together so that they may share ideas about primary prevention strategies at the macro level that are proven to be effective. Sanchez-Carracedo et al. (2012) made the recommendation to take an integrated approach to address weight-related disorders, one that includes obesity prevention as well as eating disorder prevention, to tackle both of these problems.

The third finding represents a systematic issue. The participants repeatedly indicated that eating disorders are not monitored and are not part of the public health conversation. This presents a chicken and egg scenario. By not monitoring this condition, the burden will likely not be revealed. By not discussing eating disorder prevention in public health circles, public health leaders are not likely to consider the need to begin monitoring the rates of eating disorders. This problem exposed a need to involve public health leaders in changes to organizational practices. Aarons (2005) suggested that learning organization are more likely to be open to innovative ideas and attitude change impacts changes in behaviors.

These findings are interconnected. Public health professionals do not see eating disorders as a public health issue and they do not consider the impact of eating disorders to be of a high priority. Public health leaders are not aware of the burden of this condition and are not aware of evidence-based primary prevention strategies. The issue of eating disorders is generally not a part of the public health conversation and is not being monitored by public health. The lack of monitoring impacts the ability of public health

leaders to realize the burden of the disease. By not engaging in conversations about eating disorders, public health leaders are not aware of proven primary prevention strategies, nor are they identifying the public health role in such prevention.

Limitations of the Study

There were limitations to this study. Primarily, the participants were from local health departments within only one state. I used purposeful sampling for this qualitative study to obtain information rich data, however due to the limited region represented by the sample, the results may not represent the perceptions and attitudes of public health professionals from other regions of the nation. The participants self-selected to participate in the study, which may have skewed the results. The reasons that caused others to decide to not participate might have revealed additional information that was not collected in this study. In addition, in spite of efforts to remain neutral during data collection and the use of a second rater in the data analysis phase, my own biases may have influenced the data collection and/or the data analysis processes.

Recommendations for Future Research and Practice

This study reveals areas for action in both changes in practice and for further inquiry. The first recommendation derived from the data is to include the tracking of eating disorders as part of public health epidemiological studies. Participants expressed a general lack of awareness about the prevalence of eating disorders in their counties. Monitoring the incidences of eating disorders will provide a baseline for rates within local jurisdictions and will allow ongoing monitoring of trends. Such tracking may bring awareness about the current burden of the problem, identify those who are most

impacted, and determine if rates are increasing or if shifts are occurring among the most affected groups. Tracking would also reveal if public health intervention efforts are effective in reducing the rates of eating disorders. This information could also be helpful in securing funding for eating disorder prevention programs.

In addition, there needs to be education about population-based primary prevention of eating disorders included in public health education. The participants indicated that they had some training in eating disorders during their education but none had training in eating disorder prevention. While most of the public health focus has been on obesity, these conditions fall on the same spectrum of eating and weight-related disorders (Sanchez-Carracedo et al., 2012). Obesity messages and eating disorder messages that are complimentary rather than contradictory can address both issues (Schwartz & Henderson, 2009).

Public health practitioners need to be aware of the environmental factors that contribute to the development of eating disorders. They need to understand how macro level primary prevention interventions and complementary messages can improve outcomes for both of these conditions. This awareness will help public health practitioners develop effective and cost efficient strategies resulting in improved health. It will also reduce the risk of causing unintended harm that could occur with programs that prompt harmful weight talk (Neumark-Sztainer et al., 2010), that blame people who are overweight (Puhl et al., 2012), or that don’t incorporate sensitivity when conducting BMI checks (Soto & White, 2011).

Partnerships can be built between experts in eating disorders and public health professionals who focus on obesity prevention to eliminate the division between eating disorder prevention and obesity prevention. Professional conferences and peer-reviewed journals should include evidence from research on both health issues, sharing best practices in prevention strategies that improve overall outcomes for those struggling with any health problem that falls on the spectrum.

Public health leaders should incorporate eating disorder prevention into existing obesity prevention efforts utilizing evidence-based practices. This will help to overcome the identified barriers of limited funds and resources and still allow practitioners to address mandates and other competing health concerns. Prevention does not need to be an either/or approach, instead it can be an inclusive response.

This qualitative study provides a small snapshot of public health leaders' perceptions and attitudes about eating disorder prevention as a public health issue. The participants were all public health leaders in the state of California. Further research should be conducted to explore public health leaders' perceptions and attitudes from around the United States and even around the world. The findings from this study could be compared to the findings from other regions to determine if these perceptions and attitudes are universally felt or if there are differences between regions.

This study can also serve as a springboard for other studies. Researchers might conduct mixed-method studies to explore the impact of changes in curriculum at public health academic programs on the knowledge, attitudes, and behaviors of public health practitioners. Organizational culture might be explored to determine their interest and

capacity to change social norms about eating disorders as a public health issue within the organization. Experimental research might include actual implementation of public health prevention strategies at the macro level and the impact these programs have had on the rates of eating disorders.

Social Change Implications

Aarons (2005) indicated that the culture within organizations can influence the leaders' decisions. The findings of this study reinforced this observation in relation to eating disorder prevention. The public health culture of focusing on obesity rather than looking at the larger spectrum of disordered eating and weight control behaviors has resulted in the omission of eating disorders from the public health data collection process and a disconnect between eating disorders as a public health issue when other eating behaviors and other mental health issues are included in public health efforts. When the participants of this study began to consider how public health might be involved in eating disorder prevention, many began to see that public health could play a role in prevention. Aarons also noted that leaders can influence the organizational environment.

While change is challenging, communicating and sharing of new ideas across channels within a system can result in changes in the structure and function of that system (Rogers, 2005). Rogers (2005) explained that this is social change. The constructs of the diffusion of innovation theory include that the attitude about an innovation will strongly influence the innovation-decision process (Rogers, 2005). Attributes of the innovation can impact how quickly the change may occur. The implementation of eating disorder prevention into public health practice might be perceived to have relative

advantages such as economic and convenience, the compatibility of the idea of eating disorder prevention with existing public health values and ideas about prevention, and how complex the idea is to the adaptors (Rogers, 2005).

Perhaps as more public health leaders become aware of the burden of eating disorders within their communities, and as public health practitioners learn about the role that environmental factors play in the development of eating disorders, there will be a movement to incorporate eating disorder prevention into current obesity prevention strategies. This merging of efforts can result in comprehensive, effective and cost-efficient programs that will impact even greater numbers of people than focusing a program on just one or the other health issue. Such programs, based on evidence-based practices, can address the root causes of eating disorders, minimize unintended harm, and ultimately help prevent the development of a serious health threat that is currently off the public health radar. Allowing public health leaders to recognize the advantages of integrating eating disorder prevention into public health practice could influence changes in the public health structure and function, resulting in the social change which Rogers referred to in the diffusion of innovation theory (2005).

Conclusion

Eating disorders are a serious health risk, but have remained on the sidelines as public health practitioners focus their efforts and resources on other health threats such as obesity. Although eating disorders and obesity co-exist on a spectrum of eating and weight-related disorders, public health strategies are primarily directed towards the obesity end of this spectrum. In addition, many who develop obesity prevention programs

are not knowledgeable about eating disorder prevention. This can lead to programs that unintentionally can cause harm to those who most at risk for developing eating disorders (Sanchez-Carracedo et al., 2012). Environmental strategies that integrate obesity prevention and eating disorder prevention can result in improved outcomes for both concerns.

This study revealed that eating disorders are not even on the public health radar. There are no tracking systems in place within public health to communicate the burden of this disease. Monitoring the rates of eating disorders is the first step to awareness about the incidences and the trends of this life-threatening illness.

Public health leaders in this study expressed a desire to know more about eating disorder prevention programs. Education about vulnerable populations and contributing environmental factors is needed in public health programs. These public health leaders indicated that they institute programs based on evidence from the research. The research about effective programs needs to be shared in public health circles. Implementation of evidence-based practices into existing public health obesity prevention programs will help produce improved outcomes with minimal impact on already limited funds and resources. Public health leaders' role is to promote and protect the public's health. Once educated about the public health role in eating disorder prevention, public health leaders can serve as innovators to take the steps needed to cause social change within their agencies and institutions.

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Appendix A: Interview Guide

Thank you (name) for participating in this interview. My name is Karin Lightfoot and I am a doctoral student in the public health program at Walden University. I am conducting this interview as part of my dissertation research. The interview should take approximately 20-30 minutes.

Is it agreeable to you that I record this interview?

As noted in the Informed Consent, your participation is voluntary and you may opt to not answer any question, or you may choose to end the interview, at any time. Please feel free to stop or ask me questions at any time during the interview process. The information gained from this interview will help provide insight into public health leaders' thoughts about the public health role in the prevention of eating disorders. Your answers will be added to responses from other participants and the findings will be reported in aggregate or anecdotal format. Your individual responses will be kept confidential.

For the purposes of this interview, the term "eating disorder" will refer to the three conditions recognized by the American Psychological Association (2014). These are anorexia nervosa, bulimia nervosa, and binge eating.

Interview Questions:

Q1: Are you currently a public health leader or administrator at a local public health agency in the state of California? Yes/No

- If not, thank you for your willingness to participate. Is there someone you can connect me to who is a public health leader or administrator at your agency?

Q2: Have you functioned in the capacity as a public health leader or administrator at a local public health agency in the state of California for at least one year?

Q3: What training or education have you received regarding eating disorder etiology?

Q4: What training or education have you received regarding the prevention of eating disorders?

Q5: Have you had the opportunity to be involved in the decision-making process to implement an eating disorder prevention program through a local public health agency? Yes/No

- If yes, please describe the program being considered.
  - What were your perspectives about this program?
  - Was this program implemented?

    - Please describe any barriers you encountered while developing or implementing this program.
- If no, would you consider implementing an eating disorder prevention program as part of your local public health agency's strategy to promote health and wellness?
    - If yes, please briefly describe what type of prevention program you might like to implement.
        - Please describe any barriers you think you might you encounter in developing or implementing this program.
    - If no, please explain your decision to not include an eating disorder prevention program in your agency's strategic plan.

Q 6: What are your opinions about eating disorders as a public health issue?

Q 7: Explain your thoughts about the impact primary prevention measures might have on the prevalence of eating disorders.

Q 8: What is your view about the public health role in implementing of strategies to prevent eating disorders?

Q9: Are there any additional comments you would like to include regarding public health and prevention of eating disorders?

Thank you for your participation in this interview. Again, your input will contribute to the overall understanding of the public health leaderships' perceptions about eating disorder prevention.

Appendix B: Recruitment Flyer

INVITATION

TO A RESEARCH STUDY

Public Health Leaders' Perceptions and Attitudes about Eating Disorders

Looking for public health leaders at local public health departments in California to share insight about the topic of eating disorders.

Leaders include:

- **Directors of Public Health**
- **Health Officers**
- **Managers**

~Must have been in a leadership role for at least one year.

WHAT IS EXPECTED OF YOU?

- An interview with the researcher, either face-to-face or by virtual video call or phone, expected to last 20-30 minutes .

WHAT IS EXPECTED OF THE RESEARCHER?

- Your identity will remain confidential and privacy will be maintained at all times. Responses will not be linked to participants nor their place of work.
- Results will be shared with participants after data analysis is completed.

If you are interested in participating in this research study, please contact the researcher for more information at:

xxxxxxxxxxxxxxxxxxx