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FAMILY INTERACTION PATTERNS DIFFERENTIATING OBESE AND NON-OBESE CHILDREN.

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A dissertation submitted to the Faculty of Arts, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Arts (Clinical Psychology).
Johannesburg, 1982.

I hereby declare that this dissertation is my own work, and that it has not been submitted at another university.

D. Finze.

D. FINZE.

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Abstract.

The aim of the present study was to assess the existence of certain differences between obese and non-obese children and their families. Subjects' ages ranged between seven and eleven years ($\underline{M}$ = 9.75, S.D. = 1.23). The differences assessed were in terms of personality characteristics usually associated with obesity, perception of body image and family structure and differences in family interaction.

The focus in the study was on children as it has been found that obesity with pre-adolescent onset, i.e. developmental obesity, is more resistant to treatment than obesity which develops at a later age. In addition, people with developmental obesity seem more vulnerable to the psychological complications of obesity. In this study obesity is viewed as a psychosomatic entity as its physiological and psychological elements cannot be easily differentiated.

All subjects were assessed on three projective tests viz., the DAP, KFD and TAT (or CAT). Families were assessed in terms of a Family Interaction Scale (Riskin and Faunce, 1970).

MANOVA demonstrated a significant finding on one variable of the Family Interaction Scale. This finding was related to a significant ANOVA result on the TAT. It appears that the obese subjects are more passive than the non-obese. In addition, tentative support is lent to the family model.

These results were discussed and suggestions and implications for further research were proposed. Finally, shortcomings and limitations in the research were elaborated upon.

There is no human society that deals rationally with the food in its environment and eats according to availability, edibility and nutritional value alone. Food is endowed with complex values, elaborate ideologies and religious beliefs. These aspects give the cultural and national character to food traditions and the emotional connotations of warmth and home to the eating habits of one's family and background (Bruch, 1973).

Eating is initially a matter between two people, mother and infant. It is an interpersonal relationship and remains so in later life. In this situation food is associated with the person providing the food and usually has reassuring and satisfying characteristics which fulfill both physical and emotional needs. Association of food with an emotional condition can become so close that food is sometimes substituted for emotional needs, especially love and affection. Food can become a means of self-indulgence, a form of security, a way of allaying anxiety, depressive feelings or hostility.

According to Flaks (1976), the constitutional tendency to obesity is evoked by psychological instability under stressful conditions. Eating substitutes a pleasurable sensation for the unpleasant feelings engendered by emotional strain.

Society and its sub-cultures tend to dictate eating patterns to the family. It is part of our society to connect "good" food with "good" times. To sell food, advertisements play on our society's hunger for love and security. Unfortunately, the people most easily influenced by this kind of advertising are those with deeper emotional hungers. Those able to resist the lure of the adverts are generally healthier members of society whose emotional hungers are being satisfied in other ways (Wise, 1979).

Over/.....

Over the past 25 years, the scientific view of obesity has changed from one of "it's all soma" or "it's all psyche" to the more reasonable present view that there are multiple etiological factors and probably a variety of obesities (Carrera, 1967).

Thus to understand and treat obesity with success, the various emotional values of food must be considered. Also, the symbolic values the family or sub-culture place on the eating experience. Effective treatment of obesity must provide these symbolic values in other ways.

Definition of Obesity

The index, of obesity most commonly used is that of mass in relation to height as described in the tables of the Metropolitan Life Insurance Company (1929). It is conventional to view obesity as being present when body weight exceeds by 20% the standard weight listed in the table. This table, however, is only applicable to people of 18 years of age and older. Therefore, for the purposes of this study, height-weight charts used by the Johannesburg Hospital, Paediatric department, were used (Appendix I).

Obesity is currently recognised as a major health problem (Hutzler, Keen, Molinari and Carey, 1981). Until the beginning of this century, a generous measure of adiposity was valued as a mark of affluence, beauty and health. The change in view toward overweight began with the report of Rogers (1901). He unexpectedly showed a heightened mortality among insured persons who were overweight. A succession of medico-actuarial studies, representing the experience of individual insurance organisations, has uniformly shown that overweight is associated with a shortened life expectancy and increased mortality from several diseases, notably cardiovascular diseases and particularly affecting men (Gubner, 1973).

A recent/.....

A recent report (Department of Health and Social Services and Medical Research Commission, 1976) concludes that obesity is associated with conditions such as ischaemic heart disease, arthritis, post-operative complications, poor obstetric performance and lack of physical fitness. In addition, liver biopsies regularly show degenerative changes and fatty infiltration. Pulmonary function is significantly impaired in the presence of gross overweight (Scherrer and Liechti, 1970).

The greatest adverse effects of obesity on health and survival are most evident and operative in the younger decades - b low the forties (Build and Blood pressure study, 1959).

Developmental obesity

The importance of focusing on the obese child is that children who become fat before the age of ten years usually remain obese throughout life and are especially resistant to treatment as adults (Bakwin, 1959). Thus, a pattern of obesity can be established in early childhood. This is referred to as Developmental obesity or Juvenile-onset obesity (Bruch, 1956).

Abraham and Nordsieck (1960) followed up 100 overweight children and 100 normal weight children aged 10 - 13 years and located them 20 years later. Their findings can be summarised as follows: 40/50 obese boys were obese adults, 21/50 non-obese boys were obese adults, 40/50 obese girls were obese adults and 9/50 non-obese girls were obese adults.

Lloyd (1961) followed up 67 children who had attended an obesity clinic nine years previously. He found that over one-half of the boys and three-quarters of the girls (then aged 18 years) were still overweight. He concluded that approximately two-thirds of the group were likely to become obese adults.

Crisp,/.....

Crisp, Douglas, Ross and Stonehill (1970) carried out a longitudinal study of over 3000 children over a period of 15 years. They found that of 240 boys who were fat at seven years of age, only seven were thin at 15 years of age, whereas of 276 boys who were thin at 7 years of age, only 12 were fat at 15 years of age. Similar findings were evident with girls, viz., of 243 girls who were fat at seven years of age, only three were thin at 15 years of age. Whereas of 242 girls who were thin at seven years of age, only five were fat at 15 years of age.

Physiological studies of adipose tissue show that the fundamental characteristics of adipose tissue are determined early in life (Penick and Stunkard, 1973). The fact that the number of cells does not change in adult life implies a critical period in man during which the number of cells is established for life. People who become obese during this period, perhaps in infancy or childhood, may do so through an increase in the number of adipose cells, in contrast to those who become obese in adult life.

If this is the case, one would expect the person with developmental obesity to experience increased difficulty in weight reduction, for they would be dealing with the double burden of an increased number and increased size of adipose tissue cells. One with adult-onset obesity could return to normal weight simply by emptying the adipose cells of their excessive load of fat. Thus developmental obesity is more resistant to treatment and, in addition, such people seem more vulnerable to the psychological complications of obesity (Hirsch and Knittle, 1970; Seltzer and Mayer, 1964).

Etiology of Obesity

In this section, various factors contributing to the etiology of obesity are discussed.

Genetic/.....

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Genetic/.....

Genetic versus Environmental causes

Obesity is decidedly familial. Heredity, however, does not fix one's weight exactly. It only delimits a zone within which the weight of the individual fluctuates according to food intake, activity and psychological factors (Bakwin and Bakwin, 1966).

Whether the development of obesity is controlled predominantly by genetic or by early environmental influences has not been conclusively established. Both factors appear to play a role.

Obesity in parents poses the most significant risk, i.e. when both parents are obese, approximately 70% of their children are obese; when one parent is obese the incidence drops to between 40% and 50% and when neither parent is obese it falls to less than 10% (Stunkard, 1980). There are, however, purely environmental factors that correlate with obesity. These include being born of a mother over 35 years of age (16% of obese children compared to 3% of controls); being an only child (11% versus 6%); having suffered the death of a parent in early childhood (18% versus 10%) and being a member of a lower socio-economic class (Wilkinson, 1977).

In addition, the finding that a high percentage of obese people have a family history of obesity may be attributed, at least partly, to the influence of a common environment. This refers to identification with obese parents and the use of learned oral methods for coping with anxiety, rather than only being due to a genetic factor.

Hunger versus Appetite

With regard to obesity most authors agree that there is a marked disturbance not in hunger, but in appetite. Hamburger (1951) differentiates between hunger and appetite. He states that hunger is the physiological expression of the body's need for energy (food)

which/.....

which operates involuntarily in the healthy person. Hunger may well be under the control of inherited, constitutional or hypothalamic regulation. Hunger is an uncomfortable sensation localised to the epigastrium and is relieved by eating.

Appetite, on the other hand, is the psychological desire to eat and gives a distinct anticipatory pleasure. Normally hunger produces appetite, but appetite also exists independently and can be stimulated by other means, for example, seeing or discussing liked food. Appetite is conditioned by the sight, smell and memory of certain foods and experiences while eating. Thus a particular person's appetite, taste for specific foods and eating habits are conditioned by his entire life experiences with food and eating.

An important factor in appetite is the individual's emotional state. It is common knowledge that when one is under emotional tension, there is often a reflection in one's appetite (Kaplan and Kaplan, 1957). Interestingly, this may be either in the direction of an increase or a decrease of appetite. In morbid emotional states, particularly the depressions, eating disturbances are usually cardinal symptoms. Often the neurotically depressed person will overeat and gain weight, whereas the psychotically depressed person refuses food. Thus, in sickness and in health, there is an intimate inter-relationship of appetite and an individual's emotional state.

External versus Internal cues

There has been much controversy as to whether obese individuals eat in response to internal or external cues. The Externality hypothesis was proposed by Schachter. Schachter's (1971) findings indicated that the difference in eating habits between obese and non-obese people seemed to be that the obese person obtains cues to eat from his/her

surroundings/....

surroundings, whereas the non-obese person obtains cues to eat from his/her own body's sensations.

An array of studies appears to have provided evidence for this (Goldman, Jaffa and Schachter, 1968; Nisbett, 1968; Schachter and Gross, 1968 and Stutz and Woods, 1974). However, according to Rodin and Slochower (1977), a re-examination of the externality hypothesis shows that there is no correlation between degree of obesity and external responsiveness. Leon and Roth (1977) concur with this statement and conclude that the hypothesis receives mixed support.

Deriving from a psychosomatic approach, Bruch (1973) claims that obese individuals do not correctly identify internal states of hunger, but instead eat in response to a variety of unpleasant physical or emotional states. According to Bruch (1973), in patients with severe eating disorders a basic disturbance can be recognised in the perceptual and conceptual awareness of hunger.

She asked the question of how it is possible for a basic and essential body function to develop in such a way that it could be widely misused in the service of non-nutritional needs. Bruch concluded that the experience of hunger contains important elements of learning. Briefly, her theory states that something had gone wrong in the experiential and interpersonal processes surrounding the satisfaction of nutritional and other body needs. Incorrect and confusing early experiences had interfered with the obese individual's ability to recognise hunger and satiety and to differentiate "hunger", the urge to eat, from other signals of discomfort that have nothing to do with "food deprivation". The latter are usually emotional tension states aroused by a great variety of conflicts and problems (Bruch, 1962, 1969, 1970; Coddington and Bruch, 1970).

A study/.....

A study by Leon and Chamberlain (1973) largely confirms Bruch's findings. They studied two groups of overweight women and compared them to a control group. One group had maintained weight loss for one year, while the other had regained weight previously lost. Recidivists indicated eating in response to a variety of states of emotional arousal. Maintainers reported that eating was more specific to boredom and loneliness. Results from the control group show that food consumption was primarily in response to hunger.

Society

Lastly, it is essential to focus on how society facilitates or impedes healthy eating habits, physical activity habits and weight management. Many Western societies have a major problem with obesity. This is partly related to factors such as the affluence of the society, the availability of food - particularly "junk food", i.e. high in sugar and low in nutrients; mechanisation of the society and decrease in physical activity (Mayer, 1968; Stuart and Davis, 1972). There is also growing recognition of the profound influence of advertising in conditioning food preferences and the consumption of non-nutritional, high calorie food (Gussow, 1972).

From the above discussion, it appears that obesity should be considered as a psychosomatic entity as it seems that it's physiological and psychological aspects cannot be strictly differentiated. Various authors agree with this. Finch (1967) states that the persistence of adipose tissue beyond early childhood is one of the most common psychosomatic disorders in our society. Kaplan and Kaplan (1957) conceive of obesity as an abnormality that is multicausal in origin, i.e. the overeating of the individual may have a major constitutional-hereditary contribution or be predominantly the result of emotional problems or be any combination

of the/....

of the two. Thus, they conclude that all of these factors play some role in the disruption of body homeostasis that has, as it's end result, the state of obesity.

The psychosomatic approach is based on certain basic postulates: (a) psychological processes are fundamentally not different from other processes which take place in the body. At the same time they are physiological processes and differ from other bodily processes only in that they are perceived subjectively. (b) Bodily processes are directly or indirectly influenced by psychological stimuli as the whole organism constitutes a unit in which all the parts are connected to the highest integrating centre of the nervous system (the brain) (Alexander and Flagg, 1965).

The influence of psychological factors in the precipitation and etiology of certain diseases has been carefully investigated and established in recent years. It is more or less accepted that certain types of personality organisation are more susceptible to psychosomatic influences and tend to react to stress or conflict by somatic dysfunction.

The hypothesis underlying the study of the relation between patterns of physical illness and varieties of emotional traumata postulates that emotional disruption from traumatic events causes a disorganisation of autonomic and hormonal regulatory systems, possibly mediated by the limbic system (Maclean, 1955). Attempts have been made to specify personality constellations that relate to the incidence of certain kinds of illness. However, in psychosomatic processes psychological influences operate in conjunction with a configuration of other factors and the emotional component may be variable. For example, in the case of duodenal ulcer the psychosomatic process is quite different from that involved in obesity (Lidz and Rubenstein, 1959).

Psychodynamic/

Psychodynamic aspects of obesity

Certain personality factors are found repeatedly in developmentally obese persons, i.e. obesity with childhood onset.

Since eating is a central, early need it is not surprising that it is tied to every person's emotional core. If a serious emotional problem arises at an early age, this may well be reflected in the person's later eating habits. Wise and Wise (1979) used Erikson's theory of critical stages of development to study individuals who have certain personality traits and eating problems in common. They found that eating problems began to make sense as indicators of unresolved developmental conflicts.

The obese are frequently described as dependent and passive (Bruch, 1961; Grinker, 1973; Karp, 1965 and Mendelson, 1966); immature (Bruch, 1961; Shovron and Richardson, 1949) and helpless (Stanger, 1975; Stewart, 1973). These characteristics constitute a description of oral dependence, as defined by the Psychoanalysts. Therefore, Masling, Rabie and Blondheim (1967) used projective tests to research the hypothesis that obese subjects would show more oral dependent signs than would control subjects. Their hypothesis was confirmed. They found that passivity, dependence, helplessness, loneliness and depression showed especially strong relationships to obesity. These, however, were not causal relationships.

According to Kanner (1957) obese children are characterised by emotional dependence, passivity, isolation and personal insecurity.

Monello and Mayer (1963) studied obese adolescent females as compared to non-obese controls. Results of three projective tests revealed that the obese females showed personality characteristics strikingly similar to traits of ethnic and racial minorities, viz.: (a) "obsessive

concern"/

concern" with heightened sensitivity and preoccupation with status, (b) passivity, withdrawal, a sense of isolation and feelings of rejection by peers, (c) acceptance of dominant values and consideration of obesity, therefore their own bodies, as undesirable. Stunkard and Mendelson (1961) report similar minority group personality characteristics in a small sample of obese adult women. Interestingly, such traits have been recognised by Allport (1958) to be due to their status as victims of prejudice.

Werkman and Greenberg (1967) compared a group of obese adolescent girls on a number of personality measures. Statistically significant results were found on the following measures: narcissism, social anxiety, lack of impulse control, immaturity, depression and poor imagination. These findings were all in the direction predicted by the researchers.

Held and Snow (1972) similarly found a group of obese adolescent girls to be characterised by feelings of depression, alienation and low self-worth, coupled with problems in impulse control.

Hammar (1972) found that obese adolescents are markedly different from non-obese adolescents in that they are less confident and independent and have poorer self-esteem. In addition, the obese are more egocentrically oriented, immature and self-conscious.

Sucżek (1957) applied a number of psychological measures (including the MMPI and TAT) to a large group of obese women. He found that, in their attitudes to themselves, these women are distinguished by extreme emphasis on psychological strength, hypernormality, narcissistic pride and denial of weakness. He concludes that these obese women's dimensions reflect their need for strength and largeness in order to deny an image of self that is felt to be basically weak, inadequate and helpless.

Rubin/.....

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Rubin/.....

Rubin (1966) has delineated an "obesity profile". He acknowledged that the personalities of obese people are diverse in many ways, but do have elements in common: (a) obsessive preoccupation with food, (b) compulsive eating which is only one of many oral activities and (c) alienation from the self and failure to achieve autonomous functioning and independence.

Eating has been seen not only as a means of warding off anxiety, but also as a depressive equivalent. Overeating may constitute a defence against milder forms of depression, as is shown by overt symptoms of depression appearing for the first time when weight is lost in a reducing regimen (Stunkard, 1976).

While some writers have suggested that depression and other stress reactions have accompanied weight loss (Cappon, 1958), others have shown that: (a) negative psychological reactions are frequently not found (Caufman and Pauley, 1961; Mees and Keutzer, 1967); (b) so-called depression associated with weight loss is, in fact, merely a function of lowered energy due to reduced food consumption (Bray, 1972); (c) decrease in anxiety and depression may actually accompany weight loss (Shipman and Plesset, 1963).

Simon (1963) found that in the United States air force, overweight men were far less depressed than normal weight controls. He concluded that obesity is a depressive equivalent.

Leckie and Withers (1967) designed an inventory to assess susceptibility to depressive illness. Their findings reveal that the clinically obese are a population having an underlying tendency to depressive illness.

Stunkard/.....

Stunkard (1976) used a sentence completion test probing female subjects' response to depression. Every one of the obese subjects reported a passive acceptance of a depressed mood. For example, "when I'm blue, I just cry". Non-obese subjects often gave responses indicating that they were struggling against feelings of despondency. For example, "when I'm blue, I clean house".

Phalen (1978) studied the relationship between percentage of body fat in women and various indicators of psychological adjustment and stress, using the MMPI. He found a statistically significant ratio between high percentage of body fat and the depressive-distress syndrome factor. This factor represents depressive-anxious rumination, low energy level and social withdrawal.

On the basis of the above studies, it was decided to select the following personality characteristics associated with obesity and to research whether they are evident in a sample of obese children. The personality characteristics which were assessed in the present study are enumerated in Table I.

Table I

Personality characteristics associated with obesity

Dependency,

Passivity,

Low self-esteem,

Depression,

Aggression,

Withdrawal and

Immaturity/egocentricity.

A further dimension often associated with obesity is an unrealistic perception of self (Bruch, 1973; Greenberg and Werksman, 1967 and

Stewart/.....

Stewart, 1973). This refers both to the confusion in identifying hunger (already discussed), as well as to a disturbance in body image. Body image refers to feelings and attitudes towards one's body which have evolved through subjective experience. Thus, this term may, in certain respects, overlap with various usages of concepts like ego, self and self concept (Fisher and Cleveland, 1968).

Fisher and Cleveland (1968) maintain that the psychological significance of the body is that it separates the self from the environment. It, thus, protects the self from threatening encroachments. Others have developed the ideas of the body - buffer - zone of personal space (Evans and Howard, 1973; Horowitz, Duff and Stratton, 1964; Pedersen and Shears, 1973 and Sommer, 1969). This identifies a region surrounding the body which the individual regards as personal or intimate. This region will be protected if threatened by undesired encroachments.

Over the years the individual organises his/her body image through the integration of multiple perceptions. This process begins in the earliest stages of development. The infant's exploratory movements over his/her own body, his/her hands in contact with the mother and their use in grasping objects in space, provide the primary kinesthetic and tactile sensations. These are the processes on which are founded the beginnings of self-awareness, individuality and the sense of the ego (Kolb, 1959).

The socially determined qualities of the body image begin to appear with the child's earliest experiences in relation to significant persons in his home environment. Depending on these experiences, the body may be conceived as good or bad, pleasing or unattractive, loved or disliked. Attitudes towards the body also derive from the individual's perceptions, comparisons and identifications with the bodies of others.

According/.....

According to Stunkard and Mendelson (1967), three factors predispose an obese person to develop a disturbed body image, viz. (a) age of onset of obesity - disturbances occur almost exclusively in those who become obese during childhood or adolescence; (b) presence of emotional disturbance - a necessary, but not sufficient cause of body image disturbance and (c) negative evaluation of obesity by significant others - especially during the formative years (Maddox, Back and Liederman (1968).

Penick and Stunkard (1973) agree that disturbances in body image affect only some obese individuals. These disturbances appear to be persistent, unaffected by weight loss even of long duration and are relieved only by psychotherapy - and often not even then.

This phenomenon was studied in a group of suber-obese patients following weight reduction, i.e. a minimum of 30% above normal body weight. These patients expressed concern over alteration of their body size and experienced an increased permeability of ego boundaries (Glucksman, 1968). Their figure drawings following weight loss showed larger waist diameters with the belt extending over the body lines. In spite of weight loss, they reported persistent feelings of largeness.

In an interdisciplinary study of adolescent obesity, Hammar, Campbell and Moore (1972), found that on their body image scale the total obese group had significantly lower scores, indicating a less positive or more impaired body concept than the non-obese group.

Bailey, Shinedling and Payne (1970) studied the perception of body image of underweight, normal weight and overweight college students. On the Draw-a-Person test, overweight subjects tended to draw figures with larger head and torso dimensions, indicating larger body images than the other two groups.

Generally/.....

Generally obese people view their bodies as unattractive or grotesque and make their appearances the scapegoat for all difficulties in their relationships with others. Obesity then becomes an explanation and symbol for all failures and disappointments (Wilson, 1976). A circular relationship obtains between body image disturbances which predispose to esteem-lowering experiences and depressive moods which, in their turn, reinforce the disturbed body image.

Reduced physical activity also seems to play a role in disturbance of body image, as the structuring of the body image requires motility as an integral determinant. Schilder (1935) emphasised that we do not know much about our bodies unless we move them, for it is through movement that we gain a kinesthetic awareness of our limbs and their inter-relationships.

Empirical evidence supports the hypothesis of lowered motility in obese persons. Johnson (1956) compared activity schedules of high school girls and found that obese girls spent two-thirds less time than controls in physical exercise. Stefanik (1959) found the same for obese adolescent males.

In a study by Nathan and Pisula (1973) on obese adolescents, they found that their subjects' human figure drawings were primitive and lacking in detail. They concluded that motility plays an essential part in defining the boundaries of the self. They deduced that the amorphous, unstructured style of these obese subjects may result largely from their lifelong tendency to observe, rather than participate and to absorb passively, rather than actively explore. They state that a life-style of extreme passivity and lowered motility deprives one of the kinesthetic sensations necessary for a well articulated body image.

Tolstrup/.....

Tolstrup (1953) estimated the body activity of a group of obese children as compared with a control group. This was rated in terms of poor, fair, or lively body activity. Results were:

Table II

Body activity of obese and non-obese children

	Obese	Controls
Poor activity	13	0
Fair activity	4	8
Lively activity	23	32

Ostergaard's (1954) study on the obese child's level of spontaneous activity revealed observations that accord well with Bruch's observations (1951). They both found that obese children were more sluggish and less often engaged in games with other children.

Table III

Spontaneous activity of obese children

	Ostergaard	Bruch
Inactive, sluggish	78%	72%
Active, energetic	17%	20%

In adolescence, particularly, it has been shown that obesity is more often associated with abnormal inactivity than with caloric intake in excess of average (Johnson, Burke and Mayer, 1956; Stefanik, Heald and Mayer, 1959).

In view of the asserted importance of the body image construct, it was decided to include this variable in this research study.

In addition to the abovementioned personality dynamics which are associated with obesity, there are other contributory factors to obesity. The most important of these appear to be, the role of the parents and the family. The role of individuals in this constellation will be discussed separately.

Role of the Mother

The role of a dominant and overprotective Mother is repeatedly mentioned in the literature (Bruch, 1957; Hecht, 1955; Suczek, 1955). The Mother makes the child dependent on her through the food she offers. She teaches the child food preferences. She can punish the child through food deprivation, for example, "no pudding today", or can show approval by spoiling the child with extra food. The child who wishes to please his/her Mother eats all his/her food.

Reasons for a seemingly loving Mother behaving in this manner are usually to be found in her pathology. Her ambitions and frustrations are lived out through her children, or one particular child. Whatever the case, the child contributes to the situation in that he/she has a personality make-up which allows the Mother to dominate him/her (Bruch, 1961).

A widespread practice among Mothers is to try and comfort a child in distress by feeding it (Brosin, 1955; Bruch, 1961). When the distress arises from hunger, this is the appropriate response. When it arises for other reasons like injury, a wet napkin. - it is not. In pathological cases, an inadequate Mother may respond to almost every distress signal by giving food which may lead to severe personality disorder, as well as obesity. The Mother who reacts to non-nutritional distress by giving food may be internalised by the child, i.e., the child identifies with her, often unconsciously, and treats him/herself and others in the same way.

The hazards of this situation from a nutritional viewpoint are obvious: (a) It tends to divorce food and eating habits from nutritional needs. Meal content, patterning of meals and general food consumption are heavily infiltrated with non-nutritional needs. This threatens the control systems that relate nutritional signals to nutritional

needs/.....

needs (Brosin, 1953). (b) Foods that best satisfy emotional rather than nutritional needs are essentially high in carbohydrate (Pennington, 1953). This stems both from the influence of parental figures who have used these foods in such ways, as well as from the inherent qualities of the foods themselves. They are freely available with little trouble or expense. They are usually cheaper than alcohol, tobacco or drugs, less subject to social disapproval and threaten less dire consequences if taken in excess.

Benedek (1949) describes the communication and somatic expression of neurotic conflict from Mother to child within the mother-child unit. Such forms of somatic compliance have been examined in detail in cases of obesity (Bruch, 1940, 1962, 1964, 1965). These studies emphasise the patterning of psychosomatic disorders in relation to parental conflicts. The focus is not on specific correlations between unconscious conflicts and particular psychosomatic manifestations, but stress the general maternal quality.

In a study by Juel-Nielsen (1953), he found that 26 out of 54 mothers of obese children displayed a series of common characteristics. This led him to define a mother-type that, in many ways, resembled the mothers' of obese children as described by Bruch (1949). 24 of the mothers displayed nervous, chiefly psychosomatic, symptoms. Only 12 of the fathers had psychological difficulties. In approximately one-half of the 54 cases, there seems to have been an abnormal emotional attachment between mother and obese child. The mother's attitude was largely over-protective.

In a similar study by Iversen (1953) on 40 obese children, he found that a non-rejecting overprotection of the child, by the mother, was evident in 20 cases. He stated that the following factors may have contributed to the attitude of the mother: (a) Mother's childhood - 14 mothers described their childhood as unhappy. Eight spoke of "lack of love", "strict upbringing"; (b) Parental relationship -

incompatibility/.....

incompatibility and lack of harmony between parents was stated in 11 cases. In five of these the marriage had been dissolved. In two cases the child was illegitimate and in two cases the father was deceased. A domineering attitude on the part of the mother coupled with weakness and subservience of the father was found in seven cases.

Feiner (1977) found that obese girls are more dependent on their parents than non-obese girls. This is particularly so with respect to their mothers and they tend to be more aggressive than non-obese girls towards their fathers.

Generally, evidence suggests that the mother is the more influential parent with regard to attitudes about health and body functioning (Buck and Laughton, 1959; Mechanic, 1965).

Role of the Father

The father as a possible contributor to pathology has been the subject of comment by some authors, Paterson (1959) concluded that the father's behaviour is as important as the mother's in causing maladjustment in the child. The father has been implicated in psychosomatic disorders. In Jewish children with eating problems, the father is said to be ineffectual and undependable (Lurie, 1941). Subordination is also a feature of fathers of obese children (Bruch, 1947).

Bruch (1973) also found that fathers may take an active interest in the child - often of a highly critical nature, as if one of their possessions did not live up to expectations.

Ostergaard's (1954) observations accord with Bruch's in many ways. He found that the Bruchean constellation of submissive, "unsuccessful" husband and domineering mother was confirmed. In other cases, he found a strict,

exacting/....

exacting father against whom the mother and child had to stand in united action. The mother's role was then to protect the child against rigorous treatment on the part of the father.

Role of the Family

An obisogenic family is one whose dynamics contribute to the causation of obesity. Many have examined family structure of obese patients and conclude that specific parental character traits and family situations play significant roles in the genesis of obesity. Most describe these homes as being dominated by a powerful mother who is overprotective and over-indulgent, yet cold, with a father who is usually weak, submissive and unable to give positive guidance to the obese child (Bullen, 1963; Hamburger, 1951; Hammar, 1972).

Bruch (1973) states that the obese child seems to be exploited as a compensation for disappointments or shortcomings in the parents' life. Alternatively, that the parents look on the child as a personal possession. However, in spite of the overprivileged care these children receive, true regard for their individuality is lacking.

Garrera (1973) reports on Bullen's (1964) study of the obese adolescent female and concludes, "the need to study the family in depth and to involve the parents in therapeutic intervention is reflected in the results of Bullen's study".

The reason for this was that disturbances in family relationships was the rule in these families. Disturbances were characterised by a low degree of sociability among family members and much fighting between siblings. The poorly adjusted obese adolescent girl was more dependent on the family and had conflicts over separating from the mother.

A study/.....

A study by Stanley, Glaser, Levin, Adams and Coley (1970) included parents of obese adolescents in a treatment group. In these meetings, parents tended to focus on their inability to cope with their children's dependency on them. This difficulty related closely to the parents' unsuccessful resolution of their own problems in this area. Therefore, instead of being primarily concerned with parent-child conflict over adolescent issues, for example, emancipation, peer relations, the parents seemed preoccupied with problems relating to childhood, for example, control over food intake, homework, etcetera.

Hammar, Campbell and Moore's (1972) study of families of obese and non-obese adolescents revealed distinct psychological differences. Marital dissatisfaction existed in all but one of the families of obese adolescents. The obese adolescent seemed to occupy a unique role in his/her family, not shared by non-obese control subjects. Not only did they tend to bring out differences between the parents, but also appeared to be a scapegoat in the rivalry among siblings. Siblings of the obese adolescents appeared to harass and belittle them. No parent felt that a warm and comfortable relationship existed between the obese adolescent and his family. In contrast 70% of the control families felt that a good, supportive relationship was present.

In addition, families of obese adolescents were markedly more socially introverted than control families. The social isolation of the obese adolescent appeared to mirror the life pattern set by the parents.

In a more general vein, Wise (1979) states that when the dinner table is a central family arena, the eating experience gains significance. The event is not simply meant to fill one's stomach. To eat together is to relate, laugh, argue and so forth. Families thus share food and intimacy. When the child ventures into the "outside" world, he may yearn, especially

during/.....

during times of stress, for the closeness and support he remembers within the family. The family, however, may not be as accessible or available as it once was, or the young person may be trying to be independent and avoid family support. Fusion, therefore, is attempted through compulsive eating which had been so strongly paired with closeness in childhood.

Family theorists and therapists view the family as providing the basic environment in which the child's personality develops. Parents influence the child by direct interaction with him/her. Also, parental interaction in itself serves as a model for the child to observe and identify with and/or react against. Each child in turn influences his/her parents and siblings and, thus, a mutually interactive process occurs (Jackson, 1959; Satir, 1964).

In addition, whenever a group of people are closely related to each other, as in a family, they reciprocally carry part of each other's personality. This forms a feedback system which, in turn, regulates and patterns their individual behaviours.

Experience in family therapy has shown that psychological symptoms or disordered behaviours, which are frequently etiologically and dynamically obscure from the standpoint of individual psychopathology, can often be decoded and made intelligible when viewed in the matrix of their intimate social systems (Minuchin, 1974). Framo (1972) works on the postulate that symptoms are formed, selected, maintained and reduced as a function of the relationship context in which they are embedded.

Therefore, to understand individual personality development and functioning, family therapists believe that it is essential to include the whole family as the major unit of study.

The study of psychodynamics in family structures has left the impression that patterns of family interaction have a marked impact not

only/.....

only on the psychological adjustment of its members, but also on patterns of physical health and illness. There has been a shift and refocusing of attention from the level of intrapsychic dynamics to the level of organisation of the family and its functioning. The family is also seen as being embedded within a larger context of the social community and its culture (Mutter and Schleifer, 1966; Scheflen, 1967; Von Bertalanffy, 1966).

A consistent element in disturbed families, where the pathology is more specifically psychological, is that the patient is caught up in an emotionally loaded, often tense and conflictual interaction within the family (Bowen, 1960).

In clinical situations, the close connection between depressive tendencies and psychosomatic illness is often seen (Lesse, 1967; Marder, 1967; Stewart, 1962; Vogel and Bell, 1960). Thus, where depressive moods or defences against depression dominate family interaction, a high incidence of psychosomatic disturbance might be expected. Various mechanisms may be brought into play which contribute to family cohesion but mitigate against the expression of feelings, particularly negative or dysphoric feelings (Goldberg, 1958).

In many "psychosomatic families" the patient seems to be functioning at an immature level and reveals a relatively infantile personality organisation. This is often reflected in various forms of passivity and dependence (Ruesch, 1948). The parental relationship often falls into a pattern of reciprocal functioning. One partner assumes a position of dominance and/or control over the family, while the other assumes a reciprocal position of submission and/or dependency and/or passivity (Goldberg, 1958).

The/.....

The reasons why the selected patient becomes involved are complex and must include parental dynamics, as well as the prevailing family context. According to Framo (1965),

> "The various children in the family come to represent valued or feared expectation of the parents, based on parental introjects; sometimes the roles of the children are chosen for them even before they are born (for example, the child who is conceived to 'save the marriage')... In every family of multiple siblings there is the spoiled one, the conscience of the family, the wild one; the assigned roles are infinite." (p. 192)

Framo believes that these phenomena occur in some measure in all families, as a basic fact of human existence. The "family way" of seeing and doing things becomes automatic and unquestioned. It is very difficult for anyone, no matter how mature, to avoid the family role assignment when in the presence of his family. The assignment is reinforced by family myths and rules and is ritualised into the family structure. One risks a great deal in going against the projections.

In general, it seems that some symptoms are developed as a function of efforts to escape the role assignment and others as reflections of the designation.

Framo (1972) states that although all symptoms are not interpersonally determined, they always have interpersonal and relationship consequences. These will determine their nature, course, preservation or removal.

It is important to realise that neither the transactional nor the intrapsychic levels can be replaced by the other, or reduced to the other - both are necessary for the whole picture.

Frazier, Faubion, Giffin and Johnson (1955) write from a similar framework. They conclude that there is a parental compliance factor

vital/.....

vital to the development of specific eating difficulties. They determined five types of neurotic eating difficulties exhibited by children:

(a) Family obesity, (b) clinical obesity, (c) skinniness, (d) ulcer problems and (e) anorexia nervosa.

In each family concerned there is a relatively unhappy marriage and, in all, there is parental ambivalence towards the child. The intensity of the hostile components increases from family obesity through to anorexia nervosa. In the eating problem of family obesity there is no ambivalence about eating, but in each of the remaining types there is some. Again, the intensity of this conflict increases from family obesity through to anorexia nervosa. Obese children most often taken for help present with clinical obesity (type b).

In all the cases, using detailed case histories, the authors traced the child's compliance to parental wishes as one of the major determinants in the production of the specific symptom. The parental wish is often not verbalised, but is conveyed by vacillating affection or the manner of food preparation. The child is forced by behaviours which never reach words. The well-meaning parent honestly attempts to convey constructive ideas by word of mouth, but frequently his/her efforts are defeated by unconsciously directed actions.

Children with clinical obesity know that if they continue to eat they will be openly ridiculed, yet they sense that if they do not eat they will be subjected to far more intense scorn and rejection. In spite of the open criticism, the child is complying with the parents' unconscious desire that they eat and become obese and infantile. In contrast to the happy child with family obesity (type a), the depression and irritability of these children is easily seen.

Satir/.....

Satir (1964) states that the kind of symptom which appears in an individual gives clues as to the nature of the family system within which that person exists. Straker's (1976) study implied support for this view, as well as that of Titchener and Emerson (1963) that family types can be deduced from the characteristics of the individuals they contain.

As regards the question of obesity, Stanger's (1975) research recommends that the role of the father and siblings needs clearer definition in the understanding of developmental obesity. In terms of assessing the family, Straker (1976) states that to establish interactional differences between 'normal' and 'abnormal' families in a static way is an important first step when trying to come to a formulation of individual symptomatology in terms of family pathology. Similarly, to establish that families with a diagnosed member of one kind differ from families with a diagnosed member of another kind, is also an important step in research in trying to establish specific interactional patterns in relation to specific symptoms.

In view of the importance placed on the family in the etiology and maintenance of psychopathology, both the above recommendations were accepted. The research design included the assessment of interactional patterns differentiating families with obese and non-obese children.

Aims of the study

This study aims to assess:

(a) The obese child's perception of his body image and family structure;

(b) The existence of personality characteristics associated with obesity;

(c) Interactional differences between families of obese and non-obese children.

METHOD/.....

METHOD

Subjects

The Experimental group consisted of twelve obese children, six males and six females, aged between seven and eleven years (M = 9.75, SD = 1.23). Subjects were referred from various organisations dealing with weight reduction programmes. Thus, overweight was considered a problem by all subjects and/or their parents. A subject was defined as obese if he/she was 20% above his/her "normal" body weight, according to height-weight charts used by the Johannesburg Hospital. Endocrinological and glandular etiology was excluded. Subjects' families, i.e. parents and siblings, were also involved in the study.

The Control group consisted of twelve normal weight children (six males and six females) aged seven to eleven years (M = 9.75, SD = 1.23). The Experimental and Control groups were controlled in terms of sex, age, standard at school, religion, socio-economic status and ordinal position in the family. Control group families were considered as "normal" if no member manifested any psychological disturbance.

Apparatus

The following psychometric instruments were selected to assess the obese child's perception of his/her body image and family structure, as well as the presence of certain personality characteristics associated with obesity.

An instrument was used to establish interactional differences between families of obese and non-obese children.

Draw-a-person test (DAP). Machover, K. (1949).

Drawings of the human figure are valuable aids in the study of personality, and, in particular, the concepts of self and body image.

They/.....

They can have a diagnostic function in the clinical evaluation of a patient. The use of figure drawings as a psychological test is based on the Psychoanalytical theory of projection and the concept of the self image.

Machover (1951) states that a person's spontaneous drawing of the human figure represents, in many ways, a projection of his/her own body image. It is, in other words, a self-portrait in which all the impressions an individual has of his own body are mirrored. Distortions in the drawing can be symbolic or literal expressions of the disabilities perceived by the subject (Harris, 1963).

According to Bellak (1971), body image or self image in its purest form is projected in the figure drawing. The figure drawing test is used here to study the body image concepts of the obese child. Gottesfeld (1962) emphasises that disturbances in body image occur more frequently in the obese.

In this test the subject is merely required to draw a person. As regards reliability of the instrument, there seems to be fair to good agreement among judges as to the presence or absence of selected features or qualities in collections of drawing protocols. Likewise, in general, subjects show some similarity in the way they draw on different occasions (Harris, 1963).

With respect to validity of the DAP, Swensen's (1968) research suggested that the overall quality of the drawing is related to the gross level of adjustment of the subject. Lewinsohn (1970) reached the same conclusion.

Kinetic Family Drawing (K.F.D.). Burns and Kaufman (1970).

Burns and Kaufman (1970) described a method of simply asking a child to draw members of its family doing things. It was hoped that the

addition/.....

addition of movement to the kinetic drawings would mobilise a child's feelings - not only as related to self concept, but also in the area of interpersonal relations. According to Burns and Kaufman, the KFD often reflects primary disturbances more quickly and adequately than interviews or other probing techniques.

The authors have summarised the actions, styles and symbols depicted by children in their KFDs. They note the lack of "style" in KFDs of normal children and the obvious "style" of severely disturbed children. Thus "styles" resemble defence mechanisms. Lack of style suggests a diminished need for defence.

In this study the KFD is used to reveal the child's perception of his/her family structure.

The abovementioned comments on the reliability and validity of the DAP are equally applicable to the KFD.

Thematic Apperception Test (TAT). Murray (1938).

Children's Apperception Test (CAT). Bellak (1949).

The TAT consists of 30 pictures and one blank card. The cards are used in various combinations, depending on sex and age. Some are used with all subjects, while others are used with only one sex group or age group. In clinical practice, examiners usually use only ten cards selected for the particular case.

The TAT requires the subject to interpret a picture by telling a story - i.e. what is happening, what led up to the scene and what the outcome will be. The responses are dictated by the experiences, conflicts and wishes of the subject. Essentially the subject projects himself into the scene, identifying with a character.

In/.....

In interpreting the stories, particular attention is given to the themes behind the plots. The themes focused on in this study are intended to overlap with and have a bearing on the abovementioned psychometric devices. The themes chosen include: attitude to parents, reference to body size, recognition of own individuality, feelings of passivity and depression, egocentricity and attitude to food and eating.

Material pertaining to reliability indicates that scoring reliability, under circumscribed and specific conditions, is relatively good (Cronbach, 1961). According to Zubin (1965), it is not possible to regard the TAT as a valid instrument of personality assessment as such. Rather, the TAT seems "valid" and useful under certain conditions and for specific tasks and criteria. Behavioural validation studies (i.e. studies that relate TAT responses to some aspect of behaviour) seem to be much more productive in terms of positive findings than certain other approaches to validation (Goldblatt and Greenberg, 1955).

The CAT (Bellak, 1949) is a derivative of the TAT. It was designed for children aged three to ten years. Only three of the standard TAT cards were designed specifically for children. In addition, the TAT pictures are structured largely at an adult level of emotional experience.

The ten CAT cards were designed to elicit material in certain areas of psychosexual development, viz., feeding (oral) patterns, sibling rivalry, attitudes towards parents, aggression, acceptance and loneliness.

The CAT has been used in the psychological assessment of a variety of clinical disorders, ranging from physical disabilities (Holden, 1956) to emotional disturbances (Haworth, 1963). The demonstrable differences

reported/.....

reported provide evidence for the usefulness of the CAT as a projective and diagnostic instrument (Haworth, 1963). Haworth (1963) also reports high interscorer and intra-scorer reliability.

Family Interaction Scale. (Riskin and Faunce, 1970).

This method was developed to study the interaction of the whole family. The theoretical framework is influenced by the work of Jackson (1959) and Satir (1964). The family is viewed as providing the basic environment in which the child's personality develops. Parents influence children by direct interaction with them. Parental interaction, in itself, serves as a model for the child to observe and identify with and/or react against. Each child, in turn, influences his/her parents and siblings and, thus, a mutually interactive process occurs.

To understand individual personality development, then, Riskin and Faunce (1970) believe that it is essential to include the whole family as the major unit of study. Their emphasis on process is based on the assumption that repetitive, formal patterns of family interaction, and not just ongoing verbal content, influence the child's personality. Riskin and Faunce (1970) define six categories of family interaction. These include: clarity, topic change or continuity, commitment, agreement or disagreement, affective intensity and quality of relationships. According to them, there is a relationship between these dimensions and the child's personality. For example, in families in which intensity of affect is poor, children tend to develop psychosomatic symptoms. Extreme intrusiveness will impede the child in establishing a sense of autonomy. Families with negative relationships often produce children with poor self-esteem. Passivity in children is associated with

families/.....

families in which there is poor commitment. All of these personality characteristics are repeatedly found in the obese child (Grinker, 1973; Karp, 1965; Mendelson, 1966).

In Riskin and Faunce's (1970) study, the basic scoring unit was the speech. Therefore, they defined reliability as speech by speech agreement between two raters (inter-rater) and between a rater's original scoring and his rescoring of the same family (intra-rater). High inter-rater and intra-rater reliability were achieved.

Procedure

The following psychometric tests were administered to the entire sample in the following order: (a) DAP, (b) KFD, (c) CAT or TAT - depending on the age of the child.

Each child was tested individually in one session.

Individual families were observed in a structured situation. They were assigned a simple task and their performance was rated according to Riskin and Faunce's scale (1970).

Each family was asked to "plan something you could all do together as a family, all of you please participate in the planning". The session, of an hour's duration, was audiotaped and scored.

The unit of observation was the whole family. The focus was on formal aspects of communication, rather than specific content of interaction. Five minutes of speech every fifteen minutes was scored by two independent raters.

Experimental design and Statistical analysis

A 2x2 factorial design was used in this study. This design was used as the sample was a parametric one. In keeping with the above, the

major/....

major statistical analyses of this study involved the MANOVA (Kerlinger, 1973). This technique is the most powerful and appropriate for behavioural research as behavioural problems are almost all multi-variate in nature. In addition, O'Leary and Turkewitz (1978) state that if several dependent measures are used and the correlations between the measures are high, a MANOVA that takes intercorrelations into account should be considered.

2 x 2 MANOVAs (experimental condition x subject's sex) were computed on (a) subjects' personality variables, viz., dependency, passivity, low self-esteem, depression, aggression, withdrawal and immaturity/egocentricity; (b) subjects' perception of body image, viz., mention of food, reference to body size; (c) subjects' perception of family structure, viz., Mother perceived as dominant/overprotective/over-involved; Father perceived as ineffectual/critical/subordinate; Child perceived as independent/active or passive, omits self; (d) inter-action patterns of families of subjects, viz., clarity, topic continuity/ change, commitment, agreement/disagreement, affective intensity, quality of relationship.

Pearson product moment correlation ccefficients were performed to assess interrater reliability, as well as to assess the correlations between the dependent variables mentioned above.

Results

After data was collected and scored by two independent raters, statistical analyses were performed. The results are recorded hereunder.

Initially inter-rater reliability was computed. Table IV reflects the findings.

Table IV/.....

Table IV

Inter-rater Reliability

Test: Draw-a-person		Inter-rater reliability	
Variable:	Dependency	0.77	**
	Passivity	0.78	**
	Low self-esteem	0.69	**
	Depression	0.23	
	Agression	0.44	
	Withdrawal	0.63	*
	Immature/egocentric	0.45	*

Test: Kinetic Family Drawing		Inter-rater reliability	
Variable:	Mother - dominant	0.35	*
	overprotective	0.67	**
	overinvolved	0.16	
	Father - ineffectual	0.67	**
	critical	0.76	**
	subordinate	0.76	**
	Child - independent	0.09	
	active/passive	0,38	*
	omits self	1.00	**

Test: Thematic Apperception Test		Inter-rater reliability	
Variable:	Aggression	99.00	
	Relationship between Mother & Child	0.56	*
	Relationship between Father & Child	0.39	*
	Mention of food	0.77	**
	Reference to body size	0.00	
	Depression	0.17	
	Egocentricity	0.56	**
	Passive/active participant	1.00	**
	Congruent emotional expression	0.38	*
	Recognises individuality	0.37	*

Test: Family Interaction Scale		Inter-rater reliability	
Variable:	Clarity/unclarity	0.02	
	Topic continuity/change	0.49	**
	Intrusive/unintrusive	0.31	
	Comm.tment	0.54	**
	Affective intensity	0.50	**
	Quality of relationship	0.27	
	Agreement/disagreement	0.15	

N = 24.

DF = 23.

* = $p \leq 0.05$

** = $p \leq 0.01$

Variables, in which inter-rater reliability were not significant, were eliminated. An inter-correlation matrix was then computed, using the Pearson product moment correlation coefficient. This was done in order to assess whether a MANOVA was necessary. (Table V).

Table V/.....

TABLE V

Inter-Correlation Matrix

Draw-a-Person	Dependency	Passivity	Low self-esteem	Aggression	Withdrawal	Immature egocentric
Dependency		r = 0.24	r = 0.29	r = 0.23	r = 0.09	r = 0.38 *
Passivity			r = 0.55 **	r = 0.48 **	r = 0.41 **	r = 0.29
Low self-esteem				r = 0.02	r = 0.67 **	r = 0.06
Aggression					r =-0.29	r =-0.43 *
Withdrawal						r = 0.15
Immature/egocentric						

	Mother		Father			Child	
Kinetic Family Drawing	Dominant	Over-protective	Ineffectual	Critical	Subordinate	Active/ Passive	Omits self
Mother: dominant		r = 0.37 *	r = -0.16	r =-0.16	r = 0.23	r =-0.21	r = 0.31
overprotective			r = 0.06	r =-0.04	r = 0.14	r = 0.36 *	r =-0.14
Father: ineffectual				r = 0.03	r = 0.29	r = 0.24	r =-0.42 *
critical					r =-0.05	r =-0.18	r = 0.02
subordinate						r =-0.01	r = 0.33
Child: active/passive							r =-0.51 *
omits self							

Thematic Apperception Test	Mother & Child	Father & Child	Mention of Food	Egocen-tricity	Passive/ Active	Congruent Emotions	Individuali
Relationship between Mother & Child		r = 0.20					
Relationship between Father & Child							
Mention of food				r =-0.41*	r=-0.04	r = 0.09	r = 0.11
Egocentricity					r=-0.03	r =-0.18	r =-0.10
Passive/active participant						r = 0.58**	r = 0.62**
Congruent emotional expression							r = 0.54**
Recognises individuality							

N = 24.
DF = 23.

* = $p < 0.05$
** = $p < 0.01$

Family/

			Affective Intensity
Family Interaction Scale	Topic continuity/ change	Commitment	Affective Intensity
Topic continuity/change		r = - 0.07	r = 0.14
Commitment			r = 0.67**
Affective intensity			

N = 24. * = p ≤ 0.05

DF = 23. ** = p ≤ 0.01

As the correlations between the various dependent variables were high, a MANOVA was necessitated (O'Leary and Turkewitz, 1978).

Draw-a-Person - A MANOVA was performed on variables of the DAP. However, there were no significant effects of group or of sex, nor any multi-variate effects resulting from the interactive effects of group x sex ($F(6,16) = 0.89$ Prob. $F = 0.53$).

Kinetic Family Drawing - A similar MANOVA was performed in this case. Using the Pillai - Bartlett F approximation, a significant multivariate sex effect was obtained ($F(7,14) = 2,82$, Prob. $F = 0.05$) on the active/ passive variable. This factor, however, is of no conceptual importance in this study.

Thematic Apperception Test - There was no significant MANOVA ($F(5,16) = 1.18$, Prob. $F = 0.36$) with regard to the TAT. However, in view of the large number of dependent variables measured in the study, there may be a possibility that certain effects are being masked by the MANOVA (Barling, 1979). There is, therefore, some justification for looking at the individual ANOVAs. In doing so, it was observed that the interaction effect on the category Passive/active participant on the Thematic Apperception Test was significant ($F(1,20) = 4.44$, p 0.05). This pattern is depicted graphically in Figure I. The non-obese group were found to be less passive than the obese group. In addition, the obese males were

more/.....

more passive than the females in this group. The means obtained by the obese group were M = 2 for the males and M = 1,67 for the females, while the mean for the non-obese group was M = 1,33 for both males and females.

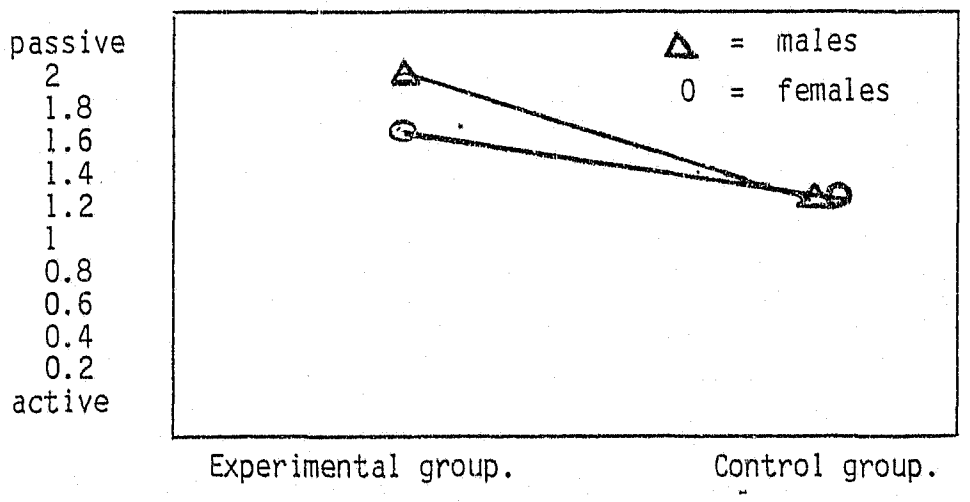


Figure I.
Passive / active participant (TAT).

Family Interaction Scale - A significant multivariate group effect was obtained on the topic continuity/change variable (F(3,18) = 3.47 prob. F = 0.04). This pattern is depicted graphically in figure II. It can be seen that the families of the obese group maintained a higher level of topic continuity during family interaction than did the families of the non-obese subjects. Again, however, there was a significant sex difference in the obese group. Specifically, the mean of the non-obese group was M = 4 for families of males and M = 4 for families of females. As regards the families of the obese subjects, M = 3 for families of males and M = 2,5 for families of females.

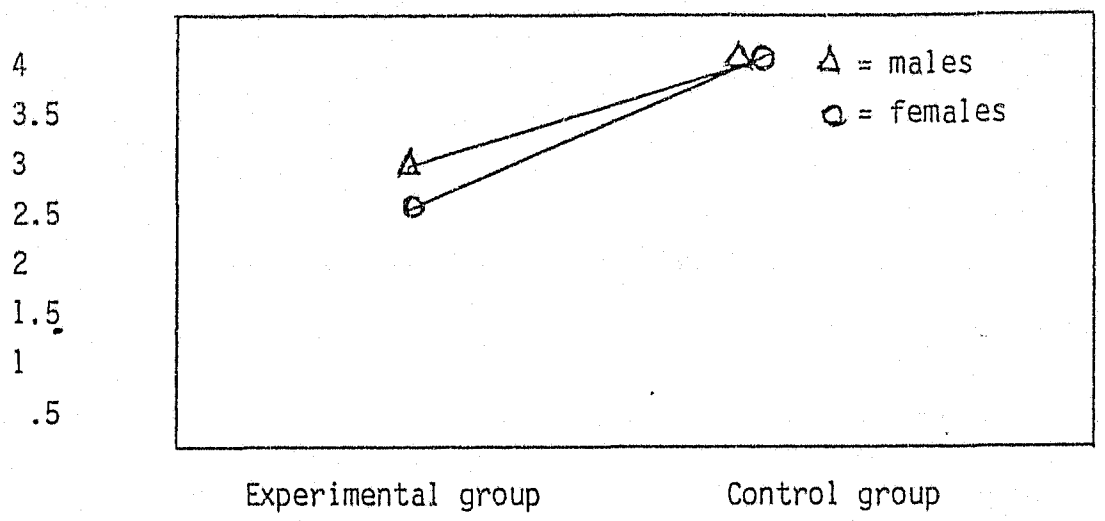


Figure II

Topic continuity/change (Family Interaction Scale)

DISCUSSION

A significant group effect was obtained on the Family Interaction Scale with regard to Topic continuity versus topic change. This category relates to the amount of topic continuity or change that occurs while the family members communicate and interact with one another.

It was found that the Control group families, when interacting, tended to maintain fairly high topic continuity. In addition, as opposed to the Experimental group families, topic change was largely appropriate. This accords with Riskin and Faunce's (1970) observations. They found that multiproblem families and constricted families, i.e. families with one neurotic member and marital problems, tended to manifest many topic shifts. Normal families, on the other hand, tended to maintain topic continuity and the topic changes that occurred were appropriate.

In addition, there was a significant difference between the families of the obese males and those of the obese females. The families of the obese females evidenced more topic change than did those of the obese males. This finding, however, is of no conceptual importance in this study.

Riskin and Faunce (1970) claim that, on the basis of the theoretical derivations of their scale, this type of interaction pattern, i.e. high topic change of an inappropriate nature, is related to passivity in family members.

The other significant result obtained was the finding on the Thematic Apperception Test which appears to accord with the above. There was a significant difference between the obese and normal weight children

in terms/.....

in terms of passivity. The obese males were found to be more passive than the obese females, but both groups were significantly more passive than the non-obese controls - male and female. As mentioned above, this finding is not conceptually important in this study.

Passivity refers both to a passive attitude to life, as well as physical passivity or inactivity. In this study physical activity per se was not measured, but rather the attitude to involvement in life situations, i.e. active or passive. This was measured by the stories told by subjects on the Thematic Apperception Test. It was assessed whether their projections of self, in terms of the individuals with whom they identified in their stories, were seen as active or passive participants in situations described.

These findings accord with a study by Ostergaard (1954). He studied 58 obese children, aged four to fourteen years. He found that the obese children displayed a passive attitude to life which he interpreted as an escape reaction. He states that the obese child's timidity and insecurity in social contact made them retreat into isolation. Ostergaard, therefore, is more inclined to place emotional and adjustment difficulties first when looking for the cause of isolation and passivity - rather than obesity per se.

That an extreme decrease in activity often leads to obesity is demonstrated by the almost universal instance of excessive weight gain by persons with paraplegic syndromes (Golden, 1979). In addition, obese children are reported to be consistently less active than their non-obese peers (Bullen, 1964; Hammar, 1972; Johnson, 1956; Juel-Nielsen, 1953).

Stuart (1955) states that obesity commonly develops during the early school years among children. Such children are either temperamentally averse to physical exertion or are not successful in school activities and, thus, progressively withdraw from them. These children are mainly

overweight. Many stout children appear disposed by temperament to move little and acquire only sedentary interests. This mode of life becomes exaggerated when difficulties are encountered in successful participation in customary school activities. This then leads to the progressive development of obesity.

Bullen, Monello, Cohen and Mayer (1963), in a study on obese and non-obese controls, found that both groups were equally enthusiastic in listing satisfaction derived from physical activity. On projective tests, however, the obese group responded with significantly less activity themes. Thus, when specifically and directly asked about physical activity, the obese group professed great positive feeling about it. However, when given an ambiguous stimulus, the obese girls did not r' ontaneously with activity-oriented ideas as did the non-obese gi addition, although the obese girls were aware that they were les. .tive than they might be, they did not seem to have any awareness of the possible relationship between this lack of activity and their obesity.

In adolescence, in particular, it has been shown that obesity is more often associated with abnormal inactivity than with caloric intake in excess of average (Johnson, Burke and Mayer, 1956; Stefanik, Heald and Mayer, 1959). In an interdisciplinary study of adolescent obesity, Hammar, Campbell and Moore (1972) found that during adolescence total daily calorie intake and eating patterns were not significantly different between obese and non-obese subjects. However, obese subjects were less physically active and more interested in sedentary pursuits.

According to Chirico and Stunkard (1960), inactivity noted in obese women was found to have correlates in their attitudes towards activity. On the basis of the above and the findings of this research, it appears

that/.....

that there is some relationship between passivity in attitude and passivity in activity. Bruch (1962, 1969, 1970) has developed a theory on the origins of passivity in the obese individual.

Bruch states that appropriate responses to clues coming from the infant, and later the child, in the biological, social, intellectual and emotional field are necessary for the child to develop self-awareness and self-effectiveness. If confirmation and reinforcement of his/her own, initially rather indifferentiated, needs have been absent, contradictory or inaccurate, the child will become an individual deficient in his/her sense of separateness, with "diffuse ego boundaries" and will feel helpless and under the influence of external forces.

This learning process is continued throughout childhood. The larger the area of appropriate responses to the various expressions of the child's needs, the more differentiated will the child become. He will be able to identify his bodily experiences, thoughts and feelings as arising within him and as distinct from his environment.

The healthy child thus gradually learns to differentiate between various bodily needs and needs in general and is able to act appropriately for their satisfaction. In contrast, when food is given as the great pacifier without regard for real reasons for the child's discomfort, or as a reward for good (compliant) behaviour or withheld for punishment, the child will grow up confused and unable to differentiate between various needs. A child growing up this way may acquire the façade of adequate functioning by robot-like submission to environmental demands. The gross defect in initiative becomes manifest when he/she is confronted with situations for which his/her background has left him/her unprepared.

Karp and/.....

Karp and Pardes (1965) studied the phenomenon of psychological differentiation in obese women. Differentiation is described as a developmental phenomenon which reflects the articulation and structuring of the experience of the self and the environment. As discussed above, individuals proceed, developmentally, from relatively global and undifferentiated experiencing in the direction of increasing differentiation. Results of Karp and Pardes' (1965) study revealed that obese women were significantly less differentiated than the control group. This experimental evidence lends support to Bruch's theory of passivity and its links with poor differentiation in developmental obesity.

There are many problems inherent in family research. Some of these may account for the fact that only one variable was significant in differentiating obese and non-obese family group interaction.

Firstly, the Family Interaction Scale used was a general one and not specific to the obisogenic family. Secondly, this approach has certain methodological limitations (Lennard and Beaulieu, 1965). This relates to the issue of stability and change in family interaction patterns. The question is which patterns are stable and which change over time? Also, which patterns were present in the family before the development of symptoms in one of its members?

There are two divergent views on this issue: (a) derived from clinical impression and analytically oriented theory, it is proposed that "disturbed" families are much less prone to change in the structure of family organisation and the quality of interpersonal relationships than are "healthy" families; (b) patterns currently identified in "disturbed" families represent reactions to the symptoms or deviance of the child.

Thirdly,/.....

Thirdly, the question relates to what is a sample of family process. Some suggest that weeks or months of observation of a family in a variety of settings is required before inferences can be made. Others claim that much significant data is provided by observing family interaction over an interval of minutes (Riskin, 1964).

O'Leary and Turkewitz (1978) also discuss methodological errors in marital and child treatment research. It seems that certain of the errors mentioned by them are applicable to this study. For example, small sample size. They state that the smaller the sample, the greater the probability of sampling error and artifacts that would limit the generalisability of findings. The sample size in this study (N = 24) was relatively small. They also mention that syndromes like obesity are the result of complex pschological, social and biological factors. Therefore, it is important to study the problem within a broad framework.

In view of the problems and issues discussed above, as well as the finding pointing to a link between type of family interaction and passivity in the children, it is believed that the findings of this study lend tentative support to the family model. This model will be discussed in detail in its perceived relationship to this study.

Meissner (1977) in an extensive article entitled "Family process and psychosomatic disease", concludes that recent literature and studies seem to point in a relatively consistent direction. He suggests that the family affective system should be regarded as the structure within which the psychosomatic process is elaborated. The patient then externalises, by his symptoms, the pathology inherent in the family system.

Psychosomatic/.....

Psychosomatic psychiatry and psychology have been hampered by two dichotomies - the mind-body duality and the individual-context schism. Current thought has laid the former to rest, but the latter, in which the person and his social environment are viewed as discontinuous, is currently controversial (Minuchin and Fishman, 1979).

Grinker (1953) expressed the need to synthesise this discontinuity when he said, "The actual functioning of the organism cannot be understood except by a study of its transactional processes as occurring in a total field."

Using this paradigm, the family-oriented practitioner studies the family in which the child is imbedded and speaks of the "psychosomatic family". The therapist scans the system for those transactions which organise the behaviour of family members in dysfunctional patterns. These lead to the manifestation of psychosomatic symptoms in a child.

This approach assumes an epistemology that conceptualises a harmonious integration of the child's inner and outer context. The self is seen as existing both inside and outside the child. The self, then, is expanded to include feedback from significant people in the child's social context.

It is Minuchin and Fishman's premise that the characteristics of the family context, in which the psychosomatic child lives, plays a major role in maintaining him/her as symptomatic. Therefore, it is at least as important to change the child's social system as it is to modify and expand the repertoire with which the child responds to stress. The child can be seen as serving a function in the system. However, the cost to the child is demonstrated in terms of his/her symptomatology.

For the/.....

For the family-oriented practitioner, the factors responsible for the etiology and those determining the maintenance of the symptoms are separate. The family therapist, as does the individually-oriented practitioner, sees the etiology as historically determined with the child having a predisposition towards the malady. The maintenance, on the other hand, is conceptualised as a result of present family organisation. By changing the particular ways in which family members interact and thereby organise each others' behaviour, the psychosomatic symptom can be alleviated. The child, nevertheless, maintains the same physiological predisposition toward the symptom.

As regards the insignificant findings, it seems that the overlap in psychological patterns among many types of disease processes has tended to confuse rather than clarify issues. Consequently, the patterns of personality functioning, as specifically related to the pathogenesis of psychosomatic illness, have been gradually slipping into disrepute (Meissner, 1977). Meissner's intention is not to criticise the individual approach, but to suggest that another meaningful set of data and relationships can be achieved by focusing on the family as a unit of interaction and analysis.

Mendelson (1966) suggests that obese individuals can be classified on a continuum characterised by increasing degrees of emotional instability. The continuum ranges from those who are emotionally stable, to those who eat as a defence against emotional tensions, to those to whom eating disturbances are a central issue in their lives. This classification would seem to account for the variety of people who are obese since numerous studies have failed to find a consistent personality constellation or pattern of underlying pathology in obese persons (Friedman, 1959; Shipman and Plesset, 1963, Weinberg, 1961).

The search/.....

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The search/.....

The search for a unitary explanation of obesity does not, at present, appear to be a fruitful avenue of exploration. Evidence strongly suggests that obesity is not a unitary syndrome (Leon and Roth, 1977).

As regards body image, relatively few studies have directly evaluated obese children. Leon, Bernis, Meland and Nussbaum (1978), therefore, decided to evaluate children entering adolescence on perceptual and projective aspects of body image. The study indicated an age, rather than weight, influence on the perceptual factors of body image. This suggests a developmental, rather than weight or sex, influence on the accuracy of the perception of one's body. This finding also reflects a greater vigilance to one's body in the older group because of changes naturally occurring at puberty.

Stunkard and Burt (1967) examined evaluative aspects of the body image concept of obese children and adolescents. They concluded that disturbances in body image in obesity originated during the adolescent period when a subset of emotionally disturbed youngsters incorporated the derogatory views of peers and parents as enduring views of themselves.

The fact that the subjects in this study were all pre-adolescent, could account for them not yet being aware of and/or concerned with body image disturbances.

THEORETICAL IMPLICATIONS OF THE STUDY

The study of entire families as functioning systems should increase our understanding of the correspondence between an individual's way of life and the way of life of the family in which he develops (Titchener, D'Zmura, Golden and Emerson, 1963). It is Titchener et al's impression that the correspondence between individual adaptation and family-systemic adaptation is more in the formal properties of adaptiveness, than in the

content/.....

content of the problems with which the individual struggles using his particular set of defences. The formal properties of a system refer to the organisation of sets of basic defences, nuclear conflicts, derivative conflicts and defences - rather than the content of these elements of a system.

Wynne (1958), Bateson (1960), Haley (1959) and Jackson (1961), have directed their work in the pathogenisis of schizophrenia to a comparison of these formal variables in the schizophrenic and his family. They theorise that individuality is organised and acquires its style through transactions in the family system. Their model can possibly be developed and extended to study and understand the theoretical fit between individuality and family transactions in other syndromes. In terms of this study, the link between family interaction patterns and passivity could be explored in the obisogenic family and then extended to other features associated with obesity.

TREATMENT IMPLICATIONS

Cooke and Meyers (1980) evaluated behaviourally oriented weight loss programmes and found that the same treatment is administered to all patients. No assessment is made of the factors that have caused, or are maintaining, the person's weight. The implication of such an approach is that the problem of obesity is caused and maintained by the same factors in all patients. It seems that this lack of attention to individual differences may account for the great variability in the response to treatment.

Cooke and Meyers (1980) have identified variables that bear a relationship to successful weight loss. One of these is the role of a supportive family. This is particularly important, especially with respect to maintenance of weight loss.

Bruch (1973) used a behaviourally oriented approach in the treatment of obese children and adolescents. Her patients achieved remarkable weight losses which were maintained for up to one year. However, several years later most had regained, and surpassed, their former weight. She recognised that temporary control over food intake alone was not sufficient if there was not, at the same time, a valid change in relevant personality characteristics and family interaction.

It thus seems that Minuchin and Fishman's (1979) model of family therapy with psychosomatic families would be relevant in working with the obese child and his/her family. The dichotomy between the individually-oriented practitioner's emphasis on etiology and the family therapist's emphasis on maintenance is an impo tant pragmatic difference in the psychological management of psychosomatic illness. The family therapist's conceptualisation of change deals with the transformation of the social system that maintains the symptom.

It appears that it would be important and valuable to design a Family Interaction Scale specific to obisogenic families. In this way specific intra-familial interaction patterns in these families could be identified.

According to Lennard and Beaulieu (1965), the most effective way of determining specificity consists in the comparison of family interaction, data from families with diverse disorders in their children. Another way lies in determining the "theoretical fit" of interaction data and findings to current clinical judgment and theory about the familial determinants of obesity.

The physical inactivi y of the obese child should be further investigated. This should perhaps be examined in terms of the role of passivity in the obese child's personality and its relationship to bodily

inactivity./.....

inactivity. Treatment programmes should focus on the physical inactivity of the obese child. Exercises and activity should be included in the treatment regimen.

LIMITATIONS OF THE RESEARCH

A number of methodological problems associated with the definition and measurement of obesity make it difficult to compare and generalise research findings. An important issue is the criteria used in labelling an individual as obese and, in particular, the measuring procedures used in determining the degree of obesity in relation to some type of standard.

Virtually all the research reviewed in this dissertation has used the Metropolitan Life Insurance tables, or comparable tables, as the criterion in assessing obesity. The major disadvantage of using tables of ideal weight is that there is no accepted system for choosing frame size (Leon and Roth, 1977).

A precise definition of obesity may appear to be unimportant if one is choosing grossly obese subjects in a psychological experiment. However, a large number of studies reviewed used a cut-off point of fifteen percent above ideal body weight as the criterion for obesity. Given the range of error possible in the ideal weight tables, this percentage may fall within the error variance of the table. It is, therefore, crucial that the lower limit of obesity be defined and measured as accurately as possible (Clancy, 1965; Grinker, Hirsch and Levin, 1973; Kurland, 1967; Leckie and Withers, 1967).

In this study the cut-off point used was twenty percent above ideal body weight. Thus the obese sample were all within the limits of being truly obese. However, the validity of comparison with other studies remains questionable.

A further/.....

A further methodological limitation was the relatively small sample size used in the study (N = 24). The implication of this is that the subjects studied were possibly not a cross-section of the population of obese children.

There are also limitations associated with inter-rater reliability. In this study, two independent raters were used. According to Horowitz, Inouye and Siegelman (1979), the reliability of ratings can be increased if multiple judges' ratings are averaged to yield a single measure. By pooling different judges' ratings into a composite measure, they state, reliability can be substantially increased with only a moderate increase in the number of judges.

Finally, three of the four instruments used in the study were projective tests. These measures are of dubious validity and rating of these measures is largely subjective. It seems preferable to use more objective measures. For example, a Family Interaction Scale specific to the obisogenic family and measures of physical activity.

In conclusion, these findings point in the direction that a psychosomatic syndrome, such as obesity in children, should be studied and understood in the natural context of the developing child, i.e. the family situation.

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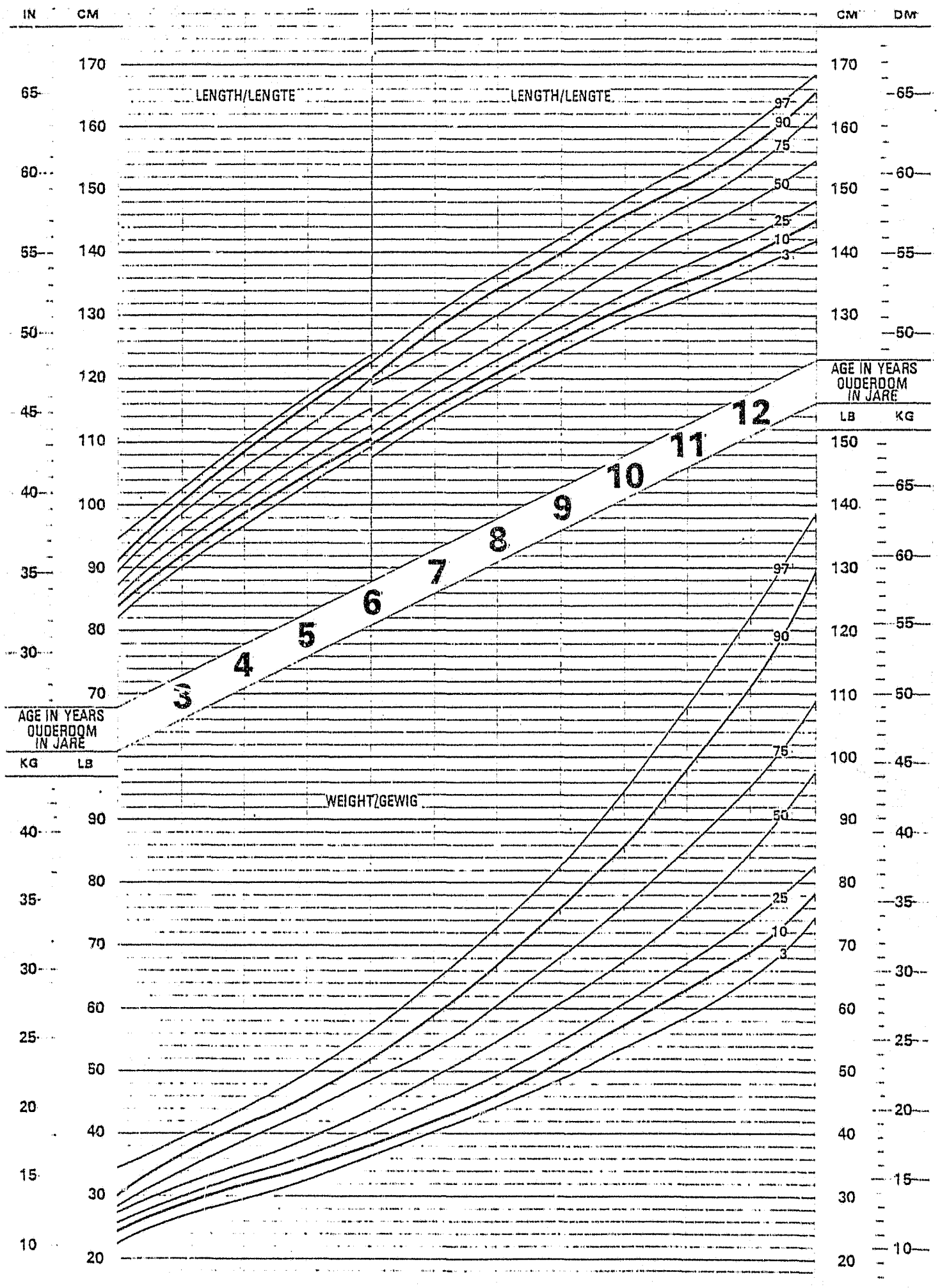
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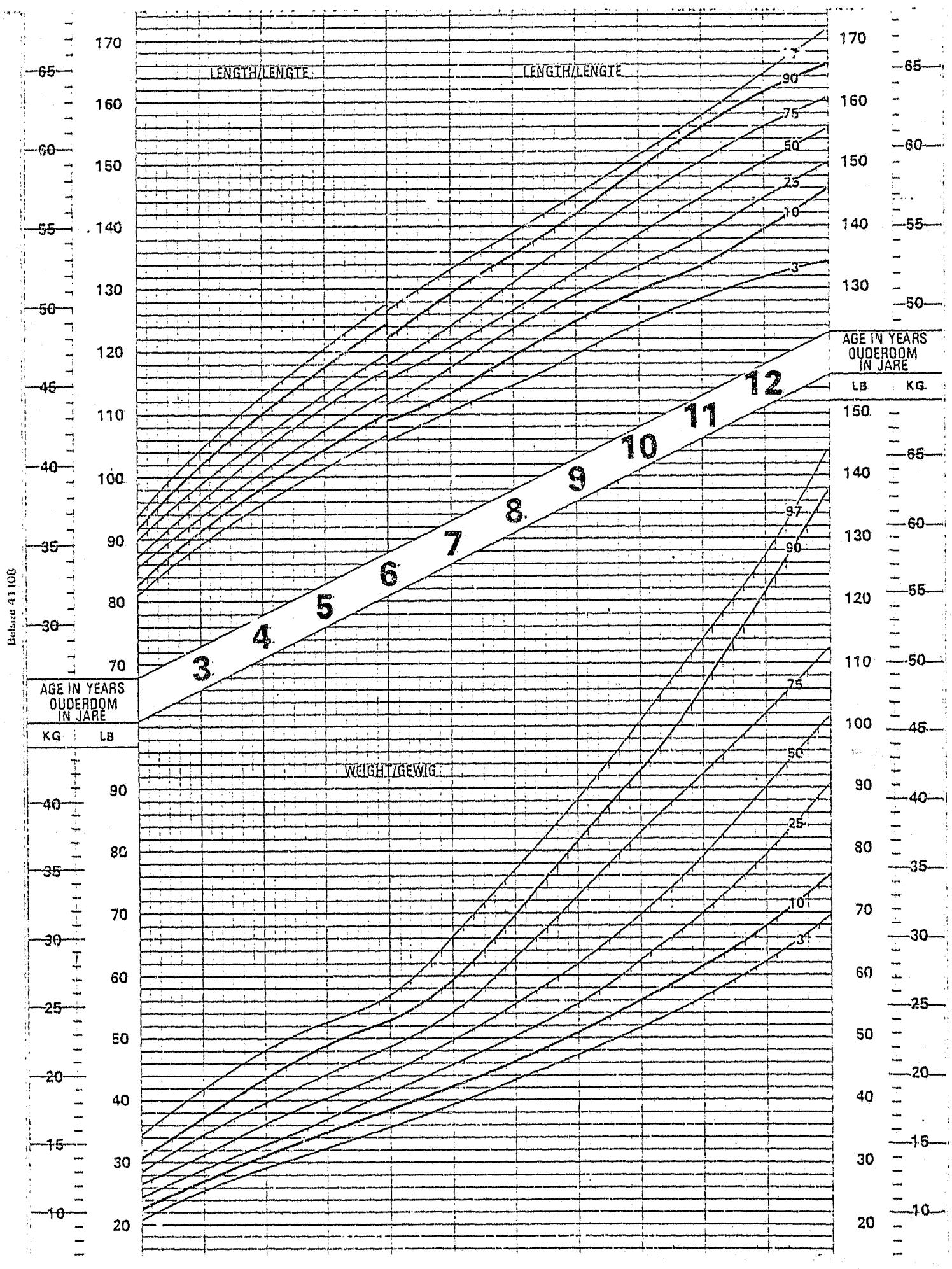
APPENDIX I

Height - weight charts - males



APPENDIX II

Height - weight charts - females



Author Finze D
Name of thesis Family interaction patterns differentiating obese and non-obese children 1982

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