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PREDICTING THE RISK OF FATTY LIVER DISEASE WITH THE BEHAVIOR PATTERN AND LIFESTYLE

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ABSTRACT

The aim of this study is Predicting the risk of fatty liver disease with the behavior pattern and lifestyle. This research was descriptive and correlation method. The sample size consisted of 140 male and female patients were included hospitals in Bandar Abbas. The sampling method was purposive stratified sampling. Sampling selected among patients who had a body mass index over 27. Result showed that Research predictor variables in the model health with wald 4.52 (p:0.001), sports and fitness to wald 3.53 (p: 0.01), weight management and nutrition with wald 2.75 (p:0.001), prevention of diseases with wald 3.16 (p:0.001), avoid drugs and drugs with the wald 2.25 (p:0.001), accident prevention with wald 2.51 (p:0.001) and behavioral pattern of the wald 28.4 (p:0.05) with criterion variables, the risk of fatty liver (non-alcoholic fatty liver disease) have a significant relationship. In this model variables spiritual health, mental health and social health have no significant correlation with the criterion variable. Daily exercise and regular intake of fruits and vegetables has a beneficial effect on the disease gradual weight loss in obese individuals is necessary and useful.

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Introduction

Fatty liver disease is a major health problem and expensive that it affects almost all age groups in all countries. The high prevalence of fatty liver disease is caused by continuous changes in lifestyle such as unhealthy diets, physical inactivity, obesity and stress. These are often associated with urbanization, mechanization and industrialization. Fatty liver disease in medical condition is reversible of the accumulation of fat vacuoles in liver cells that is characterized by inflammation of the liver [1]. This may occur in people who consume alcohol, but in Iran this disease has other causes and "nonalcoholic fatty liver" is called. Nonalcoholic form of disease occurs in a number of clinical disorders such as diabetes, obesity and malnutrition. In alcoholic fatty liver disease, liver damaged by excessive alcohol consumption and it's not able to break down fat. If you avoid from consuming alcohol, fatty liver is treatment, but if you continue to consume alcohol a person may be suffering from cirrhosis [2]. Most patients age 40_ 60 years and are more common in women [2]. Fatty liver disease is in children older than 10 years can also be created. This chronic liver dysfunction will remain for years [3]. Most people are not symptomatic, sometimes a person have pain and fullness in abdominal area. It rarely feels discomfort in the right upper abdomen and fatigue. Sometimes in random laboratory tests elevated liver enzymes (such as employment surveys) [4]. Daily exercise and consumption of fruit and vegetables have a beneficial effect on the disease. Gradual weight loss in obese individuals is necessary and useful, but a sudden drop in weight, this exacerbates this problem [2].

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The concept of "lifestyle" also influenced by three factors of physical, psychological, and social. His talents as well as the status of the defects triple in person and social fields and facilities, each person puts forward various ways and a special way to compensate for feelings of inferiority marks and a certain way of life will be realized.
Adler based on "lifestyle" has identified four styles and personality type:
A) First type of aggressive and consolidation.
B) Second type or Receiver
C) Third type or avoidance.
These three types of Adler's lack of social interest lifestyle is at odds with the realities of society and they can collaborate with others. The only social type, have a fourth type.
D) The fourth type or socially useful.
Based on the results of previous studies and theoretical orientation in present study predicted the rate of fatty liver on behavior and lifestyle clients Bandar Abbas hospitals.

Method

This research was descriptive and correlation method was performed. The sample consisted of 140 male and female patients were included hospitals in Bandar Abbas. The sampling method was purposive stratified sampling. This form of sampling selected among patients who had a body mass index over 27.

Research Tools

Information collected by library and survey. The essays, theses scientific Book and scholarly journals and sites - valid extension is used for scientific research. After the election, use questionnaire for gather information.

Life Style Questionnaire

Life Style Questionnaire [5], a questionnaire has 68 questions that measure 10 factors of lifestyle factors. These components include physical health, fitness and exercise, nutrition and weight control, prevention of diseases. Likert scale questionnaire is based on a maximum score of 340 and a minimum score on this questionnaire is 68. Content validity of the questionnaire was confirmed on the basis of some of the professors of Psychology. The reliability, internal consistency, Cronbach's alpha coefficient as an index equal to the total of 0.84 to 0.94 have been reported in the present study, Cronbach's alpha reliability of these instruments is 0.82.

Inventory behavioral pattern

The number of questions is 18. The maximum score in this questionnaire is 90 and a minimum score of 18 in the questionnaire. The questionnaire is based on the Likert scale. Reliability and validity of the questionnaire was reported in satisfactory level. In the present study, Cronbach's alpha reliability of the instrument equal to 0.81.

Diagnose of fatty liver disease

In this study, for diagnose of fatty liver disease in patients referred to hospitals in Bandar Abbas by Internal Medicine. Diagnosis is based on history taking, test results and ultrasound results.
Predictor variables: lifestyle and behavior patterns
Criterion variables: the rate of fatty liver disease
To analyze the data used descriptive statistics (mean and standard deviation) and for inferential statistics using logistic regression analysis.

Results

Research predictor variables in the model health with wald 4.52 (p:0.001), sports and fitness to wald 3.53 (p: 0.01), weight management and nutrition with wald 2.75 (p:0.001), prevention of diseases with wald 3.16 (p:0.001), avoid drugs and drugs with the wald 2.25 (p:0.001), accident prevention with wald 2.51 (p:0.001) and behavioral pattern of the wald 28.4 (p:0.05) with criterion variables, the risk of fatty liver (non-alcoholic fatty liver disease) have a significant relationship. In this model variables spiritual health, mental health and social health have no significant correlation with the criterion variable.

Table 1. Mean and standard deviation of the variables in the total sample

variables	Mean	SD	variation range	Min	Max
Physical Health	15.87	2.52	11.20	8.80	20
Sports and fitness	12.20	2.68	11	8	19
Weight control and nutrition	12.71	3.69	13	10	23
Prevention of disease	16.55	3.69	14	8	22
Psychological Health	14.39	2.25	13	13	26
mental health	14.10	2.45	12	9	21
Social Health	9.92	3.58	13	8	21
Avoid drugs and narcotics	11.58	2.56	14	8	22
Prevention of accidents	15.53	3.74	10	11	21
behavioral pattern	13.34	2.25	13	9	22

Table 2. Mean and standard deviation of variables in control group

variables	Mean	SD	variation range	Min	Max
Physical Health	17.19	2.12	11.20	8.80	20
Sports and fitness	13.85	2.23	11	8	19
Weight control and nutrition	13.85	3.31	13	10	23
Prevention of disease	17.29	3.19	14	8	22
Psychological Health	15.57	2.45	13	13	26
mental health	15.58	2.65	12	9	21
Social Health	11.19	3.64	13	8	21
Avoid drugs and narcotics	12.98	2.21	14	8	22
Prevention of accidents	16.85	3.14	10	11	21
behavioral pattern	14.23	2.12	13	9	22

Table 3. Mean and standard deviation of the variables in patients with fatty liver disease

variables	Mean	SD	variation range	Min	Max
Physical Health	14.56	2.12	11.20	8.80	20
Sports and fitness	11.35	2.63	11	8	19
Weight control and nutrition	11.58	3.29	13	10	23
Prevention of disease	15.82	3.39	14	8	22
Psychological Health	13.22	2.54	13	13	26
mental health	12.36	2.23	12	9	21
Social Health	8.65	3.52	13	8	21
Avoid drugs and narcotics	10.18	2.26	14	8	21
Prevention of accidents	14.21	3.44	10	11	21
behavioral pattern	12.45	2.28	13	9	22

Table 4. Results of chi-square test

chi-square	DF	P
52.65	8	0.001

Table 5. Classification of cases of fatty liver disease based on the predictor variables

Variable			Percentage of correct predictions
	Case group	Control group	
fatty liver disease Case group	11	33	25
Control group	8	88	91.71
Total prediction	70.1		

Table 6. Regression coefficients of predictor variables

Variable	B	S.E.	Wald	DF	P
Fixed equation	0.35	0.93	0.126	1	**0.001**
Physical health	0.95	0.34	4.52	1	**0.001**
Sports and fitness	0.70	0.38	3.35	1	**0.001**
Weight control and nutrition	0.40	0.24	2.75	1	**0.001**
Prevention of disease	0.52	0.29	3.16	1	**0.001**
Psychological Health	0.23	0.25	0.84	1	**0.34**
mental health	0.32	0.36	0.78	1	**0.25**
Social Health	0.29	0.31	0.86	1	**0.15**
Avoid drugs and narcotics	0.24	0.36	2.25	1	**0.001**
Prevention of accidents	0.55	0.35	2.51	1	**0.001**
behavioral pattern	0.41	0.39	4.28	1	**0.001**

Conclusion

The risk of fatty liver disease predicted from the lifestyle in hospitals in Bandar Abbas. Table (6) showed that the logistic regression model between 46 to 49 Percentages of the variance in risk for fatty liver disease research is explained by the predictor variables the research indicates that hypothesis is confirmed. According to previous studies [6 -9], daily exercise and regular intake of fruits and vegetables has a beneficial effect on the disease, gradual weight loss in obese individuals is necessary and useful, but a sudden drop in weight, this exacerbates the disorder. The disease has no specific symptoms, but after the failure to comply with the progression of the disease in the liver, causing indigestion and eventually lead to human death. Nonalcoholic steatohepatitis, the more severe form fatty liver disease can lead to chronic liver disease, including cirrhosis [10-12]. As a result, many states occurs fatty liver disease due to alcohol consumption, metabolic disorders, drugs and eating disorders. Multiple mechanisms of fatty liver disease and in most cases are asymptomatic.

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