

Obesity in Samoans: a practice-based naturalistic inquiry

SEIJI YAMADA MD, MPH*

Introduction

The problem of obesity in Samoans has been the subject of numerous studies¹⁻⁵. Biological anthropologists, biomedical scientists, and medical researchers have studied it from various perspectives. This report highlights the perceptions and attitudes of the Samoan people themselves. It is thus an attempt to give a voice to those who are not often heard, those whose subjectivity is often buried, those who are usually "subjects" of study. The ultimate purpose of this effort is to develop strategies for helping Samoan people overcome obesity and thereby improve their health status. While stressing people's perceptions of their illness has recently come under criticism as being overly "culturalist"⁶, it remains an important aspect of a comprehensive picture of the problem.

Given the connotations of a subordinate researcher/subject relationship implicit in the word "study," I choose to call the present endeavor an "inquiry." This naturalistic inquiry took place within the context of general medical practice. While patients present with a gamut of problems in such a setting, an attempt was made to focus on a particular clinical problem. The gathering of information and the generation of knowledge were not separated from the endeavor to care for patients. While those who engage solely in research are careful not to "contaminate" their data with the effect of the intervention, this inquiry was conducted in the course of the practice of medicine.

While conventional biomedical research attempts to erase the subjectivity of the researcher, assuming that bias can thus be minimized if not eliminated, I contend that science cannot be separated from the values and concerns of its researchers. Rather, one's moral and political perspective determine what one believes to be phenomena worthy of study⁷. I therefore choose to utilize the first person and

active voice⁸. In addition, I will clearly state my background and my orientation.

Methods

The naturalistic inquiry into the problem took place at a community health center in Hawaii. The health center has a clinic located in an area where Samoan people are concentrated and also provides services within nearby public housing developments. The health center is part of an agency which offers a variety of health and social services. It has a multicultural and multilingual staff, including a number of Samoan workers. At the time that the project was conducted (August 1995 through February 1996) twenty-nine per cent of the health center's patients were uninsured; 47 per cent received health coverage via public assistance. A large proportion (30 per cent) of patients served by the health center are Samoan. Some are first generation immigrants from American and Western Samoa. Others were born in Hawaii or the mainland U.S.

The participants

Of the 26 patients who participated in the study, 18 were female and 8 male, and the median age was 26. All 6 of the patients under the age of 18 were male, and their median age was 12. Of the 20 patients over the age of 18, 18 were female and 2 male, and their median age was 35. The overall preponderance of females reflects the greater number of females that present for medical attention. However, all of the pediatric age patients were boys.

As I myself was the investigator for this project, I will include a note about myself. At the time that I carried out this project, I was a family physician working full-time at the community health center described above for the previous two years, seeing many of the patients who became my informants. I am a Japanese-American raised in the mainland. My contacts with Samoan people have included work-related and social contacts with co-workers and patients at the health center. I have no competence in the Samoan language.

Strategy for gathering information

I gathered information from structured interviews, and obtained supplemental information from participation-ob-

*University of Hawaii.

ervation^{9, 10}. Patients were recruited via convenience sampling. I continued to recruit patients until I felt that further patient selection would produce redundant information¹¹. As time in my schedule of clinic practice allowed, I asked patients (and parents of the children) who were obese if I could interview them about their attitudes toward obesity. I thus gathered clinically relevant information from my patients as part of the clinical encounter as part of my usual duties as a medical practitioner. To this end, I relied on questions for eliciting patient explanatory models about illness episodes formulated by Kleinman, Eisenberg, and Good¹². From these questions I created a template for a semi-structured interview, with which I gathered demographic patient data and then posed eleven questions on the subject of obesity. A number of key informants, Samoan workers at the community health center, allowed me to field-test the interview template with them, and contributed a number of points included below. The final version of the interview template is presented in the appendix.

In an attempt to utilize the interview to disseminate the results of previous work in this area, I asked a number of patients their opinions about the following statements:

1. Some people think that people in Western Samoa are not as heavy as people in American Samoa or Hawaii because people in Western Samoa have to do more farming and other hard work.
2. Some people think that Samoans gain weight easily because the ancient Polynesians took long sea voyages, so the heavy people were the ones that survived.

The interview was not administered in a standardized format. Usually I asked the questions after having completed the clinical tasks at hand. With some patients I interspersed the questions throughout the encounter. The length of the interview (excluding the patient care session) varied from approximately 10 to 20 minutes, and largely depended on the number of patients waiting to be seen. With other patients, I recruited them during one patient care session for an interview during a subsequent session. Initially, I took notes on the template form for the interview, but as I committed the questions to memory, I utilized the form less during the encounter. Rather, I recorded responses in the medical chart or completed the form afterward. Additional information was gathered through review of the medical record, including dietitians' notes.

Additionally, I have learned from unsystematic participation and observation as a worker in the clinic and in the housing projects and as resident in the local community. Thus, by attending a birthday party for an elderly Samoan patient, I saw for myself how the presentation of food is an expression of love and respect. Also, I observed the residents of the housing projects buying their meals at the so-called "manapua" (Chinese *bau*) trucks, which feature items such as fried burritos and fried turkey tails.

Within the context of the study, I made an effort to make use of all such information gathered for the benefit of the patients themselves. Indeed, Kleinman's method for eliciting patient explanatory models have been recognized for their usefulness in cross-cultural clinical encounters¹³. I thus made an effort to address the problem of obesity in a manner appropriate for each patient. I took the opportunity to try to educate patients about the adverse effects of obesity on other medical problems. In this way, the focus on weight was intended to have a therapeutic effect. Upon follow-up some patients had, indeed, lost weight.

Results

Faced with the choice of telling the stories of various patients versus systematically presenting the responses to the questions I posed, I have elected to do the latter. While this approach essentially ignores the contextual situation of individual patients, it allows comparison of disparate views and recognition of widely held views on each individual theme: explanatory models, therapeutic goals, and the psychosocial and cultural meaning¹² of obesity.

The etiology of obesity

Most of the subjects discussed different types of food. They identified "Samoan food" as being fattening: "starchy food" such as taro and "fatty food" such as corned beef, coconut milk, and food fried in oil. Some mentioned fast food. When asked about vegetables, most stated that they ate few vegetables.

- One mother blamed grandparents for buying the children food as treats and the children themselves for "raiding the refrigerator."
- One woman said that she could not help but eat when she sees other people eating. Another stated, "stress makes me turn to food."
- A 22 year old mother with a 3 month old infant said that she feels bored at home, sees the refrigerator, and eats.
- A 47 year old woman maintained, "Samoan people like to eat a lot. Especially Sundays after church, they feast and sleep."

A common theme was the attribution of a propensity for obesity to manipulation of the reproductive system. Three women blamed depot medroxyprogesterone, used as a contraceptive agent, for their obesity. One of these women had used it for only two years nearly two decades ago. Another blamed her tubal ligation of over two decades ago.

Most informants agreed that the differences in the nature of work between Western and American Samoa contributes to obesity in American Samoa. One woman noted that people who come from Western Samoa are in good physical shape but end up out of shape because they do not do any physical work in Hawaii.

Most informants who had an opinion agreed that the historical experience of the ancient voyagers may contribute to a propensity for obesity. A mother of a pediatric patient and an aunt of another had been told the same by older members of their families. The aunt said, "Also the royal family were big people, like the King of Tonga . . . the same in Samoa. They were the ones who were fed first."

Problems caused by overweight

- One 37 year old woman stated that she feels self-conscious about her weight: "I don't feel good about myself." One twelve-year old boy, while licking a lollipop said that he feels "shame," especially with the teasing he endures from classmates at school.
- One woman found it difficult to find clothing that would fit her. Another complained that her old clothes don't fit.
- Many found that their obesity interfered with physical activity: "It makes me tired." A 25 year old woman said, "After playing basketball for five minutes, I get short of breath."

Notably, patients with medical conditions related to their obesity, such as diabetes or hypertension, did not mention these problems.

Cultural conceptions of overweight

Most were in agreement that Samoans were more tolerant of obesity than Americans. One 58 year old woman, who had worked as a nurse in Western Samoa until she was age 45, outlined what was perhaps the most culturally conservative viewpoint: "People look down on you if you're slim. They think that you're malnourished or diseased, that you have TB. They think that you have too much stress, like jealousy or being poor. People look down on you if you eat vegetables."

- The 25 year old woman stated, "Our society accepts it more. We're used to it."
- A 48 year old woman stated, "They don't tease people; they don't mind." One patient, however, mentioned that her brother with a 54 in. waist was the subject of good-natured name-calling at their church.
- One aunt of an obese boy stated, "In the past, people thought that being too skinny showed that you were sick, that it was healthy to be fat. Now people know that being overweight can cause diabetes, hypertension, heart disease." This informant works as a dental assistant and may thus be relatively more familiar with biomedical conceptions.

How subjects thought that they could lose weight

Most subjects expressed optimism on this point. They recognized a need to eat less and exercise more. The 25

year old woman said, "I just have to keep going to youth functions and playing basketball. I have to concentrate on getting rid of stress and being bored." The 37 year old woman said, "I need motivation . . . I need time to exercise." One patient jokingly suggested, "Operate? Weight loss pills?"

Advice about losing weight

Most patients denied receiving advice to lose weight.

- The 25 year old woman described how her sisters were assisting her by making food relatively inaccessible, e.g. keeping the refrigerator understocked.
- One 26 year old woman last tried SlimFast, but her sister-in-law ("She was big, too.") kept teasing her and throwing her skim milk in the rubbish.
- One 48 year old woman has morbid obesity exacerbating her diabetes and coronary artery disease as well as complicating evaluation and treatment of menometrorrhagia. She denied ever having received counseling on weight loss, but chart review revealed multiple attempts by her physicians and a dietitian to counsel her.

Whether subjects engaged in exercise

- The twelve year old boy claimed, "I play basketball with my friends almost every day," only to be contradicted by her mother, who said, "He only sits inside the house and watches TV."
- One 26 year old woman claimed to be walking around "all the time" on the job at the discount store. She often stops by the pizza store, however, to eat their buttered bread. I told her that she needed to limit her snacking. One twenty year old mother of two stated that caring for her children prevented her from exercising. I asked her if there were any way for her to go walking with her children in a stroller.
- Two older women complained that pain in their knees prevented them from walking long distances.

Structural barriers to weight loss

The intention of this question was to elicit any ideas for changes in the micro or macro environment (e.g., food supply, employment situation, living conditions, economic conditions, availability of opportunities for exercise) that might affect their overweight. Most patients did not have any suggestions.

- The 25 year old woman suggested: "Close the fast food places." But she negated her comment immediately by saying, "No, I know it has to come from within myself."
- No patient stated that it was difficult to buy healthy foods. The assumption, however, is that patients know what foods are healthy.

- The mother of the twelve year old said that she would occasionally buy healthy foods such as apples, but that her son would only eat one.
- Many patients were interested in seeing a dietitian, and this generated an immediate referral. On occasion, the dietitian was able to see the patient the same day.

The majority of patients expressed interest in an organized weight loss program or an exercise program. One patient suggested that a group including other people interested in losing weight would be helpful. Such a group might exercise together.

Despite popular perceptions around Hawaii of the locality, especially its housing projects, as dangerous places, none of the patients expressed fear for their safety or that of their children.

As I progressed in my knowledge of attitudes toward overweight and prevalent dietary patterns, I became a more culturally competent clinician. Thus, I specifically warned against consuming corned beef and brisket. I encouraged the consumption of bananas and taro, despite their expense, and without the coconut milk. I suggested strategies for not overeating during Sunday feasts.

Discussion

Obesity in the biomedical paradigm

In the U.S. the public health consequences of obesity are receiving much attention. Whereas smoking is responsible for more than 400,000 deaths per year, diet and activity patterns are responsible for approximately 300,000 deaths per year¹⁴. The news media preferentially reports on technological advances in the battle against obesity: A gene that causes obesity in mice is isolated. A new obesity drug is approved. A substitute for fat has no calories. Until they were reported to cause valvular heart disease, fenfluramine and dexfenfluramine were being widely prescribed¹⁵. Such phenomena reflect the American public's desire for modern medicine to produce a curative "magic bullet." This is in accordance with the reductionist strategy of the *biomedical paradigm*: to identify the real cause of problems at the molecular level^{16,17}.

A dialectical approach

In contradistinction to the analytical method of breaking a problem down into its most basic constituent parts, a dialectical approach to problems entails considering the whole and considering historical development. Thus, in the case of the problem of obesity, the commonality of the problem among minority groups prompts us to search for a common threads in the experience of these populations in the context of world history. The essential aspect of the historical experience of minority groups is oppression:

African Americans were brought to the Americas as slave labor; Native Americans had their lands expropriated and were actively exterminated; people of various countries were colonized and forced to migrate by the colonial conditions of their homelands¹⁸.

The current conditions of oppressed peoples include poor housing, difficulty finding housing, low income, high levels of unemployment, poor working conditions, abuse by the police, the experience of denigration of their culture and language, the experience of indifferent treatment by public institutions, and a realization that they have no power. Such conditions can be expected to lead to stress¹⁸.

Conditional rationality. Thus, many people find themselves in circumstances that are not of their own making. Rather, they are the result of larger political and economic forces. With this given, it becomes possible to see that what are often termed "life style" choices are not really freely chosen by many people. Within the constraints imposed upon them, people make choices that are conditionally rational¹⁸. Thus, one may realize that consuming high fat items may increase the risk of heart disease, but if the need to work two jobs leaves little time to buy and prepare nutritious meals, and if the fast food outlet prices its salads higher than its hamburger and french fries, then the conditionally rational choice is combination number one.

Levins and Lewontin further note, "Our assumption of conditional rationality means that we cannot expect to change behavior by education alone: rather, we must alter those circumstances that make such harmful choices seem optimal"¹⁸.

Implications for intervention

Knowledge — the role of health education. The interviews demonstrate that patients are aware that overeating and lack of exercise cause weight gain. Probably from the fact that they are overweight, and that they eat what they consider to be "Samoan food," they conclude that Samoan food is fattening. Thus, "starchy" and "fatty" food are recognized to be problematic. The particularly high caloric content of fat does not seem to be recognized, however. "Starchy food" such as taro, in and of themselves, actually should not be so problematic, but in Samoan cooking, taro is often prepared with coconut milk. In fact, low calorie density foodstuffs form the basis of the Molokai/Wai'anae/Hawaii Diet¹⁹⁻²¹, in which a return to the diet of the Kanaka Maoli (Native Hawaiians) has been shown to lower weight and improve blood pressure and blood sugar control.

During the patient care sessions I attempted some basic dietary education, and I referred all interested patients to the dietitians. What is needed, however, is public health education to discourage consumption of high fat foods such as tinned and processed meats and fried foods as well

as to encourage consumption of fruits and vegetables. Samoans need general guidelines on proper food choices. However, many patients, upon being told to eat less fattening foods such as fish and vegetables, remark that such foods are more expensive than staples such as tinned meats. As noted, many find it convenient to take many of their meals at the manapua trucks. This is an example of the conditionally rational choices that people make. Market forces, thus, determine what people consume.

Attitudes — the role of culture change. Many aspects of Samoan culture promote overeating. Among these are the acceptance of obesity, food as an expression of love and respect, food as a focus of social interactions, and the physical inactivity of high status individuals^{22, 23}. While such norms may have promoted harmony in the social fabric within the traditional culture, in an era of ready availability of food, they are proving to be maladaptive.

The results of the interviews clearly shows that attitudes toward overweight among Samoans is relatively tolerant. To some extent, the high prevalence of overweight among Samoans implies that they must either tolerate it or be subject to self-depreciation and depreciation of others in their social network.

As far as public health interventions are concerned, the task, then, becomes to achieve attitudinal changes so that overweight is less acceptable culturally. A difficult question is how this can be done in a manner that does not do damage to the self-esteem of those who are overweight.

As the bulk of Samoan immigration to the U.S. has taken place in the post-World War II period, the high prevalence of obesity may partially reflect the general tendency among immigrant groups to have more obesity in the first generation. It would seem that with the mass media promoting images of thinness as beautiful, growing familiarity with and participation in the general popular culture would lead to less cultural tolerance of overweight among Samoans.

The focus on food at social interactions and food as an expression of love and respect both need to be changed. It is difficult to conceive of the means to achieve such a strike at the core values of a culture. Essentially, this is a call for a cultural revolution of sorts. Certainly, it cannot be achieved without the cooperation of leaders within Samoan society: either traditional title holders (such as the *matai*) or church leaders. As such personages lead the social gatherings, whether they be church ceremonies or family celebrations, they are in a position to change the character of the gatherings.

Practices — changing behavior. The lack of exercise among Samoans needs to be addressed. Patients say they would participate in an exercise program if one were available. As many patients cite parental duties as interfer-

ing with finding the time to exercise, perhaps child care could be offered while parents exercise.

Antecedent conditions. As can be seen in the disaggregative analysis, social problems contribute to the clinical problems that patients experience. In that the technical interventions of medicine are poorly suited to addressing such problems, social problems are commonly ignored or forgotten within the context of the medical encounter²⁴. These are problems which need to be addressed via mass movements to combat racism and unjust economic systems.

Possible intervention programs

There is a paucity of programs that could serve as models, but one obvious choice is that of the Wai'anae program. In order to determine the feasibility and acceptability of a variety of other interventions, one possibility would be to form a focus group of Samoan people. The findings of the current study would be presented, and the participants would be asked to formulate a program to address the problem. The following are possibilities:

- Invite a commercial program such as Weight Watchers to start a program in the Samoan community.
- Start an exercise program (walking, aerobics). This might involve hiring exercise instructors and providing child care so that parents can participate.
- Start a weight loss program stressing competition, e.g. between residents of various housing projects.
- Start a weight awareness campaign in Samoan churches. Leaders of Samoan churches would be enlisted for the campaign.
- Enlist popular Samoan sports figures (not sumo wrestlers) for a media campaign to promote physical fitness.
- Start a community garden so that fruits and vegetables can be grown.

Conclusion

In this project, we re-examine the problem of obesity among Samoans utilizing alternative paradigms in order to identify possible public health interventions. Firstly, we utilized medical anthropological techniques to assess knowledge, attitudes, and practices concerning obesity among Samoan patients in an urban setting in the U.S. As part of the clinical encounter, we gathered relevant information from patients, utilizing a semi-structured interview to elicit patient explanatory models of obesity. We found that the patients are aware that overeating and lack of exercise cause weight gain. The particularly high caloric content of fat does not seem to be recognized, however. We also found that Samoans have tolerant attitudes toward overweight. The dominant biomedical paradigm focuses on the physiologic antecedents of obesity: excessive caloric intake and inadequate caloric expenditure. However, economic,

social, cultural, and psychological factors also play a role in the genesis of obesity. The biopsychosocial paradigm integrates such factors into a wholistic model. As the biomedical paradigm focuses on "unhealthy lifestyles," the usual prescription is for health education and exhortations to adopt "healthy lifestyles." In contrast, the dialectical point of view encourages an examination of the economic, social, and cultural constraints on the lives of people, constraints within which they make conditionally rational choices. The biopsychosocial model of the determinants of obesity among Samoans show that many problems stem from the meanings attached to food within Samoan culture. Aspects of Samoan culture that may have been adaptive in the past are now maladaptive. There is thus a need for changes within the Samoan culture to de-emphasize food as a medium of exchange as well as an expression of love and respect. Such change must come from the leaders of Samoan society. The model also points to the role of the market economy in fostering the unavailability of traditional foods, dependence on mass-produced calorie dense foods, as well as the economic marginalization of Samoan people. Interventions will need to focus on counteracting the dominance of the market economy.

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