DIABETES IS A DANGER THAT THREATENS OUR KIDS

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ABSTRACT

This subject is very important in the life time because the people fetcher effect of sick for there, we bottom studied this subject for population in (K. S. A.) design increasing consciousness at the persons in population. Section 1, we discussed the definition of diabetes in children, type of diabetes in children, symptoms, complications of diabetes, methods of treatment in children, the measure glucose decrease in children, reasons for low blood glucose, signs and symptoms of low blood glucose, lower of blood glucose in children during sleep and diabetes prevention. Section 2, we project the result of questionnaire and write the statistical analysis for this subject and summaries on the results and illustration by figure.

Keywords: *treatment in children, diabetes in children, blood, glucose*

INTRODUCTION

One of the oldest evidences of the existence of the disease in Egypt in the era of the pharaohs is the presence of inscriptions on papyrus representing a man holding his loin, and then urine showed after that attracts ants, see [1]. However, for the English naming of the disease, the word Diabetes Is of Grecian origin that reflects the loss of important fluids of the body, and the word mellitus is of Hispanic origin that means sweet and that naming is due to non-availability of diagnostic capabilities at the time, the mothers used to note the presence of granules, such as sugar in the urine after the evaporation of the liquid part of it. Diabetes is considered a disease of the most prevalent and most common diseases in the modern era where statistics show a higher incidence, studies show increased incidence in recent years, despite the stunning advances in methods of prevention, treatment and various health awareness for this disease, see [2].

Section 1:

Definition of diabetes in children
Is the body's inability to consume glucose in the blood circulation in a natural way and this deficit comes for two main reasons: The first reason: a lack of full

amount of the hormone insulin which is produced by the pancreas. The second reason: as a result of lack of effectiveness of insulin found in abundance on the cells of the body. **Note: -** In both cases the proportion of sugar in the blood rises, see [3].

Types of diabetes in children
There are three types of diabetes in children:

The first type: is the most common of all, and it is one of the autoimmune diseases as already explained in Part I, and can be detected in the blood of these antibodies (antibodies) formed.
The second type: It is clear from the research that this type of diabetes is increasing in children as a result of increasing obesity rates associated with change of diet in our Arab societies.
Type III (MODY) diabetes: a rare inherited and has several types of diabetes in which injuries to several generations exist within the same family and are diagnosed by genetic examinations in the event of the presence of this family story, and in the absence of auto antibodies existing in Type I diabetes.
Type IV (Diabetes neonates): It is also a rare inherited diabetes that has several types affects affecting infants under the age of a year and diagnosed by specific hereditary investigations and some o its types do not need insulin needles and others are given insulin needles for a temporary period to be determined by the treating physician, see[4].

Symptoms
Common symptoms common to all previous types are:
Frequent urination - Constant feeling of hunger - Feeling thirsty as a result of - the large number of fluid loss - Lack or severe increase in weight - Rapid fatigue when less effort – Colic –Fainting - Losing appetite - Blurred vision.

The causes of type I diabetes and due to talk about the allocation of research in the field study, we have to focus on the causes of the first type, which affects children since birth
There are several different reasons for the infection with type I diabetes include:
- Genetics.
- Viral infections.
- Dietary factors.
- A birth defect in the pancreas.

Complications of diabetes
There are several complications of diabetes, including:
-Low or high blood sugar levels -Diabetic nephropathy - Diabetic retinopathy -Diabetic neuropathy which helps the occurrence of abscesses and chronic foot ulcers - Diabetic keto-acidosis coma as a result of high sugar - Enlarged liver - Inflammation of the skin and mucous membranes.

Methods of Treatment of Diabetes

-Food organization and compensate for the missing growth hormone - The use of insulin -Exercise.

Glucose decrease in children
Glucose lowering scale rate in children

When the blood sugar level is less than 70 mg / ml and lowering is considered a severe decline when the value of blood sugar is less than 40 mg / ml, and the seriousness of sugar decline stems from the fact that sugar is the main energy source for the brain, see [6].

Reasons for low blood Glucose

There are several reasons for the low blood Glucose of the most important:
Increasing the dose of insulin
- Do not eat on time after taking insulin
- The amount of energy given to the child is not corresponding with the dose of insulin and the level of loco motor activity that he does (during exercise, for example), see [7].

Signs and symptoms of low blood glucose

There are several symptoms and signs of low blood sugar rate in the blood which are:

Pallor-Flicker. - Sweating. -The feeling of weakness (fatigue) -Increased heart rate -Hunger. -Ferment. -Difficulty concentrating. -Irritable. -Blurred vision (confusion) -Loss of consciousness temporarily. -Delirium. -Epileptic fits (Convulsions)- Coma.

Note: Most children feel signal signs for the occurrence of decline, but may not be at some of them any signal symptoms or signs and develop epileptic fits or lose consciousness suddenly, in particular those with diabetes for a long time.

Lower of blood glucose in children during sleep

Low blood glucose may occur during sleep, which represents a serious problem for the health of the child because of the difficulty of the discovery of this decline so if the child complained of a headache when he wakes up or was turbid mood or looked upon agitation and anger signs, you should measure blood sugar and give sugar when needed, and measure blood glucose in the next night at 3 a.m. in the morning. To avoid low blood sugar during sleep it is advised to measure glucose level at ten o'clock or eleven at night and if the sugar level up to 110 mg, it is advisable to give the child a snack, see [8]& [9].

Diabetes Prevention
• **Starts at home by:**
I.To allow children to select healthy foods.

The first step in repelling diabetes is to take preventive measures related to eating and advice simply is to provide healthy alternatives to reduce the risk of

developing diabetes. Make sure that the meals contain protein, not carbohydrates only. Pour off the white bread and try bread made from whole grains.

II. Family cooperation to combat the disease.

The whole family should be involved in the health food style. No person is immune to diabetes; everyone must follow a healthy lifestyle. So do not buy different components rich in sugars, including one for children who do not suffer from diabetes, and healthy and free of sugars for the other child with diabetes, having a diabetic child means the possible infection of any member of the family, so make sure to promote good behavior for the whole family. Do not feed your family toxins.

III. Commitment to exercise.

Exercises play an essential role in the prevention of diabetes, try to change lifestyle for your family, reduce the hours of watching TV, surfing the Internet, playing video games as this will contribute to a large degree in weight loss, increase blood flow, reduce blood glucose concentration, and raising energy for adults and children.

IV. Treatment of diabetes in children.

Dealing with cases of low blood sugar by giving 10-20 grams of sugar in the form of a sweetened juice or milk, or cereal glucose, while more serious cases (that is, when the sugar value fall below 40 mg) should be dealt with by giving glucose intravenously or injected Glucagon hormone intramuscularly or in the fatty tissue under the skin, and we can teach parents how to give Glucagon injections at home, while the child is transferred to the hospital.

Section 2:

Introduction of statistical analysis

Due to the importance of this subject we did questionnaire includes the following:

1- **The first axis**: the psychological state
2- **The second axis**: family factors
3- **The third axis**: dietary habits
4- **The fourth axis**: Health Status
5- **Fifth Axis**: physical activities

And then we chose a measure of Liker the fifth because it allows freedom and more credibility to individuals who fill out the questionnaire. An exploratory sample was done to ensure the safety of the questionnaire and then questionnaire were deployed at the following locations: Irfan Hospital - faculty members and administrators of King Abdul Aziz University (Girls' branch) - schools - Online. Then we got a sample of 127 and using the program (SPSS – 22) we created the Alpha Cronbach's coefficient to measure the degree of stability and credibility of the data and the value was equal to (0.873) closer to the correct one, and this shows the high proportion of credibility of the data which will reflect positively on the results of this evaluation.

The First axis:

(Psychological state) we measure the impact of psychological state on the child's diabetes

Questions	Scale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	mean	Standard Deviation	Result
1- In your opinion stress causes diabetes in children	frequency	14	65	34	14	0	3.62	0.825	Agree
	percentage	11.0	51.2	26.8	11.0	0			
2- In your opinion grief causes diabetes in children	frequency	20	56	38	13	0	3.65	0.867	Agree
	percentage	15.7	44.1	29.9	10.2	0			
3- In your opinion psychological shock causes diabetes in children	frequency	25	58	28	16	0	3.72	0.923	Agree
	percentage	19.7	45.7	22.0	12.6	0			
4- In your opinion parental breakdown causes diabetes in children	frequency	15	47	39	26	0	3.40	0.945	Agree
	percentage	11.8	37.0	30.7	20.5	0			
5- In your opinion nervousness causes diabetes in children	frequency	24	57	30	16	0	3.70	0.920	Agree
	percentage	18.9	44.9	23.6	12.6	0			
6- In your opinion extreme fear causes diabetes in children	frequency	20	36	47	24	0	3.41	0.971	Agree
	percentage	15.7	28.3	37.0	18.9	0			
7- In your opinion violence causes diabetes in children	frequency	12	44	41	30	0	3.30	0.937	Agree
	percentage	9.4	34.6	32.3	23.6	0			
First axis result	frequency	130	363	257	139	0	**3.54**	0.64	**Agree**
	percentage	14.6	40.83	28.9	15.63	0			

We note of the result of the average of the first axis according to Liker the fifth scale that all those who have to fill in the questionnaire agreed on (agree) in their assessment of the psychological condition.

• The figure shows that the lowest value to the axis of the psychological state is strongly disagree at all and the highest value is agree.
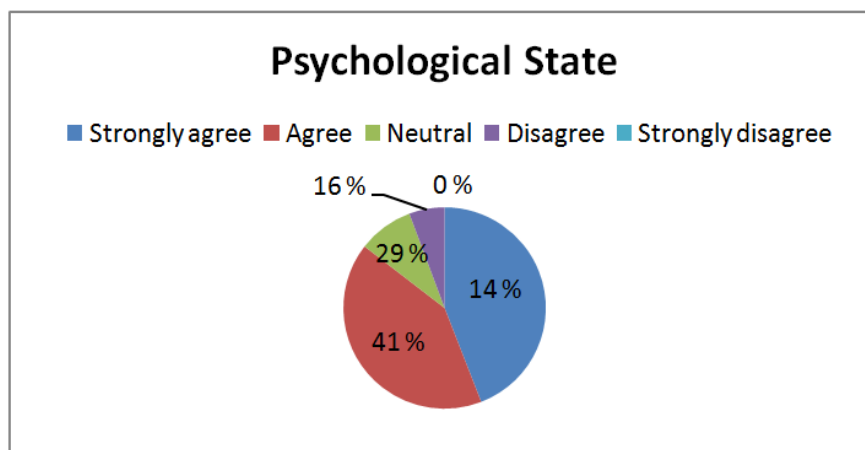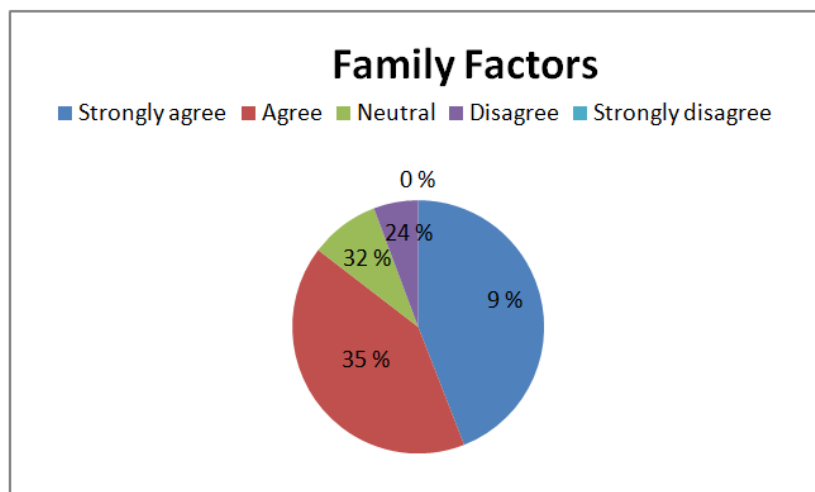
The second axis:
(Familial factors) we measure the impact of family factors on the child's diabetes

Questions	Scale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	mean	Standard Deviation	Result
1- In your opinion if parents are relatives, this causes diabetes in children	frequency	21	62	24	20	0	3.66	0.936	Agree
	percentage	16.5	48.8	18.9	15.7	0			
2- In your opinion artificial feeding causes diabetes in children	frequency	14	25	56	32	0	3.17	0.932	Neutral
	percentage	11.0	19.7	44.1	25.2	0			
3- In your opinion hereditary of the main reasons that causes diabetes in children	frequency	58	58	10	1	0	4.36	0.663	Strongly agree
	percentage	45.7	45.7	7.9	0.8	0			
4- In your opinion if the child is diabetic, it is possible to know that siblings are diabetic	frequency	20	51	37	19	0	3.57	0.931	Agree
	percentage	15.7	40.2	29.1	15.0	0			
5- In your opinion family problems causes diabetes in children	frequency	13	47	40	27	0	3.36	0.932	Neutral
	percentage	10.2	37.0	31.5	21.3	0			
6- In your opinion mother affection by diabetes during pregnancy of the main reasons that causes diabetes in children	frequency	13	35	50	29	0	3.25	0.926	Neutral
	percentage	10.2	27.6	39.4	22.8	0			
Second axis result	frequency	139	278	217	128	0	**3.56**	0.56	**Agree**
	percentage	9.4	34.6	32.3	23.6	0			

We note of the result of the average of the second axis according to Liker the fifth scale that all those who have to fill in the questionnaire agreed on (agree) in their assessment of the family factors.

• Figure shows that the lower value of the axis of family factors is strongly disagree at all and the highest value is agree.
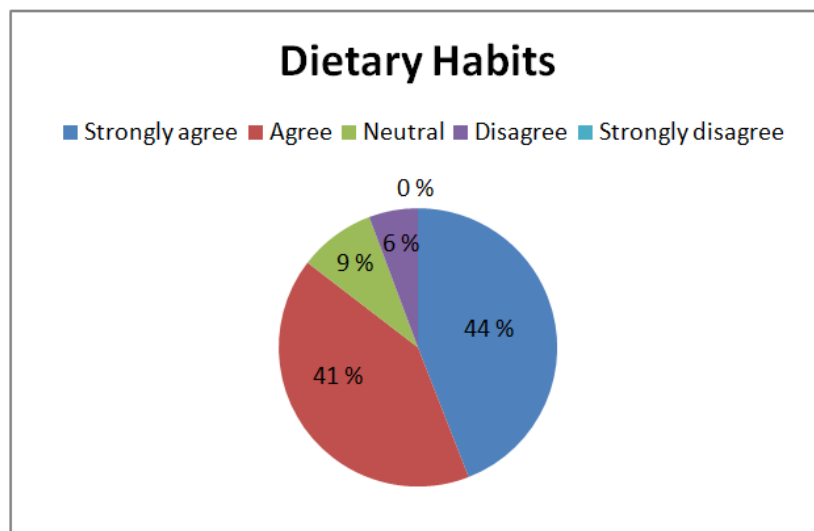
The third axis:
(Dietary habits) we measure the impact of malnutrition among children of having diabetes.

Questions	Scale		Agree	Neutral	Disagree	Strongly disagree	mean	Standard Deviation	Result
1- In your opinion child commitment of healthy diet helps diabetes control	frequency	78	41	3	5	0	4.51	0.733	Strongly agree
	percentage	61.4	32.3	2.4	3.9	0			
2- In your opinion fast food causes diabetes in children	frequency	53	51	16	7	0	4.18	0.858	Agree
	percentage	41.7	40.2	12.6	5.5	0			
3- In your opinion weight gain and obesity causes diabetes in children	frequency	60	57	7	3	0	4.37	0.699	Strongly agree
	Percentage	47.2	44.9	5.5	2.4	0			
4- In your opinion eating sweet meals cause diabetes in children	Frequency	33	61	19	14	0	3.89	0.919	Agree
	Percentage	26.0	48.0	15.0	11.0	0			
Third axis result	Frequency	224	210	45	29	0	**4.24**	0.56	**Strongly agree**
	Percentage	44.075	41.35	8.875	5.7	0			

We note of the result of the average of the third axis according to Liker the fifth scale that all those who have to fill in the questionnaire agreed on (strongly agree) in their assessment of the dietary habits.

• Figure shows that the lowest value to the axis of the Dietary Habit is strongly disagree at all and the highest value is strongly agree.


Dietary Habits

Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree

0 %
6 %
9 %
44 %
41 %

The fourth axis:

(Health Status) we measure in this axis the impact of health status deterioration in children of having diabetes

Questions	Scale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	mean	Standard Deviation	Result
1- In your opinion Vitamin D deficiency causes diabetes in children	frequency	5	24	70	28	0	3.05	0.754	Neutral
	percentage	3.9	18.9	55.1	22.0	0			
2- In your opinion viral disease infection (like, flu, small pox) causes diabetes in children	frequency	5	23	45	54	0	2.83	0.862	Neutral
	percentage	3.9	18.1	35.4	42.5	0			
3- In your opinion children intake of corticosteroids such as (Allergy and asthma drugs) causes diabetes in children	frequency	9	24	59	35	0	3.06	0.867	Neutral
	percentage	7.1	18.9	46.5	27.6	0			
4- In your opinion hormonal imbalance causes diabetes in children	frequency	8	54	44	21	0	3.39	0.836	Neutral
	percentage	6.3	42.5	34.6	16.5	0			
5- In your opinion some endocrine glands such as (Thyroid and pancreas) has relation to diabetes in children	frequency	32	64	23	8	0	3.94	0.829	Agree
	percentage	25.2	50.4	18.1	6.3	0			
Fourth axis result	frequency	59	189	241	146	0	3.25	0.57	**Neutral**
	percentage	9.28	29.76	37.94	22.98	0			

We note of the result of the average of the fourth axis according to Liker the fifth scale that all those who have to fill in the questionnaire agreed on (neutral) in their assessment of the health status.

• Figure shows that the lowest value to the axis of the Health Status is strongly disagree at all and the highest value is neutral.
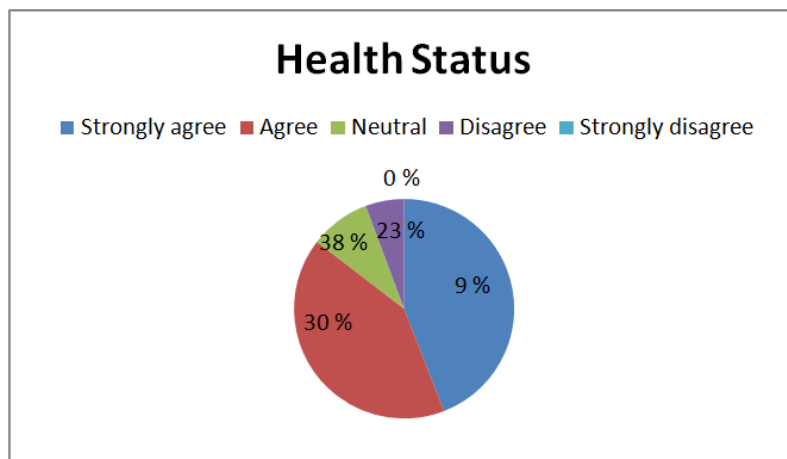
The fifth axis:

(Exercises) we measure in this axis the impact of laziness and immobility and less doing exercises in children of having diabetes

Questions	Scale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	mean	Standard Deviation	Result
1- In your opinion laziness and immobility and less doing exercises cause diabetes in children	Frequency	36	52	24	15	0	3.86	0.965	Agree
	Percentage	28.3	40.9	18.9	11.8	0			
2- In your opinion sports has an important role in balance of diabetes in children	Frequency	77	42	5	3	0	4.52	0.688	Strongly Agree
	Percentage	60.6	33.1	3.9	2.4	0			
3- In your opinion walking prevents diabetes in children	Frequency	49	57	14	7	0	4.17	0.833	Agree
	Percentage	38.6	44.9	11.0	5.5	0			
4- In your opinion fresh air causes balance of diabetes in children	Frequency	30	41	39	17	0	3.66	0.986	Agree
	Percentage	23.6	32.3	30.7	13.4	0			
Fifth axis result	Frequency	192	192	82	42	0	4.05	0.66	**Agree**
	Percentage	37.775	37.8	16.125	8.275	0			

We note of the result of the average of the fifth axis according to Liker the fifth scale that all those who have to fill in the questionnaire agreed on (agree) in their assessment of the exercises.

- Figure shows that the lowest value to the axis of the exercises is strongly disagree at all and show the equal highest value is agree.

Exercises

■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree
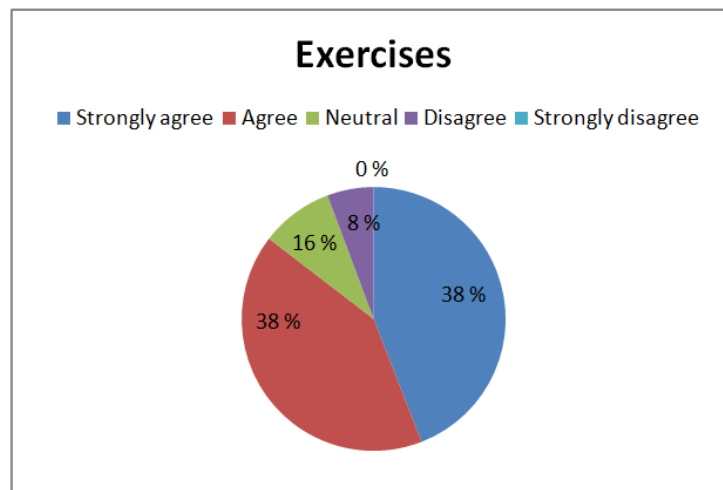
- **The relationship between the first axis (psychological state) and second axis (familial factors)**

Correlations

			x	y
Spearman's rho	x	Correlation Coefficient	1.000	.800
		Sig. (2-tailed)	.	.200
		N	4	4
	y	Correlation Coefficient	.800	1.000
		Sig. (2-tailed)	.200	.
		N	4	4

◻After studying the table we note that the relationship between psychological state and family factors, is strong positive trend that any impact affect the rise and decline of family factors lead to decline and rise on the psychological state of the child and of very high statistical significance (less than or equal to 0.001)

• **The relationship between the third axis (dietary habits) and the fifth axis (Exercises)**

Correlations

			x	y
Spearman's rho	x	Correlation Coefficient	1.000	.949
		Sig. (2-tailed)	.	.051
		N	4	4
	y	Correlation Coefficient	.949	1.000
		Sig. (2-tailed)	.051	.
		N	4	4

◻After studying the table we note that the relationship between dietary habits and exercises is strong positive effect that the direction of exercises to rise and fall affect the decline or rise on the food habits and of very high statistical significance (less than or equal to 0.001)

• **The relationship between the third axis (dietary habits) and fourth axis (health status)**

Correlations

			x	y
Spearman's rho	x	Correlation Coefficient	1.000	-.400-
		Sig. (2-tailed)	.	.600
		N	4	4
	y	Correlation Coefficient	-.400-	1.000
		Sig. (2-tailed)	.600	.
		N	4	4

◻After studying the table we note that the relationship between dietary habits and health status is weak inverse as the direction to the effect of dietary habits to rise or fall affecting the decline or rise on the health status (reduces the incidence of the disease)

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