ATTITUDES OF WOMEN OF DIFFERENT WEIGHT GROUPS TOWARD SELECTED TRAITS

by

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INTRODUCTION

The consumption of food serves the biological need for energy and growth. Its nutritive function is essential for the maintenance of life. However, eating is an experience that may be invested with many intellectual and emotional values quite apart from metabolic utilization of the food. Physiologists, psychologists, sociologists, and nutritionists point to the need for food because of sociological and cultural value and meaning placed on the food as well as the need for food as such. Attitudes toward food are thought to be related to the pressure and sanction of the culture and society.

Overweight caused by an imbalance in calories consumed and calories expended is one of the most prevalent health problems in the United States. Starvation and underweight are leading health hazards in the world. Possibly these symptoms are a result of inequality of food distribution. Further insight seems to come when the problem of body weight is considered to have both physiological and sociopsychological aspects. The combination of physiological and sociopsychological considerations concerned with food intake and weight manifest complexities.

Review of the literature substantiates the opinion that research in the area of food habits and food attitudes is in a state of flux. Research is needed to determine the effect of attitudes on dietary preference, nutrient intake and body weight. Interrelationships between sociopsychological and physical factors as they affect the physical status of the adult female 20 to 50 years of age have been explored little.

The present study was designed to investigate differences among

underweight, overweight, and average weight women in attitudes toward selected traits and personal histories.

REVIEW OF LITERATURE

In the adult, height and weight measurements are employed routinely as a criterion of nutritional status. Further indices of the composition and mass of the body reflect the relative calorie adequacy of the previous diet. Recently, methods of determining body composition (proportion of body fat to lean body mass) have been developed which are sufficiently simple to be used with population groups. These methods have been employed more frequently with men, adolescents, or children (1).

Assessment of Body Composition

Indirect Methods

Standard height-weight tables. Standards for weight based upon height, sex and age have been established largely from measurements made through medico-actuarial investigations. Standard weight is usually defined as the average weight of individuals of a given sex, height, and age (2). These standard weights have been made into tables, with or without essentially arbitrary corrections for the height and weight of shoes and clothes worn by the individuals measured. The deviation of body weight from the standard weight for height may serve as a gross indicator of under- or overdevelopment of soft tissues. The soft tissues are composed of the adipose tissue, musculature, and viscera. However in pathological conditions other body components can yield the deviations from the standard useless (2).

Ideal height-weight tables. Tables of "ideal" weights for men and women aged 25 and over were prepared by the statisticians of the Metropolitan Life Insurance Co. in 1943. These tables give weights "as ordinarily

dressed," at each inch in height "with shoes," for individuals of "small," "medium," and "heavy" frame. Each value is given as a range rather than a single point in appreciation of other variants which affect weight. Unfortunately these tables are not adequate since no quantitative data for the determination of the size of the frame or for further adjustments based on other dimensions affecting body weight are given (2).

Finegan et al. (4) felt that the ideal weight as expressed in the Metropolitan Life Insurance Tables was an unrealistic concept when applied to contemporary western society and that the mean weight of the adult population in these countries is significantly greater.

Pryor width-weight. In 1936 Pryor (5) placed adult individuals along the continuum of linear-lateral body build--that is, each individual has a fixed point on a scale based on width and length. She used the width-length index, obtained as the ratio of the bi-iliac diameter and height. The use of this index has been essentially limited to classifying the body build of children and young adults (6). In 1940 Pryor (7) revised the width-weight tables to include the chest width. The thoracic lateral diameter was measured with no pressure; therefore it included both the width of the thoracic cage and the cutaneous and subcutaneous tissue. Thus, a fat individual would appear to have a larger frame and to be less overweight than he actually was (3). Brozek and Keys (3) stated that this is a disadvantage of Pryor's tables, which otherwise represent an important move forward in the estimation of "normal" weight.

Tables of average weights and suggested weights for heights. In 1960 "Heights and Weights of Adults in the United States," Home Economics Research Report No. 10, was issued by the United States Department of

Agriculture (8). This publication brings together data of height-weight which covers about 100 years. The Food and Nutrition Board (9) uses a table of "suggested weights for heights" developed by Hathaway and Foard (8) for men and women.

Also included in an addendum are tables for height-weight issued by the Society of Actuaries, based on insurance data for about 5,000,000 Americans in the 1959 Build and Blood Pressure Study. These average weights for heights and age are based simply on ". . . weights in ordinary indoor clothing including shoes" with no reference to corrections for height of heels.

In order to compare the actuarial data of "average weights" and the data in the "suggested weights for heights," corrections must be made for the "average weights." Some researchers (8) feel that these corrections can be made by allowing 2 inches for heel heights and about 3 pounds for clothing weights. If this is done, then the actuarial values for women 20 to 24 years old fall between the "median" and "high" values for Hathaway and Foard's table based on women in this age range. Thus, young women in the general population as exemplified by the 1959 actuarial tables average a few pounds heavier than college students of similar age. Actually the data of "average weights" and the data in the "suggested weights for heights" agree quite well since neither takes into consideration difference in body build. Some researchers (8) advanced the idea that the table of "suggested weights for heights" may be near the desirable weights for present day American women, since it is commonly recommended that weights increase little or none with advancing age.

Assessment of Dietary Intake

Methods of Collecting Information on Dietary Intake

There are numerous established methods for collecting dietary information. Becker, Indik and Beeuwkes (10) classified the methods into "food records in weighed, measured, or estimated amounts, and the dietary history." The needs of various investigators are met by modification of these two methods. Chalmers et al. (11) defined the dietary record as a method for collection of dietary data for research purposes which consists of a detailed, quantitative listing of all foods consumed by an individual over a given period. She emphasized that this was one of the more widely used methods for obtaining dietary information. Burke (12) developed the dietary history as a "tool in research" designed to facilitate "estimation of average intake for a given period time." Burke's technique requires: (a) an intelligent and cooperative subject; (b) a trained nutritionist interviewer; (c) a criteria for converting lay descriptions into scientific data on nutrient intake.

Becker, Indik and Beeuwker (10) noted that the dietary collection method employed is dependent upon the particular situation and specific investigation. Factors affecting the selection of technique are: (a) pooled data vs. individual data; (b) persons studied; (c) amount of detailed information required; (d) amount of error tolerable; (e) scope of problem; (f) size of population; (g) source and amount of variability of respondents; (h) seasons, weeks, and days included; (i) collection period duration; and (j) number and competence of the staff.

The validity, reliability and objectivity of these methods have been

considered by many researchers (10, 13, 14, 15, 16). Validity is a measurement technique which measures what it purports to measure. Reliability was equated to reproducibility. The concept of reliability was further expanded by noting several sources of error: (a) each assessment affects the results of subsequent assessments; (b) individuals eat differently at different times—in food items, in amounts, in methods of preparation of food; (c) individuals respond differently to different research methods, different investigators, and at different times; and (d) investigators affect the results because they differ as individuals in contacting different respondents, use methods differently, and act differently at different times. Objectivity was thought of as standardization (10).

Chalmers et al. (11) emphasized the necessity of dietary records covering a sufficient period of time to furnish an adequate picture of nutrient intake. However, an unduly lengthy period of record keeping should be avoided because the enthusiasm and cooperation of the subject might waver. Obviously the question of how many and which days to keep a record remains a complex problem—a problem dependent to a degree upon whether individuals or groups are involved. Eppright et al. (17) reported that data from dietary records are more accurate when describing groups than individuals.

Food records and dietary histories have been used rather extensively with varied problems and varying results. Christakis et al. (18) obtained 24-hr recall diet histories from 642 elementary school pupils in New York City. The diet histories delineated broad and general trends in the food habits of the study population rather than individual detailed observations. In a study of some of the problems involved in collecting dietary data from individuals, Adelson (19) concluded that: "1) one week proved as

satisfactory as two consecutive weeks; and 2) the recall method proved as satisfactory as the record method." Hankin et al. (20) performed statistical analyses on the measured 7-day food records of 93 Japanese-American men and recommended careful consideration of the possible significant differences in food intake on weekends (especially Sunday).

Young et al. (21) and Wilhelmy et al. (22) employed a combination of methods to collect dietary data in Groton Township, New York: a family food record kept for one-week periods in the spring and fall and individual 24-hr food records kept for one mid-week day by each cooperating individual in the fall only. By such methods they were able to get averages for groups of families and individuals—averages from which the individual or particular family may deviate significantly.

Browe et al. (23) developed and used a questionnaire to elicit information about current dietary intake. This methodology had certain advantages: ease of administration, relatively low cost, minimum need for especially trained personnel, and ease of application to large scale surveys.

Young et al. (24) reported on a comparison of the dietary history and the 7-day record as measures of food intake and on an attempt to predict the dietary intake by one method using figures collected by the other technique. They found that it was virtually impossible to predict the intake by a seven-day record from dietary history with any accuracy. In another study Young et al. (25) compared the 24-hour recall vs. seven-day record. They reported "that 24-hour recall and seven-day record can be used interchangeably for the population groups studied seems to be evident . . . It seems possible, then, that when an estimate of the mean intake of a group of roughly fifty persons or more is desired and when some errors of 10 per cent

can be tolerated, the shorter, more expedient 24-hour recall can be used as a substitute for the more time-consuming seven-day record. Such a substitution would mean a tremendous saving in time, both in collection of data and in its calculation and analysis. Also, since considerably less participant's time and cooperation is involved, a more representative population sample would probably be possible (25). However, Young et al. (25) warned that the interchangeable use of the 24-hour recall and the seven-day record applies only when describing the mean intake of a group as a whole. Stevens et al. (26) compared the 24-hour recall and dietary histories. They concluded that consistent estimates can be obtained by interview with either method with informed subjects.

Trulson and McCann (27) appraised various dietary methods. Their report indicated "No one technique of evaluating food intake that is practical for field conditions gives a completely reliable pattern of the characteristic intake of the individual" (27).

An essential part of the dietary history method is the interview technique. Young (28) indicated that the criteria involved are: the right interviewer, respondent, time, and clearly defined circumstances previous to the interview. Young (28) looked upon dietary interviewing as a highly skilled process. Wakefield (29) indicated the source of bias should be controlled since the interview technique involves a social situation.

Assessment of Body Concept or Image

Personality and Body Build

Sheldon's (30) five year study of two hundred college males indicated personality and body build were related. Descriptive case reports of the

three types of body build: (a) endomorphy, (b) mesomorphy, and (c) ectomorphy were secured and the temperament of subjects recorded. Definitions of these are listed:

> When endomorphy predominates, the digestive viscera are massive and highly developed, while the somatic structures are relatively weak and undeveloped. . . .
> When mesomorphy predominates, the somatic structures (bones, muscle, and connective tissue) are in the ascendancy . . . The hallmark of mesomorphy is uprightness and sturdiness of structure, as the hallmark of endomorphy is softness and sphericity. . . .
> Ectomorphy means fragility, linearity, flatness of the chest, and delicacy throughout the body . . . There is relatively slight development of both the visceral and somatic structures. The ectomorph has long, slender, poorly muscled extremities with delicate, pipestem bones, and he has, relative to his mass, the greatest surface area and hence the greatest sensory exposure to the outside world (30).

The case reports indicated that persons who are classified as endomorphs are likely to show manifestations characterized by general relaxation, love of comfort, sociability, conviviality, gluttony for food, for people, and for affection; mesomorphy is roughly a predominance of muscular activity and of vigorous bodily assertiveness; ectomorphy is roughly a predominance of the element of restraint, inhibition, and of the desire for concealment (30).

Bronsin (31) and Moore (32) discussed eating as a compensatory refuge for insecurity, anxiety, defeat, lonesomeness, and social isolation. They pointed out that anxiety, insecurity and emotional instability might manifest themselves in behavioral patterns whereby, voluntarily or involuntarily, a person either eats to excess or rejects food. Mead (33) considered the problem of body weight in children to have both physiological and socio-psychological aspects.

The psychologic considerations concerned with food intake and weight manifest complexities. Hamburger (34) and Monello and Mayer (35) emphasized

the concepts of hunger and appetite or satiety sensation as physiological and psychological responses. Bruch (36) focused on the cultural and socio-cultural aspects of nutrition as causes for weight problems. Researchers (37, 38, 39, 40) pointed to numerous psychologic considerations as limiting factors in food intake. Gill (41) emphasized that food, an organic necessity, means more to the overweight person in that it may be a chief source of satisfaction. Hamburger (42) suggested that family attitudes, habits and customs about food and eating can predispose a child to overeating. That overeating which leads to overweight can be traced to an individual's enjoyment of food was recognized by Conrad (43). Suczek (44) stressed the psychological aspects of weight when he indicated that successful dieting is dependent upon the changing of attitudes toward eating and food. Leverton (45), however, felt that the two most important factors involved in the conquest of overweight are effective motivation and suitable knowledge.

Others have found psychological factors to be of importance in overweight. Werkman and Greenberg (46) compared eighty-eight obese adolescent girls with 42 normal-weight girls. The obese girls showed unusual narcissism, difficulty in impulse control, considerable social anxiety, behavioral immaturity, and depression. They were less ambitious in their life goals and seemed to live within a pattern of ego restriction of social and occupational horizons, and faulty perception of significant concepts appeared to accompany overweight. Stunkard (47) believes that it has not been possible to define the psychological characteristics of obese people which will consistently distinguish them from non-obese people. While Leckie and Withers (48) feel that they have developed an inventory which shows that the clinically obese are a population having an underlying tendency to depressive

illness.

Some psychopathological studies (49, 50) have compared anorexia nervosa and bulimia. Guiora (49) suggested the name "dysorexia" for the syndrome comprising both anorectic and bulimic behavior. The dramatic self-starvation, one pole of the syndrome, and the other side of the disorder, overeating, should be understood as an expression of the basic conflict of womanhood and motherhood identity (49). Guiora explained the disorder:

> In the background looms large the lesion in the ego structure, and the extent of this lesion will determine the direction dysorexia will take. The greater the lesion, and consequently the weaker the inhibitions, the more the sadistic component will prevail and take the form of overt aggression, i.e., bulimia. The patient will eat the "others."
>
> If the lesion is less severe and the inhibitions stronger, the masochistic component will have the upper hand, aggression will be passive, inward-directed (the patient will eat herself), and the clinical picture will be that of anorexia (49).

Crisp (51) has shown some relationships between the marked underweight and the grossly overweight: in particular, such psychosomatic factors as sexual behavior and level of activity in the two groups and such concepts and descriptive features as "denial," "compulsion," and "addiction" which are seemingly applicable to and shared by both groups. Also he emphasized the importance of carbohydrate to both the persons suffering from anorexia nervosa and those suffering from obesity. He felt that carbohydrates had special meanings for each group.

The psychological and sociopsychological aspects of over- or underweight seem to be many and complex. Certain basic underlying reasons account for each individual case of overconsumption of food. Among the contributing factors are insufficient exercise, metabolic, hereditary, endocrine, and psychological disorders and with adults—lessened energy need with age. Regardless of the reasons for development of overweight which is a

generalized weight excess due to the accumulation of fat beyond the 10 to 20 per cent of normal range for age, sex, and height, the consequences make it undesirable. Canning and Mayer (52, 53) examined the effect of obesity on college acceptance. They (52) found that obese college applicants were rejected at a higher rate than non-obese applicants. Subsequent study (53) of the problem showed that there was prejudice against the obese applicant. This prejudice seemed to come mainly from college interviews. Other complications can be traced directly to obesity. Warner and Garrett (54) reported that the obese patient poses special problems and risks for anesthesia and surgery.

Physiological and Sociopsychological Aspects of Body Build, Body Weight, and Food Intake

For many years, social scientists have used questionnaires to gather social and economic data including questions about foods. Work by Margaret Mead (33) indicated the interrelationships of the sociopsychological and physiological aspects of food intake. Chassy et al. (55) found several social science research methods useful in obtaining information on food habits, when quantitative information on food consumption was not essential to study.

Lee (56) indicated that the very first ingestion for the human being is culturally structured. Will the baby be breast-fed or bottle-fed? Will he be given colostrum, milk, or some other fluid at his first feeding? Who will feed him and how? Will the feeding experience be one of simultaneously experiencing comfort, social warmth, solace, emotional communication and nutrition or will it be a situation of sheer nutrition? Such questions as these "are answered differently according to the culture of the society into

which the infant is born. . . . Culture may present food mainly as a means for the stilling of hunger, or of getting nutrition, or as the way to psychosomatic health; it may regard eating as a duty or a virtue, or as gustatory pleasure or as a social or religious communion" (56). Prugh (57) pointed out that a society's standard of beauty of figure brings direct pressure upon the eating habits of persons under the culture. Babcock (58, 59) reported that experiences with food affect the attitude and behavior response of the child to early gratification and frustration. Selection of a method of resolution of the internal tension and anxiety concomitant with these experiences depends upon his earliest interpersonal relationships. His attitudes toward and use of food as an adult to provide security for himself and to communicate with, control, or manipulate other persons may be derived from these early experiences. Tinsley (60) stated the same idea when she wrote "As the Twig is Bent." Stiebeling and Dreis (61) reported that food habits are "Habit—and More." Fathauer (62) emphasized the importance of culture upon food intake and the resultant variety of food intake.

Since the hazards of overweight seem to be numerous, possible solutions are important. It is well known that a reduction in food intake leads to loss of weight. Grande (63) questioned this "established" theory when he reviewed the literature on metabolic physiology which is important for the proper evaluation of the effects of caloric restriction on the composition of the body. He emphasized the discrepencies in reported results of caloric restriction and weight lost (63). The loss of weight seemed to be more than fat tissue. Conversely, Miller et al. (64, 65) questioned the idea that increase in food intake inevitably leads to gain of weight. They found that excess caloric intake of subjects was disposed of by an increased heat

production (64). This view was supported by the measurement of oxygen consumption. The thermic effect was greatly increased while exercising (65).

Glucksman and Hirsch (66) advanced the possibility of multidisciplinary investigation as a solution to the conflicting reports of behavioral responses of obese patients during weight reduction. Reporting one aspect of such an approach, they found that in selected obese patients, psychopathologic adaptations during weight reduction were related to diminished body size, interpersonal transactions in the hospital environment which articulated with previous injurious experiences, and caloric deprivation. Drenick (67) emphasized the advantages of a "semistarvation" regimen. He felt that this method resulted in rapid and extensive weight loss without much hunger under controlled hospital conditions. Although advantages were cited, it was noted that severe dietary restriction does result in major physical and biochemical changes which could cause serious complications. Wagonfeld and Wolowitz (68) explored the dynamics of membership in self-help weight-reduction groups and found that such a group strengthens existing defenses but does not alter personality. The group demonstrated the theme of aggression played out among members (68).

Body Image

Stunkard and Mendelson (69) reported that "of all the forms of neurotic behavior to which obese persons are subjected, only two seem specifically related to their obesity. The first is overeating, the second is a disturbance in the body image (69)." Body image refers to the concept which each individual has of his own body as an object in space, independently and apart from all other objects. The body image develops in infancy and

childhood, changes radically during the rapid growth of adolescence, and only when disturbed does its existence become apparent (70). Researchers (69) have established three criteria which contribute to disturbance of body image in the obese: (a) onset of obesity before adulthood, (b) individual suffers from an emotional disturbance and (c) derogatory parental concern focused on the obesity. Meyer and Tuchelt-Gallwitz (71) found that the obese when confronted with pictures consisting of 17 which on one side continuously broadened and on the other continuously thinned, + and -3 per cent each in both directions showed greater deviations. There was a significant trend towards enlargement only in the hyperphagic, compulsive eaters, group. Braun and Link (72) found that self-acceptance was negatively correlated with food aversion. Schwab and Harmeling (73) found that the extension of negative feelings toward the body as a whole correlated with indices of emotional distress. They reported striking body-image differences between the sexes; women were more dissatisfied with their bodies and their attitudes were much more closely tied to illness and psychological well-being. Men, however, had negative body images correlated with advancing age and higher socioeconomic status.

Attitudes

In numerous disciplines the study of attitudes has occupied a dominant place in theory and research. An attitude has been defined by Rokeach (74) as an organization of several beliefs focused on a specific object (physical or social, concrete or abstract) or situation, predisposing one to respond in some preferential manner. Some of these beliefs about an object or situation concern matters of fact and others concern matters of evaluation.

An attitude is thus a package of beliefs consisting of interconnected assertions to the effect that certain things about a specific object or situation are true or false and other things about it are desirable or undesirable. Hatcher and Andrews (75) stated that attitudes may be regarded as a series of personal beliefs or ideas which cause an individual to feel and act in certain ways. This "feeling" aspect indicates an emotional content. Hall and Paolucci (76) reported that attitudes might be defined as a state of readiness to react toward individuals, situations, or objects. The manner in which one acts may be influenced by social pressures, specific characteristics of the particular situation, moral situation, emotions, or other complex elements.

When attempting to measure attitudes, statements on an attitude scale should be applicable for the cultural group in which they are used and they should be debatable. Persons with differing views should respond differently. Some of the common approaches to measuring attitudes are: (a) equal-appearing intervals; (b) rating scale; (c) incomplete sentences; (d) picture-story; and (e) observations and self-reports (76).

Review of the literature substantiates the opinion that research in the area of food habits and food attitudes is in a state of flux. Research is needed to determine the effect of attitudes toward selected traits and personal history on body weight.

Purpose of Study

This study was designed (a) to measure the influence of attitudes and personal history on the physical status of adult women and (b) to determine the degree of interrelationship among these factors. The parameters used

were personal histories, attitudes toward selected traits, and height and weight measurements.

Hypotheses to be tested are that deviations in women from the average body weight are related to attitudes toward selected traits and personal history; and that interrelationships exist among these factors.

METHODS AND PROCEDURES

Selection of Sample

One hundred twenty-five, registered female voters in Manhattan, Kansas between the ages of 21 and 50 years were selected as subjects in this study. The names, ages, addresses, and occupations of all women voters within the range were obtained from the Voter Registration Books in the Office of the City Clerk. Each name appeared alphabetically according to precinct, except in the case of Ward I which had no precincts. The City of Manhattan is divided into five voting wards and each ward, except Ward I, is further subdivided into precincts. There are a total of twenty precincts. With the assistance of a statistician and tables of random numbers, random samples from each of the 19 precincts and Ward I were drawn. The twenty individual sampling processes were made in order to insure a sample from each precinct or ward proportional to the population of the ward or precinct and the total population of Manhattan (Table I, appendix).

Each subject was assigned numbers representing (a) subject, (b) the ward, and (c) precinct. Thus the interviewer did not know the name of the subject.

On first contact the interviewer explained the study and asked for the woman's participation and interviewed her if agreeable. If the sample address chosen did not yield an interview, the interviewers went first to the house on the right and then to the house on the left as described by Blalock (77). If after these three attempts no subject was found, then a new participant was drawn from the same ward or precinct.

Interview

Interview Schedule

The interview schedule consisted of four forms. Form I (appendix) consisted of a schedule of 40 traits related to body image as one feels others see him, as he sees himself, and what he considers ideal for himself. Form II (appendix)—a personal history containing questions concerning personal data, dietary and health beliefs, nutrition history, and dietary pattern (10-27). Physical measurements were recorded on form III (appendix).

Training of Interviewers

Four Kansas State University students were selected for interview training in the following manner: Two assigned articles on research interviewing techniques were read and discussed (28, 39). Instruction was given as to method of soliciting subject's participation, uniform administration of instrument, method of securing height and weight and termination of interview technique. All procedures were to be performed in the predetermined and prescribed manner to insure continuity among interviewers in interview techniques. In the actual interview they were told to ask only the questions on the questionnaire, avoiding any conversation which might cause bias. The interviewers were trained to ask questions on each trait proceeding (a) as others see you, (b) as you see yourself, and (c) your ideal. Then move to the second question and repeat the three phases of body image for each trait. The interviewers were taught to end an interview in a pre-determined manner, i.e., thank the participant after weighing.

Interviewers practiced the interview technique by interviewing the other interviewers and other students. Then each interviewer observed two interviews with the trainer. Finally each one conducted two interviews with the trainer observing. The trainer accompanied each interviewer on other interviews periodically to insure continuity in technique.

The Interview Process

Interviews were begun on October 1, 1968, and the last interview was completed December 3, 1968. No interview appointments were made: subjects were contacted at home and asked to participate. Interviewing was conducted on Tuesday through Friday of each week except the Thanksgiving Holidays, November 27-29, 1968. Interviewing was confined to Tuesday through Friday omitting holidays in an attempt to eliminate bias caused by different living patterns during weekends and holidays.

The interview session included: (a) explanation of the study to the prospective participant; (b) obtaining permission to conduct interview; (c) obtaining feelings toward each trait on Form I concerning body image; (d) obtaining information for Form II concerning personal data, nutrition and health beliefs, nutrition history, and dietary pattern; and (e) weighing and measuring the height of each woman. On Form I feelings concerning each trait were sought in three ways: (a) as others see you; (b) as you see yourself; and (c) your ideal. These three questions were asked for each trait before moving to the next trait.

A description of the height and weight measurements conducted follows:

> Standing Height--distance from the soles of the shoes to top of head measured. Women stood straight against a vertical surface with no baseboard. The subject's height was measured using an "infa-rule" held in contact with the floor with the foot and the

scale extended up the wall to measure the woman's height (78). No corrections were made for heel heights.

Weight--weight with indoor clothing. Bathroom scales checked with a Health-O-Meter scale were used for recording of all weights. The scales were carried in an attache case and were not seen by the subject until the interviewer asked for the subject's exact height and weight (78). No corrections were made for weight of clothing.

Tabulation of Data

Personal History

The percentage response was determined for items on the personal history. Percentages were determined for the number of subjects giving similar responses to selected questions. For specific questions the number giving a certain response was divided into height-weight classification, i.e., underweight, average weight, and overweight. The percentage responding in a designated manner was determined for each weight group.

Height and Weight Data

The height and weight of each woman were compared with the Height-Weight table prepared by Hathaway and Foard (8). The data were grouped into three divisions according to the position on the table: Overweight; Underweight; and Average Weight. A deviation of ± 10% of the "median" weight for height determined the weight category into which a person fell.

Attitude Toward Selected Traits

Each response given on the body image schedule was assigned an identification number. These were transferred to punch cards. The responses were categorized according to age group, height-weight group, occupation, income,

and education. Data for each trait were arranged in a 3 x 3 contingency table and analyzed by means of a chi-square test. Analysis of data indicated the differences between the number of responses given a rating of (a) not at all, (b) moderately, and (c) very much for each trait in accordance with the feelings expressed (d) as others see you; (e) as you see yourself; and (f) your ideal.

RESULTS

Description of Subjects

One hundred twenty-five randomly selected women between the ages of 21 and 50 years from Manhattan, Kansas were interviewed between October 1, 1968 and December 3, 1968. Interviews were conducted on Tuesday through Friday except holidays in an attempt to eliminate bias (46). Information concerning body image, personal history, and height and weight were measured for each participant. The participants were from various racial, ethnic, and socioeconomic backgrounds.

Birthplace of Subjects and Their Parents

One hundred thirteen of the 125 participants indicated that they were born within the continental United States, while twelve presented their birthplace as other than the United States. Seven regions of the United States and seven countries were represented. The distribution of the population was as follows:

TABLE 2

Place of birth of subjects

Place	No.	Percentage
United States	113	90.4
North East	3	2.4
Southern	10	8.0
Midwest	75	60.0
Southwest	13	10.4
Rocky Mountain	8	6.4
West	3	2.4
District of Columbia	1	0.8
Other than United States	12	9.6

In response to questions concerning the place of birth of the participants' parents six regions of the United States and ten countries were mentioned. One hundred nine fathers and 112 mothers were born in the United States, while 16 fathers and 13 mothers were foreign born. The percentage distribution was:

TABLE 3

Place of birth of parents of subjects

Place	Parent[a]	No.	Percentage
United States	F	109	87.2
	M	112	89.6
North East	F	5	4.0
	M	8	6.4
South	F	11	8.8
	M	9	7.2
Midwest	F	78	62.4
	M	84	67.2
Southwest	F	11	8.8
	M	7	5.6
Rocky Mountain	F	1	0.8
	M	3	2.4
West	F	3	2.4
	M	1	0.8
Other than United States	F	16	12.8
	M	13	10.4

[a]F = Father; M = Mother

It is of interest that the Midwest was the birthplace of 60.0% of the participants, 62.4% of the fathers, and 67.2% of the mothers.

Age, Education, Occupation, and Income

In answer to questions concerning age, education, occupation, and income, the participants were asked to indicate the most representative

category. The responses given as characterizing the participants are recorded on Table 4.

TABLE 4

Age, education, occupation, and income designated as representative by subject

	Number of Subjects			
	Total	Under-weight	Over-weight	Average weight
Age (years)				
21-35	64	9	22	33
35-50	61	7	28	26
Education				
1-8	4	0	2	2
9-12	42	7	24	11
College	27	3	6	18
College Graduate	30	3	8	19
Graduate	22	3	10	9
Occupation				
Homemaker	78	7	34	37
Secretary	13	5	2	6
Teacher	17	2	5	10
Other	17	2	9	6
Gross Income of Family				
0-5999	44	7	20	17
6000-8999	28	2	12	14
9000-over	53	7	18	28

Health

When questioned about health, the 125 participants indicated that 16.0% were pregnant, 1.6% lactating and 82.4% neither pregnant nor lactating. All except one of the pregnant women were in the first trimester of pregnancy. They were compiled for tabulation with the non-pregnant. The

one who was in the second trimester of pregnancy was underweight for her height irrespective of pregnancy. Weighing and measuring of height indicated that of the participants 47.2% were average weight, 40.0% overweight, and 12.8% underweight. When questioned concerning correct height and weight, 12.8% of the sample reported seeing themselves as too tall, 19.2% too short; 5.6% reported they were underweight and 56.0% overweight. Fifty or 40.0% stated that they had been underweight at sometime during their life, while 73 or 58% said that they had been overweight during some period of their life. The times during the life cycle which were mentioned as being periods during which overweight and underweight occurred were as recorded in Table 5.

TABLE 5

Time of reported overweight and underweight

Time	Overweight		Underweight	
	No.	%	No.	%
Baby	9	7.2	10	8.0
Child	15	12.0	21	16.8
Adolescent	27	21.6	22	17.6
Young adult	35	28.0	26	20.8
Recently	19	15.2	7	5.6
Presently	45	36.0	6	4.8

The participants who reported having been overweight and underweight were asked to give the maximum number of pounds over- and underweight during their life. The responses are recorded in Table 6.

TABLE 6

Maximum number of pounds subjects reported being overweight and underweight during life

Pounds	Overweight		Underweight	
	No.	%	No.	%
5	7	9.6	9	18.0
10	18	24.6	11	22.0
15	8	11.0	6	12.0
20	17	28.3	10	20.0
25	7	9.6	—	----
30	7	9.6	4	8.0
35	—	----	—	----
40	5	6.8	—	----
85	1	1.4	—	----
150	1	1.4	—	----
No answer	2	2.7	10[a]	20.0

[a]Ten who reported underweight as a baby only did not answer how much underweight.

In response to a question--from your experience what would you say causes the most overweight--the participants indicated:

TABLE 7

Reported causes of most overweight

Cause[a]	No.	Percentage[b]
Overeating	91	55.8
Nerves	26	16.0
Lack of exercise	11	6.7
Thyroid	6	3.7
Desserts	4	2.5
Emotional	4	2.5
Eating wrong foods	3	1.8
Lack of willpower	3	1.8
Eating too much at once	3	1.8
Eating between meals	2	1.3
Being pregnant	2	1.3

TABLE 7 (cont'd)

Cause[a]	No.	Percentage[b]
Body fluid retention	2	1.2
Heredity	1	0.6
Too much money	1	0.6
Disease	1	0.6
Liking food	1	0.6
Food habits	1	0.6
Due to fat	1	0.6
	163	100.0

[a]Many gave more than one cause of most overweight, thus there were 163 causes recorded.

[b]Percentage is based upon the total number of causes recorded not upon the number of subjects.

The obvious concentration of suggested reasons for most overweight was over-eating, nerves, lack of exercise, and thyroid which comprised over 80% of the total recorded responses.

The reasons given for losing weight were recorded as follows in Table 8.

TABLE 8

Reasons given for losing weight

Reason[a]	No.	Percentage[b]
Appearance	73	40.5
Health	39	21.6
Blood pressure	21	11.6
Feel better	14	7.7
Pride and vanity	10	5.5
Get into clothes	9	5.0
So can be active	3	1.7
Diabetes in family	2	1.1
Please husband	2	1.1
Others[c]	7	4.2
	180	100.0

[a]Many gave more than one reason. A total of 180 reasons were given.

[b]Percentage based upon total (180) reasons given.

[c]Includes 7 other reasons that were given only once.

Seventy-three of the 125 participants stated that if they were overweight they would lose the excess poundage because of appearance. Thirty-nine mentioned health, 21 blood pressure and 14 feeling better--these responses might be combined under the general heading of health which would mean 40.9% of the responses were concerned with health while at least 40.5% were centered around appearance.

Furthermore, in answer to the question--if you had a friend or relative who was overweight what health hazards would you expect him to be facing? The subjects answered as indicated in Table 9.

TABLE 9

Health hazards thought to be caused by overweight as reported by subjects

Health hazard[a]	No.	Percentage[b]
Heart disease	115	58.4
Diabetes	37	18.8
Lung trouble	11	5.6
Vein trouble	9	4.6
High blood pressure	7	3.6
Lack of energy	4	2.0
Mental illness	3	1.5
Shorter life	3	1.5
Stroke	2	1.0
Others[c]	6	3.0
	197	100.0

[a]Many gave more than one health hazard. A total of 197 health hazards were suggested.

[b]Percentage is based upon total (197) suggested health hazards not upon number of subjects.

[c]Includes 6 other hazards that were given only once.

Possibly there was some incongruity in the attitudes and opinions expressed. When considering reasons for losing weight 21 gave blood pressure, while only 7 mentioned blood pressure as a health hazard. Only 2 gave diabetes or the supposed threat of diabetes as reason for losing weight but 37 listed diabetes as a health hazard. Most striking is that no one gave heart disease as an incentive for weight loss but 115 felt it was a health hazard caused by or related to overweight.

Each subject was asked what she considered to be ideal height and weight and the actual height and weight of each were recorded.

TABLE 10

Subjects actual height and reported height subjects considered ideal

Height	Actual		Ideal	
	No.	%	No.	%
4'11"	5	4.0	1	0.8
5'	6	4.8	1	0.8
5'1"	8	6.4	1	0.8
5'2"	8	6.4	4	3.2
5'3"	8	6.4	6	4.8
5'4"	22	17.6	22	17.6
5'5"	16	12.8	15	12.0
5'6"	18	14.4	44	35.2
5'7"	16	12.8	13	10.4
5'8"	3	2.4	12	9.6
5'9"	6	4.8	4	3.2
5'10"	1	0.8	--	----
5'11"	6	4.8	1	0.8
6'	2	1.6	1	0.8
6'1"	--	----	--	----

TABLE 11

Subjects recorded actual and reported weight subjects considered ideal

Weight lbs.	Actual		Ideal	
	No.	%	No.	%
90	--	----	--	----
95	1	0.8	6	4.8
100	1	0.8	5	4.0
105	3	2.4	12	9.6
110	7	5.6	14	11.2
115	3	2.4	23	18.4
120	16	12.8	22	17.6
125	18	14.4	22	17.6
130	14	11.2	11	8.8
135	10	8.0	1	0.8
140	20	16.0	2	1.6
145	14	11.2	6	4.8
150	3	2.4	--	----
155	5	4.0	--	----
160	4	3.2	--	----
165	2	1.6	1	0.8
170	2	1.6	--	----
175	2	1.6	--	----

Other health related questions were asked and certain discrepancies noted. Each participant was asked how often one should visit the doctor and how often she did visit the doctor. The following table shows the distribution of answers.

TABLE 12

Reported number of times subjects felt one should visit the doctor and reported number of times subjects did visit the doctor

Number of times	Should visit		Did visit	
	No.	%	No.	%
Once a week	—	———	2	1.6
Once a month	1	0.8	—	———
Every six weeks	1	0.8	3	2.4
Seven times/year	—	———	2	1.6
Six times/year	4	3.2	3	2.4
Five times/year	1	0.8	4	3.2
Four times/year	4	3.2	9	7.2
Three times/year	10	8.0	15	12.0
Two times/year	67	53.6	46	36.8
One time/year	33	26.4	32	25.6
Once every two years	—	———	1	0.8
No more than have to	—	———	1	0.8
When ill	3	2.4	—	———
Several	—	———	3	2.4
Never	—	———	3	2.4
No answer	1	0.8	1	0.8

Oddly enough, the sample population tended to report that they did visit the doctor more than they felt a person should.

Physical activity and interest in physical activity of the participants were rather revealing. When asked whether they considered themselves to be active, moderately active or inactive, the distribution of responses was as recorded in Table 13.

TABLE 13

Reported degree of activity in life of subjects

Rating	No.	%
Active	65	52.0
Moderately active	55	44.0
Inactive	5	4.0

When the participants were asked to describe their activity and interest in sports events, the following responses were recorded in Table 14.

TABLE 14

Reported activity and interest in sports events

Activity[a]	No.	%[b]
Participants	39	31.2
Attend to watch	75	60.0
Observe on T.V.	84	59.2
None	24	19.2

[a]Some gave more than one activity; giving a total of 212 answers.

[b]Percentages figures on the basis of the percent of 125 who reported each.

From the two above Tables 13 and 14 it is apparent that there is a definite discrepancy between the reported degree of activity and the reported activity and interest in sports events. While 52.0% of the participants considered themselves active only 31.2% engaged as participants in any sports events. Only 4.0% of the participants considered themselves as inactive while 19.2% indicated no activity or interest in sports events.

Another interesting comparison can be made when the type of physical activities considered most beneficial to health are compared with the physical activity actually engaged in daily.

TABLE 15

Reported type of physical activity considered most beneficial to health and physical activity

Activity	Beneficial activity[a]		Daily activity[c]	
	No.	%[b]	No.	%[d]
Physical exercise	17	13.6	9	7.2
Housework	1	0.8	63	50.4
Walking	58	46.4	40	32.0
Yardwork	1	0.8	2	1.6
Climbing stairs	—	———	3	2.4
Jogging	23	18.4	8	6.4
Horseback riding	—	———	2	1.6
Hiking	2	1.6	1	0.8
Working	—	———	7	5.6
Bicycling	14	11.2	4	3.2
Golf	4	3.2	1	0.8
Children	—	———	2	1.6
Teaching	—	———	1	0.8
Bowling	2	1.6	—	———
Sports	4	3.2	—	———
Swimming	18	14.4	—	———
Outdoor activity	6	4.8	—	———
Dancing	2	1.6	—	———
None	—	———	4	3.2

[a]Since some gave more than one answer for the beneficial activity, there were a total of 152 suggestions.

[b]Percentage is based on percent of 125 subjects who think each activity is beneficial.

[c]Since some gave more than one answer for the daily activity there were a total of 147 activities given.

[d]Percentages are based on the percent of 125 subjects who did each activity daily.

The activities given most frequently as being beneficial were walking 46.4%, jogging 18.4%, swimming 14.4%, physical exercise 13.6%, and bicycling 11.2% while these activities were engaged in daily by these percentages walking 32.0%, jogging 6.4%, swimming 0%, physical exercise 7.2%, and bicycling 3.2%. The daily activity most often mentioned was housework 50.4% while only 0.8% considered it beneficial to health. It would appear that daily activity is little regulated by consideration for benefits to health.

Food Habits

The participants were classified according to height-weight--12.8% underweight, 47.2% average weight, and 40.0% overweight. Tabulation of the data on eating habits according to height-weight showed definite differences between the underweight, average weight and overweight groups. The following graphs (Figures 1, 2, and 3) show the meal patterns for the three groups.

It is apparent from the above graphs that the overweight tend to skip all three meals the most often. The underweight group tended to skip breakfast to some extent but always ate lunch and dinner. The average weight group skipped some of all meals but never to the extreme that the overweight did.

When the participants were asked how long it had been since they had eaten breakfast and lunch regularly the responses were recorded in Table 16. It will be noted that a response to these two questions does not necessarily correspond with the reported regularity of meal eating as recorded in Figures 1 and 2. In other words, there seemed to be no relationship between the meaning of "daily" and "regularly."

Fig. 1 Breakfast pattern of the underweight (u), average weight (a), and overweight (o) participants.


100
PERCENT EATING BREAKFAST
u a o
never
1
2
3
4
5
6
7
TIMES PER WEEK

Fig. 2 Lunch pattern of the underweight (u), average weight (a) and overweight (o) participants.

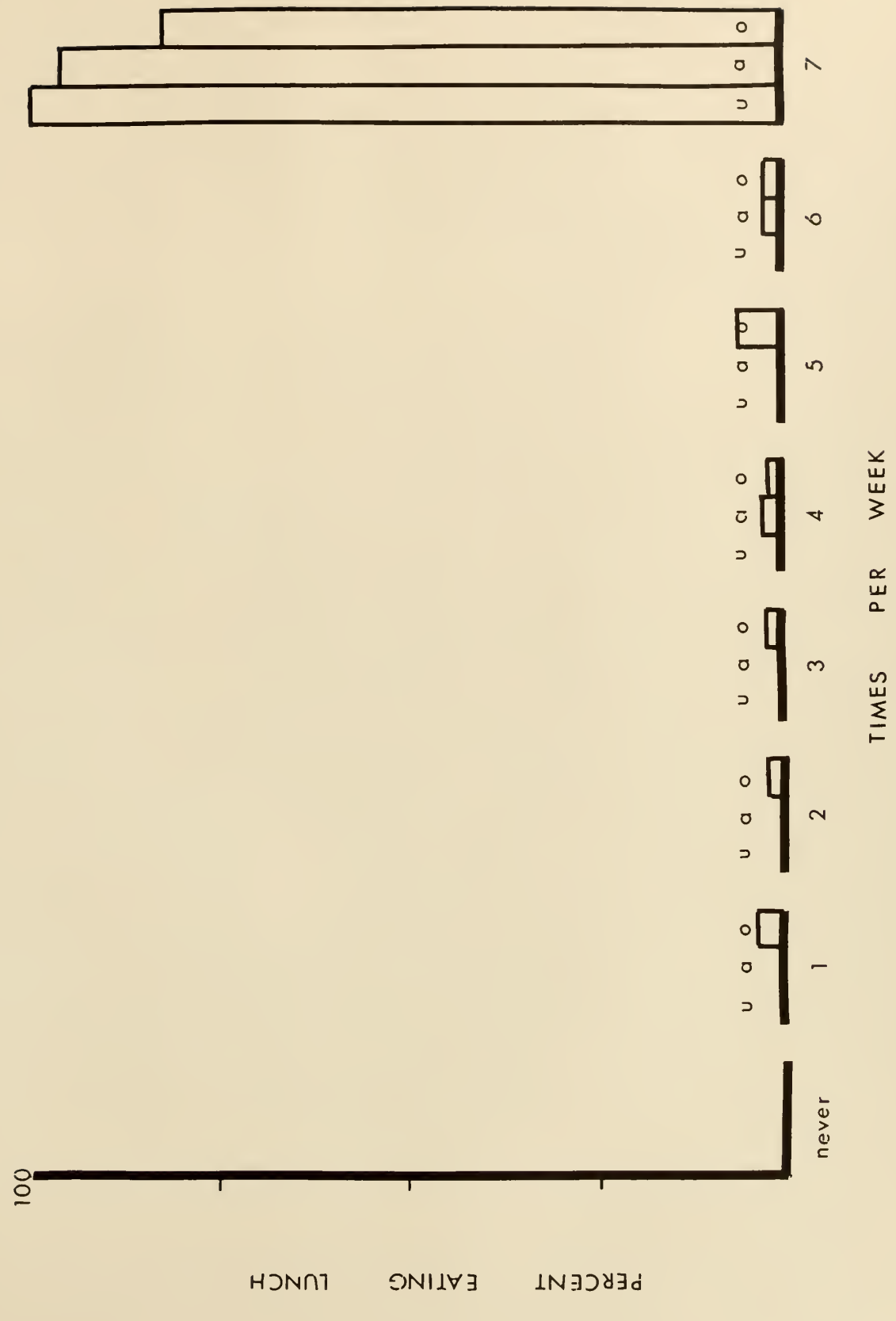

100
PERCENT EATING LUNCH
never
1
2
3
4
5
6
7
TIMES PER WEEK

Fig. 3 Number of times per week the underweight (u), average weight (a), and overweight (o) usually eat dinner.

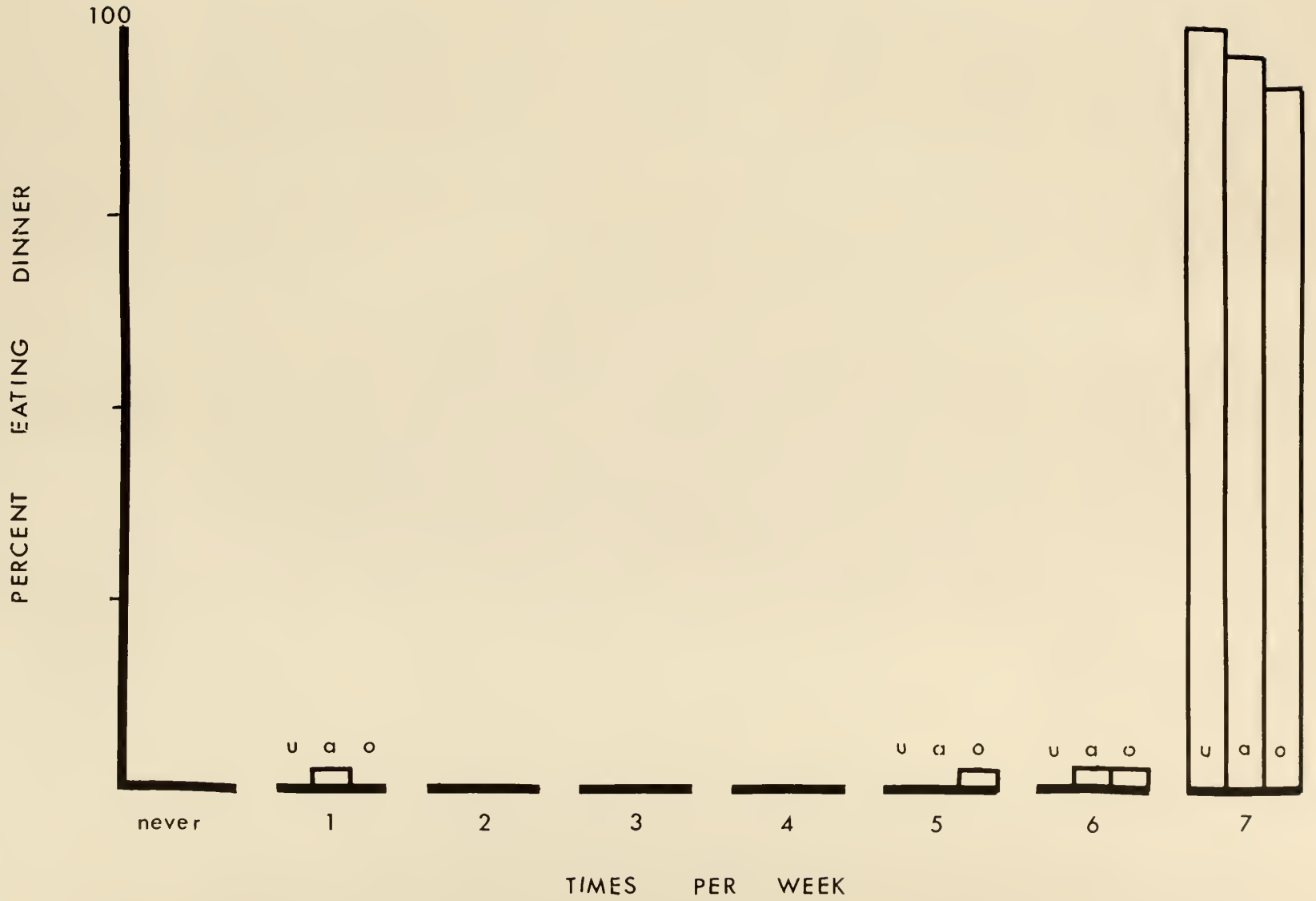

100
PERCENT EATING DINNER
u a o
u a o
u a o
u a o
u a o
never
1
2
3
4
5
6
7
TIMES PER WEEK

TABLE 16

Length of time since breakfast and lunch were eaten regularly

Time	Breakfast						Lunch					
	Under-weight		Average weight		Over-weight		Under-weight		Average weight		Over-weight	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One month	-	-	1	8.3	1	5.9	-	-	-	-	-	-
1 year	2	40.0	-	-	2	11.7	-	-	-	-	3	42.9
2 years	-	-	1	8.3	1	5.9	-	-	1	50.0	1	14.3
3 years	-	-	-	-	1	5.9	-	-	-	-	-	-
4 years	-	-	-	-	-	-	-	-	-	-	-	-
5 years	2	40.0	1	8.3	-	-	-	-	-	-	-	-
6 years	-	-	1	8.3	-	-	-	-	-	-	-	-
7 years	-	-	-	-	1	5.9	1	50.0	-	-	-	-
8 years	-	-	-	-	1	5.9	-	-	-	-	-	-
9 years	-	-	-	-	1	5.9	-	-	-	-	-	-
10 years	1	20.0	3	25.0	2	11.7	1	50.0	-	-	-	-
15 years	-	-	3	25.0	-	-	-	-	-	-	-	-
20 years	-	-	-	-	1	5.9	-	-	-	-	-	-
30 years	-	-	-	-	1	5.9	-	-	-	-	-	-
Many	-	-	-	-	1	5.9	-	-	-	-	-	-
Never	-	-	1	8.4	4	23.5	-	-	1	50.0	-	-
No answer	-	-	1	8.4	-	-	-	-	-	-	1	19.2

An overwhelming majority of all weight groups ate dinner everyday but the overweight tended to skip more than the others.

The respondents gave reasons for skipping lunch. The distribution of these answers is shown in Table 17. It seemed apparent that the factor of time was the most important reason for skipping lunch.

TABLE 17

Reasons expressed for skipping lunch

Reasons	Under-weight		Average weight		Over-weight	
	No.	%	No.	%	No.	%
No time	—	—	1	50.0	3	33.1
Not hungry	—	—	—	———	2	22.2
Lose weight	—	—	—	———	2	22.2
Not home	—	—	—	———	—	———
Don't like to eat alone	—	—	—	———	1	11.1
Don't want to fix	—	—	—	———	1	11.1
Eat 2 meals over weekend	—	—	1	50.0	—	———

Of further interest was the distribution of the weight groups' responses for the people with whom they ate. Table 18 shows these trends. One of the striking things about the people with whom each weight group ate lunch and breakfast was the fact that the overweight group ate alone more often than the under- and average weight women.

The responses to the question--where do you usually eat lunch is recorded in Table 19. The overweight and the underweight tended to eat more lunches away from home than did the average weight.

Tables 20 and 21 show the responses received on the questions concerning the main meal of the day and eating between meals.

TABLE 18

People with whom lunch and breakfast are eaten

People	Lunch						Breakfast					
	Under-weight		Average weight		Over-weight		Under-weight		Average weight		Over-weight	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Alone	6	37.5	17	26.5	20	40.0	1	6.3	4	6.8	6	12.0
Family	3	18.8	13	20.3	7	14.0	10	62.5	37	62.7	27	54.0
Friends	1	6.3	11	17.2	3	6.0	-	-	2	3.4	4	8.0
Husband	2	12.4	7	10.9	9	18.0	2	12.5	13	22.0	12	24.0
Children	2	12.4	7	10.9	8	16.0	-	-	-	-	1	2.0
Son	1	6.3	3	4.7	2	4.0	-	-	-	-	-	-
Roommate	1	6.3	3	4.7	-	-	3	18.7	3	5.1	-	-
Daughter	-	-	1	1.6	-	-	-	-	-	-	-	-
Grandchildren	-	-	1	1.6	1	2.0	-	-	-	-	-	-
No answer	-	-	1	1.6	-	-	-	-	-	-	-	-

TABLE 19

Place where participants reportedly ate lunch

Place	Underweight		Average weight		Overweight	
	No.	%	No.	%	No.	%
Home	13	81.3	53	89.8	35	70.0
Half at home—half cafe	—	———	—	———	3	6.0
Snack bar or cafe	—	———	5	8.5	2	4.0
School	3	18.7	—	———	9	18.0
Work	—	———	—	———	1	2.0
No answer	—	———	1	1.7	—	———

TABLE 20

Meals participants reported were the main meal of the day for them

Meal	Underweight		Average weight		Overweight	
	No.	%	No.	%	No.	%
Dinner	16	100.0	54	91.5	47	94.0
Lunch	—	———	4	6.8	2	4.0
Both lunch and dinner	—	———	—	———	1	2.0
Half lunch and half dinner	—	———	1	1.7	1	2.0

TABLE 21

Times participants reported eating between meals

Time	Underweight		Average weight		Overweight	
	No.	%	No.	%	No.	%
Between breakfast and lunch	4	25.0	29	49.6	16	32.0
Between lunch and dinner	8	50.0	22	37.3	21	42.0
After dinner	8	50.0	26	44.1	20	40.0
Before bed	6	37.5	21	35.6	21	42.0

All groups ate between meals. Differences were noted. Obviously the overweight tended to eat later in the evening before going to bed. The average weight tended to eat early in the day and the underweight show tendency to eat near the middle of the day.

Attitudes Toward Selected Traits

Respondents reaction to the 40 traits on the body image scale were recorded (a) as others see you, (b) as you see yourself, and (c) your ideal. Each response given on the scale was assigned an identification number and the information was transferred to punch cards. Data were pooled for each trait and arranged on a 3 x 3 chi-square. The responses were categorized according to age group, height-weight group, occupation, income, and education. Analysis of data indicated the differences between and/or among the number of participant category responses given a rating of (a) not at all, (b) moderately, and (c) very much for each trait in accordance with the feelings expressed (d) as others see you, (e) as you see yourself, and (f) your ideal.

Each of the 40 traits with the exception of the traits feminine and well-proportioned was shown to be related significantly at the 10, 5, 1% levels to one of the 5 participant categories. The level of significance was read from standard chi-square tables (80).

Age Groups

The participants were divided into two age groups—the younger group, 21-35 years; the older group, 35-50 years.

Others saw them. Both age groups gave comparable answers when asked

how others saw them in relation to the forty traits with the exceptions of weak ($p < .10$); stylish ($p < .05$); and underweight ($p < .10$). Predominately both age levels felt that others saw them as not at all weak, while approximately equal percentages felt that others saw them as very weak. The major differences between the two groups lie in the fact that over 20% of the younger group felt others saw them as moderately weak while only 8% of the older group felt this way. Over half of the younger group reported feeling that others saw them at either extreme with the largest rating being moderately stylish. Over half the older group stated that others saw them not at all stylish, while the remainder of their answers were divided approximately equally between moderately and very stylish. The largest percentage from the age groups felt that others saw them as not at all underweight. However the older group demonstrated a stronger tendency to feel that others saw them not at all underweight. Almost twice as many of the younger group as the older group felt that others saw them as moderately or very much underweight.

Self evaluation. Although similarities were observed in the self ratings, striking differences were also noted. Significant differences between the age groups were found in these traits: weak ($p < .05$); awkward ($p < .10$); boyish ($p < .10$); confident ($p < .05$); shy ($p < .05$); motherly ($p < .05$); petite ($p < .10$); dependent ($p < .01$); tailored ($p < .10$); domineering ($p < .05$); energetic ($p < .10$); flat-chested ($p < .05$); broad-hipped ($p < .01$); and underweight ($p < .10$). Fifty percent of the younger group saw themselves as moderately or very weak while 72.1% of the older group felt that they were not at all weak. Approximately 58% of the younger group saw themselves as moderately or very awkward while over 60% of the

group saw themselves as not at all awkward. The majority of both age groups felt that they were not at all awkward. The majority of both age groups felt that they were not at all boyish. However almost three times as many of the younger group as the older group considered themselves moderately boyish. Approximately equal numbers of each group considered themselves very boyish.

On the traits of confident ($p < .05$), shy ($p < .05$), and motherly ($p < .05$) the age group responses were noted. Fifty per cent of the younger group saw themselves as not at all confident or moderately confident, while 67.2% of the older group saw themselves as very confident. An approximately equal number of the younger group saw themselves as not at all shy or saw themselves as very shy. Forty per cent of the younger group saw themselves as moderately shy while only 23% of the older group saw themselves as moderately shy. Over twice as many of the older group saw themselves as not at all shy as saw themselves as very shy. Approximately three times as many in the younger group as the older group saw themselves as not at all motherly. The distribution for the other two ratings was similar for both groups.

For the traits petite ($p < .10$), dependent ($p < .01$), and tailored ($p < .10$) these responses were recorded. While 65.6% of the older group reported they saw themselves as not at all petite, only 11.5% saw themselves as very petite. In the young group, however, half as many reported they were very petite as reported they were not at all petite. The younger group tended to cluster around moderately dependent with approximately equal numbers in not at all (25.0%) and very dependent (26.6%) while the older group clustered at very dependent (47.5%) with 34.1% indicating not at all and 21.3% indicating moderately. For the trait tailored over 80% of the

older group saw themselves as very much or moderately tailored.

For the traits of domineering ($p < .05$) and energetic ($p < .10$) the following responses were noted. The largest portion of both groups reported they were not at all domineering. Almost twice as many younger women as older women reported they were very domineering while about twice as many older women as younger saw themselves as moderately domineering. Approximately equal numbers of younger women saw themselves very energetic and moderately energetic, while less than 10% saw themselves as not at all energetic. The older group showed a predominant trend toward seeing themselves as very energetic.

The traits of flat-chested ($p < .05$), broad-hipped ($p < .01$), and underweight ($p < .10$) received these responses. The older groups showed a tendency to see themselves as not at all flat-chested with equal numbers seeing themselves as moderately and very flat-chested. The younger group had the largest number seeing themselves as very flat-chested; followed by a second group seeing themselves as not at all flat-chested. In the younger group less than 20% saw themselves as moderately flat-chested. Approximately equal percents of younger women saw themselves as very broad-hipped while the older women saw themselves as not at all broad-hipped. About 40% of the younger women reportedly saw themselves as not at all broad-hipped while only 23% of the older women saw themselves as very broad-hipped. Approximately twice as many older women as younger saw themselves as moderately broad-hipped. The overwhelming majority of each group saw themselves as not at all underweight but the younger group had approximately equal numbers seeing themselves as moderately and very underweight while about 20% of the older group saw themselves as moderately underweight. Only 3.3% of

the older group saw themselves as very underweight.

The differences between the responses given by the two age groups for overweight were not significant but trends were noted. Over 50% of the older women saw themselves as not at all overweight, while about 44% of the younger women saw themselves as very much overweight. Approximately equal numbers of the younger group felt they were not at all overweight as felt they were very overweight in the older group. More of the younger women saw themselves as moderately overweight than the older group.

Ideal evaluation. Both age groups gave the same desirability ratings to the traits with the exceptions of unpredictable ($p < .10$); well-groomed ($p < .10$); dependent ($p < .05$); and underweight ($p < .05$). Approximately equal numbers of younger women considered being unpredictable not at all desirable as considered it moderately desirable. Less than 20% of the younger women felt being unpredictable was very desirable. The overwhelming majority of the older group felt the trait of unpredictable was not at all desirable with about 25% considering it moderately desirable and 10% considering it very desirable. Well-groomed was considered by the majority of the women to be a very desirable trait. However, about 15% of the older women felt being a well-groomed person was not at all desirable or moderately desirable, while approximately one-third of the younger women rated it as not at all desirable or moderately desirable.

The responses recorded for the ratings given by the traits dependent ($p < .05$) and underweight ($p < .05$) indicated the following trends. The ratings given by the younger group were fairly well dispersed along the scale while the majority of the older women felt that being dependent was very desirable. The majority of both groups considered underweight as not

at all desirable, but about three times as many older women as younger felt it was moderately desirable.

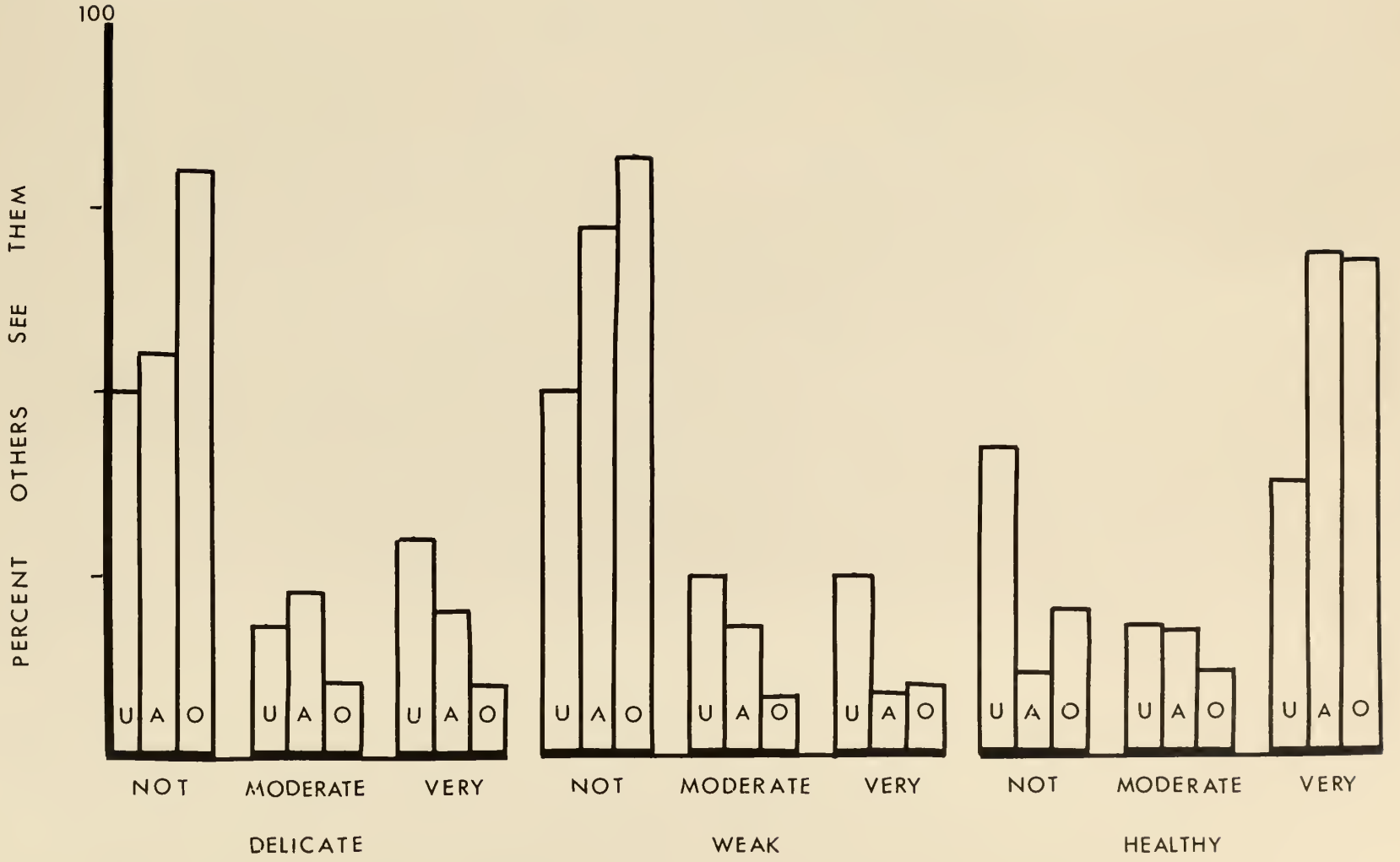
While not significant the responses for the trait, ill at ease, showed trends. Approximately equal percentages of younger women as older women gave being ill at ease a rating of not at all desirable, while about twice as many older women as younger gave a rating of moderately. Over 20% of the younger women and under 10% of the older women gave a rating of very desirable.

Weight

The participants were subdivided into three weight groups, overweight, average weight, and underweight (8). The responses for each of these weight groups were analyzed (a) as others saw them, (b) as they saw themselves, and (c) as an ideal trait.

When the participants were divided into groups according to weight, the responses given as to how others saw them were homogeneous with the exceptions of delicate ($p < .05$); weak ($p < .10$); healthy ($p < .05$); chubby ($p < .01$); untidy ($p < .10$); confident ($p < .10$); ill at ease ($p < .10$); motherly ($p < .05$); overweight ($p < .01$); muscular ($p < .01$); masculine ($p < .10$); stylish ($p < .01$); flat-chested ($p < .01$); and underweight ($p < .01$). The majority of each group felt others saw them as not at all delicate, Figure 4. While only 20% of the overweight reported others saw them as moderately or very delicate, 50% of the underweight and 44% of the average weight felt others saw them as moderately or very delicate. While 73% of the average weight reported feelings that others saw them as not at all weak, 50% of the underweight reported others saw them as moderately or

Fig. 4 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of delicate, weak, and healthy as others see them.


PERCENT OTHERS SEE THEM
100
U A O
NOT
MODERATE
VERY
DELICATE
WEAK
HEALTHY

very weak, Figure 4.

The responses received for the traits healthy ($p < .05$), chubby ($p < .01$), and untidy ($p < .10$), Figure 5, were recorded. Thirty-eight per cent of the underweight felt others saw them as very healthy, Figure 4, whereas 69.5% of the average weight and 68.0% of the overweight felt others saw them as very healthy. While 44% of the underweight felt others saw them as not at all healthy only 12% of the average weight and 20% of the overweight felt this way. The average weight and underweight reported similarly when over 60% of each indicated that others saw them as not at all chubby while the remaining answers were distributed approximately equally between moderately and very chubby. The reverse was true with the overweight group; 46% felt others saw them as very chubby; 28.0% felt others saw them as moderately chubby. The majority of the overweight and average weight reported feelings that others saw them as not at all untidy while only 25.0% of the underweight reported such feelings. Equal numbers on the underweight group reported others saw them as moderately or very untidy ($p < .10$).

For the traits confident ($p < .10$), Figure 5, and ill at ease ($p < .10$), Figure 6, these responses were noted. The overwhelming majority of the average weight and overweight felt others saw them as very or moderately confident while 50% of the underweight indicated that others saw them as moderately confident with the remaining 50% divided equally between not at all and very confident. The majority of the average weight and the overweight indicated that others saw them as not at all ill at ease while the majority of the underweight felt others saw them as moderately or very ill at ease.

For the traits motherly ($p < .05$), overweight ($p < .01$), Figure 6, and

Fig. 5 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of chubby, untidy, and confident as others see them.

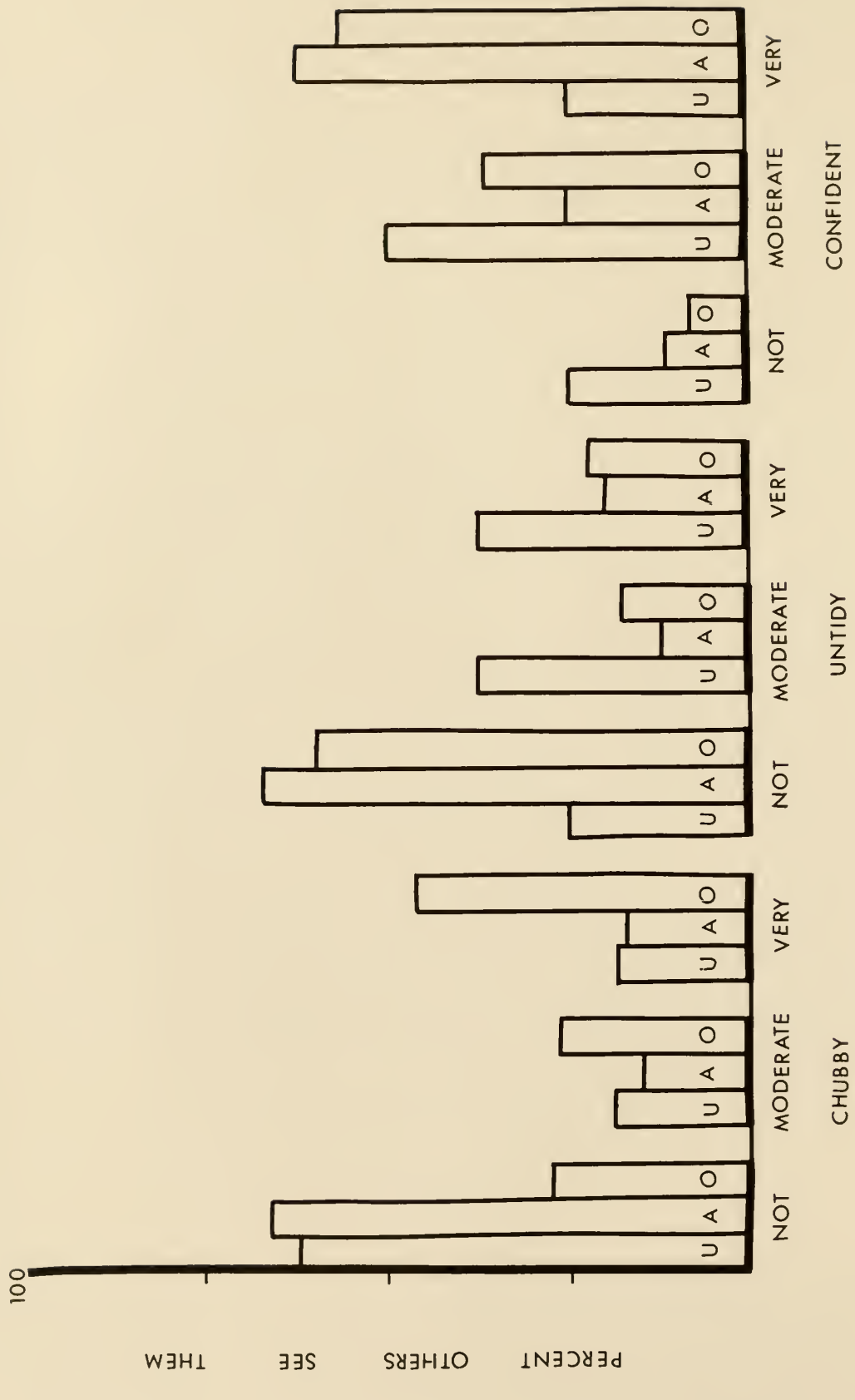
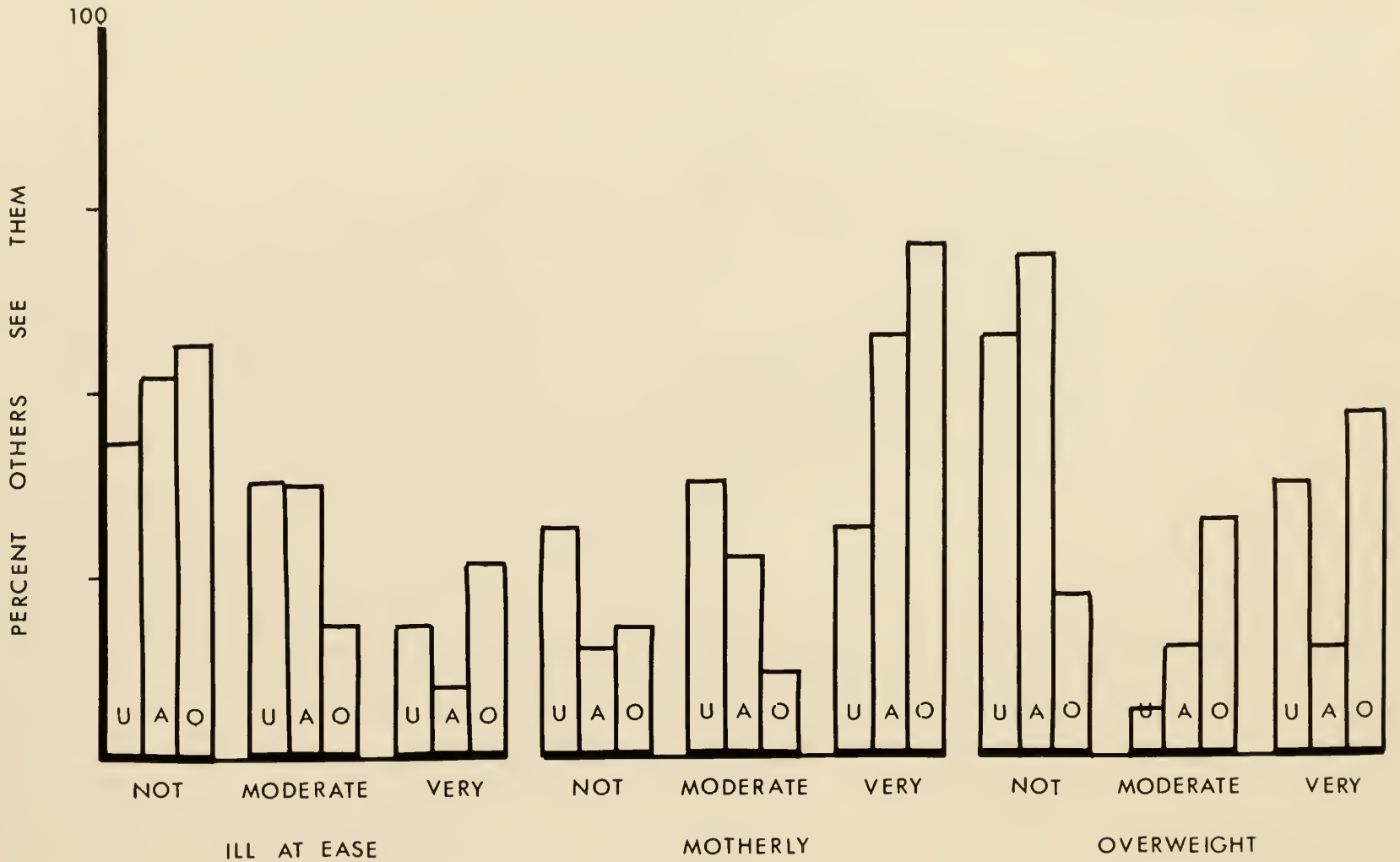

PERCENT OTHERS SEE THEM
100
NOT MODERATE VERY
CHUBBY
NOT MODERATE VERY
UNTIDY
NOT MODERATE VERY
CONFIDENT
U A O

Fig. 6 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of ill at ease, motherly, and overweight as others see them.


100
PERCENT OTHERS SEE THEM
U A O
NOT
MODERATE
VERY
ILL AT EASE
MOTHERLY
OVERWEIGHT

muscular ($p < .01$), Figure 7, these responses were elicited. The trait of motherly was given a rating of very much by 57.6% of the average weight and 70.0% of the overweight when considering how others saw them. The responses given by the underweight were fairly evenly divided among not at all, moderately, and very motherly with moderately receiving slightly more. The majority of the average weight and underweight felt others saw them as not at all overweight but the largest percentage of the overweight felt others saw them as very overweight. However, 54% of the overweight felt others saw them as not at all or moderately overweight. Approximately 75.0% of the average weight and underweight felt others saw them as not at all muscular while only 5% of the average weight felt others saw them as very muscular and none of the underweight indicated very muscular. While 50% of the overweight felt others saw them as not at all muscular, 32% indicated very muscular.

These responses were recorded for the traits of masculine ($p < .10$), stylish ($p < .01$), Figure 7, and flat-chested ($p < .01$), Figure 8. The overwhelming majority of the overweight and average weight felt others saw them as not at all masculine while the majority of underweight felt others saw them as moderately or very masculine. The largest number of average weight reported that others saw them as moderately stylish with approximately equal numbers reporting not at all and very much. The majority of the underweight felt others saw them as moderately stylish with two and one-half times as many reporting very much as not at all. While 62% of the overweight felt that others saw them as not at all stylish, 22% felt very much and 16.0% felt moderately. While 42.4% of the average weight and 70.0% of the overweight reported that others saw them as not at all flat-chested,

Fig. 7 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of muscular, masculine, and stylish as others see them.

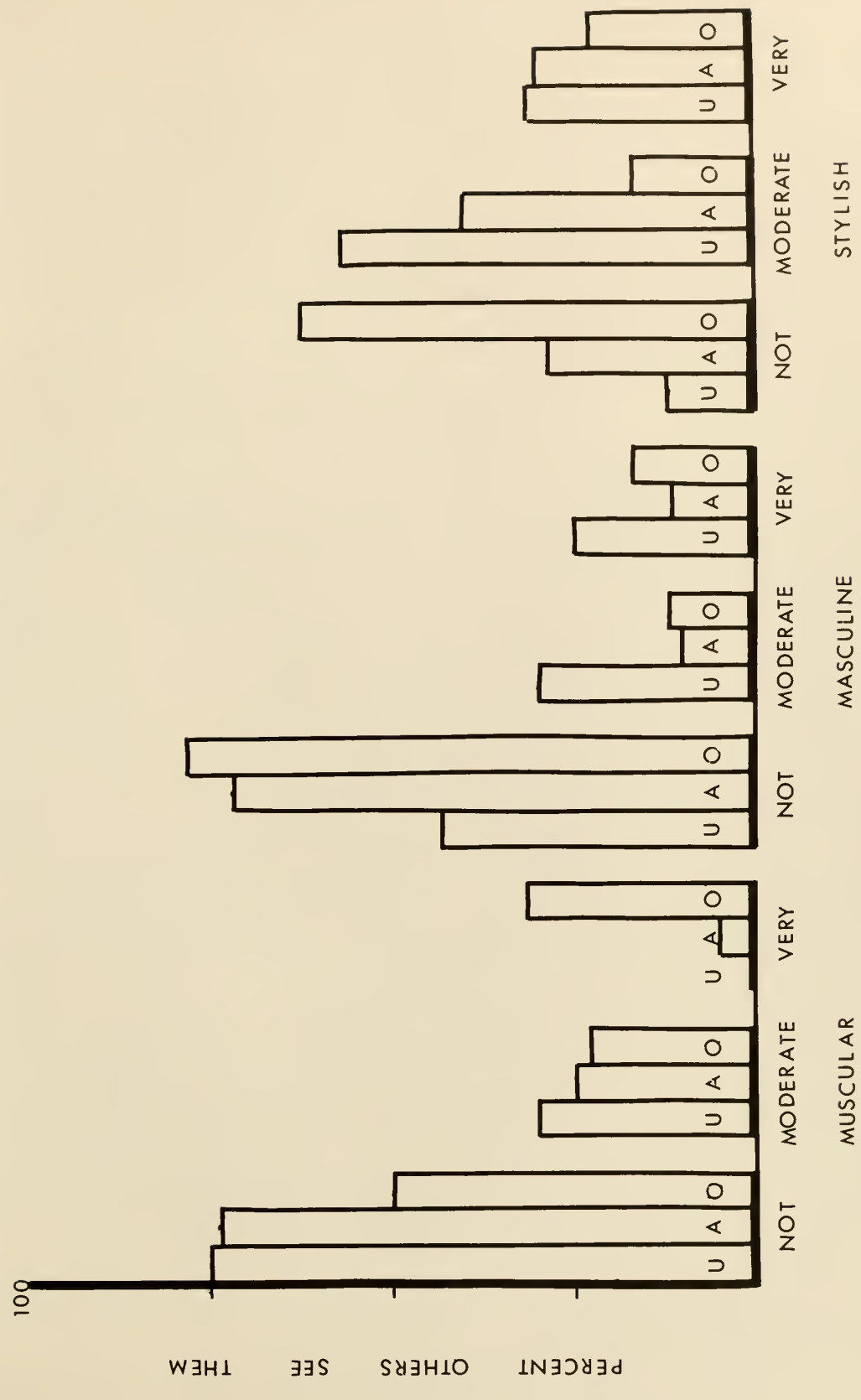
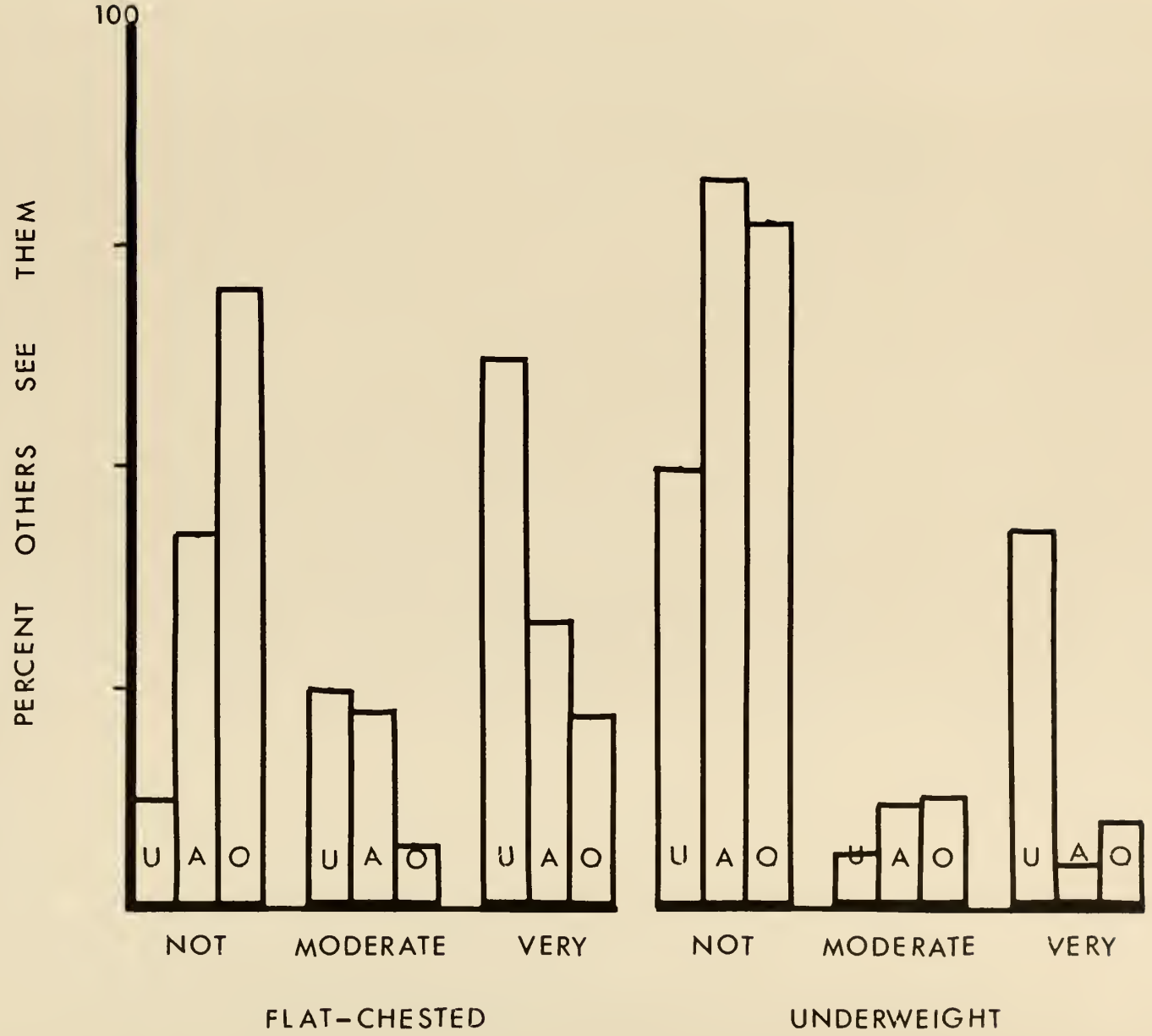

PERCENT OTHERS SEE THEM
100
NOT MODERATE VERY
U A O U A O U A O
MUSCULAR
NOT MODERATE VERY
U A O U A O U A O
MASCULINE
NOT MODERATE VERY
U A O U A O U A O
STYLISH

Fig. 8 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of flat-chested and underweight as others see them.


100
PERCENT OTHERS SEE THEM
U A O
NOT
MODERATE
VERY
FLAT-CHESTED
UNDERWEIGHT

only 12.5% of the underweight indicated this. Approximately 63% of the underweight indicated that others saw them as very flat-chested whereas approximately 34% of the average weight and 22% of the overweight stated this.

The overwhelming majority of the average weight and the overweight felt others saw them as not at all underweight, Figure 8, while 50% of the underweight indicated that others saw them as not at all underweight and 43.8% of the underweight reported others saw them as very underweight. Thus the underweight tended to answer in the extreme.

While not significant, definite trends were noted for the trait of broad-hipped. The largest percentages of the average weight and the underweight felt that others saw them as not at all broad-hipped while the largest percentage of the overweight felt others saw them as very broad-hipped.

Self evaluation. Self ratings given on each trait paralleled when divided according to weight classification but differences were significant for weak ($p < .05$); chubby ($p < .01$); motherly ($p < .10$); overweight ($p < .01$); masculine (p .01); stylish ($p < .01$); flat-chested ($p < .01$); broad-hipped ($p < .10$); and underweight ($p < .01$). Seventy percent of the overweight saw themselves as not at all weak, Figure 9, while only 59.3% of the average weight and 37.5% of the underweight viewed themselves as not at all weak. Only 12.0% of the overweight saw themselves as moderately weak whereas 32.2% of the average weight and 37.5% of the underweight viewed themselves as not at all weak. Only 12.0% of the overweight saw themselves as moderately weak whereas 32.2% of the average weight and 43.8% of the underweight saw themselves as moderately weak. Approximately 51% of the

Fig. 9 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of weak, chubby, and motherly as they see themselves.


100
PERCENT SEE SELF
U A O
NOT
MODERATE
VERY
WEAK
CHUBBY
MOTHERLY

average weight and 56% of the underweight evaluated themselves as not at all chubby, Figure 9, with nearly equal numbers rating themselves as moderately or very chubby. However, 58.0% of the overweight rated themselves as very chubby with almost equal numbers rating themselves as not at all or moderately chubby. The majority of each weight group saw themselves as very motherly, Figure 9. The remainder of the average weight tended to see themselves as moderately motherly while the average weight and overweight tended to see themselves as not at all motherly.

For the traits of overweight ($p < .01$), masculine ($p < .01$), and stylish ($p < .01$) these responses were noted, Figure 10. Approximately 56% of the average weight and the underweight saw themselves as not at all overweight while 56% of the overweight saw themselves as very overweight. About 29% of the average weight and 25% of the underweight saw themselves as very overweight. Twenty percent of the overweight saw themselves as not at all overweight and 24% saw themselves as moderately overweight. The overwhelming majority of the average weight group and the overweight group saw themselves as not at all masculine while only 43.8% of the underweight saw themselves as not at all masculine. Less than 12% of the average weight and 24% of the overweight saw themselves as moderately or very masculine while 56% of the underweight saw themselves as moderately or very masculine. The distribution of responses given by the average weight group was fairly even although 39% of them rated themselves as moderately stylish while 50% of the overweight saw themselves as not at all stylish and only 14% saw themselves as very stylish.

The weight groups gave these responses to the traits flat-chested ($p < .01$), broad-hipped ($p < .10$) and underweight ($p < .01$), Figure 11.

Fig. 10 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of overweight, masculine and stylish as they see themselves.

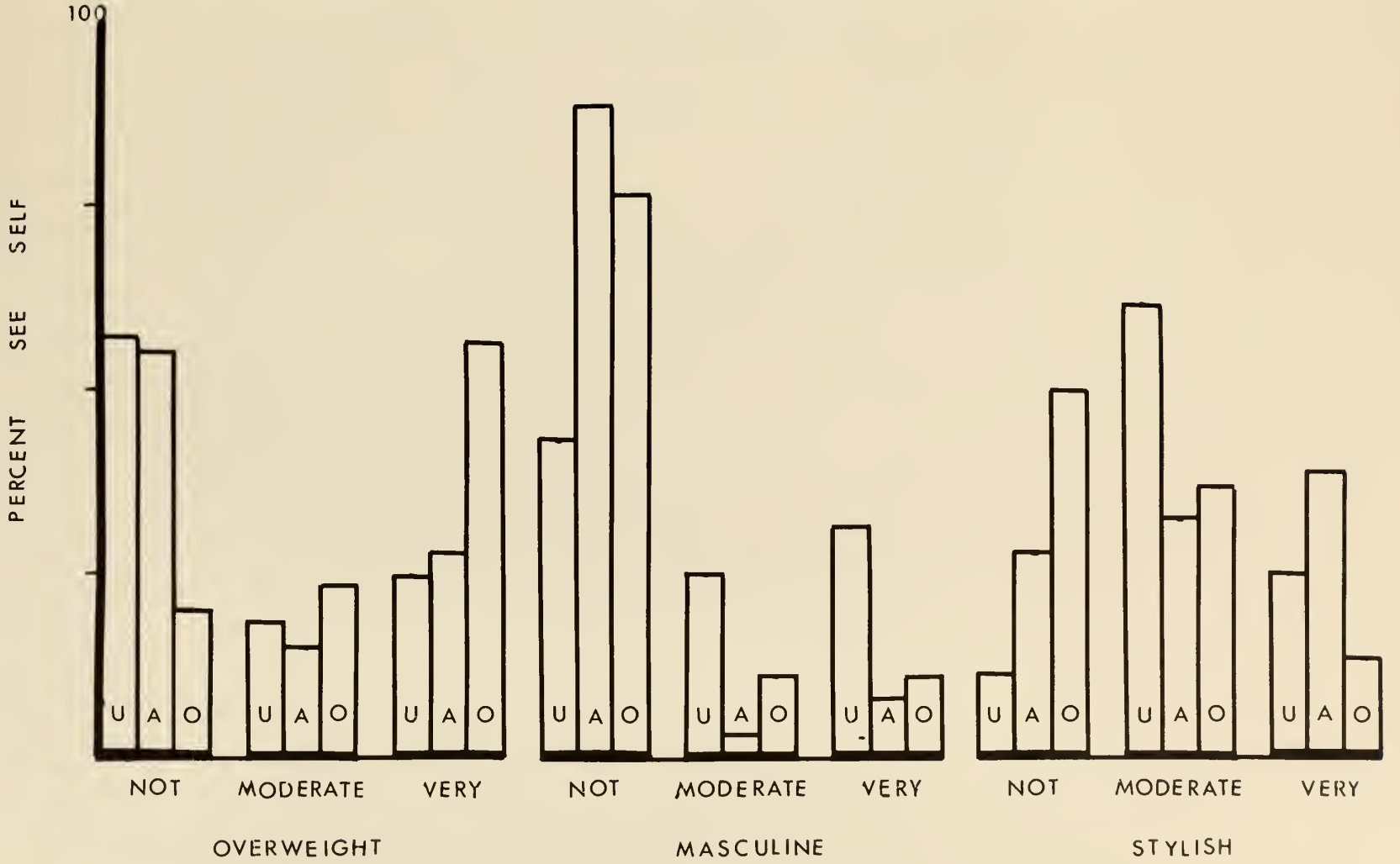
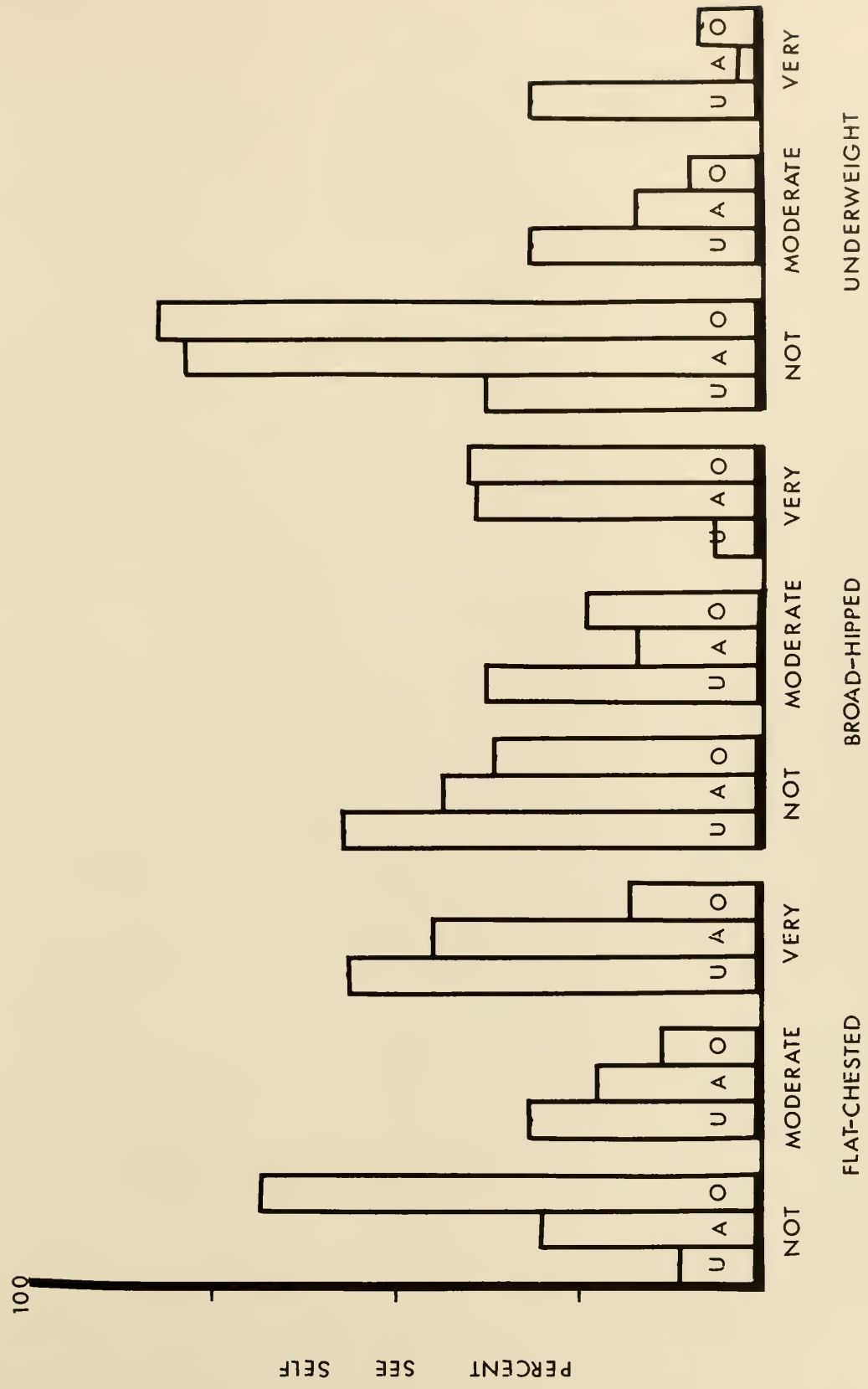

100
PERCENT SEE SELF
U A O
NOT
MODERATE
VERY
OVERWEIGHT
MASCULINE
STYLISH

Fig. 11 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of flat-chested, broad-hipped and underweight as they see themselves.


PERCENT SEE SELF
100
NOT MODERATE VERY NOT MODERATE VERY NOT MODERATE VERY
U A O U A O U A O U A O U A O U A O U A O U A O U A O
FLAT-CHESTED
BROAD-HIPPED
UNDERWEIGHT

Sixty-eight per cent of the overweight saw themselves as not at all flat-chested while only 12.5% of the underweight and 30.5% of the average weight saw themselves as not at all flat-chested. Eighteen per cent of the overweight, 45.8% of the average, and 56.3% of the underweight rated themselves as very flat-chested. The average weight and the overweight had a tendency to rate themselves at either extreme while 94% of the underweight viewed themselves as not at all or moderately broad-hipped. The overwhelming majority of the average weight and overweight saw themselves as not at all underweight with less than 20% of each group rating themselves as moderately or very underweight. The responses given by the underweight group were approximately equally divided among not at all, moderately, and very underweight with the largest percentage being not at all underweight.

In addition while not statistically significant the self ratings for the traits petite and dependent showed trends. The majority of the average weight and the overweight saw themselves as not at all petite while 43.8% of the underweight saw themselves as not at all petite and 43.8% saw themselves as very petite. The responses given by the average weight were fairly evenly dispersed among the ratings but moderately dependent received the largest per cent. Equal per cents of the underweight saw themselves as not at all and moderately dependent with only 12.5% answering very dependent. Forty-eight per cent of the overweight saw themselves as very dependent while 24% reported not at all and 28% reported moderately.

Ideal evaluation. The desirability ratings were significantly different among the weight groups for clean ($p < .05$); neat ($p < .10$); unpredictable ($p < .05$); well-groomed ($p < .05$); overweight ($p < .10$); plain ($p < .05$); graceful ($p < .01$) and slumped ($p < .05$). Less than 10% of the

average weight and underweight rated the trait clean, Figure 12, as not at all desirable while 31.3% of the underweight rated clean as not at all desirable. The trend in ratings was for all groups to consider clean very desirable. The majority of the average weight and underweight rated the trait, neat, Figure 12, as very desirable with equal division of the remainder between not at all and moderately desirable. Almost 44% of the underweight rated the desirability of the trait neat as moderately desirable and 37.5% rated it very desirable. The majority of the overweight tended to rate unpredictable, Figure 12, as not at all desirable with only 12% rating it moderately desirable. Seventy-five per cent of the underweight rated unpredictable equally not at all desirable and very desirable. The average weight set a third trend when 49.2% rated the trait unpredictable as not at all desirable and 39% as moderately desirable.

For the traits of well-groomed ($p < .05$), overweight ($p < .10$), and plain ($p < .05$) differences were recorded, Figure 13. While there was a very strong tendency for the average weight and overweight to rate the trait of well-groomed as very desirable, the underweight tended to rate it at either extreme with a slight tendency to rate it as very desirable. Seventy-eight per cent of the average weight and overweight groups rated overweight as a not at all desirable trait whereas 50% of the underweight viewed the trait of overweight as moderately or very desirable. The largest percentage of the average weight and of the underweight showed a tendency to rate the trait of plain as not at all desirable while the underweight rated it as moderately desirable. The remainder of the responses given by the underweight group were equally divided between moderately and very desirable; the responses given by the overweight were approximately equally

Fig. 12 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of clean, neat, and unpredictable as an ideal trait.

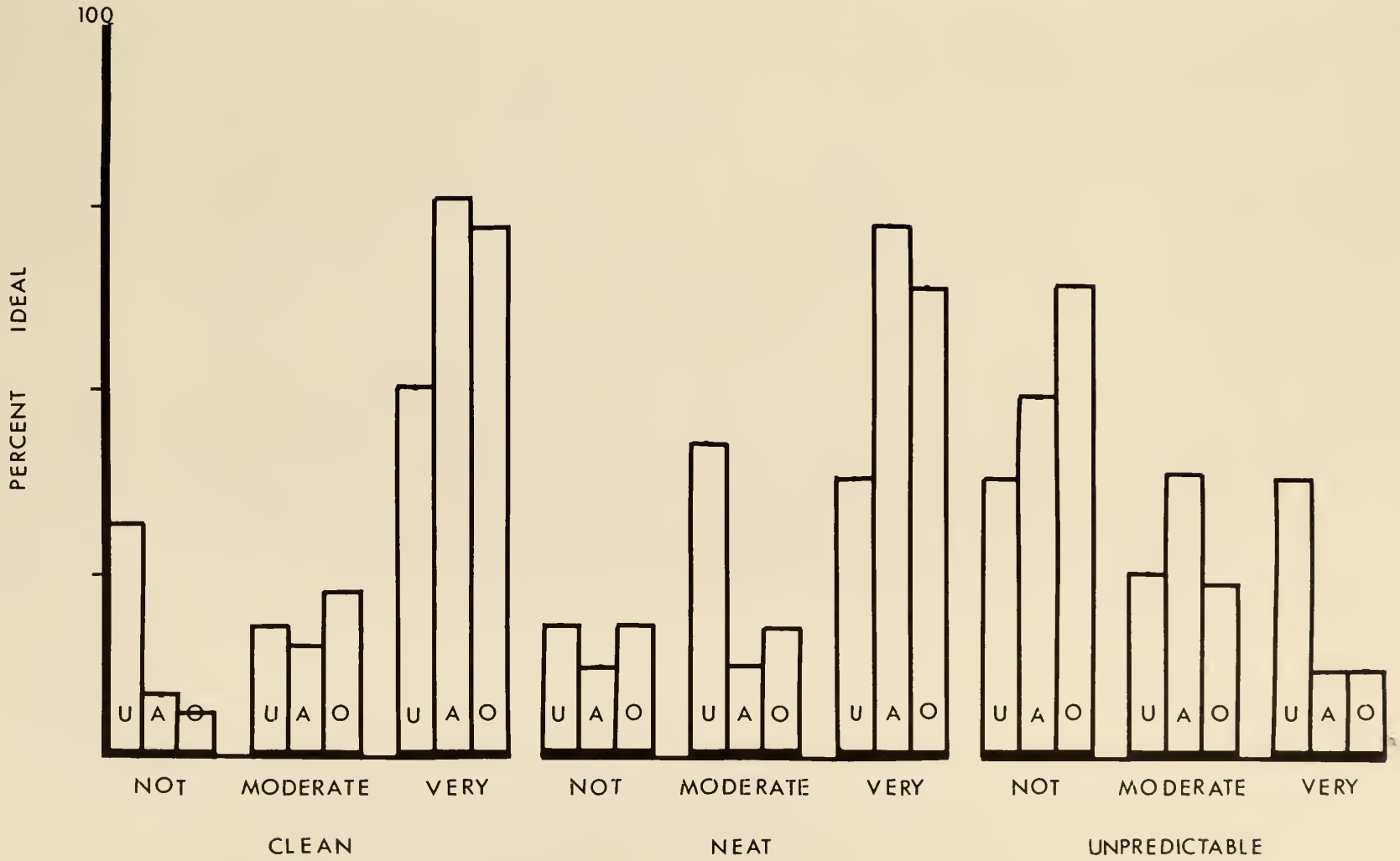
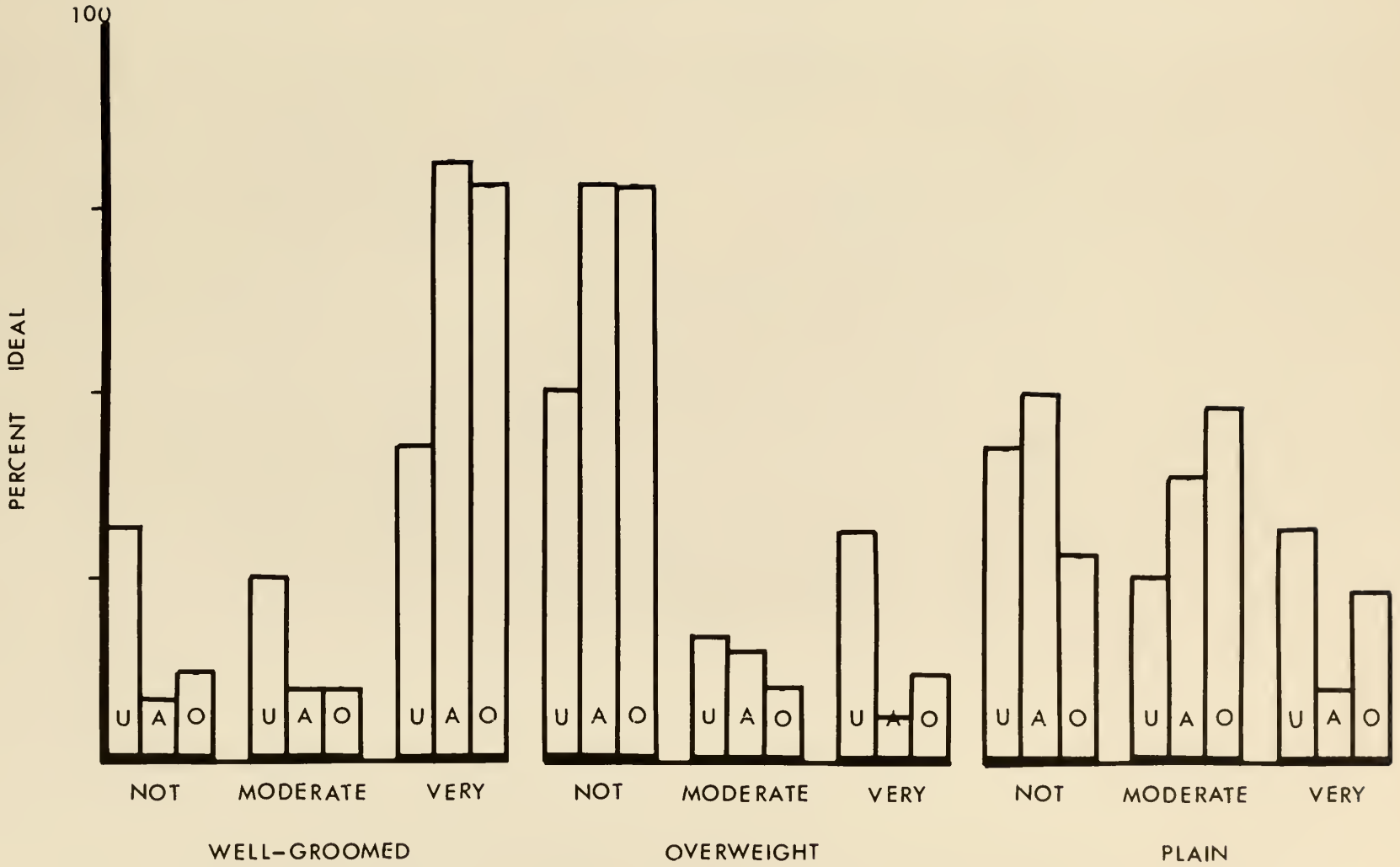

100
PERCENT IDEAL
U A O
NOT
MODERATE
VERY
CLEAN
NEAT
UNPREDICTABLE

Fig. 13 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of well-groomed, overweight, and plain as an ideal trait.


100
PERCENT IDEAL
U A O
NOT
MODERATE
VERY
WELL-GROOMED
OVERWEIGHT
PLAIN

divided between not at all and very desirable; and the responses given by the average weight group tended to rate plain as moderately desirable.

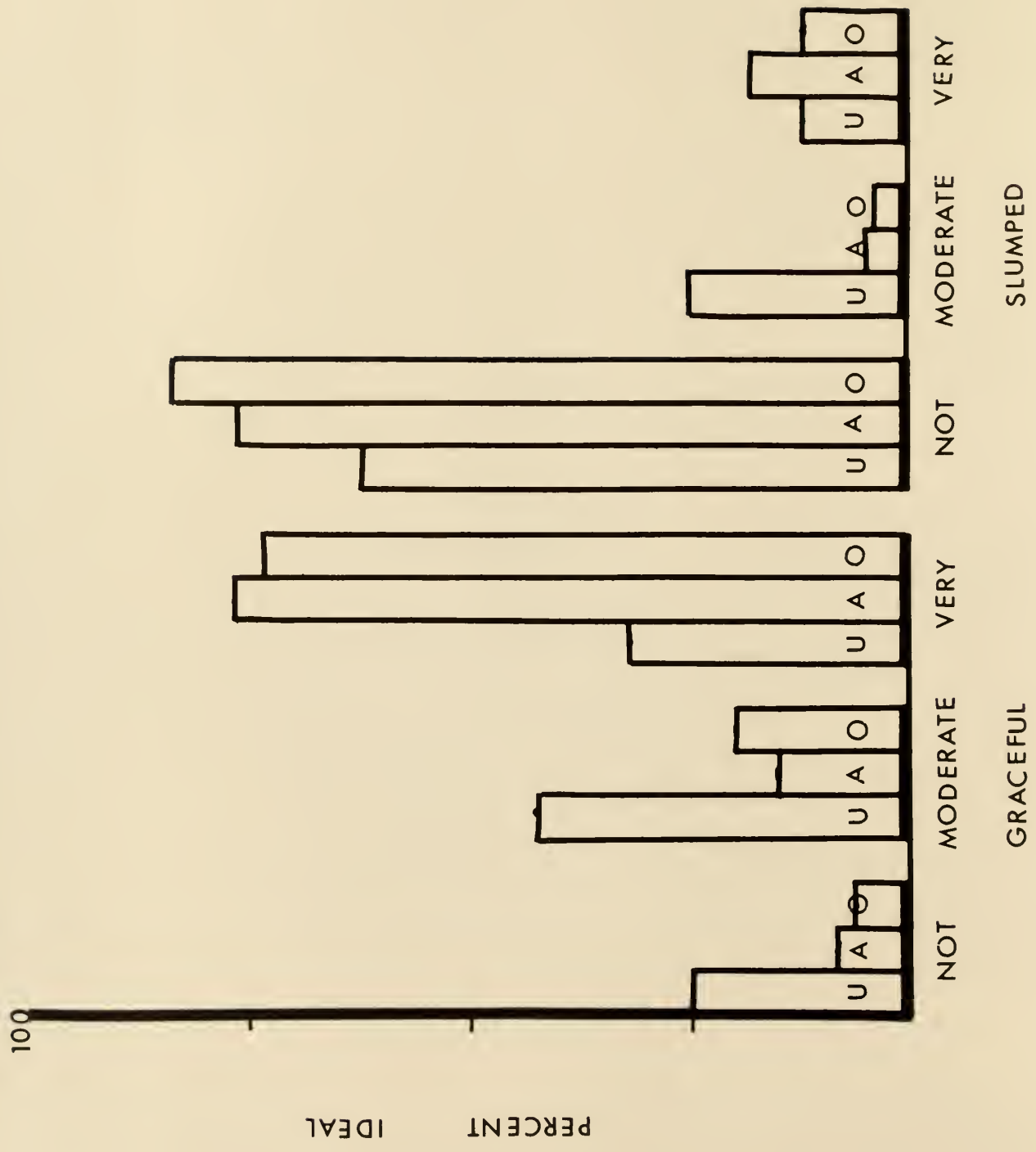
These answers were recorded when questions concerning the traits of graceful ($p < .01$) and slumped ($p < .05$) were asked, Figure 14. A tremendous tendency to rate the trait of graceful as very desirable was established by the average weight and overweight groups. About 44% of the underweight rated the trait as moderately desirable with 56% rating it equally at each extreme of not at all and very desirable. There was a tendency for all groups to consider the desirability of the trait slumped as not at all desirable. While 25% of the underweight considered the trait moderately desirable, only about 5% of the other two groups rated it as such.

While not significantly different the desirability ratings of the traits of untidy and coordinated approached definite trends. There was a definite trend for the average and overweight to see the trait untidy as not at all desirable while 50% of the underweight saw it as moderately or very desirable. The overwhelming majority of the average weight and overweight rated the trait of coordinated as very desirable while almost 38% of the underweight rated the trait as moderately or not at all desirable. It is of interest to note that only in the weight category and only on the desirability rating did graceful show significance ($p < .01$).

Occupation

The participants were divided into four occupation groups: homemakers, secretaries, teachers, and others. Homogeneity prevailed throughout the four occupation groups in the answers given when asked how others saw them with the exception of weak ($p < .05$); healthy ($p < .05$); inconspicuous

Fig. 14 Significant differences among the responses given by the underweight (U), average weight (A), and overweight (O) to traits of graceful and slumped.


100
PERCENT IDEAL
NOT MODERATE VERY
GRACEFUL
NOT MODERATE VERY
SLUMPED
U A O
U A O
U A O
U A O
U A O
U A O

($p < .10$); coordinated ($p < .05$); ill at ease ($p < .10$); shy ($p < .10$); motherly ($p < .05$); overweight ($p < .10$); flat-chested ($p < .05$); masculine ($p < .01$); domineering ($p < .01$); lazy ($p < .05$); and sexy ($p < .05$). There was a definite trend for all occupation groups to feel that others see them as not at all weak, however, 30.8% of the secretaries felt others saw them as very weak and 35.3% of the participants in the other group felt others saw them as moderately weak. None in the secretary group felt others saw them as moderately weak. The secretaries reported that others saw them as not at all, moderately and very healthy about the same number of times. The overwhelming majority of the homemakers felt others saw them as very healthy while only 41.2% of the teachers and 52.0% of the other occupations reported this. The homemakers tended to answer in the extremes when asked how others saw them in relation to the trait inconspicuous. The largest percentage from each group answered the question this way: 53.8% of the secretaries moderately, 58.8% of the teachers not at all, and 47.1% of the others group very inconspicuous.

For the traits of coordinated ($p < .05$), ill at ease ($p < .10$) and shy ($p < .10$), these responses were given. The majority of each occupation group felt that others saw them as very coordinated while 9.0% of the homemakers, 23.1% of the secretaries, none of the teachers, and 29.4% of the other occupation group felt others saw them as not at all coordinated. The majority of the participants in the teacher and other occupation groups felt others saw them as not at all ill at ease. Half of the homemakers felt others saw them as moderately or very ill at ease. The secretaries reported others saw them equally as not at all and moderately ill at ease. The majority of the homemakers, secretaries, and other occupations felt others

saw them as not at all shy while the majority of the teachers felt others saw them as very shy.

The traits of motherly ($p < .05$), overweight ($p < .10$), and masculine ($p < .01$) received these responses. The overwhelming majority of the homemakers felt others saw them as very motherly. The secretaries tended to distribute their answers equally among not at all, moderately, and very motherly while the other occupation group tended to answer in the extremes. The largest percentage of the teachers felt that others saw them as very motherly with approximately equal percentages answering not at all and moderately motherly. The majority of the homemakers, secretaries, and teachers reported that others saw them as not at all overweight while 82.4% of the participants in other occupations felt others saw them as moderately or very overweight. The majority of the occupation groups felt others saw them as not at all masculine. None in the secretary group felt others saw them as very masculine while from 1 to 25% of the other three occupation groups felt others saw them as very masculine.

The responses given for the traits domineering ($p < .01$), flat-chested ($p < .05$), lazy ($p < .05$), and sexy ($p < .05$) were recorded. The majority of the homemakers, secretaries, and teachers felt that others saw them as not at all domineering or moderately domineering while 52.9% of the participants in the other occupations felt others saw them as very domineering. While 55.1% of the homemakers and 70.6% of the participants in the other occupations felt that others saw them as not at all flat-chested while 53.8% of the secretaries and 52.9% of the teachers felt others saw them as very flat-chested. The overwhelming majority of the homemakers and teachers felt others saw them as not at all lazy while 53.9% of the secretaries and 52.9%

of the participants in the other occupations felt others saw them as moderately or very lazy. Participants in the other occupations gave extreme ratings when asked how others saw them in relation to being a sexy person. The majority of the homemakers, secretaries, and teachers felt others saw them as not at all sexy.

In addition boyish and well-proportioned showed definite trends even though, no significant difference was noted. The overwhelming majority of the homemakers and secretaries felt that others saw them as not at all boyish while 52.9% of the teachers and other occupation groups felt others saw them as moderately or very boyish. The majority of the homemakers and secretaries felt others saw them as very well-proportioned while nearly equal percentages of the teachers felt others saw them as moderately or very well-proportioned. The participants in the other occupations tended to give extreme answers.

Self evaluation. The trend was much the same when the groups were questioned as to how they saw themselves. Significance was indicated with healthy ($p < .01$); boyish ($p < .10$); untidy ($p < .05$); ill at ease ($p < .10$); motherly ($p < .05$); overweight ($p < .05$); fully-developed ($p < .05$); muscular ($p < .05$); masculine ($p < .05$); and underweight ($p < .05$). The overwhelming majority of the homemakers, secretaries, and the other occupations saw themselves as very healthy while only 41.2% of the teachers saw themselves as very healthy. Over 50% of the teachers saw themselves as moderately healthy. The majority of the homemakers and the subjects in the other occupation group saw themselves as not at all boyish while 46.2% of the secretaries felt this way. The teachers tended to answer in the extremes. While 59.0% of the homemakers and 47.1% of the other occupations

saw themselves as not at all untidy while 53.8% of the secretaries saw themselves as moderately untidy. The teachers tended to answer in the extremes.

For the traits of ill at ease ($p < .10$), motherly ($p < .05$) and overweight ($p < .05$) participants gave these answers. The majority of the secretaries felt that they were not at all ill at ease. The participants in the other occupation group answered in the extremes while equal numbers of the teachers answered moderately and very ill at ease. The largest percentages of the homemakers saw themselves as moderately ill at ease with the remainder divided between the extremes. The majority of the homemakers saw themselves as very motherly. The secretaries saw themselves equally in all categories. The teachers saw themselves as moderately or very motherly while the other occupation groups saw themselves as at either extreme. The homemakers reported themselves equally as not at all and very overweight. The majority of the secretaries and teachers saw themselves as not at all overweight while the majority of the other occupation groups saw themselves as very overweight.

The traits fully-developed ($p < .05$), muscular ($p < .05$), masculine ($p < .05$) and underweight ($p < .05$) received these responses. The majority of the homemakers and the secretaries saw themselves as very fully-developed while the teachers saw themselves as not at all fully-developed. The other occupation groups saw themselves equally as moderately and very fully-developed. The majority of the homemakers, teachers, and the other occupation groups saw themselves as not at all muscular while the secretary group saw themselves as moderately muscular. The trend was for all occupation groups to see themselves as not at all masculine. However, 30.8% of the secretaries saw themselves as moderately masculine and 29.4% of the other

occupation group saw themselves as very masculine. While 80.8% of the homemakers, 46.2% of the secretaries, 76.5% of the teachers and 70.6% of the other occupation group saw themselves as not at all underweight, 30.8% of the secretaries saw themselves as very underweight. None of the teachers saw themselves as underweight.

While not significantly different the self ratings for the trait inconspicuous showed definite trends. Approximately equal numbers of homemakers and of secretaries evaluated themselves as not at all, moderately, and very inconspicuous. The majority of the teachers saw themselves as not at all inconspicuous. While 41.2% of the participants in the other occupations saw themselves as not at all inconspicuous and 58.8% of them saw themselves as moderately or very inconspicuous.

Ideal evaluation. The only statistically significant differences expressed as to the desirability of the traits were clean ($p < .05$); inconspicuous ($p < .10$); neat ($p < .05$); awkward ($p < .10$); attractive ($p < .05$); boyish ($p < .05$); fully-developed ($p < .10$); severe ($p < .10$); slow ($p < .10$); sexy ($p < .05$); and underweight ($p < .05$). While 29.4% of the other occupation groups rated the trait clean as not at all desirable, 80.8% of the homemakers, 53.8% of the secretaries, 64.7% of the teachers and 47.1% of the other occupation groups felt that clean was a very desirable trait. Approximately equal numbers of the homemakers saw the trait of inconspicuous as not at all, moderately, and very desirable. About 85% of the secretaries rated the trait of inconspicuous as moderately or very desirable. The majority of the teachers rated inconspicuous as not at all desirable while 41.2% of the other occupation group rated it as very desirable. The majority of the occupation groups rated the trait neat as very

desirable while 46.2% of the secretaries rated it as moderately desirable and 35.5% of the other occupation group rated it as not at all desirable.

For the traits of awkward ($p < .10$), attractive ($p < .05$) and boyish ($p < .05$) these responses were noted. The majority of all occupation groups rated the trait awkward as not at all desirable while 29.4% of the other occupation group rated it as moderately desirable. The majority of the homemakers, secretaries, and other occupation groups rated the trait of attractive as very important while the majority of the teachers saw the trait as moderately desirable. The majority of the homemakers and secretaries rated the trait of boyish as not at all desirable, while the majority of the teachers gave it a rating of moderately desirable. While 47.1% of the other occupation groups rated boyish as not at all desirable, 52.9% of them rated it moderately or very desirable.

For the traits of fully-developed ($p < .10$), severe ($p < .10$), and slow ($p < .10$) these responses were indicated. The majority of all occupation groups rated the trait full-developed as very desirable while 30.8% of the secretaries rated it moderately desirable and 35.3% of the other occupation rated it not at all desirable. The majority of the homemakers, secretaries and teachers rated the trait of severe as not at all important. The other occupation group tended to rate it at both extremes. Over 40% of the teachers rated severe as moderately desirable. The overwhelming majority of the homemakers and teachers rated the trait of slow as not at all desirable while 46.2% of the secretaries and 52.9% of the other occupation group rated it as not at all desirable. A large percentage of the secretaries (38.5%) and other occupation group (35.3%) rated it as moderately desirable.

For the traits of sexy ($p < .05$) and underweight ($p < .05$) these

responses were received. The ratings for the trait sexy were fairly equally distributed among the three ratings by the homemakers. While 76.4% of the teachers and 82.4% of the other occupation group rated sexy as moderately or very desirable, 69.2% of the secretaries rated it not at all desirable. The overwhelming majority of the homemakers, secretaries, and teachers rated the trait underweight as not at all desirable while the other occupation group tended to rate the trait in the two extremes.

Income

The participants were divided into three categories according to level of income: $0-5999, $6000-8999, and $9000-over. The three categories of participants demonstrated similar trends in answering all questions concerning body image traits with a few exceptions.

Others saw them. The ratings which were significantly different when considering how others saw them were delicate ($p < .05$); chubby ($p < .10$); coordinated ($p < .05$); overweight ($p < .10$); muscular ($p < .05$); severe ($p < .10$); and lazy ($p < .05$). There was an increasing tendency with increasing income to feel that others saw them as not at all delicate and there was a decreasing tendency with increasing income to feel that others saw them as moderately or very delicate. The lowest income group tended to feel that others saw them at either extreme not at all or very chubby. Fifty per cent of the middle income group felt others saw them as moderately or very chubby. Only 32.1% of the highest income group felt others saw them as very chubby while 56.6% felt others saw them as not at all chubby. There was a definite tendency for all income groups to feel that others saw them as being very coordinated with a rating of moderately coordinated being

second. Less than 2% of the highest income group felt that others saw them as not at all coordinated while 22.7% of the lowest income felt others saw them as not at all coordinated.

For the traits of overweight ($p < .10$), muscular ($p < .05$), severe ($p < .10$), and lazy ($p < .05$) the following responses were recorded. There was a tendency for the middle and highest income groups to feel that others see them as not at all overweight while 45.5% of the lowest income group felt others saw them as very overweight. There was a tendency for all income groups to feel that others saw them as not at all muscular but 25% of the lowest group felt others saw them as very muscular and 30.2% of the highest group felt others saw them as moderately muscular. There was a tendency for all income groups to report that others saw them as not at all severe. However, 25% of the lowest income group felt others saw them as very severe and 30.2% of the highest income group felt others saw them as moderately severe. There was an increasing tendency with increasing income to report that others saw them as not at all lazy. The percentages of those from each income group reporting others saw them as moderately or very lazy were: lowest 43.2%, middle 25%, and highest 17%. While not significantly different trends were noted for the trait tailored. The majority of the middle income group felt that others saw them as very tailored with the remainder divided equally between not at all and moderately tailored. The lowest income group tended to answer in the extremes and the highest income group tended to distribute their answers equally among the three ratings.

Self evaluation. Differences were expressed in self assessment among the three income categories in confident ($p < .05$); overweight ($p < .01$); and severe ($p < .05$). The trend was for all income categories to see

themselves as very confident, however, 59.1% of the lowest income, and 28.6% of the middle saw themselves as not at all or moderately confident. Only 5.7% of the highest group saw themselves as not at all confident but 28.3% did see themselves as moderately confident. While 59.1% of the lowest income group saw themselves as very overweight, 25.0% of the middle and 30.2% of the highest income group saw themselves as very overweight. Trend for the middle and highest income groups was to see themselves as not at all overweight. The middle income group had the highest percentage indicating that they were moderately overweight. There was a tendency for all income groups to see themselves as not at all severe. Less than 10% of the middle and highest groups felt that they were very severe, while a fourth of the lowest felt this way.

While not significantly different the self ratings for the trait domineering showed trends. The highest percentage and approximately equal percentages from each income group saw themselves as not at all domineering. The second highest percentage for each group was under very domineering for the lowest and moderately domineering for the middle and highest.

Ideal evaluation. Significant differences among the three groups in desirability ratings were chubby ($p < .10$); well-groomed ($p < .05$); ill at ease ($p < .01$); and lazy ($p < .10$). Although there was a definite trend for all income groups to rate the trait chubby as not at all desirable, 22.7% of the lowest income group rated it very desirable. There was a definite increase in the percentage rating the desirability of well-groomed as very desirable with increasing income and a decrease in percentage rating it not at all desirable with increasing income. There was a tendency for all groups to rate the desirability of the trait ill at ease as not at all

desirable. In the lowest income group, however, 31.8% rated it as very desirable. There was a definite trend for all income groups to rate the desirability of the trait lazy as not at all desirable, but 25% of the lowest income group rated it very desirable. While not significantly different, definite trends were shown in the ratings of the traits delicate, inconspicuous, untidy, overweight, masculine, stylish, severe, and underweight.

Education

The participants were divided into five educational groups: Grades 1-8 (level 1), grades 9-12 (level 2), college (level 3), college graduate (level 4), and graduate (level 5). The second smallest number of significant traits were related to the five educational categories. All five groups expressed homogeneity in answering all questions except in eleven cases.

Others saw them. When considering how others saw them differences were noted in chubby ($p < .10$); confident ($p < .05$); ill at ease ($p < .05$); overweight ($p < .10$); and domineering ($p < .05$). The largest percentage of all educational levels except the level 1 group felt that others saw them as not at all chubby. Level 1 felt others saw them as moderately chubby. Levels 2 and 4 were very similar in their answers in that they tended to give extreme ratings; while levels 3 and 5 had almost equal distributions of answers between moderately and very chubby. All in educational level 1 felt others saw them as moderately confident. The majority in levels 2, 3, and 5 felt others saw them as very or moderately confident, with fewer than 12% responding with not at all. Level 4 showed the largest percentage

answering very confident but with over 56% answering moderately or not at all confident. Level 1 group reportedly felt that others saw them as not at all or moderately ill at ease equally frequently. The distribution of ratings for level 2 were approximately equal for all ratings. The remaining levels 3, 4 and 5 felt others saw them as not at all or moderately ill at ease.

For the traits of overweight ($p < .10$) and domineering ($p < .05$) these responses were noted. Half the group falling into education level 1 reportedly felt others saw them as moderately overweight while the remainder responded at either extreme. The major portion of the participants in the levels 2, 3 and 4 felt others saw them as not at all overweight while the second major clustering of answers were at the other extreme. Most of level 5 felt others saw them as moderately or very overweight. The majority of the participants in educational levels 1, 2, 3, and 4 felt others saw them as not at all domineering. The second largest number of levels 2 and 4 reportedly felt others saw them as moderately domineering, while none of the level 1 felt others saw them as moderately domineering. An equal number in level 3 felt others saw them as moderately or very domineering. The graduate, level 5, felt others saw them as very domineering, not at all domineering and moderately domineering in that order.

Self evaluation. Self assessments revealed differences with delicate ($p < .05$); plain ($p < .10$); and slow ($p < .10$). The majority of levels 2, 3, 4, and 5 responded that they saw themselves as not at all delicate. The second largest number of ratings were moderately delicate except for level 3 where the second largest number of participants saw themselves as very delicate. The major portion of the subjects in level 1 saw themselves as

very delicate with equal numbers responding with not at all and moderately. The majority of levels 2 and 3 and all of level 1 saw themselves as moderately or very plain while the majority of levels 4 and 5 saw themselves as moderately plain. The majority of the levels 2, 3, 4, and 5 saw themselves as not at all or moderately slow while level 1 saw themselves as moderately or very slow.

Ideal evaluation. Finally the desirability ratings showed statistical differences with delicate ($p < .05$); dependent ($p < .10$); and slumped ($p < .05$). All of the level 1 rated delicate as very or moderately desirable while the other groups saw the trait delicate as not at all or moderately desirable. Levels 1 and 4 were equally divided between the extremes on the rating of desirability for the trait dependent. While none in level 1 rated dependent as moderately desirable about 27% of the level 4 did. Fifty per cent of level 5 rated dependent as moderately desirable. The majority of levels 2 and 3 rated dependent as moderately or very desirable. The overwhelming majority of the people in levels 2, 3, 4, and 5 rated the trait slumped as not at all desirable while in level 1, 50% rated it moderately desirable with the other 50% rating it not at all desirable. None in level 1 rated slumped as very desirable while none in level 4 rated it as moderately desirable.

Traits

Each of the forty traits received similar responses by all groups of participants for the categories of others, self, and desirable with these exceptions: The trait of clean was found to be significantly different for the weight groups ($p < .05$); and occupation groups ($p < .05$) when

desirability of the trait was evaluated.

The trait of delicate was significantly related to how others saw the participants in the weight groups ($p < .05$) and the income groups ($p < .05$). It was also related to the education levels when considering self ($p < .05$) and ideal ($p < .05$) evaluations. Desirability of being delicate showed definite trends although it did not show a significant difference.

The trait of weak was statistically related to age groups evaluations under others ($p < .10$) and self ($p < .05$); weight groups comments on others ($p < .10$) and self ($p < .05$); and occupation groups responses to others ($p < .05$).

None of the categories was significantly different for the trait of feminine.

The trait of healthy was different for the weight groups (p .05) when the respondents reported how others saw them and in the occupation groups for others ($p < .05$) and self ($p < .01$).

The trait of inconspicuous was different in the occupation categories under others ($p < .10$) and ideal ($p < .10$). It was not significant but showed trends in the self analysis of the occupation groups and in the income groups rating of desirability.

The trait of neat was significant in the desirability ratings given by the weight groups ($p < .10$) and the occupation groups ($p < .05$).

The trait of awkward was significant at the 10% level in the self analysis of the age groups and the desirability ratings of the occupation groups.

The trait attractive was only statistically significant in the desirability ratings of the occupation groups.

The trait unpredictable was significant in the desirability ratings for age groups ($p < .10$), and weight groups ($p < .05$).

The trait boyish was different for self ratings in the age groups ($p < .10$), and self ($p < .10$) and ideal ($p < .05$) ratings in the occupation groups. While not significant the others ratings for the occupation groups showed definite trends.

The trait of chubby was statistically different for the weight groups in the others ($p < .01$) and self ($p < .01$) ratings; for the income groups in the others ($p < .10$) and ideal ($p < .10$) ratings; and for the education groups in the other ratings ($p < .10$).

The trait of untidy was significantly different for the weight group in the others ($p < .10$) ratings and for the occupation groups in the self ratings ($p < .05$). The ideal ratings in both the weight groups and the income groups were not significant but trends were noted.

The responses to the trait of confident gave chi-square values of significance in the age groups for self ($p < .05$); weight groups for others ($p < .10$); income groups for self ($p < .05$); and education groups for others ($p < .05$).

The trait of coordinated was significant for others ratings in the occupation groups ($p < .05$) and the income groups ($p < .05$). The desirability ratings in the weight groups were not significant although definite trends were noted.

The desirability ratings for the trait of well-groomed were significantly different for the age groups ($p < .10$); weight groups ($p < .05$); and the income groups ($p < .05$).

The ratings under others for the trait of ill at ease were significant

in these groupings: weight ($p < .10$), occupation ($p < .10$), and education ($p < .05$). Ratings under self in the occupation groups ($p < .10$) and under ideal in the income groups ($p < .01$) were significant. The desirability ratings in the age groups were not significant, but trends were reported.

The trait of shy received different responses among the members of the age groups in the self ratings ($p < .05$) and among the occupation groups in the others ratings ($p < .10$).

The responses to the trait of motherly differed among the members of the age groups in the self evaluation ($p < .05$); weight groups ($p < .10$) in the self evaluations, and of the occupation groups ($p < .05$) in the self evaluations; and in the way others saw them in the weight groups ($p < .05$) and the occupation groups ($p < .05$).

The trait of overweight was statistically significant in the others ratings for the weight groups ($p < .01$); occupation groups ($p < .10$); income groups ($p < .10$) and education groups ($p < .10$). Self ratings in the weight groups ($p < .01$); occupation groups ($p < .05$); and income groups ($p < .01$) were important. The desirability rating for weight groups ($p < .10$) was different statistically. The self ratings for age groups and the desirability rating for the income groups were not significant but they showed definite trends.

The trait of fully-developed was statistically different for all ratings for the occupation groups others ($p < .05$); self ($p < .05$); and ideal ($p < .10$). Others ratings for the income groups were not statistically significant although they demonstrated trends.

The responses for the trait of muscular were different in the others evaluations for weight groups ($p < .01$) and income groups ($p < .05$) and in

the self ratings for the occupation groups ($p < .05$).

The trait of petite was significant in the self analysis for the age groups ($p < .10$) and though not significant showed definite trends for the weight groups.

The trait of dependent was statistically different for the desirability ratings given by the age groups ($p < .05$) and the education groups ($p < .10$) and for the self ratings for age groups ($p < .01$). The self evaluations of the weight groups were not significant but trends were noted.

The responses for the trait of plain were significant in the ideal ratings for the weight groups ($p < .05$) and the self analysis of the education groups ($p < .10$).

The trait of masculine was significant for the other aspect for the weight groups ($p < .10$) and occupation groups ($p < .01$) and for the self aspects for weight groups ($p < .01$) and occupation groups ($p < .05$). Although not significant trends were noted in ideal ratings for income groups.

The responses given for the trait of tailored were only significant in the self analysis of the age groups and showed trends in the other ratings of income groups.

The ratings given by the participants for the trait of stylish were different in the others evaluation for the age groups ($p < .05$) and the weight groups ($p < .01$) and for the self analysis for the weight groups ($p < .01$). Trends were apparent for the desirability ratings for the income groups for the trait of stylish.

The trait of severe was related to the desirability ratings for the occupation groups ($p < .10$) and for the income groups in other ($p < .10$) and

self ($p < .05$). The ideal ratings for the income groups for the trait of severe tended to be different.

The answers given for the trait of domineering were related to others evaluation for the occupation groups ($p < .01$); and for the education groups ($p < .05$) and to self ratings for the age groups ($p < .05$). The self ratings for the income groups for the trait of domineering tended to differ.

The trait graceful was only statistically different for the desirability responses given by the weight groups ($p < .01$).

The responses received for the trait of energetic were different for the self analysis given by the age groups ($p < .10$).

Statistical difference was noted for the trait of flat-chested in the self ratings given by the age groups ($p < .05$) and in the weight groups ($p < .01$). Differences were noticed in the way others saw them in the weight groups ($p < .01$).

The trait of broad-hipped was different in the self analysis for age groups ($p < .01$) and weight groups ($p < .10$). Others under the weight groups differed on the trait of broad-hipped.

The responses to the trait of lazy were statistically related to other in the occupation groups ($p < .05$) and income group ($p < .05$) and to desirability in the income groups ($p < .10$).

The chi-square values for the responses on the trait of slow were significant at the 10% level for ideal in occupation groups and for self in education groups.

The trait of sexy was related ($p < .05$) to others and ideal responses of occupation groups.

The ratings for the trait of slumped demonstrated differences in the

ideal ratings for weight ($p < .05$) and education ($p < .05$).

The trait of underweight was statistically significantly related to others ($p < .10$), self ($p < .10$), and ideal ($p < .05$) under age groups; to others ($p < .01$) and self ($p < .01$) under weight groups; and to self ($p < .05$) and ideal ($p < .05$) under occupation groups. It was not significantly related to ideal under income groups, but trends were apparent.

The responses to the trait of well-proportioned were not statistically significantly related to any grouping, but tended to be related to others in the occupation groups and the income groups.

DISCUSSION

Factors in the current study found to bear a relationship to body weight in women between the ages of 21 and 50 years were the personal histories and attitudes toward selected traits. Most findings seem to indicate that in the sample studied there were definite differences among the three weight groups. It appears that the overweight and underweight groups represent extremes.

From the personal history it was found that the majority of the participants in this study were born in the U.S., especially the midwest with similar birth records for their parents; that the group was divided almost equally into the two age groups (21-35 and 35-50); that the majority were homemakers with total family income of $9000-over. These characteristics were noted for the underweight, average weight, and overweight groups. The underweight tended to be younger, high school graduates, homemakers, and in either the lowest or highest income groups. The average weight were generally younger, had attended college or were a college graduate, were homemakers, and were of the highest income group. The overweight tended to be older, high school graduates, homemakers, and at the lowest income or the highest income groups. In addition, tabulation of the personal histories showed that the majority were not pregnant or lactating; that 47.2% were average weight, 40.0% overweight, and 12.8% underweight while 38.4% reported they were average weight, 56.0% overweight, and 5.6% underweight. The reported causes of overweight were overeating, nerves, lack of exercise and thyroid. An obvious incongruity in the attitudes and opinions expressed was noted when the health hazards of overweight were listed and heart disease was given by 115 of the 125 and when the reason for losing weight were

listed and not one person mentioned heart disease. Appearance seemed to be the major reason for losing weight. Another discrepancy was observed between the reported degree of activity and the reported interest and activity in sports events. The meal patterns of the average weight, overweight and underweight tended to differ. The overweight reported skipping all three meals most often. The underweight group tended to skip breakfast to some extent but always ate lunch and dinner. The average weight group skipped some meals but not to the extent that the overweight did. Time was reported to be the biggest factor causing lunch to be skipped. The overweight and underweight tended to eat more meals alone than the average weight. This was especially true at lunch. Bronsin (31) and Moore (32) discussed eating as a compensatory refuge for insecurity, anxiety, defeat, lonesomeness, and social isolation. They pointed out that these factors or traits might manifest themselves in behavioral patterns whereby, voluntarily or involuntarily, a person either eats to excess or rejects food. Perhaps eating alone tends to cause some of these traits to develop resulting in over- or underweight. Although all groups tended to eat between meals, the overweight group tended to eat later in the evening before bed.

Attitudes toward each of the 40 selected traits except feminine and well-proportioned were shown to be related significantly at the 10%, 5%, and 1% levels to one of the 5 participant categories of age groups, weight groups, occupation groups, income groups, and education groups. Wekman and Greenberg (72) compared obese adolescent girls with normal weight girls. The obese girls showed unusual narcissism, difficulty in impulse control, considerable social anxiety, behavioral immaturity, and depression. The obese were found to be less ambitious in their life goals and seemed to live

within a pattern of ego restriction of social and occupational horizons, and faulty perception of significant concepts. Guiora (49) described the syndrome, "dysorexia," comprising both anorectic and bulimic behavior. He felt that both the self-starvation and the overeating should be understood as an expression of the basic conflict of womanhood and motherhood identity.

In this study it was found that several traits were related to weight groups. For the trait of weak ($p < .10$) 73% of the average weight group reported feeling that others saw them as not at all weak, while 50% of the underweight reported others saw them as moderately or very weak. Similar results were noted in the self evaluations on the trait weak ($p < .05$). For the trait of unpredictable ($p < .05$) the ideal ratings showed that the majority of the overweight tended to rate unpredictable as not at all desirable while the underweight rated unpredictable equally not at all and very desirable. The majority of the average weight group rated unpredictable as not at all or moderately desirable.

The trait of chubby was found to be statistically different for others ($p < .01$) and self ($p < .01$) in the weight groups. The average weight and underweight groups reported similarly when over 60% of each indicated that others saw them as not at all chubby while the remaining answers were distributed approximately equally between moderately and very chubby. The reverse was true with the overweight group: 46% felt others saw them as very chubby; 28.0% felt others saw them as not at all chubby; and 26.0% felt others saw them as moderately chubby. Approximately 51% of the average weight and 56% of the underweight evaluated themselves as not at all chubby with nearly equal numbers rating themselves as moderately or very chubby. However, 58.0% of the overweight rated themselves as very chubby with almost

equal numbers rating themselves as not at all or moderately chubby.

The responses for the trait motherly were shown to be significant for others ($p < .05$) and self ($p < .10$). The majority of each weight group saw themselves as very motherly. The remainder of the average weight tended to see themselves as moderately motherly while the underweight and overweight tended to see themselves as not at all motherly. The majority of the responses given for how others saw them in relation to the trait of motherly by the average weight and overweight were very motherly. The responses given by the underweight group were fairly evenly divided among the three ratings.

The responses for the trait of overweight were statistically significant for the others ($p < .01$); self ($p < .01$), and ideal ($p < .10$) in the weight groups. The majority of the average weight and underweight felt others saw them as not at all overweight but the largest percentage of the overweight felt others saw them as very overweight. However, 54% of the overweight felt others saw them as not at all or moderately overweight. Approximately 56% of the average weight and underweight saw themselves as not at all overweight while 56% of the overweight saw themselves as very overweight. Seventy-eight percent of the average weight and overweight groups rated overweight as a not at all desirable trait whereas 50% of the underweight viewed the trait of overweight as moderately or very desirable.

While not significantly related the self ratings for the trait dependent showed trends. The responses given by the average weight were fairly evenly dispersed among the ratings but moderately dependent received the largest percent. Equal percents of the underweight saw themselves as not at all and moderately dependent with only 12.5% answering very dependent.

Forty-eight per cent of the overweight saw themselves as very dependent while 24% reported not at all and 28% reported moderately.

Definite significance was noted for the others ($p < .10$) and self ($p < .01$) ratings of the trait masculine. For both the others and self ratings the average and overweight felt they were not at all masculine while for both the underweight felt they were moderately or very masculine. Similar trends were noted for the others ($p < .01$) and self ($p < .01$) ratings for the trait stylish except that the underweight and average weight felt they were moderately or very stylish while the overweight felt they were not stylish.

For the trait of flat-chested the overweight and average weight tended to report that others ($p < .01$) and self ($p < .01$) saw them as not at all flat-chested while the underweight felt both saw them as very flat-chested.

Surprising results were recorded for the traits of underweight for others ($p < .01$) and self ($p < .01$). The overwhelming majority of the average weight and the overweight felt others saw them as not at all underweight, while 50% of the underweight indicated that others saw them as not at all underweight and 43.8% of the underweight reported others saw them as very underweight. The overwhelming majority of the average weight and overweight saw themselves as not at all underweight. The responses given by the underweight group were approximately equally divided among not at all, moderately, and very underweight with the largest percentage being not at all underweight.

The findings indicated a significant difference in responses among age, occupation, income, and education groups on selected traits for overweight and underweight participants. Overweight was related to age, weight,

occupation, income, and education groups while underweight was related to age, weight, occupation and income groups.

Age-underweight. Underweight was significantly related to age as others saw them ($p < .10$), as they saw themselves ($p < .10$), and as an ideal ($p < .05$). The largest percentage from the age groups felt that others saw them as not at all underweight. However the older group demonstrated a stronger tendency to feel that others saw them not at all underweight. Almost twice as many of the younger group as the older group felt that others saw them as moderately or very underweight. The overwhelming majority of each age group saw themselves as not at all underweight but the younger group had approximately equal numbers seeing themselves as moderately and very underweight while about 20% of the older group saw themselves as moderately underweight. Only 3.3% of the older group saw themselves as very underweight. The majority of both age groups considered underweight as not at all desirable, but about three times as many older women as younger felt it was moderately desirable.

Age-overweight. The differences between the responses given by the two age groups for overweight were not significant but trends were noted. Over 50% of the older women saw themselves as not at all overweight, while about 44% of the younger women saw themselves as very much overweight. Approximately equal numbers of the younger group felt they were not at all overweight as felt they were very overweight in the older group. More of the younger women saw themselves as moderately overweight than the older group.

Occupation-overweight. The responses for the trait of overweight were significantly different for the occupation categories as others saw them ($p < .10$) and as they saw themselves ($p < .05$). Over half the homemakers,

secretaries, and teachers felt that others saw them as not at all overweight while 80% of the participants in other occupations felt others saw them as moderately or very overweight. Homemakers tended to see themselves at either extreme--not at all overweight or very overweight while secretaries and teachers saw themselves as not at all overweight. The participants in other occupations tended to see themselves as very overweight.

Occupation-underweight. The responses for the trait of underweight were statistically significantly different for the occupation categories as they saw themselves ($p < .05$) and as an ideal ($p < .05$). The overwhelming majority of the homemakers, teachers, and those in other occupations saw themselves as not at all underweight while the secretaries had a tendency to see themselves at either extreme not at all underweight and very underweight. The overwhelming majority of the homemakers, secretaries, and teachers rated the trait of underweight as not at all desirable while those in other occupations rated it at other extremes.

Income-overweight. The reactions of the participants to the trait of overweight was significantly related to the income categories as others saw them ($p < .10$) and as they saw themselves ($p < .05$). The lowest income group reported feeling others saw them as very overweight while the moderate and highest income group felt others saw them as not at ail overweight. The same was true of the self evaluation.

Income-underweight. The differences in the responses given by the income categories for underweight were not significant but trends were noted. The majority of all income categories rated underweight not at all desirable but 22.7% of the lowest income group rated it very desirable.

Education-overweight. The trait of overweight received significantly

different responses from the education groups ($p < .10$). Half the group falling into the elementary education level reportedly felt others saw them as moderately overweight, while the remainder responded at either extreme. The major portion of the participants in the high school, college, and college graduate groups felt others saw them as not at all overweight with the second major clustering of answers at the other extremes. Most of the graduates felt others saw them as moderately or very overweight.

SUMMARY

The hypotheses that deviations in women from average body weight are related to attitudes toward selected traits and personal history were upheld. Of the participants 47.2% were average weight, 40.0% overweight and 12.8% underweight.

Different trends in meal patterns were noted. The overweight and average weight skipped many of the three meals while the underweight missed breakfast but always ate lunch and dinner. The underweight group ate dinner daily but the overweight tended to skip more than the average weight group. The overweight group ate lunch and breakfast alone more often than did the underweight or average weight groups. The overweight and underweight tended to eat more lunches away from home than the average weight. All three weight groups ate between meals. The overweight tended to eat in the afternoons and late evenings while the average weight group ate in the mornings and early evening. The underweight showed a tendency to eat near the middle of the day.

Attitudes toward 38 selected traits were shown to be related significantly at the 10%, 5%, and 1% levels to one of the participant categories of age, weight, occupation, income, and education groups. Findings indicate a significant difference in responses among age, occupation, and income groups on the traits of overweight and underweight. Differences were noted for the responses given by the education groups for the trait of overweight.

Differences were recorded for the responses by the three weight groups to 22 of the 40 selected traits. Differences were noted for ratings of how others saw them. The overweight tended to feel that others saw them as not at all delicate, weak, untidy, ill at ease, muscular, masculine, stylish,

flat-chested, or underweight. They reported that others saw them as very healthy, chubby, confident, motherly, and overweight. Although the majority of the overweight felt they were not at all muscular more overweight than underweight or average weight felt they were very muscular. The underweight felt others saw them as not at all delicate, weak, healthy, chubby, ill at ease, overweight, muscular and underweight. They reported others saw them as very flat-chested. Ratings for these traits were approximately equally distributed among not at all, moderately, and very much: motherly, and masculine. They felt others saw them as moderately confident and stylish. The average weight group reported feeling that others saw them as not at all delicate, weak, chubby, untidy, ill at ease, overweight, muscular, masculine and underweight. They responded with very much ratings for the traits of healthy, confident and motherly. Moderate ratings were given to the trait of stylish and the ratings were approximately equally distributed for the trait of flat-chested.

For the self evaluations significant differences were noted. The overweight saw themselves as not at all weak, masculine, flat-chested, and underweight. They rated themselves as very chubby and motherly. They gave approximately equal ratings to not at all and very overweight and not at all, moderately and very stylish and broad-hipped. The underweight reported that they were not at all chubby, overweight, and broad-hipped. They felt that they were very motherly and flat-chested. The underweight responded that they were moderately weak and stylish. They gave answers distributed approximately equally over the three ratings for the traits of masculine and underweight. The average weight group evaluated themselves as being not at all weak, chubby, overweight, masculine, broad-hipped and underweight while

they rated themselves as very motherly and flat-chested. They gave approximately equal responses on the three ratings for the trait stylish.

Evaluation of desirability of the 40 traits showed differences in certain of the traits. The overweight felt that these traits were not at all desirable: unpredictable, overweight and slumped. They rated the traits of clean, neat, well-groomed and graceful as very ideal. They rated the trait of plain as moderately desirable. The underweight felt that the traits of overweight, plain, and slumped were not at all desirable. They rated clean and well-groomed as very desirable. Approximately equal numbers rated the trait neat as moderately and very desirable and the trait of unpredictable as not at all and very desirable. They rated the trait of graceful as moderately desirable. The average weight rated the traits clean, neat, well-groomed, and graceful as very desirable while the traits of unpredictable, overweight, plain, and slumped were noted as not at all desirable.

The findings seem to indicate that in the sample studied there were definite differences among the three weight groups. It appeared that the overweight and underweight groups represented extremes.

As mentioned previously significant differences in responses were noted in all 5 participant categories, however the weight groups were the major concern in this study. Additional work needs to be done to further delineate the parameters of this study.

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APPENDIX

TABLE 1

Location	Population	Percentage	Number in sample
Ward I	77	2.43	3
Ward II			
Precinct I	90	2.84	4
Percinct II	147	4.64	6
Precinct III	168	5.30	7
Percinct IV	163	5.14	6
Ward III			
Precinct I	164	5.17	6
Precinct II	100	3.16	4
Precinct III	205	6.47	8
Precinct IV	81	2.56	3
Precinct V	152	4.80	6
Ward IV			
Precinct I	151	4.77	6
Precinct II	94	2.97	4
Precinct III	233	7.35	9
Ward V			
Precinct I	192	6.06	8
Precinct II	130	4.10	5
Precinct III	190	6.00	7
Precinct IV	217	6.85	9
Precinct V	183	5.78	7
Precinct VI	119	3.76	5
Precinct VII	313	9.88	12
Totals	3169	100.03	125

Factor: 1/3169 = .0003156

Form I: Selected Traits

CODE_____ TRAITS

INSTRUCTIONS: Indicate to what degree these statements are like you by placing a check in the appropriate column to the right of the statement. You will note that these are statements as you feel <u>others see</u> you.

			Not at all	Moderately	Very much	
1.	Others see me as a—	clean person				
2.	———	delicate				
3.	———	weak				
4.	———	feminine				
5.	———	healthy				
6.	Others see me as an-	inconspicuous person				
7.	———	neat				
8.	———	awkward				
9.	———	attractive				
10.	———	unpredictable				
11.	Others see me as a—	boyish person				
12.	———	chubby				
13.	———	untidy				
14.	———	confident				
15.	———	coordinated				
16.	Others see me as a—	well-groomed person				
17.	———	ill at ease				
18.	———	shy				
19.	———	motherly				
20.	———	overweight				
21.	Others see me as a—	fully developed person				
22.	———	muscular				
23.	———	petite				
24.	———	dependent				
25.	———	plain				
26.	Others see me as a—	masculine person				
27.	———	tailored				
28.	———	stylish				
29.	———	severe				
30.	———	domineering				
31.	Others see me as a—	graceful				
32.	———	energetic person				
33.	———	flat-chested				
34.	———	broad-hipped				
35.	———	lazy				
36.	Others see me as a—	slow person				
37.	———	sexy				
38.	———	slumped				
39.	———	underweight				
40.	Others see me as a—	well-proportioned person				

Form I (cont'd)

CODE_____ TRAITS

INSTRUCTIONS: Indicate to what degree these statements are like you by placing a check in the appropriate column to the right of the statement. You will note that these are statements as you feel you are.

			Not at all	Moderately	Very much	
1.	I see myself as a—	clean person				
2.	———	delicate				
3.	———	weak				
4.	———	feminine				
5.	———	healthy				
6.	I see myself as an—	inconspicuous				
7.	———	neat person				
8.	———	awkward				
9.	———	attractive				
10.	———	unpredictable				
11.	I see myself as a—	boyish				
12.	———	chubby				
13.	———	untidy				
14.	———	coordinated				
15.	———	confident				
16.	I see myself as a—	well-groomed				
17.	———	ill at ease				
18.	———	shy				
19.	———	motherly				
20.	———	overweight				
21.	I see myself as a—	fully developed person				
22.	———	muscular				
23.	———	petite				
24.	———	dependent				
25.	———	plain				
26.	I see myself as a—	masculine person				
27.	———	tailored				
28.	———	stylish				
29.	———	severe				
30.	———	domineering				
31.	I see myself as a—	graceful person				
32.	———	energetic				
33.	———	flat-chested				
34.	———	broad-hipped				
35.	———	lazy				
36.	I see myself as a—	slow person				
37.	———	sexy				
38.	———	slumped				
39.	———	underweight				
40.	I see myself as a—	well-proportioned person				

Form I (concl'd)

CODE _____

INSTRUCTIONS: Indicate how you feel about yourself as described by each trait by placing a check in the appropriate column to the right. You will note that these traits are to be evaulated by rating the desirability of your having each trait.

TRAIT	DESIRABILITY OF TRAIT		
	Not at all	Moderately	Very much
1. clean			
2. delicate			
3. weak			
4. feminine			
5. healthy			
6. inconspicuous			
7. neat			
8. awkward			
9. attractive			
10. unpredictable			
11. boyish			
12. chubby			
13. untidy			
14. confident			
15. coordinated			
16. well-groomed			
17. ill at ease			
18. shy			
19. motherly			
20. overweight			
21. fully developed			
22. muscular			
23. petite			
24. dependent			
25. plain			
26. masculine			
27. tailored			
28. stylish			
29. severe			
30. domineering			
31. graceful			
32. energetic			
33. flat-chested			
34. broad-hipped			
35. lazy			
36. slow			
37. sexy			
38. slumped			
39. underweight			
40. well-proportioned			

Form II: Personal History

Code _____ Date _____ Time _____

Were you born in the U.S.A.? _____ WHERE? _____
Where were your parents born? FATHER? _____ MOTHER? _____
Ethnic group with which you most associate:
Irish _____ English _____ German _____ French _____ Other _____
Italian _____ Polish _____ Scandinavian _____ American _____
Age _____ Years School _____ Marital Status: M ____ S ____ W ____ D _____
Are you pregnant? _____ Lactating? _____
Your career:
Homemaker _____ Secretary _____ Teacher _____ Nurse _____ Clerk _____
Self-employed _____ Please describe _____
Other _____ Please describe _____
Please give an estimate of the income category which represents your family income for the year 1968.
$ 0-3999 _____ $6000-7500 _____ $9000-10,000 _____
4000-5999 _____ 7500-8999 _____ Over 10,000 _____
How many times a year do you visit the doctor? _____
How many times should you visit the doctor? _____
Are you in good physical health now? _____
Have you ever been in poor health? _____ Explain _____
_____
Are you the wrong height? _____ Too tall? _____ Too short? _____
Are you the wrong weight? _____ Too heavy? _____ Too thin? _____
What height and weight do you consider to be ideal for you?
Height? _____ Weight? _____
If you were overweight, what would be your reasons for losing the excess poundage? _____
_____
If you had a friend or relative who was overweight, what health hazard would you expect him to be facing as a result of the overweight? _____
_____
Does overweight necessitate a visit with the doctor? _____
What type of reduction diet have you or your friends found to be most effective? _____
Who recommended this diet? _____
From your experience what would you say causes the most overweight? _____
_____
Have you ever been overweight? _____ When? _____
Baby _____ Child _____ Adolescent _____ Young Adult _____
Recently (how many years ago?) _____ Presently _____
How much overweight? _____
Have you ever been underweight? _____ When? _____
Baby _____ Child _____ Adolescent _____ Young Adult _____
Recently (how many years ago?) _____ Presently _____
How much underweight? _____
How many times a week do you usually eat breakfast?
None 1 2 3 4 5 6 7

Form II (cont'd)

If you skip breakfast, how long has it been since you have eaten breakfast regularly? _____

Why do you skip breakfast, if you do? _____

Do you usually eat between meals? _____

If YES, when do you snack?

Between breakfast and lunch _____ After dinner _____

Between lunch and dinner _____ Before bed _____

How many times a week do you usually eat lunch?

None 1 2 3 4 5 6 7

Where do you usually eat lunch? _____

With whom do you eat lunch? _____

If you skip lunch, why do you? _____

If you usually skip lunch, how long has it been since you have eaten lunch regularly? _____

How many times a week do you usually eat dinner?

None 1 2 3 4 5 6 7

Where do you usually eat dinner? _____

With whom do you eat dinner? _____

If you skip dinner, why do you? _____

If you usually skip dinner, how long has it been since you have eaten dinner regularly? _____

At what hour do you usually eat dinner? _____

Is dinner your main meal of the day? _____ If NO, which is? _____

Have you ever tried and found that omission of dinner is an easy way to lose weight? _____ EXPLAIN: _____

How many years have you participated in TOPS:

None 1 2 3 4 5 6 More, Specify _____

Are you: Active? _____ Moderately active? _____ Inactive? _____

Which of these covers your activity and interest in sports events?

Participate _____ Attend to watch _____ Observe on T.V. _____

None _____

What type of physical activity do you have each day? _____

What physical activity do you consider most beneficial to health? _____

_____ Why? _____

Form III: Record of Height and Weight

Code _____

Height _____

Weight _____

ATTITUDE OF WOMEN OF DIFFERENT WEIGHT GROUPS TOWARD SELECTED TRAITS

by

JIMMIE KAY ULLOM

B. S., Texas Technological College, 1967

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Foods and Nutrition

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1969

One hundred twenty-five women 21-50 years of age from Manhattan, Kansas, were selected at random from the voting records and contacted at home by trained interviewers from October-December 1968. The interview consisted of determining attitudes toward selected traits (a) as others see you, (b) as you see yourself, and (c) as an ideal trait; obtaining information concerning personal data, nutrition and health beliefs and nutrition history. The weight and the height of each woman was measured.

The hypotheses that deviations in women from average body weight are related to attitudes toward selected traits and dietary history were upheld. Of the participants 47.2% were average weight, 40.0% overweight and 12.8% underweight.

Definitely different trends in meal patterns were noted. The overweight and average weight skipped any of the three meals while the underweight missed breakfast. The underweight group ate dinner daily but the overweight tended to skip more than the average weight group. The overweight group ate lunch and breakfast alone more often than did the underweight or average weight groups. The overweight and the underweight tended to eat more lunches away from home than the average weight. All three weight groups ate between meals. The overweight tended to eat late, average weight group ate early and the underweight ate in the middle of the day.

Attitudes toward 38 selected traits were shown to be related significantly at the 10%, 5%, and 1% levels to one of the participant categories of age, weight, occupation, income, and education groups. Findings indicated a significant difference in responses among age, occupation, and income groups on the traits of overweight and underweight. Differences were noted for the responses given by the education groups for the trait

overweight.

Differences were recorded for the responses by the three weight groups to 22 of the 40 selected traits. Differences were noted for how others saw them. The overweight tended to feel that others saw them as not at all delicate, weak, untidy, ill at ease, muscular, masculine, stylish, flat-chested, or underweight. They reported that others saw them as very healthy, chubby, confident, motherly, and overweight. Although the majority of the overweight felt they were not at all muscular more overweight than underweight or average weight felt they were very muscular. The underweight felt others saw them as not at all delicate, weak, healthy, chubby, ill at ease, overweight, muscular and underweight. They reported others saw them as very flat-chested. They felt others saw them as moderately confident and stylish. The average weight group felt that others saw them as not at all delicate, weak, chubby, untidy, ill at ease, overweight, muscular, masculine and underweight. They responded with very much ratings for the traits of healthy, confident, and motherly. Moderate ratings were given to the trait of stylish.

For the self evaluations, the overweight saw themselves as not at all weak, masculine, flat-chested, and underweight. They rated themselves as very chubby and motherly. The underweight reported that they were not at all chubby, overweight, and broad-hipped. They felt that they were very motherly and flat-chested. The underweight responded that they were moderately weak and stylish. The average weight group evaluated themselves as being not at all weak, chubby, overweight, masculine, broad-hipped, and underweight while they rated themselves as very motherly and flat-chested.

Evaluation of desirability of the 40 traits showed differences in certain of the traits. The overweight group rated the traits of clean,

neat, well-groomed and graceful as very ideal; unpredictable, overweight and slumped as not at all desirable. The underweight felt that the traits of overweight, plain, and slumped were not at all desirable. They rated clean and well-groomed as very desirable. Approximately equal numbers rated the trait neat as moderately and very desirable and the trait of unpredictable as not at all and very desirable. The average weight rated the traits clean, neat, well-groomed, and graceful as very desirable while the traits of unpredictable, overweight, plain, and slumped were rated as not at all desirable.

The findings seem to indicate that in the sample studied there were definite differences among the three weight groups. It appeared that the overweight and underweight groups represented extremes.