

A STUDY OF ATTITUDES
OF ADOLESCENT DIABETICS

by

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A THESIS


Presented to
the University of Oregon School of Nursing
and the Graduate Council
of the University of Oregon Medical School
in partial fulfillment
of the requirements for the degree of
Master of Science

June 9, 1972

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This study was supported by a
professional nurse traineeship from
the United States Public Health Service

Grant number 2 A11 NU 0035-14

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
	The Problem	1
	Purpose	2
	Method	3
	References	5
II.	REVIEW OF THE LITERATURE	6
	Influence of Stress on Diabetes	6
	Attitudes and Reactions Produced by the Disease	9
	Management of Juvenile Diabetes	11
	The Adolescent	14
	Summary	15
	References	16
III.	ANALYSIS OF DATA	19
	Description of Sample	19
	Description of Experimental Group	20
	Hypotheses	22
	Adjustment to Diabetes	30
	Summary	32
	References	33
IV.	SUMMARY, DISCUSSION, AND RECOMMENDATIONS	34
	Summary	34
	Discussion	37
	Recommendations	38
	BIBLIOGRAPHY	39
	APPENDICES	
A.	Diabetic Interview--Schedule	42
B.	Questionnaire--Control Group	46

LIST OF TABLES

TABLE		PAGE
1.	Frequency Distribution of the Father's Occupation of Each Respondent	20
2.	Frequency Distribution of Experimental Group by Last Hospitalization for Diabetes	21
3.	Frequency Distribution of Experimental Group by Control of Their Disease	21
4.	Frequency Distribution of Experimental Group by Type of Treatment	22
5.	Frequency Distribution of Respondents Now Dating	23
6.	Frequency Distribution of Respondents Who Were Going Steady	23
7.	Frequency Distribution of Respondents by Number of Children They Wanted	24
8.	Dating and Marriage Plans of Diabetics	25
9.	Frequency Distribution of Respondents' Career Plans	26
10.	Frequency Distribution of Respondents' Ability to Advance to Position if They Complete Their Career Plans	27
11.	Frequency Distribution of Respondents by Influence on Career Choice	28

LIST OF TABLES (Continued)

TABLE		PAGE
12.	Frequency Distribution of Respondents by Grades Presently Receiving	29
13.	Frequency Distribution of Respondents by Highest Educational Goal	30
14.	Frequency Distribution of Experimental Group by Most Difficult Aspect of Care to Manage	31

CHAPTER I
INTRODUCTION

The Problem

Diabetes mellitus is a chronic metabolic disorder of glucose metabolism which affects some estimated four million Americans today. As a cause of death it is predicted that it will rate second only to heart disease by 1980. Juvenile diabetes, which afflicts approximately ten per cent of this number, is defined as a disease whose onset usually occurs before fifteen years of age. (1) Diabetes mellitus is most difficult to control when its onset occurs during childhood. It is characterized by a rapid weight loss, rapid onset with the classical symptoms of polyuria, polydipsia, polyphagia, and glycosuria. In contrast to adults, juvenile diabetes cannot be managed by diet or oral agents alone and the juvenile diabetic must rely on diet therapy, insulin, and restricted activities. Thus, the juvenile diabetic is continually confronted with coping with dietary restrictions, variations in activities, hypoglycemia, urine testing, and with the emotional adjustment to a chronic, incurable disease.

Emotions have long been recognized as affecting the course of diabetes. Thus, the nurse should not only assist the patient with learning about his disease, but should help him in his continual emotional adjustment in coping with a disorder which will be with him the rest of his life. Too often the focus of attention in juvenile diabetes is on the mechanics of insulin technique, diet, and knowledge of the disease, instead of on the adolescent himself. The period of growth and development known as adolescence normally brings its own variety of tensions and stresses. (2) When disease is superimposed on the adolescent his ability to cope with stress may be lessened.

Knowledge of the attitudes and feelings of the adolescent with diabetes may help the nurse better understand how to anticipate the adolescent's needs. Then she can assist him in his continuous psychological adjustment, in coping with his chronic disorder, and in helping him maintain better diabetic control.

Purpose

This was a study of the attitudes of the adolescent diabetic.

The following null hypotheses were investigated:

- I. There will be no difference in the marriage plans of non-diabetic adolescents and diabetic adolescents.
- II. There will be no difference in the occupational plans of non-diabetic adolescents and diabetic adolescents.

III. There will be no difference in the educational plans of non-diabetic adolescents and diabetic adolescents.

Further attitudes were investigated on how the adolescent diabetic felt he had adjusted to his disease.

Method

The method of study was exploratory in which an experimental and control group were utilized. Data were collected by means of a structured interview schedule. The schedules were devised from Davis and associates' study which was designed to measure attitudes of diabetic boys and girls (3) and from Koski's interview schedule which measured coping processes in childhood diabetes. (4) The tools are shown in Appendices A and B. The section on marriage, education and occupational plans were largely taken from the Davis study and questions on adjustment were taken from Koski.

The experimental group consisted of nine adolescent diabetics and the control group consisted of nine non-diabetic adolescents. The two groups were matched on age, sex, year in school, race, living with both parents, and both parents married. The latter two variables were included at the suggestion of the internist of the experimental group. Respondents were compared as to father's occupation. An adolescent was defined as between 14 and 18 years of age.

In addition to the demographic data more information was obtained on the experimental group: degree of control of disease,

last blood sugar, last hospitalization, other diabetes in the family, age when first diagnosed, and type of treatment for diabetes. The judgment of control of the disease was determined by the physician.

The experimental group consisted of all of the adolescent diabetics living in the Portland area who were the patients of one internist. This physician had a speciality in diabetes; conducts classes for patients and professionals; and has done research in diabetes. Fourteen patients were in the original group, but only nine were included in the study. The other five could not be contacted.

A letter was sent to each of the members of the experimental group. This letter introduced the study, indicated it was supported by their physician, and stated that they would be receiving a phone call to establish an appointment. A week after the letter was sent a phone call was made and an appointment scheduled. All those who were contacted volunteered to be part of the study. Interviews were conducted in the respondents' homes. The length of each interview was approximately one half hour.

The control group were members of a church youth group. They were contacted at one of their regular meetings and the study was explained to them. All of those in attendance completed the questionnaire. Only nine who matched the experimental group on the specified variables were included as the control group.

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CHAPTER II

REVIEW OF THE LITERATURE

Influence of Stress on Diabetes

Emotional factors have long been known to affect diabetes mellitus. As early as the seventeenth century Thomas Willis described the sweet urine of the diabetic and ascribed the cause of the disease to "a long sorrow". Clinical observation of the relationship between diabetes and mental illness was frequently recorded in the late nineteenth century. (5) In the 1930's Daniels made a review of the literature and stated the possibility of emotional stress as the etiology of diabetes mellitus. He felt that any ultimate understanding of the psychopathology associated with diabetes mellitus must develop from an exhaustive and painstaking study of cases, with parallel observations on accompanying physiological changes. (6) Menninger, in 1935, postulated the existence of psychogenic diabetes and described a "diabetic personality". These patients were considered to be especially prone to depression. (7) Dunbar, Wolfe, and Rioch described a personality profile for the diabetic patient, pointing out that from early childhood and before the onset of the disease, diabetic

patients have had difficulty in making the adjustment which is necessary before one progresses from the infantile state to the more mature independent one, and consequently such individuals vacillate from one attitude to the other, the impulse towards independence being asserted mainly in words, and only very little in action. (8)

Hinkle developed a concept of the meaning of diabetes mellitus as a disease of adaptation. He studied the effect of life stress situations on the onset and course of diabetes. In one study on the life history and course of diabetes of three "stable" diabetics he concluded that exacerbations of the diabetes, associated with increased glycosuria, polyuria, and weight loss, were observed to occur in association with subsequent and often similar stresses in the life situations, and took place even if there were no significant change in their insulin intake, diet, or activity, and in the absence of infection or trauma. Remission of the diabetes, associated with reduced insulin requirements or fewer symptoms occurred during periods of relative security. (9)

In other studies on the relation of life stress to diabetes mellitus, Hinkle developed a theory of the psychobiological meaning of diabetes mellitus:

- 1) The metabolic pattern which occurs in diabetes mellitus is an adaptive response to carbohydrate starvation which has developed in the vertebrates in parallel with the increased importance of the central nervous system as the central integrator of the organism. Its effect, when brought into action, is an increase in the use of fat and ketone bodies as fuel for muscular activity, and

a parallel decrease in the use of carbohydrate. Carbohydrate is conserved to minimize protein breakdown, and to provide a source of energy for those systems which require its presence, prominent among which is the central nervous system, which is entirely dependent upon carbohydrate and cannot metabolize. 2) The diabetic pattern of metabolism represents an adequate and effective response of the human to carbohydrate starvation. 3) Food, affection, emotional security, and physical security are intimately identified in infancy. This "conditioned" relationship is strongly reinforced by childhood training as well as by later adult experiences. 4) Some persons because of constitutional predisposition or strong conditioning in later life respond to cumulative psychological, situational, and physical stress which involve loss of affection and security, as if they represented threats of starvation.

Hinkle continued by explaining that it is in this situation the diabetics utilize a metabolic adaptation to starvation which is inappropriate and they continue to do so even when food is supplied to them in large amounts. Long-continued use of this mechanism is associated with diabetes. Acute stresses in the course of diabetes may be associated with ketosis and coma. (10)

Goldner concurred with Hinkle's theories on stress in that he states that the diabetic patient reacts to severe stress with aggravation of his disease, often to the extent of ketoacidosis and coma. (11) Slawson and associates' study of the psychological factors associated with diabetes mellitus in 1963 also supported the work of Hinkle and Wolf in suggesting the influence of stress on diabetes. (12)

In Burch and Phillips' 1962 review of the literature, they stated there is considerable evidence of the relationship between emotional factors and fluctuation in the course of diabetes. These fluctuations

are expressed by ketonemia and an increased excretion of glucose, water and chlorides, and alterations, either up or down, of blood glucose level. All seem to agree that these changes are more notable, more frequent, and more important in the juvenile and adolescent diabetic, and in the labile, "brittle" diabetic (who is usually, but not always a young person). (13)

Attitudes and Reactions Produced by the Disease

After consideration of the effect of stress on diabetes mellitus, the attitudes and reactions produced by the disease are reviewed. Palmer discussed the uniqueness of diabetes mellitus among chronic incurable diseases. He explained that there is no disease other than diabetes which requires daily self-administration of hypodermic medication and holds some threat of disaster if this ritual is not observed. The threat of disaster is further enhanced by the institution of daily urine testing in which the patient confronts himself with evidence of any defection from self-control. In addition, the success or failure of diabetic control is largely dependent upon participation of the patient in treatment, and his use of discerning judgment in unusual situations not specifically covered by the physician's instruction. (14)

Kennedy discussed the effect of diabetes mellitus on the juvenile diabetic explaining that he must balance on a "fence", and not fall from one side to the other. The problems involved in this balancing

act have to do with: 1) dietary restrictions, 2) insulin injections, 3) hypoglycemic reactions, 4) variations (including restrictions) in activities, 5) anxiety regarding complications, 6) problems of career, and 7) individual emotional adjustments. He explained that, paradoxically, the education concerning the nature of the disease, which is essential for the juvenile diabetic's adjustment to it, exposes him to the knowledge of the possible complications and that natural fears are bound to come. (15)

Mirsky pointed out that the onset of diabetes mellitus may produce profound psychologic changes in patients, as well as in various other members of the family. Thus their pride may be hurt, their fears and feelings of inadequacy may become intensified, and their aggressive feelings may be aroused, and as a consequence of having a juvenile diabetic in the family may show great emotional reaction to the onset of diabetes. (16)

Problems of adjustment of the juvenile diabetic were found to be quite high in Swift's study. He found that there were a high number of children with adjustment problems and a positive significant relationship between control of diabetes and social and emotional adjustment. (17)

Isenberg and Barnett commented that psychological problems in diabetes are classified into three groups: 1) the onset period which is characterized by emotional upheaval, 2) the general course in which daily care and adjustment are important, and 3) the chronic

complications stage which is characterized by new adjustments. They stated that they hear from patients, both adult and children, later in the course of their diabetes when complications have occurred, that they realized they have never accepted their illness. The patients seem to imply that they never fully tolerated the realities of the disease, even though they have been taught what they need to know.

(18)

Management of Juvenile Diabetes

The management of diabetes mellitus in juvenile presents unique problems derived from the systematic treatment required. (19) The clinical course is one of rapid onset with the classical symptoms of polyuria, polydipsia, and polyphagia. Irritable disposition, lassitude and weakness are pronounced. Vision is often blurred and pruritus is common. Weight loss is usually apparent and often the juvenile will be diagnosed after ketoacidosis has occurred. (20) Treatment consists of a management program of: insulin, diet prescription, education, avoidance of complications such as acidosis and hypoglycemia, physical activity, and continual supervision by the physician.

Stephens and associates recommend a cautious program in the management of the juvenile diabetic. This is predicated on the theory that inadequate control hastens the evolution of degenerative vascular and related tissue changes. (21)

Danowski explained that there is no doubt that a variety of treatment programs will effectively prolong the survival of a child with diabetes mellitus. This is achieved by avoidance of starvation and of the development of acidosis and coma. However, despite optimal therapy and diabetic regulation, retinopathy and glomerulosclerosis do remain as almost inevitable sequels of long-standing juvenile and other diabetes. (22)

Etzwiler and Sines conducted a study by administering questionnaires to 72 juvenile diabetics, their parents, teachers, counselors, and physicians to get better insight into the family, social, academic, and medical implications of the disease. They commented that when diabetes mellitus occurs in a family, all members are immediately affected. Diets must be prepared, insulin administered, routines adhered to, and family activities and plans adjusted accordingly. The results of their study showed that deficiencies exist in the knowledge and understanding diabetic children and their parents have concerning the disease, and a disparity between ideal management practices and those generally followed was frequently noted. (23)

Cooperation of the family and the influence of family attitudes on the management of juvenile diabetes was the purpose of Khurana's and White's recent study. Of the 79 parents interviewed they found poor diabetic control occurred more often in children whose parents were indifferent than in those whose parents who were over anxious, overindulgent, perfectionist or "normal". Results of the study showed

that: 1) the child's adjustment to diabetes is closely related to his parents' acceptance of his disease, and 2) both children and parents need to be better educated in the fundamentals of diabetes mellitus, its treatment, and its prognosis. (24)

Davis and associates studied the attitudes of diabetic boys and girls towards their diabetes and its treatment. They conducted structured interviews on 31 boys and 27 girls between the ages of eight and fifteen who were attending a diabetic camp. Their findings suggested that boys and girls with diabetes may consider their disorder as a normal part of their lives and that they do not comprehend the seriousness of their disorder. (25)

Koski studied the coping process in childhood diabetes by conducting interviews with both the child and the parents and by completing psychological tests. Koski suggested that there is a need for the re-examination of techniques that have been developed to meet the emotional needs of families of diabetic children. The first step in many cases might be the confrontation and reduction of the child's anxiety and also the parent's. Further recommendations are that educative efforts should be geared so that the anxiety and depression be relieved before the education is offered. Koski concluded that a confrontation aimed at securing the honest admission that the child has a chronic disease which makes him different from his agemate, combined with highlighting the intact area of functioning, seem to aid the family in achieving the best overall adjustment and at the same

time better control of the child's diabetes. (26)

The Adolescent

In order better to understand the adolescent with diabetes the period of life known as adolescence must be reviewed. Adolescence is characterized by maturation of the reproductive system with resulting sex differentiations, development of adult capacities in physical and physiologic functions and advancement of mental, emotional, and social development and learning. The adolescent period covers the years in which the individual "grows up", that is, changes from being a child to being a man or a woman. (27)

Stuart explained that because the adolescent becomes deeply concerned with himself and is especially interested in his physique and sexuality, he wishes above all to be assured that he is "normal" and like his peers. Because of the adolescent's intense concern with himself and his normality, more difficult problems are raised when he is in fact abnormal in any way such as having a disease. Patient and considerate help may be required during adolescence in order to permit healthy acceptance and adaptations. (28) Josselyn suggested that the normal adolescent needs support, encouragement, and guidance, and above all, adequate time before he is forced to crystallize his final personality pattern. (29) Meyer discusses the traumatic effects of any threat to body strength and image on the adolescent which may confront him with many adjustments at a time when he is still striving

for personal identity and is already struggling with the normal problems of development. (30) Cunningham explained that during adolescence the emotional and physiological upheaval, the psychological impact of illness seems to be greater than at any other age. The adolescent patient's innate self-consciousness plus an unrelenting desire not to be different enhance the trauma of recognition of any abnormality. Thus, emotional as well as physiological factors, must then receive paramount consideration in the approaches to the endocrine problems of the adolescent patient. (31)

Summary

A review of the literature suggested the importance of emotional factors in the onset and course of diabetes. The uniqueness of diabetes mellitus was cited as a disease in which a strict regime of control not cure and a knowledge of chronic complications produce attitudes which cause problems in adjustment and subsequently control of diabetes. The management of juvenile diabetes was reviewed and the importance of the attitudes of the family and juvenile with diabetes as well as a systematic routine was emphasized as important in helping the adolescent adjust to his disease. Finally, adolescence was characterized as normally a period of emotional and physiological stress in which the impact of any illness would be psychologically more devastating than at any other age.

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CHAPTER III

ANALYSIS OF DATA

The purpose of this study was to explore the attitudes, adjustment of adolescent diabetics in relation to marriage plans, educational plans, and occupational plans. Also, investigated were how the adolescent diabetic felt he had adjusted to his disease. Structured interviews were conducted on an experimental and a control group.

Description of Sample

Eighteen respondents were included in the study. Nine were in the control group and nine were in the experimental group. The control and experimental group were matched on: age, sex, year in school, all were living with both parents, and all parents were married. The age range was from 14-18 years. There were 14 female respondents and four male respondents. Respondents in the control group and experimental group were compared as to father's occupation. In the experimental group five were in the major professional classification, one in the white collar, and three in the blue collar. In the control group four were in the major professional

classification, five in the white collar and none in the blue collar.

(32) See Table 1.

TABLE 1
FREQUENCY DISTRIBUTION OF THE FATHER'S OCCUPATION
OF EACH RESPONDENT

	Group	
	Experimental	Control
Major Professional	5	4
White Collar	1	5
Blue Collar	3	0
Total	9	9

Description of the Experimental Group

Four of the experimental group had immediate family members who had diabetes. One respondent's father and brother were diabetic, one respondent's mother was diabetic, and two respondents had a father, brother, and three sisters who were diabetic. Four of the respondents were diagnosed from six to ten years ago, and five were diagnosed from one to five years ago. Length of time since last hospitalization included three who were hospitalized over 24 months ago, three who were hospitalized from 12-24 months ago, one who was hospitalized from 6-12 months ago, one who was hospitalized less than 6 months ago, and one who had never been hospitalized. See Table 2.

TABLE 2

FREQUENCY DISTRIBUTION OF EXPERIMENTAL GROUP
BY LAST HOSPITALIZATION FOR DIABETES

Length of Time Since Last Hospitalization	N
Never hospitalized	1
Less than 6 months	1
6-12 months	1
12-24 months	3
Over 24 months	3
Total	9

The physician in charge of the respondents judged the degree of control of each patient. Three were in good control, three were in partially good control and three were in fair control. See Table 3. In a larger sample the variable of control of illness could be relevant to explaining certain findings. It was not useful in this study because of the small sample and the even distribution of control of diseases.

TABLE 3

FREQUENCY DISTRIBUTION OF EXPERIMENTAL GROUP
BY CONTROL OF THEIR DIABETES

Degree of Control	N
Good	3
Partially good	3
Fair	3
Total	9

The type of treatment of diabetes was asked. Seven respondents were on a split insulin dose which included a morning and evening dose. One was controlled on diet alone, and one was on an oral medication. See Table 4.

TABLE 4
FREQUENCY DISTRIBUTION OF EXPERIMENTAL GROUP
BY TYPE OF TREATMENT

Type of Treatment	N
Insulin-split dose	7
Oral medication	1
Diet alone	1
Total	9

Hypotheses

Hypothesis I that: there will be no difference in the marriage plans of non-diabetic adolescents and diabetic adolescents, was accepted. There were differences in the dating patterns of the control and experimental group. Seven in the control group were now dating and two were not. Five in the experimental group were now dating and four were not. See Table 5.

TABLE 5
 FREQUENCY DISTRIBUTION OF RESPONDENTS
 NOW DATING

Now Dating	Group	
	Experimental	Control
Yes	5	7
No	4	2
Total	9	9

In the control group five were going steady and four were not. In the experimental group none was going steady. See Table 6.

TABLE 6
 FREQUENCY DISTRIBUTION OF RESPONDENTS
 WHO WERE GOING STEADY

Going Steady	Group	
	Experimental	Control
Yes	0	5
No	9	4
Total	9	9

All of the respondents in the control and experimental groups planned to get married and all planned to have children. This supports Davis' study on the attitudes of diabetic boys and girls who found that 98 per cent of his respondents planned to get married. (33) In the control group one planned to have no children, six planned from one to three children and two planned more than three children. In the

experimental group two planned to have no children, three planned from one to three, and three over three, and one did not know. See Table 7.

TABLE 7
FREQUENCY DISTRIBUTION OF RESPONDENTS
BY NUMBER OF CHILDREN THEY WANTED

Number of Children	Group	
	Experimental	Control
None	2	1
1-3	3	6
3 or more	3	2
Don't know	1	0
Total	9	9

Specific questions were asked the experimental group to determine if diabetes had influenced their marriage plans. Five respondents would marry another diabetic and four would not. Two would have more children if they did not have diabetes and seven would not. Eight felt they would be just as good a wife or husband as they would be if they did not have diabetes and one respondent did not know. See Table 8. These data concurred with Davis. He found that half of his sample (N 58) would marry another diabetic, 11 per cent would limit the number of children, and all felt they would make just as good spouses as non-diabetes. (34)

In the present study, two respondents felt they would find out if their date was a diabetic and seven felt they would not find this out.

Five respondents would tell their date they had diabetes and four would not. These findings can be interpreted in two ways.

TABLE 8
DATING AND MARRIAGE PLANS OF DIABETICS

Dating and Marriage Plans	Yes	No	Don't Know	Total
Would marry another diabetic	5	4	0	9
Would have more children if didn't have diabetes	2	7	0	9
Would find out if date had diabetes	2	7	0	9
Would tell a date you have diabetes	5	4	0	9
Will be just as good a spouse as would be if did not have diabetes	8	0	1	9

One interpretation would be that by not telling their dates they have diabetes they have not accepted their disease and the other interpretation would be that by not telling their dates they have diabetes they have learned to live with their disease. In this study five of the nine would tell their date they had diabetes. This differs from Davis who reported that 96 per cent of his sample would tell their dates they had diabetes and 77 per cent thought they would find out if their date had diabetes. (35) The difference in findings could be due to the fact that

the respondents in the present study were actually dating and the respondents in the Davis group were not.

Hypothesis II that: there will be no difference in the occupational plans of non-diabetic adolescents and diabetic adolescents, was accepted. There was no difference in the plans of the experimental and control group. In the experimental group six planned to enter a profession which required a college education, two planned on an occupation which required technical education, and one had no career plans. In the control group seven planned on entering a profession which required college education, one planned on an occupation required technical education, and one had no career plans. See Table 9.

TABLE 9
FREQUENCY DISTRIBUTION OF RESPONDENTS'
CAREER PLANS

Career Plan	Group	
	Experimental	Control
Profession requiring college education	6	7
Occupation requiring technical education	2	1
No plans	1	1
Total	9	9

These findings were similar to Davis' in which all respondents in his sample planned to attend college or professional school. (36) There was little difference in the response of the experimental and control groups in their perception of their ability to advance to a position in their career choice. In the experimental group five thought they would be able to advance within their career as well as the average person and four felt they would advance within their career better than the average person. In the control group two felt they would advance within their career choice "average" and six felt they would advance within their career "better than average", and one did not know. See Table 10.

TABLE 10

FREQUENCY DISTRIBUTION OF RESPONDENTS'
ABILITY TO ADVANCE TO POSITION
IF THEY COMPLETE THEIR CAREER PLANS

Ability to Advance	Group	
	Experimental	Control
Better than average	4	6
Average	5	2
Don't know	0	1
Total	9	9

There was little difference between the experimental and control groups in regard to who influenced their career choice. In the experimental group two were influenced by a teacher, three by parents, and one by a nurse. In the control group three were

influenced by teachers, one by a parent, and three by friends. See Table 11.

TABLE 11
 FREQUENCY DISTRIBUTION OF RESPONDENTS
 BY INFLUENCE ON CAREER CHOICE

Influence on Choice	Group	
	Experimental	Control
Teacher	2	3
Parent(s)	3	1
Friends	0	3
Nurse	1	0
None	3	2
Total	9	9

Three of the diabetics said that their disease did make a difference in their career choice and two said they would select another occupation if they did not have diabetes. This concurs with Davis in which one third of his sample felt that diabetes had influenced their choice of occupation. (37)

Hypothesis III that: there will be no difference in the educational plans of non-diabetic adolescents and diabetic adolescents was accepted. There was no difference in the educational plans of the control group and the experimental group. In the experimental group five stated they were now receiving above average grades and four stated they were not receiving average grades. In the control group six stated they were now receiving above average grades and three

stated they were now receiving average grades. See Table 12.

TABLE 12
FREQUENCY DISTRIBUTION OF RESPONDENTS
BY GRADES PRESENTLY RECEIVING

Grades	Group	
	Experimental	Control
Above average	5	6
Average	4	3
Total	9	9

Six respondents in the control group planned on completing college, two planned on some college and one did not know. In the experimental group seven wanted to complete college, one planned on some college and one did not know. These data on grades correspond with the respondents' career plans in that they would need to graduate from college to pursue their college plans. The grades they were receiving seemed to qualify them for admission to college. See Table 13. Here again the results are similar to Davis in which all of his sample planned to attend college or professional school. (38)

TABLE 13
 FREQUENCY DISTRIBUTION OF RESPONDENTS
 BY HIGHEST EDUCATIONAL GOAL

Educational Goal	Group	
	Experimental	Control
College graduate	7	6
Some college	1	2
Did not know	1	1
Total	9	9

In the experimental group two of the diabetics felt that their diabetes interfered with their school work and seven said it did not. Seven of the diabetics felt that there was no difference in their grades since they were first diagnosed. One felt that his grades were better and one felt that his grades were worse since being diagnosed. Only one respondent felt that his educational goal might be different if he did not have diabetes. This supported the findings of Davis in which only two of his sample of 58 felt that diabetes limited their educational opportunities. (39)

Adjustment to Diabetes

A final aspect of this study was to ascertain how the diabetic adolescent adjusted or coped with his disease. All but one respondent felt they had adjusted well to their disease. This was demonstrated by their stating they had told their teachers and friends that they had diabetes. In the initial period of diagnosis six of the nine respondents

were frightened, one did not understand, and two could not remember their initial reaction because they were too young. All but one respondent felt their feelings had changed since their first diagnosis. The change in feelings were that they were no longer frightened of their disorder and they had learned to live with their diabetes.

A question was asked if there was anything unusual happening in the life of the diabetic at the same time he was diagnosed. This question was asked as the literature indicated that stress was often associated with the onset and course of diabetes mellitus. However, the respondents in this study were too young at the time of diagnoses to answer the question.

TABLE 14

FREQUENCY DISTRIBUTION OF EXPERIMENTAL GROUP
BY MOST DIFFICULT ASPECT OF CARE TO MANAGE

Aspect of Care	N
Diet	5
Urine Testing	2
Insulin injections	1
Diet and urine testing	1
Total	9

In response to which aspect of their self-care was most difficult to manage: five felt it was their diet, two felt it was urine testing, one stated it was insulin injections, and one stated it was both diet and urine testing. See Table 14. The difficulty in acceptance

of disease was supported by seven of the nine respondents who stated that they do go off their diets and eat sweets.

In responding to the question of the most frightening incident in their lives, four out of the nine said it was related to their diabetes. This was higher than Davis' study in which 20 per cent mentioned a diabetes-related incident. (40) All of the respondents stated they had had an insulin reaction. Five were fearful of having another and four did not know what they would do with another reaction. All but one respondent felt that diabetes was inherited. All of the respondents looked at diabetes as a condition and not a disease.

Summary

There was no difference in the marriage, occupational, and educational goals between the adolescent diabetics and the adolescent non-diabetics. The diabetic adolescents felt they had adjusted to their disease. However, they did not seem to have adjusted because they went off their diet and found the disease frightening.

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CHAPTER IV

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

A review of the literature suggested the importance of emotional factors in the onset and course of diabetes. The uniqueness of diabetes mellitus was cited as a disease in which a strict regime of control, not cure, and a knowledge of chronic complications produce attitudes which cause problems in adjustment and subsequently, in the control of diabetes. A systematic routine and the attitudes of the family and adolescent with diabetes were emphasized in the management of juvenile diabetes in helping the adolescent adjust to his disease. Normally adolescence was characterized as a period of emotional and physiological stress in which the impact of any illness would be psychologically more devastating than at any other age. There was a paucity of studies done on the adolescent diabetic and none were found which used a control group. Therefore, the purpose of this study was to investigate the attitudes and plans of the adolescent diabetic with the following three null hypotheses:

- I. There will be no difference in the marriage plans of non-diabetic adolescents and diabetic adolescents.

- II. There will be no difference in the occupational plans of non-diabetic adolescents and diabetic adolescents.
- III. There will be no difference in the educational plans of non-diabetic adolescents and diabetic adolescents.

Further attitudes were investigated on how the adolescent diabetic felt he had adjusted to his disease.

The study utilized an experimental group of nine adolescent diabetics and the control group consisted of nine non-diabetic adolescents. The two groups were matched on age, sex, year in school, race, living with both parents, and both parents married. The experimental group consisted of all the adolescent diabetic patients of one internist whose speciality area was in diabetes. The control group consisted of members of a church youth group.

The tool consisted of a structured interview which was given to both the experimental and control group. In addition to this interview the experimental group were asked questions about their adjustment to their disease.

The respondents consisted of fourteen females and four males. Occupations of the fathers of both groups were similar. In the diabetic group all but one had been hospitalized, the major type of treatment was a split dose of insulin. The degree of control determined by the diabetic's physician was divided equally between good, partially good, and fair control.

Hypothesis I: There will be no difference in the marriage plans of non-diabetic adolescents and diabetic adolescents, was accepted.

Most of the respondents in both the experimental and control group were dating. They all planned to get married, and all planned to have children. The members of the control group planned on fewer children than the members of the experimental group. The diabetics felt they would make just as good a spouse and parent as the non-diabetics and four out of five of the respondents stated they would marry another diabetic.

Hypothesis II: There will be no difference in the occupational plans of non-diabetic adolescents and diabetic adolescents, was accepted. Most of the members of the experimental and control groups planned a career which required a college education. The diabetics felt they had just as good a chance for job advancement as the average person. Five out of nine respondents felt that their diabetes did make a difference in their career choice.

Hypothesis III: There will be no difference in the educational plans of non-diabetic adolescents and diabetic adolescents, was accepted. Over 50 per cent of both groups were presently receiving above average grades. Seven of the diabetics felt that their disease did not interfere with their school work. Most of both groups planned a college education.

In the investigation of attitudes and adjustment of the diabetics, all but one felt they were adjusting to their disease. They stated this was a change of attitude since their diagnosis as they had originally been frightened. However, four out of the nine respondents related

the most frightening incident in their lives to diabetes. The most difficult aspect of care was diet. Seven of the nine respondents stated that they go off their diet and eat sweets.

The findings from the present study concurred with the findings of Davis and associates in relation to occupational, educational, and marital goals. Davis found that diabetes had not affected adversely the plans of the boys and girls interviewed.

Discussion

In the present study the findings suggest that the plans of the adolescent do not differ in spite of the imposition of a chronic disease. Thus, the importance of understanding the adolescent and his behavior and realizing that diabetic adolescents are not "different" or "abnormal" is apparent. The limiting factor of the present study was sample size. However, a positive aspect of the study was the use of a control group. This showed that there was no difference in the diabetic and non-diabetic adolescent plans.

It was the opinion of the respondent's physician that many of his patients were living in stressful situations. This included that their parents were divorced or separated or that the adolescent had left home. However, the findings of the present study did not show this, but it might have been apparent with a larger sample. Also, the present study was unable to relate a stressful situation to the time of diagnosis which had been suggested in the literature. This was due to

the small sample size and that the respondents were too young at the time of diagnosis.

Even though the diabetics indicated they felt they were accepting their disease, some of their behavior indicated they were not. This was shown by their going off of their diet and being frightened of their disease. It is realized that they may have stated they were adjusting well to their disease because they felt that an answer was expected of them.

The adolescent diabetic needs understanding from all those who deal with him. He also needs to realize the importance of maintaining a strict regime in the long term management of his chronic disorder. However, it can be seen that the professional's approach to the juvenile diabetic is often difficult and must be one of flexibility.

Recommendations

1. Replicating the present study: using a larger sample, another socio-economic class, different races, and/or using an urban versus rural population.
2. Conducting a study to determine the behavior of adolescent diabetics and adolescent non-diabetics and comparing it with their attitudes toward illness.
3. Conducting a study to determine if diabetic adolescents differ in their plans and adjustments with adolescent patients who have other chronic diseases.

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APPENDICES

APPENDIX A
DIABETIC INTERVIEW
SCHEDULE

DIABETIC INTERVIEW

Schedule

Please circle:

Age: 14 15 16 17 18 19 20

Sex: M F

Year in school: 9 10 11 12 post high school

First diagnosed as diabetic: 1-5 yr 6-10 yr 11-15 yr 16-20 yr

Are your parents: both living one living both deceased

Father's occupation:

Degree of control: good fair poor

Last hospitalization: 0-6 months 6-12 months 1-2 yr
3-5 yr over 5 yr never

Other diabetics in the family: mother father brother sister

Last blood sugar:

Are your parents: married separated divorced

Are you living with your parents: yes no

I. Occupation

1. What are your career plans?

2. If you become a, do you feel you will be able to
advance to a position: better than average average
less than average

3. Has diabetes influenced your choice of occupation?
4. What would you do if you didn't have diabetes?
5. Has any person with whom you have had contact influenced your occupation?

II. Education

1. How far would you like to go in school?
2. What kinds of grades are you making in school?
3. Is this better no different or worse
than you made before you had diabetes?
4. Would your educational goal be any different if you didn't have diabetes?
5. At this time are you confident you will accomplish your goal?
6. Does diabetes interfere with your school work?

III. Marriage Plans

1. (a) Do you plan to get married?
(b) Would you marry another diabetic?
2. (a) Do you plan to have children? How many?
(b) Would you have more if you didn't have diabetes?
3. Are you dating? Are you going steady?
4. (a) When you date a person do you think you will usually find
out whether he/she has diabetes?
(b) Will you tell them you have diabetes?

5. As a diabetic, do you think you will be just as good a wife/husband as you would be if you did not have diabetes?

IV. Adjustment

1. How long have you had diabetes?
2. How did you feel about it when you were first diagnosed as a diabetic?
Did you cry? Were you angry?
3. Why do you think you have diabetes?
4. Was there anything unusual that happened about the same time in your life that you developed diabetes?
5. Did you tell your teachers friends
that you have diabetes?
6. Have your feelings about your diabetes changed since your first reaction? If so, how?
7. Your diet, insulin and urine testing are important in your daily care. Which is most difficult for you?
8. Do you ever go off your diet and eat sweets?
9. Do you talk to your parents about your diabetes?

10. Do your parents help you with your diet? Injections?
11. How do your parents feel about your diabetes?

APPENDIX B
QUESTIONNAIRE
CONTROL GROUP

QUESTIONNAIRE

Control Group

Please circle:

Age: 14 15 16 17 18 19 20

Sex: M F

Year in school: 9 10 11 12 high school graduate

Do you have diabetes: yes no

Are your parents: both living one living both deceased

Are your parents: married separated divorced

Are you living with your parents: yes no

1. What are your career plans?

2. What is your father's occupation?

3. If you complete your career plans do you feel you will be able to

advance to a position:

a) better than average

b) average

c) less than average

4. What has influenced your choice of occupation?

5. Has any person with whom you have had contact influenced your choice of occupation?
6. How far would you like to go in school?
7. What kinds of grades are you making in school now?
8. At this time are you confident you will accomplish your educational goal?
9. Do you plan to get married?
10. Do you plan to have children? How many?
11. Are you dating? Are you going steadily with someone?


AN ABSTRACT OF THE THESIS OF

LUCINDA ALLEN SCHNEIDLER

For the MASTER OF SCIENCE IN NURSING EDUCATION

Date of receiving this degree: June 9, 1972

Title: A STUDY OF ATTITUDES OF ADOLESCENT DIABETICS

Approved: 

(Professor in charge of thesis)

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