Title: Symptom experience and predictive factors in patients with liver cirrhosis: A cross sectional survey in Egypt

Background: Liver cirrhosis is a global health problem and a national health problem in Egypt. Aim: This study aimed to explore and describe the range of symptoms experienced by cirrhotic patients and the predictive factors of perceived symptom severity and distress. Method: A cross-sectional study with a convenience sample of 401 patients from three hospitals in Cairo, Egypt, was conducted between June and August 2011. Patients were interviewed to complete a background data form, the Liver Disease Symptom Index 2.0 and the Multidimensional Scale of Perceived Social Support.

Results: More than two-thirds of patients reported joint pain (78.3%), decreased appetite (75.6%) and memory problems (77.3%). Joint pain and depression were reported to have the biggest impact on daily life. Symptom severity and distress were higher among patients who were: female, illiterate, unemployed, and who had advanced cirrhosis with more complications and comorbidities (p ≤ 0.006). Symptom severity (r=-0.206) and distress (r=-0.205) were negatively associated with perceived social support (p=0.005). Using multiple linear regression, females, advanced cirrhosis, low perceived support from spouse and family predicted high-perceived symptom severity and distress (p≤0.04). Conclusion: Nurses should involve the patient’s family in any plan of care. Further research is recommended to explore additional predictive factors and to develop programs to relieve treatable symptoms.

This is the first research study investigating the full range of experienced symptoms and their predictive factors among liver cirrhotic patients in Egypt. This study will contribute evidence about the symptoms that liver cirrhotic patients in Egypt experience and the severity and distress caused by them. Symptom severity has been found to be the main predictor of physical and mental health.
The findings indicate the importance of developing symptom management programs to improve these patients symptom experience and thus improve their HRQOL. This study has identified factors that can explain symptom experience, as well as HRQOL in patients with cirrhosis, such as perceived spouse and family support. This information will help health care providers during the development of symptom management programs. This study therefore suggests that involving the patient’s family in any intervention program will be helpful to improve their symptom experience as well as their HRQOL.

In conclusion, health care providers have an important role in identifying and managing symptoms that patients are experienced, as well as to help in improving their HRQOL. However, the family may also have an important role to improve these patients symptom experience and their HRQOL.

**Note:** this PhD had four aims: (1) to translate and validate a liver disease specific HRQOL tool (LDSI-2.0) in Arabic, (2) to explore and describe HRQOL and its predictive factors in patients with liver cirrhosis in Egypt, (3) to explore and describe symptoms that liver cirrhosis patients are experiencing and predictive factors of perceive symptom severity and symptom distress, and (3) explore and describe how these patients perceive the available social support and its predictive factors. The attached abstract forms one part of the PhD research i.e. the second aim (exploring and describing symptom experience of liver cirrhotic patients in Egypt).