

Original Article

Common Mental Health Disorders and Mental Health Help-Seeking Behaviors among Caregivers of Diabetic Children in Ismailia

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Abstract

Background: Mental health issues are major public health concern. Primary caregivers of diabetic children carry multi-dimensional burden during management of this chronic condition and are vulnerable to various mental disorders.

Objective(s): To identify the common mental health disorders and mental health help-seeking behaviors among caregivers of diabetic children.

Methods: A comparative cross-sectional study including primary caregivers of children with type-1 diabetes (n=151) and caregivers of non-diabetic children (n=151) was carried out at Suez Canal University and Health Insurance hospitals in Ismailia, Egypt. Participants completed a structured questionnaire including socio-demographic characteristics, medical histories, and recent mental health help-seeking behaviors. WHO self-reporting questionnaire-20 (SRQ-20) was used to assess the suspected Common Mental Health Disorders (CMHD) among studied caregivers.

Results: suspected CMHD among caregivers of diabetic children was relatively higher than the caregivers of non-diabetic children (75.5% vs. 72.2%, $p = 0.513$). The proportion of caregivers of diabetic children who sought formal sources of mental health help was significantly lower than caregivers of non-diabetic children (6.7% vs. 20.5%). Caregivers with suspected CMHD had significantly lower perceived mental and physical health and sought mental health help more than those with no suspected CMHD (31.8% vs. 17.7%, $p = 0.02$). The main significant determinants of suspected CMHD were the perceived mental and physical health ($p < 0.001$, and 0.027, respectively).

Conclusion: No significant difference in CMHD existed between caregivers in studied groups. Caregivers of diabetic children were less likely to seek formal sources of mental health help-seeking. Perceived mental and physical health were the determinants of CMHD.

Keywords: mental health, help-seeking behavior, caregivers, diabetic children

Available on line at:

jhiphalexu.journals.ekb.eg

Print ISSN: 2357-0601

Online ISSN: 2357-061X

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Suggested Citations: Lotfy SL, Refaat AH, Amer SA, Elotla SF. Common Mental Health Disorders and Mental Health Help-Seeking Behaviors among Caregivers of Diabetic Children in Ismailia. JHIPH. 2022;52(2):82-90.

INTRODUCTION

Mental health is a growing public health concern. Globally, the prevalence of mental health disorders ranges between 15-20%. This accounts for 5% of global disease burden and up to 10% in several countries. ^(1, 2) In Egypt, the prevalence of common mental health disorder (CMHD) namely, stress, anxiety, and major depression, among adults ranges from 10.6% to 25%. ^(3, 4)

Persons with mental disorder suffer from the symptoms of the disease itself and the associated societal influences as well. Disease symptoms can be severe enough to interfere with working, living independently, or achieving a satisfactory quality of life. Furthermore, the view of the society about mental

disorders results in stigma and limited help-seeking and increases their suffer. ⁽⁵⁾

Help-seeking is "any action or activity carried out by a person who perceives herself/himself as needing personal, psychological, affective assistance or health or social services, with the purpose of meeting this need in a positive way". This includes seeking help from formal services such as clinic services, counselors, psychologists, medical staff, traditional healers, religious leaders, or informal sources, which include peer groups and friends, family members and/or other senior adults in the community. ^(6, 7)

Seeking mental health help is a coping process; it is a reaction to stress and a mechanism that contributes to well-being. seeking psychological help is important because it decreases the long-term negative effects of mental health problems. ⁽⁷⁻⁹⁾ Although there is an

increasing awareness of mental disorders, the use of mental health services by those with mental health disorders is still low. ⁽¹⁰⁾ This could be affected by attitudinal and structural barriers related to receiving psychological help. ^(11, 12)

Diagnosis of a child with Type-1 Diabetes Mellitus (T1DM) has life-changing effects on families and caregivers of those children. ⁽¹³⁾ Although all individuals encounter emotional difficulties throughout their lives, primary caregivers, mostly mothers, of diabetic children reported greater stress compared to others. ⁽¹⁴⁾ Stress in diabetic children's caregivers is multifactorial and directly linked to increased parental anxiety, frustration, and reduced self-efficacy. ⁽¹⁵⁾ The multi-dimensional responsibilities of diabetes management increase diabetic caregivers' daily stress and affect their mental wellbeing, which could affect the quality of care provided to their children. ^(16, 17) Avoiding seeking help and disclosing emotional problems is more evident in Arab societies who generally have negative attitudes towards mental disorders. ⁽¹⁸⁾ There, mental disease is regarded as stigma, which is the most common reason for the under- utilization of available psychiatric services. ⁽¹⁹⁾

As families struggle to care for chronically ill children, their own mental health is put in danger. Caregivers' mental health requires focused attention from health professionals, policy makers and caregivers themselves to ensure effective and efficient quality of care. ⁽²⁰⁾ Studies that investigated mental health disorders and mental health help-seeking behavior have been focusing mainly on caregivers of mentally diseased patients. ⁽²¹⁻²³⁾ However, investigating these variables among caregivers of children with chronic diseases, particularly T1DM, being the second most common chronic disease among children after bronchial asthma, has not been sufficiently addressed in Egypt. ^(24, 25) The issue that is mandatory for provision of high-quality health care to diabetic children, and consequently better health outcomes. Therefore, this study investigated CMHD and pattern of mental health help-seeking behavior among this at-risk group compared to the general population.

METHODS

A comparative cross-sectional study including a convenience sample of primary caregivers of children with type-1 diabetes (n=151) and caregivers of non-diabetic children (n=151) was carried out at Suez Canal University and Health Insurance hospitals in Ismailia, Egypt between April 2020 to May 2021.

The sample size required to perform the study was calculated using Epi Info version 7 based on confidence level 95%, power 80%, mental distress (mild–extremely severe) in caregivers of type-1

diabetic children = 30.1 % and mental health distress (mild–extremely severe) in caregivers of non-diabetic children = 14.3 %. ⁽³³⁾ The total required sample size to perform the study was 270 (135 per group) after considering 15 % for non-response.

Caregivers of diabetic children were recruited from pediatric diabetes and metabolism clinics in university and insurance hospitals. Caregivers in the comparison group were recruited from general pediatric and family medicine clinics in these settings.

Participants were studied in two groups. Group A included primary caregivers of children who had been diagnosed with insulin-dependent diabetes at least one year prior to the study. Caregivers of children with additional major disease like cancer, genetic disorders, neuro-developmental disorders, or chronic mental disorders were excluded. Group B included primary caregivers whose children haven't been diagnosed with any chronic diseases and were accompanying their caregivers while existing in the above-mentioned settings.

Participants were interviewed to complete a structured questionnaire involving: socio-demographic characteristics, caregiver's medical history, child medical history: age, order of sibling, age at diagnosis, management plan, presence of other chronic conditions, caregivers' perceived mental health status, physical health status and ability to perform daily physical activity and finally their recent help-seeking behaviors by asking about whether psychological help has been sought, asking about recent intake of psychiatric treatment, and listing several potential help sources and asking whether help has been sought from each of the sources. Three questions were used to measure participants perceived mental health status and physical health status, the responses were coded on a 5-point Likert scale (0=bad to 4= excellent) and similarly was coded the responses to perceived ability to perform daily activities (0=not at all to 4= almost all).

The Arabic Self Reporting Questionnaire (SRQ-20) was used to assess the CMHD. SRQ-20 is a valid screening instrument with 20 binary (yes/no) questions with codes "1" which represents the presence of a symptom, and "0" if the symptom is absent. A cutoff point between 6 and 7 was found to yield a sensitivity of 93%, a specificity of 70%, and a misclassification rate of 19% ⁽²⁶⁾ and reflect depression, anxiety, and psychosomatic complaints, which are all together, grouped under CMHD and have been found to detect probable cases with satisfactory accuracy. ^(27, 28) Accordingly, those with <7 points were categorized as "not suspected" and those with ≥7 points were considered "suspected." SRQ-20 was originally designed as a self-administered scale; however, it is suitable as an interviewer questionnaire in settings with low literacy rate, such as in developing countries. ⁽²⁹⁾

Statistical Analysis

The collected data were coded, cleaned, filtered, entered, and processed using the Statistical Package for Social Science (SPSS version 25; IBM Corporation, Armonk, NY, USA). Kolmogorov–Smirnov test was performed for continuous variables to test for data normality. Continuous variables were expressed as mean and standard deviation, while the categorical variables were expressed as frequency and percentage. Mann-Whitney U test was used to test for significance of the differences in non-normally distributed continuous variables between caregivers of diabetic and non-diabetic children. Chi-Square test was used for testing the significance of associations between categorical variables, while the Fisher's Exact test was used instead when over 20% of cells had expected values less than 5. Multiple binary logistic regression model was used to identify the determinants of CMHD among caregivers, where parameters estimated were expressed as odds ratios and 95% confidence intervals. P-values < 0.05 were considered statistically significant.

Ethical Considerations

The study protocol was approved by the Review Board and Research Ethics Committee in Faculty of Medicine, Suez Canal University. The study followed the International Guidelines for Research Ethics.⁽³⁰⁾ Participation in the study was voluntary, and an informed oral consent was obtained from all participants after explaining the aim and concerns of the study.

RESULTS

Table 1 shows that the mean age was not significantly different between caregivers of diabetic children (group A) and caregivers of non-diabetic children (group B), 35.38 ± 6.20 vs. 36.64 ± 6.45 , respectively ($p=0.07$). Likewise, no statistically significant differences existed between the two groups of caregivers regarding their residence ($p=0.30$), marital status ($p=0.14$), level of education ($p=0.72$), employment ($p=0.53$), income level ($p=0.48$), body mass index ($p=0.06$), smoking ($p=1.00$), practice of regular physical exercises ($p=0.15$), number of children ($p=0.43$), having pregnancy or lactating ($p=0.36$), and number of chronic diseases ($p=0.69$). Although the perceived mental and physical health among caregivers of diabetic children were less than in those of non-diabetic children, no statistically significant difference was detected ($p=0.08$, and 0.06 , respectively). However, caregivers of diabetic children reported significantly higher level of perceived ability to do daily life activities, compared to caregivers of the non-diabetic children (2.92 vs. 2.42 , respectively, $p<0.001$).

The prevalence of suspected CMHD among

caregivers of diabetic children was not different enough to be statistically significant, compared to caregivers of non-diabetic children (75.5% vs. 72.2% , $p=0.513$) (**Figure 1**). Regarding mental health help seeking, the proportion of caregivers in group A who would seek formal resources of mental health help (i.e., any healthcare provider, and mental health providers) if they got distressed were significantly less than caregivers in group B (6.6% vs. 13.9% , $p<0.001$). However, caregivers in group A were less likely to seek non-formal mental health help from parents ($p=0.04$), close friends ($p<0.001$), religious leaders ($p<0.001$), and traditional healers ($p=0.57$), compared to caregivers in group B. In contrast, they were more likely to seek non-formal mental health help from other relatives and family members ($p=0.01$), and praying ($p=1.00$), compared to caregivers in group B. The proportion of caregivers in group A who recently sought mental health help was insignificantly higher than caregivers in group B (32.5% vs. 23.8 , $p=0.10$). Likewise, the proportion in group A who recently received any psychiatric medications was insignificantly higher than in group B (6.0% vs. 4.0% , $p=0.43$) (**Table 2**).

Table 3 shows that the perceived mental and physical health among caregivers with suspected CMHD were significantly lower than caregivers with no suspected CMHD (1.45 and 1.66 vs. 2.44 and 2.35 , respectively, $p<0.001$). Although the perceived ability to perform daily life activities among caregivers with suspected CMHD was lower than those with no suspected CMHD, it was not statistically significantly different (2.61 vs. 2.83 , $p=0.16$). On the other hand, caregivers with suspected CMHD recently sought mental health help more frequently than caregivers with no suspected CMHD, but with no statistically significant difference (31.8% vs. 17.7% , $p=0.02$). However, the proportion of caregivers with suspected CMHD who recently received psychiatric medications was greater than the proportion of caregivers who had no suspected CMHD (5.4% vs. 3.8% , $p=0.76$).

Table 4 shows the adjusted associations between the CMHD and the study variables using a binary logistic regression model. The model shows a good fit (Hosmer & Lemeshow Chi-square = 7.91 , $p = 0.443$), and is statistically significant (Chi-square = 64.2 , $p < 0.001$), with 0.28 Nagelkerke R square and 78.1% predictability. The only significant determinants were the perceived mental and physical health. The odds of suspected CMHD were significantly 51% less for every higher point on the perceived mental health scale (95% CI: $0.33 - 0.72$), given all other variables were kept constant. Likewise, the odds of suspected CMHD were significantly 37% less for every higher point on the perceived physical health scale (95% CI: $0.42 - 0.95$), given all other variables were kept constant.

Table 1: Comparison of demographic characteristics between caregivers of diabetic children and caregivers of non-diabetic children

Characteristic	Caregivers of diabetic children (n=151)	Caregivers of non-diabetic children (n=151)	p-value
Age of caregiver (years)			
Mean \pm SD, (Range)	35.38 \pm 6.20 (22 – 54)	36.64 \pm 6.45 (23 – 59)	0.07 ^a
Residence, No. (%)			
Rural	78 (51.7)	69 (45.7)	0.30 ^b
Urban	73 (48.3)	82 (54.3)	
Marital status, No. (%)			
Married	131 (86.8)	139 (92.1)	0.14 ^b
Not married	20 (13.2)	12 (7.9)	
Level of education, No. (%)			
Illiterate	10 (6.6)	8 (5.3)	0.72 ^b
Elementary education	25 (16.6)	19 (12.6)	
Secondary/technical school	49 (32.5)	54 (35.8)	
University /postgraduate	67 (44.4)	70 (46.4)	
Employment status, No. (%)			
Unemployed (housewife)	110 (72.8)	105 (69.5)	0.53 ^b
Employed	41 (27.2)	46 (30.5)	
Perceived level of income, No. (%)			
Low	68 (45.0)	59 (39.0)	0.48 ^b
Average	56 (37.1)	58 (38.4)	
High	27 (17.9)	34 (22.5)	
Body mass index, Mean \pmSD	24.76 \pm 4.18	24.12 \pm 3.31	0.06 ^a
Smoking, No. (%)			
Current smoker	3 (2.0)	2 (1.3)	1.00 ^c
Not smoker	148 (98.0)	149 (98.7)	
Regular physical exercise, No. (%)			
Practicing	(23.8) 36	26 (20.5)	0.15 ^b
Not practicing	115 (76.2)	125 (82.8)	
No. of children, Mean \pmSD	2.84 \pm 1.19	2.74 \pm 1.15	0.43 ^a
Pregnancy or Lactation, No. (%)			
Pregnancy	2 (1.3)	5 (3.3)	0.36 ^c
Lactation	4 (2.6)	7 (4.6)	
None	145 (96.0)	139 (92.1)	
Chronic diseases, No. (%)			
None	79 (52.3)	78 (51.7)	0.69 ^c
Single chronic disease	48 (31.8)	55 (36.4)	
Two or more chronic diseases	24 (15.9)	18 (11.9)	
Perceived social support			
Receiving social support	29 (19.2)	29 (19.2)	1.00
Not receiving social support	82 (80.8)	82 (80.8)	
Perceived mental health status, Mean \pm SD	1.67 \pm 1.09	1.89 \pm 1.05	0.08 ^a
Perceived physical health status, Mean \pm SD	1.73 \pm 1.04	1.97 \pm 0.87	0.06 ^a
Perceived ability to perform daily life activities, Mean \pm SD	2.92 \pm 1.16	2.42 \pm 1.15	0.00 ^{*a}

Group A: Caregivers of diabetic children, Group B: Caregivers of non-diabetic children
 test, ^c Fisher's Exact test

^a Mann-Whitney U test, ^b Chi-square

* Statistically significant p-value (<0.05)

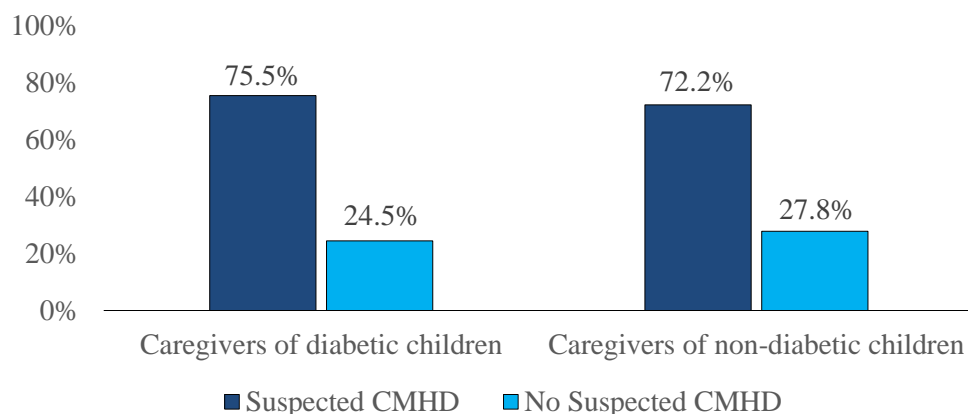


Figure 1: Distribution of caregivers in the studied groups by the common mental health disorders (CMHD)

Table 2: Comparison of mental health help-seeking behavior between caregivers of diabetic children and caregivers of non-diabetic children

Characteristic	Caregivers of diabetic children (n=151) No. (%)	Caregivers of non-diabetic children (n=151) No. (%)	p-value
Formal resources for mental health help:			
Any Health care provider	1 (0.7)	13 (8.6)	0.00* ^b
Mental health professionals	9 (6.0)	18 (11.9)	0.07 ^b
Total formal resources	10 (6.6)	21 (13.9)	0.00* ^b
Informal resources for mental health help:			
Parents	59 (39.1)	77 (51.0)	0.04* ^b
Close friends	62 (41.4)	93 (61.6)	0.00* ^b
Religious leaders	29 (19.2)	53 (35.1)	0.00* ^b
Other relatives/ family members	99 (65.6)	75 (49.7)	0.01* ^b
Traditional healers	14 (9.3)	17 (11.3)	0.57 ^b
Praying	150 (99.3)	149 (98.7)	1.00 ^b
Recently sought mental health help	49 (32.5)	36 (23.8)	0.10 ^b
Recently received psychiatric medications	9 (6.0)	6 (4.0)	0.43 ^b

Group A: Caregivers of diabetic children, Group B: Caregivers of non-diabetic children

^b Chi-square test

* Statistically significant p-value (<0.05)

Table 3: Association between common mental health disorders (CMHD) and the perceived mental and physical health and the mental health-seeking behaviors

Variables	Suspected CMHD (n=223)	No Suspected CMHD (n=79)	p-value
Perceived mental health status	1.45 ± 1.07	2.44 ± 0.78	0.00* ^a
Perceived physical health status	1.66 ± 0.94	2.35 ± 0.83	0.00* ^a
Perceived ability to perform the daily life activities	2.61 ± 1.21	2.83 ± 1.04	0.16 ^a
Seeking mental health help	71 (31.8)	14 (17.7)	0.02* ^b
Recently receiving psychiatric medications	12 (5.4)	3 (3.8)	0.76 ^c

Mean ± SD, or no. (%)

CMHD: common mental health disorders

^a Mann-Whitney U test, ^b Chi square test, ^c Fisher's Exact test

* Statistically significant p-value (<0.05)

Table 4: Determinants of common mental health disorders (CMHD) among caregivers of diabetic children and caregivers of non-diabetic children

Variables	Odds Ratio	95% CI	p-value
Caregivers of diabetic vs. caregivers of non-diabetic children	0.82	0.45 – 1.53	0.538
Age (years)	0.99	0.93 – 1.03	0.484
Rural residence (vs. Urban)	1.01	0.55 – 1.85	0.987
Married (vs. divorces or widow)	0.54	0.18 – 1.62	0.272
Employed (vs. housewife)	1.95	0.95 – 4.02	0.069
Level of education	0.88	0.65 – 1.20	0.421
Income level	0.91	0.71 – 1.15	0.416
Number of children	1.03	0.77 – 1.37	0.867
Body Mass Index (kg/m ²)	1.02	0.93 – 1.11	0.707
Number of chronic diseases	1.18	0.79 – 1.76	0.424
Pregnancy or lactation (vs. non)	3.75	0.67 – 21.0	0.134
Perceived mental health	0.49	0.33 – 0.72	0.000*
Perceived physical health	0.63	0.42 – 0.95	0.027*
Perceived ability to perform the daily life activities	1.10	0.83 – 1.47	0.505
Seeking mental health help (vs. no)	1.91	0.93 – 3.94	0.078
Constant	187.0		0.003*

Group A: Caregivers of diabetic children, Group B: Caregivers of non-diabetic children

Model Chi-square = 64.2 (p < 0.001), Nagelkerke R square = 0.28, Hosmer & Lemeshow test (Chi-square = 7.91, p = 0.443), overall classification = 78.1%.

DISCUSSION

Primary caregivers of diabetic children, mostly mothers, carry multidimensional responsibility including extensive monitoring blood glucose, paying attention to dietary intake and physical activity besides the usual routine care of children and other social

responsibilities. Providing such overwhelming care would affect their mental health and keep them vulnerable to various mental disorders.⁽³¹⁾ Resisting professional mental health help seeking and disclosing psychological or emotional problems have been characteristic in Arab countries because of cultural factors in terms of stigma and negative attitudes

towards mental disease. ⁽³²⁾

In this study, the prevalence of suspected CMHD was high among mothers of diabetic children and their controls (72.2% vs. 75.5%, respectively), but with no statistically significant difference. This finding was not consistent with a case-control study by the National Institute of Child Health in Karachi, Pakistan. The Pakistan's study reported that the prevalence of depression and anxiety among caregivers of diabetic children were higher than caregivers in the control group (100%, 90% vs. 62%, 50%, respectively). The disagreement between our study's finding and the Pakistan's study could be attributed to using more specific scales to screen for depression and anxiety (Patient Health Questionnaire 9 and Generalized Anxiety Disorder 7 scale, respectively). ⁽³³⁾

On the other hand, studies in Arabic countries reported relatively lower percentages of mental disorders among caregivers of diabetic children. A cross-sectional study in Saudi Arabia found that 32% of caregivers of diabetic children had depression using the second Beck Depression Scale. ⁽³⁴⁾ Another case-control study in Bahrain used self-reported depression, anxiety, and stress symptoms scale (DASS-21) reported that 46.5% of caregivers of diabetic children had depression and 62.8% had anxiety as compared to 43.1% and 43.1% respectively in the control group. ⁽³⁵⁾

These disagreement in prevalence with our findings regarding suspected CMHD (75.5% in caregivers of diabetic children vs. 72.2% in the comparison group) could be attributed to the variations in tools used to assess mental health status in these studies in addition to the possible psychological impact of COVID-19 pandemic, dominating during our study, that could have affected the mental health of the general population generally and caregivers of diabetic children specifically.

Caregivers of diabetic children perceived their mental health and physical health as worse than caregivers of non-diabetic children. This reflected the caregiving burden confronted by caregivers of diabetic children. The previous finding agreed with another study conducted on caregivers of children with chronic disease (including diabetes) and has explained that those caring for children with chronic disease experienced a moderate level of perceived caregiving burden with the mean score (1.98 +/-0.43) on Caregiving Burden Scale (CBS). ⁽³⁶⁾ Likewise, one study conducted on caregivers of diabetic children (where??) has found that caregivers of diabetic children perceive their physical health as poor and believe it is likely to get worse, more often experience fatigue, have more frequent problems with everyday activities because of emotional health, and were more nervous and depressed than mothers of non-diabetic children. ⁽³⁷⁾

Previous studies have showed that the social

support provided by extended families decreases caregivers' responsibilities and stresses, and their perceived level of burden. (36, 38) Hence in our study both caregivers of diabetic and non-diabetic children perceived equally low level of social support (19.2%), this could explain the non-statistically significance difference between them regarding perceived mental and physical health.

On the other hand, caregivers of diabetic children reported a statistically significant better perception of their ability to perform daily physical activities as compared to caregivers of non-diabetic children. This could be explained by the fact that caregivers of diabetic children carry important and multidimensional responsibility to achieve proper glycemic control for their child through continuous measurement of blood glucose, balanced diet, and treatment besides their responsibility towards the rest of the family which in turn would require increasing their performance to cope with the daily requirement and consequently their perception of doing so.

This finding was in contrast with the finding of another study investigating perceived quality of life of mothers of children with diabetes and without diabetes in Australia. The target population was members of the Juvenile Diabetes Research Foundation throughout Australia, recruited through an article placed in the Diabetes Australia (NSW) quarterly magazine and through the clinics of various physicians in Queensland who were specialized in pediatric endocrinology while the comparison group was recruited through school newsletters, parent online forums, and by word-of-mouth. This study found that both groups had similar scores on the quality of life domains assessing physical function. This difference could be attributable to the different tools used to assess perceived physical function, the smaller sample size of diabetic group (n=63) and also the higher mean age of the study participant (39.33±5.67 in diabetic group, 36.64±6.45 in non-diabetic group, respectively). ⁽³⁷⁾

In this study, the majority of caregivers of diabetic children were seeking psychological help from informal sources with the largest proportion seeking help from God by praying (99.3%) followed by other relatives/family members (65.6%). On the other hand, relatively low proportions (0.7% and 6.0%) of caregivers of diabetic group reported seeking help from any health care provider and mental health professionals respectively as compared to (8.6% and 11.9%) in the non-diabetic group respectively with a significant difference between the groups in seeking help from health care provider.

In this study, most of caregivers of diabetic and non-diabetic children sought mental health help from the God by praying (99.3% and 98.7%), followed by parents (39.1% and 51.0%), close friends (41.4% and

61.6%) and other relatives (65.5% and 49.7%). However, seeking mental help from healthcare providers and mental health professionals were extremely unmet (0.7%, 8.6% and 6.0%, 11.9%, respectively). These findings were inconsistent with the results of a study carried out in Addis Ababa, Ethiopia to investigate unmet needs of 102 caregivers of children with developmental disorders where most of the caregivers spoke to a health professional (86.3%), talked to family members (85.3%) or talked to friends (76.5%), and also often used prayer (57.8%) as a coping strategy. This difference might be due to the different nature of the two disorders where in diabetes the majority of management plan is conducted by family caregivers while in neurodevelopmental disorders the role of health care professional is more dominant which in turn may encourage caregivers to seek help from formal sources.⁽³⁹⁾ In addition, most of the caregivers in the previous study lived primarily in urban areas (80.4%) and the study was facility-based, and thus was biased towards those with higher educational level and ability to access biomedical care, while in our study more than half of the caregivers of diabetic children came from rural areas (51.7%). Additionally, a recent systematic review suggested that Arabs prefer seeking faith healers or referring to God as a first approach to treating mental disease.⁽⁴⁰⁾ Some of the reasons for not seeking proper psychiatric services can be linked to some of the stigmatizing beliefs or social distance reported in Arab countries, such as mental disease harming the family's reputation or feelings of shame for having mental disease in the family.⁽³²⁾ Furthermore, it has also been reported that traditionally strong family relationships in the Middle East influence the type of treatment that is being sought, as admission of a family member to a psychiatric hospital produces a stigmatizing label not only for the patient but for all members of the family.⁽⁴⁰⁾ Another study reported fear of being labeled as mentally ill as this would result in limiting marriage prospects or job opportunities.⁽⁴¹⁾

In our study, although the majority of caregivers of diabetic children were suspected of having CMD, only (32.5%) of this group reported seeking psychological help and (6.0%) of them were currently receiving psychiatric treatment as compared to (23.8%) and (4.0%) in the second group, respectively. This finding was consistent with the finding of a recent systematic review, which explained that, in general, Arabs expressed stigmatizing attitudes towards the use of psychiatric medications. This stigmatizing attitude towards treatment can be linked to stigmatizing beliefs in Arab culture, such as the belief that medications can lead to addiction, or because of less involvement of a health professional in the treatment of mental disease.⁽⁴⁰⁾

In our study, the perceived mental and physical health were the significant determinant of CMHD. This finding was consistent with the result of a study carried out on caregivers of persons with mental diseases in Newcastle, Australia and found that caregivers who most need support, due to their own deteriorating psychological effect, are less likely to access timely mental health care on behalf of their consumers. In such cases, consumers might only come to the attention of mental health services after reaching a point of crisis, rather than accessing appropriate early intervention in times of relapse.⁽²³⁾

Few limitations should be considered while interpreting the findings of this study. First, although depending mainly on a validated Arabic version of psychometric scale to collect data of this study, we couldn't use the self-administered approach in data collection, which is the preferred one in addressing culturally critical or stigma-associated issues, because of the low mental health literacy in developing countries. Second, this study focused on the primary caregivers, which are commonly the mothers and didn't involve other caregivers such as fathers or other family members who could be also vulnerable to affection for their mental health.

CONCLUSION AND RECOMMENDATIONS

In conclusion, no significant difference in CMHD existed between caregivers of diabetic children and those of non-diabetic children. Caregivers of diabetic children were less likely to seek help from formal sources of mental health help-seeking. Perceived mental and physical health were the main determinants of CMHD.

Based on the study findings, the following are recommended: firstly, replication of this research using longitudinal studies that consider changes over time in maternal adjustment with Diabetes management, along with repeated monitoring of the child's medical and psychosocial outcomes. Secondly, carrying out further qualitative studies to explore root causes of reported non-professional mental health help seeking among surveyed caregivers, to understand different challenges faced by them and their perceived unmet needs and to tailor the appropriate interventions and coping strategies. We also recommend integration of mental health support services for caregivers like screening, counselling and management of psychiatric disorders in the health service package provided to diabetic children as well as applying evidence based and culturally appropriate approaches to improve mental health literacy in the general public and at-risk groups.

ACKNOWLEDGMENTS

Authors acknowledge the Suez Canal University hospital and Suez Canal Insurance Hospital in Egypt for facilitating

the data collection and the study participants for their cooperation in data collection.

FUNDING

All authors did not receive any specific grant for this manuscript from funding agencies in the public, commercial, or not-for-profit sectors.

COMPETING INTERESTS

All authors have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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