



HAL
open science

Stigma is a Predictor of Impairment of Health Related Quality of Life among Patients with NAFLD

Zobair M Younossi, Yusuf Yilmaz, Jian-Gao Fan, Ming-Hua Zheng, Khalid Alswat, Saleh A Alqahtani, Mohamed El-Kassas, Laurent Castera, Jesús Funuyet-Salas, Manuel Romero-Gómez, et al.

► **To cite this version:**

Zobair M Younossi, Yusuf Yilmaz, Jian-Gao Fan, Ming-Hua Zheng, Khalid Alswat, et al.. Stigma is a Predictor of Impairment of Health Related Quality of Life among Patients with NAFLD. AASLD The Liver Meeting 2023, Nov 2023, San Diego, CA, United States. inserm-04548946

HAL Id: inserm-04548946

<https://inserm.hal.science/inserm-04548946>

Submitted on 16 Apr 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Stigma is a Predictor of Impairment of Health Related Quality of Life among Patients with NAFLD

Zobair M. Younossi, Yusuf Yilmaz, Jian-Gao Fan, Ming-Hua Zheng, Khalid Alswat, Saleh A. AlQahtani, Mohamed El-Kassas, Laurent Castera, Jesús Funuyet-Salas, Manuel Romero-Gómez, Vincent Wai-Sun Wong, Shira Zelber-Sagi, Sombat Treeprasertsuk, Alina M. Allen, Hirokazu Takahashi, Takumi Kawaguchi, Sven Francque, Marlen I. Castellanos Fernández, Ajay Duseja, Jörn M. Schattenberg, Patrizia Burra, Patrizia Carrieri, Marco Arrese, Mary Rinella, Ashwani K. Singal, Stuart Gordon, Michael Fuchs, Wayne Eskridge, Naim Alkhouri, Kenneth Cusi, Rohit Loomba, Jane Ranagan, Achim Kautz, Janus P. Ong, Marcelo Kugelmas, Yuichiro Eguchi, Moises Diago, Phil Newsome, Ming Lung Yu, Lynn Gerber, Brian Lam, Lisa Fornaresio, Fatema Nader, Linda Henry, Andrei Racila, Pegah Golabi, Maria Stepanova, Jeffrey V. Lazarus and the Global NASH Council

Background: Stigma associated with non-alcoholic fatty liver disease (NAFLD) can be consequential and associated with impairment of health-related quality of life (HRQL).

Aims: To evaluate association between stigma and HRQL scores among NAFLD patients.

Method: NAFLD patients were invited to complete the Chronic Liver Disease Questionnaire-NAFLD (CLDQ-NASH; 36 items, 6 domains, range 1-7, higher scores indicate better HRQL) and a specifically designed stigma survey which asked about history of stigmatization or discrimination due to chronic conditions, various aspects of disease burden [Liver Disease Burden (LDB) instrument; 35 items, 7 domains including Stigma, range 1-4, higher scores indicate greater disease burden], and perception of various diagnostic terms for NAFLD.

Results: The CLDQ-NASH and the stigma survey were completed by 377 NAFLD patients (9% <35 years, 50% ≥55 years, 52% male, 56% college-educated, 47% with ≥2 chronic comorbidities, 45% type 2 diabetes, 20% severe fibrosis or cirrhosis) from 12 countries (47% USA). The mean (±SD) CLDQ-NASH score was 5.23±1.11, with the greatest HRQL impairment seen in the Fatigue domain (mean score 4.60±1.54). Of included patients, 15% reported having experienced stigma or discrimination (at least sometimes) due to NAFLD and 42% due to being overweight/obese; the mean LDB Stigma score was 2.31±0.69, and 26% reported being uncomfortable with the diagnostic term “NAFLD”. All aspects of NAFLD stigma (self-reported history of stigmatization due to NAFLD, having LDB Stigma score in the top quartile, and being uncomfortable with the term “NAFLD”) were associated with lower HRQL scores in all domains ($p \leq 0.01$); the magnitude of the association varied between -0.33 and -1.29, with the strongest HRQL impairment observed in the Worry domain of CLDQ-NASH (Figure). In addition, all HRQL scores were significantly negatively correlated with all LDB scores (ρ from -0.13 to -0.48, all $p < 0.01$; the strongest between Worry of CLDQ-NASH and Stigma of LDB). In multivariate regression analysis adjusted for the country of enrollment, history of stigmatization or discrimination due to NAFLD was the strongest independent predictor of lower HRQL scores in all domains (beta -0.63 to -1.02, $p < 0.001$). In addition, high LDB Stigma scores were independently associated with Emotional Well-Being and Worry of CLDQ-NASH (beta -0.43 to -0.49, $p < 0.01$) while history of stigmatization due to being overweight/obese was associated only with Activity of CLDQ-NASH (beta=-0.36, $p=0.01$). In contrast, negative perception of the diagnostic term “NAFLD” was not

associated with HRQL scores (all $p > 0.05$). Other predictors of lower HRQL scores in NAFLD included female sex, lack of college education, having ≥ 2 chronic comorbidities, history of weight loss due to medical reasons, and having severe fibrosis or cirrhosis ($p < 0.05$).

Conclusions: As a major independent predictor of quality-of-life scores, stigmatization of the condition is not harmless for patients with NAFLD.

