Survey of non-alcoholic fatty liver disease knowledge and nutrition and physical activity patterns among the general public in Beijing, China

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Introduction

- Non-alcoholic fatty liver disease (NAFLD) describes a spectrum of liver diseases ranging from steatosis to steatohepatitis (NASH) and cirrhosis.
- NAFLD is a growing problem in the Chinese population with an estimated prevalence of 15-35%.
- Despite its growing prevalence, knowledge and awareness of NAFLD among the public seems to be lacking.

Purpose

- To understand awareness of NAFLD among the general population of Beijing and to assess diet and physical activity patterns as contributing risk factors for NAFLD.

Methods

- The study was conducted on adult patients and their family members in the ultrasound clinic at Peking University Hepatology Institute and staff from government offices in Beijing.
- Subjects completed an anonymous survey which consisted of four sections: knowledge of NAFLD, diet, physical activity, and demographics/medical history.
- The knowledge portion included 25 questions; one point was given for each correct answer; physical activity was assessed using the International Physical Activity Questionnaire (IPAQ).
- Data were analyzed using STATA version 13.

Results

1296 subjects at the ultrasound clinic and 494 subjects from 8 offices participated in the study. Response rate in the clinic was 68.4% and 96.7% in the offices.

Table 1 Characteristics of the Participants.

	Clinic	Offices
Sex, % female	50.9	60.6
Median age (range)	35 (18-85)	43 (20-86)
Median BMI (range)	22.3 (14.2-54.9)	23.8 (15.6-50.2)
Education, % college education or higher	80.5	92.9

Figure 2 Knowledge of NAFLD. Percentage of respondents who responded correctly to questions in the knowledge portion of the survey.

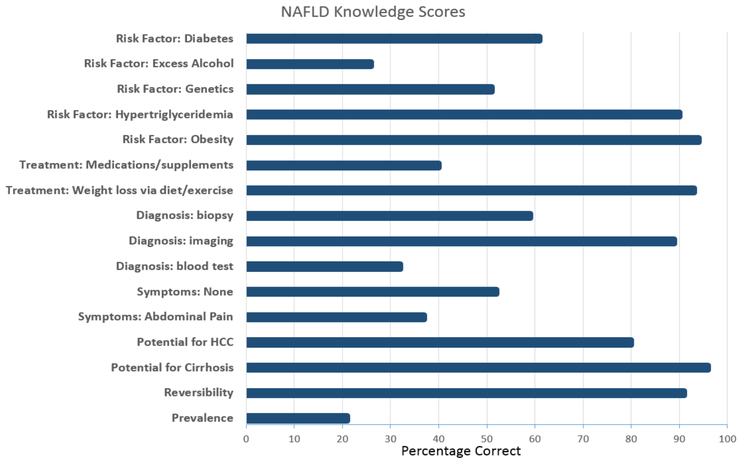
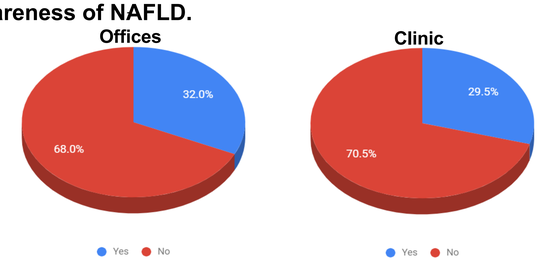


Table 2 Univariate and Multivariate Logistic Regression Analysis of Predictors of Knowledge (Score >16).

Variable	Univariate OR (95% CI)	P value	Multivariate OR (95% CI)	P value
Sex	1.13 (0.93-1.38)	0.20	1.07 (0.81-1.41)	0.63
Age (per year)	0.99 (0.98-1.00)	0.19	0.98 (0.97-1.00)	0.06
BMI	1.02 (0.99-1.04)	0.07	1.00 (0.97-1.04)	0.53
Education (college or higher)	1.82 (1.45-2.20)	**<0.001**	1.70 (1.11-2.60)	**0.01**
PMH of NAFLD	1.84 (1.38-2.44)	**<0.001**	1.39 (0.93-2.08)	0.10
PMH of Diabetes	0.95 (0.58-1.56)	0.85	N/A	N/A
FH of NAFLD	1.83 (1.34-2.50)	**<0.001**	0.96 (0.64-1.44)	0.86
FH Hyperlipidemia	2.26 (1.78-2.87)	**<0.001**	1.96 (1.40-2.74)	**<0.001**
Number of Sugary Beverages/week	0.73 (0.62-0.86)	**<0.001**	0.74 (0.60-0.91)	**0.006**

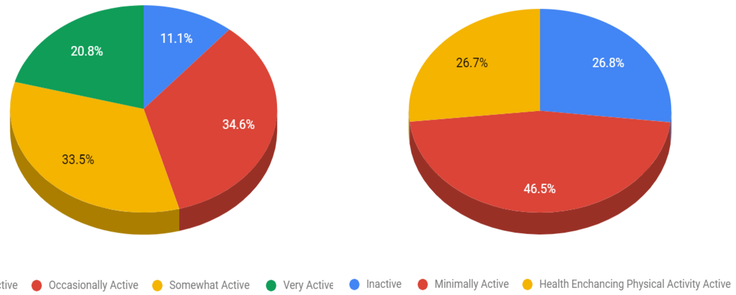
PMH: past medical history, FH: family history

Figure 3 Awareness of NAFLD.



Responses to question: Have you heard of NAFLD before this survey?

Figure 4. Physical Activity: Self perception and categorization based on IPAQ



Responses to question: "How physically active do you consider yourself to be?"

Activity level using IPAQ analysis.

Summary

- Of nearly 2000 subjects living in Beijing, only 1/3 had baseline awareness of NAFLD. Median knowledge score was 15 and 16 out of 25 in clinic and offices, respectively.
- Education level and family history of hyperlipidemia were the only significant predictor of good knowledge while number of sugary beverages/week was a negative predictor of knowledge.
- Most commonly missed question was prevalence of NAFLD in China; being underestimated by most.
- There were many misconceptions surrounding risk factors for NAFLD, the commonly asymptomatic presentation, and potential to cause HCC.
- Subjects tended to overestimate their physical activity with 88.9% of participants considering themselves physically active but only 27.3% meeting the minimum weekly physical activity recommendations per IPAQ analysis.
- Patient education directed at these gaps in knowledge and at promotion of physical activity is critical to curb the rapidly growing epidemic of NAFLD in China.

Disclosures

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