

Parental Attitude Towards the Prescription of Psychotropic Medications for Mental Disorders in Children in a Tertiary Care University Hospital in Oman

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ABSTRACT: Objectives: This study aimed to investigate parental attitude towards psychotropic drugs' use for children's mental disorders. **Methods:** This cross-sectional study was conducted from December 2020 to March 2021 at the Department of Behavioural Medicine, Sultan Qaboos University Hospital, Muscat, Oman. A questionnaire was used to determine parents' opinions and attitudes about use of psychotropic medications on their children and, in a small proportion, other caregivers if the child attended with them. Risk factors associated with parents who preferred to consult a folk healer (FH) for children with mental disorders were identified by the logistic regression model. **Results:** A total of 299 parents participating in the study (response rate: 95.2%). Most (n = 244, 81.6%) agreed to give their child psychotropic medications if necessary, but 25.4% (n = 76) would consult an FH before a psychiatrist. Married parents were 14.5 times ($P = 0.011$) more likely than separated or divorced parents to consult an FH. Caregivers with a monthly income below 500 OMR and between 500 and 1,000 OMR were 2.5 ($P = 0.016$) and 3.2 times ($P < 0.001$), respectively, more likely than those with more than 1,000 OMR to consult an FH. Parents who disagreed with giving their children psychotropic medications were 3.8 times ($P < 0.001$) more likely to consult an FH than parents who agreed to give them if necessary. **Conclusion:** Most parents agreed to give their children psychotropic medications if necessary. However, a proportion of parents and caregivers preferred to consult an FH before accessing mental health services.

Keywords: Attitude; Child; Parents; Psychotropic Drugs; Oman.

ADVANCES IN KNOWLEDGE

- Most parents agreed to give their child psychotropic medications if necessary.
- Married parents and those in a lower income bracket were more likely to seek advice from a folk healer before accessing mental health services.

APPLICATIONS TO PATIENT CARE

- The results of this study and its implications will help better understand parents' and caregivers' attitudes towards using psychotropic medications in children.
- The feedback will help in the development of parent support groups to further discuss concerns and improve healthcare services; this

THE NUMBER OF EVIDENCE-BASED TREATMENTS for child psychiatry is growing.^{1,2} There has been a dramatic rise in the use of psychiatric drugs in children over the past four decades.^{3–5} Unfortunately, studies have shown a sceptical view and stigma among parents and caregivers of psychiatric patients on the use of psychotropic medications for their children.^{6,7} Therefore, most families prefer psychotherapy over drugs, even when psychopharmacological agents are deemed crucial.^{8,9} Earlier studies suggest that parents are reluctant to start their children on psychotropic medications; this attitude is due to concerns about severe and harmful side-effects, leading to decreasing or stopping the medication earlier than recommended.¹⁰ In addition, studies have identified existing racial/ethnic disparities

among parents agreeing to prescribe psychotropic medications for their children. For example in the USA, white children are more likely to receive psychotropic drugs than Black and Latino children.^{11,12} However, the view of and attitude towards the use of psychotropic medications in children in Oman have never been explored. Therefore, understanding the cultural context and establishing relationships between mental healthcare providers and parents may offer the best strategies for reducing the negative parental perceptions related to prescribing psychotropic medications for their children.

The current study aimed to explore and understand the opinions and attitudes of Omani parents towards prescribing psychotropic medications to their children with mental disorders. It is hoped that

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paediatric psychiatrists will alleviate parental concerns regarding the use of psychotropic medications in their children and effectively reduce parental stigma regarding mental health.

Methods

This cross-sectional study was conducted at the Department of Behavioural Medicine, Sultan Qaboos University Hospital (SQUH), Muscat, Oman, between December 2020 and March 2021. All patients aged younger than 18 years and attending their regular appointment at the child and adolescent clinic during the study period were eligible to be included in the study; this was a total of 450. Parents or caregivers of patients older than 18 years of age and those of children below 18 who did not give consent were excluded from the study.

Data were collected in the child psychiatry outpatient clinic at SQUH while patients were waiting for their appointment. All parents of attendees of the child psychiatry outpatient services at SQUH during the study period were included in the study. The two-part questionnaire was offered in Arabic, the first language of most participants, as well as English. The first part collected sociodemographic and clinical factors including age, gender and the diagnosis of the child (neurodevelopment disorder, mood disorder, psychotic disorder and others [epilepsy, genetic syndromes, metabolic syndromes]), place of residence (urban, rural), age of parents, marital status (married, divorced and separated), educational level of parents, socioeconomic status (family monthly income) and occupation. The second part of the questionnaire focussed on parents' opinions, knowledge and attitudes about children's psychotropic medications. Anonymised data were saved on a password-protected electronic database and securely destroyed after use following the code of conduct for handling research data (UKRIO, 2009). Signed consent forms were stored separately in a locked compartment.

The required sample size was calculated using an online EPITOOLS software (Epitools epidemiological calculator, Ausvet, Australia) allowing with an accepted 21.5% prevalence rate to consult an FH for a 95% confidence interval (CI), a 5% type I error and 80% power. The minimum sample size was calculated to be 260.

A simple random sampling method was used to recruit the study participants from the list of patients expected to attend the child and adolescent clinic during the study period. Randomiser software (<http://www.randomizer.org/>) generated a list of participants. Those selected randomly and who did not meet the

inclusion criteria or opted not to participate were substituted with the next randomly selected participant chosen to fulfil the required sample size. A 20% attrition rate, including non-completed questionnaires and unsigned consent forms, was considered.

Descriptive statistics, including mean, standard deviation (SD), median, range, frequency and percentage, were used to report participants' demographic and clinical data and response to the use of children's psychotropic medications. The dependent variable was from one attitude question: 'If your child experienced psychiatric symptoms, would you first consult a folk healer (FH) before consulting a psychiatrist? Yes/No.' Those parents who replied 'Yes' were categorised as the 'Prefer FH' group while those who replied 'No' were in the 'Non-FH' group. Univariate comparison between the two groups (Yes versus No) was evaluated using Chi-square/Fisher's exact test to explore demographic, clinical and other attitude variables. Those variables with $P < 0.05$ in the univariate analysis were included in the multivariate logistic (Wald) regression for further analysis to identify the risk factors associated with the 'Prefer FH' group. All statistics, including the OR with 95% CI, were obtained by the Statistical Package for the Social Sciences (SPSS), Version 27.0 (IBM SPSS Inc. Chicago, IL, USA), set at a 5% level of significance.

Ethical approval was granted by the College of Medicine and Health Sciences at Sultan Qaboos University, Muscat, Oman (MREC #2371). The study was conducted as per the Declaration of Helsinki and the American Psychological Association regarding human ethical research, including confidentiality, privacy and data management. Information on the nature and goals of the research, the right to anonymity and the right to withdraw at any stage with no effect on the clinical care was disseminated to the participants. Written informed consent was obtained from all participants.

Results

Out of 314 individuals, a total of 299 parents and caregivers participated in the study (response rate: 95.2%). There were 117 (39.1%) fathers, 156 (52.2%) mothers and 26 (8.7%) other caregivers. The majority of the fathers ($n = 223$, 74.6%) had a high school certificate or higher, 39.8% ($n = 119$) were between 30–40 years old and most ($n = 231$, 77.3%) were employed. The majority of the mothers ($n = 228$, 76.3%) had a high school certificate or higher, more than half ($n = 158$, 52.8%) were between 30–40 years old and more than half were unemployed ($n = 177$, 59.2%). The majority of the parents were living in an urban area ($n = 243$, 81.3%) and were married ($n =$

Table 1: Characteristics of the parents/caregivers/child included in this study (N = 299)

Characteristic	n (%)
Child's gender	
Boy	204 (68.2)
Girl	95 (31.8)
Age of the child in years	
≤10	134 (44.8)
11–15	94 (31.4)
>15	71 (23.7)
Diagnosis of the child	
Neurodevelopmental disorder	224 (74.9)
Mood disorder	26 (8.7)
Psychotic disorder	41 (13.7)
Other (e.g. epilepsy)	8 (2.7)
Age of father in years	
<30	7 (2.3)
30–40	119 (39.8)
41–50	119 (39.8)
>50	54 (18.1)
Education level of father	
Illiterate to grade 11	76 (25.4)
Grade 12	98 (32.8)
Diploma and above	125 (41.8)
Employment status of father	
Employed	231 (77.3)
Unemployed	13 (4.3)
Retired	55 (18.4)
Respondents' relation to child	
Father	117 (39.1)
Mother	156 (52.2)
Other caregiver	26 (8.7)
Place of residence	
Urban	243 (81.3)
Rural	56 (18.7)
Marital status of the parents	
Married	274 (91.6)
Separated	13 (4.3)
Divorced	12 (4.0)
Income per month in OMR	
<500	69 (23.1)

500–1,000	101 (33.8)
1,001–2,000	74 (24.7)
>2,000	55 (18.4)
Age of mother in years	
<30	20 (6.7)
30–40	158 (52.8)
41–50	113 (37.8)
>50	8 (2.7)
Education level of mother	
Illiterate to grade 11	71 (23.7)
Grade 12	105 (35.1)
Diploma and above	123 (41.1)
Employment status of mother	
Employed	102 (34.1)
Unemployed	177 (59.2)
Retired	20 (6.7)

274, 91.6%). More than half of the participants had a monthly income of up to 1,000 Omani Rial (n = 170, 56.9%; OMR). Among the children, there were more male patients (n = 204, 68.2%) than females (n = 95, 31.8%). The majority were of the age range below 10 years old (n = 134, 44.8%), and 74.9% (n = 224) had a diagnosis of neurodevelopmental disorders, followed by psychotic disorder (n = 41, 13.7%), mood disorder (n = 26, 8.7%) and other conditions such as epilepsy (n = 8, 2.7%) [Table 1].

The majority of participants responded that they did not suffer from a psychiatric disorder (n = 258, 86.3%), had never taken any psychiatric medications (n = 264, 88.3%), had no family member with a psychiatric illness (n = 198, 66.2%) and had no family member who had taken any psychiatric medications (n = 203, 67.9%). Regarding the beliefs of the respondents about the use of psychotropic medicines in children, 44.1% (n = 132) believed that these medications lead to addiction in children, 27.4% (n = 82) thought that they cause brain damage and 28.4% (n = 85) had concerns about the serious side-effects of these medications. The majority of the respondents (n = 274, 91.6%) preferred psychotherapy as the first step of treatment for their children. However, 81.6% (n = 244) agreed to give psychotropic medications if necessary to their child, whereas 25.4% (n = 76) said they would consult an FH before consulting a psychiatrist if their child experienced psychiatric symptoms [Table 2].

In the univariate analysis, the results showed that marital status ($P = 0.010$), monthly income ($P < 0.001$),

Table 2: Frequency of responses to the questionnaire on attitudes towards the prescription of psychotropic medications in children (N = 299)

No.	Question	n (%)
1	Would you agree to give your child psychotropic medications if necessary?	
	Yes	244 (81.6)
	No	55 (18.4)
2	Do you suffer or have you suffered from a psychiatric disorder?	
	Yes	41 (13.7)
	No	258 (86.3)
3	Have you ever taken psychiatric medication?	
	Yes	35 (11.7)
	No	264 (88.3)
4	Has any member of your family experienced a psychiatric disorder?	
	Yes	101 (33.8)
	No	198 (66.2)
5	Has any member of your family taken psychiatric medication?	
	Yes	96 (32.1)
	No	203 (67.9)
6	What is your concern regarding the use of psychotropic medication in children?	
	It causes addiction	132 (44.1)
	It causes brain damage when used for long periods	82 (27.4)
	It has serious side-effects	85 (28.4)
7	If your child were diagnosed with a psychiatric disorder, would you prefer your child to receive psychotherapy before being started on medication?	
	Yes	274 (91.6)
	No	25 (8.4)
8	If your child experienced psychiatric symptoms, would you first consult a folk healer before consulting a psychiatrist?	
	Yes	76 (25.4)
	No	223 (74.6)

education level ($P = 0.026$) and employment status ($P = 0.026$) of the mother were linked to a negative attitude towards the use of psychotropic medications in children ($P < 0.001$) and were significantly associated with parents who would prefer to consult an FH [Table 3].

In the multivariate analysis, the logistic (Wald) regression showed that marital status, monthly income and attitude towards giving psychotropic medications to their children, if necessary, were significant risk factors for parents to prefer to consult an FH. According to the Hosmer-Lemeshow goodness-of-fit test ($\chi^2 = 0.567$; $P = 0.967$), the model had a good fit with a predicting power of 65.9%. Married parents were 14.5 times ($P = 0.011$) more likely to consult an

Table 3: Univariate and multivariate (logistic) analysis showing the association between respondents' attitude towards consulting a folk healer and demographic factors

Factor	n (%)		Univariate*	Multivariate†	
	Q8: Preferred to consult a folk healer		P value	OR	P value
	Yes (n = 76)	No (n = 223)			
Respondents relation to child					
Father	33 (43.4)	84 (37.7)	0.794		
Mother	35 (46.1)	121 (54.3)	0.354		
Other caregiver (ref)	8 (10.5)	18 (8.1)			
Child's gender					
Boy	54 (71.1)	150 (67.3)	0.540		
Girl (ref)	22 (28.9)	73 (32.7)			
Age of the child in years					
≤10	30 (39.5)	104 (46.7)	0.485		
11–15	27 (35.5)	67 (30.0)	0.781		
>15 (ref)	19 (25.0)	52 (23.3)			
Diagnosis of the child					
Neurodevelopmental disorder	53 (69.7)	171 (76.7)	0.404‡		
Mood disorder	8 (10.5)	18 (8.1)	0.997‡		
Psychotic disorder	12 (15.8)	29 (13.0)	0.687‡		
Other (e.g. epilepsy) (ref)	3 (3.9)	5 (2.2)			
Place of residence					
Urban	57 (75.0)	186 (83.4)	0.105		
Rural (ref)	19 (25.0)	37 (16.6)			
Marital status of the parents					
Married	75 (98.7)	199 (89.2)	0.010	14.512	0.011
Separated/divorced (ref)	1 (1.3)	24 (10.8)			

ref = reference point.

*Using χ^2 test. †Logistic (Wald) regression: Hosmer & Lemeshow test (Chi-squared = 0.567, $P = 0.967$); Nagelkerke R square = 0.176; Sensitivity = 60.5%, Specificity = 65.8%, Overall = 65.9%. ‡Using Fisher's exact test.

Table 3 (cont'd.): Univariate and multivariate (logistic) analysis showing the association between respondents' attitude towards consulting a folk healer and demographic factors

Factor	n (%)		Univariate*	Multivariate [†]	
	Q8: Preferred to consult a folk healer		P value	OR	P value
	Yes (n = 76)	No (n = 223)			
500–1,000	37 (48.7)	64 (28.7)	<0.001	3.185	<0.001
>1,000 (Ref)	21 (27.7)	108 (48.4)			
Age of father in years					
≤40	37 (48.7)	89 (39.9)	0.211		
41–50	28 (36.8)	91 (40.8)	0.645		
>50 (ref)	11 (14.5)	43 (19.3)			
Education level of father					
Illiterate to grade 11	23 (30.3)	53 (23.8)	0.227		
Grade 12	26 (34.2)	72 (32.3)	0.484		
Diploma and above (ref)	27 (35.5)	98 (43.9)			
Employment status of father					
Unemployed/retired	20 (26.3)	48 (21.5)	0.389		
Employed (ref)	56 (73.7)	175 (78.5)			
Age of mother in years					
≤40	45 (59.2)	133 (59.7)	0.967 [‡]		
41–50	29 (38.2)	84 (37.7)	0.986 [‡]		
>50 (ref)	2 (2.6)	6 (2.7)			
Education level of mother					
Illiterate to grade 11	19 (25.0)	52 (23.3)	0.258		
Grade 12	34 (44.7)	71 (31.8)	0.026		
Diploma and above (ref)	23 (30.3)	100 (44.8)			
Employment status of mother					
Unemployed/retired	58 (76.3)	139 (62.3)	0.026		
Employed (ref)	18 (23.7)	84 (37.7)			

ref = reference point.

*Using χ^2 test. [†]Logistic (Wald) regression: Hosmer & Lemeshow test (Chi-squared = 0.567, P = 0.967); Nagelkerke R square = 0.176; Sensitivity = 60.5%, Specificity = 65.8%, Overall = 65.9%. [‡]Using Fisher's exact test.

Table 4: Univariate and multivariate logistic analysis on respondents' attitude towards consulting a folk healer in association with using psychotropic medications in children

No.	Question	n (%)		Univariate*	Multivariate [†]	
		Yes (n = 76)	No (n = 223)	P value	OR	P value
1	Would you agree to give your child psychotropic medications if necessary?					
	No	25 (32.9)	30 (13.5)	<0.001	3.754	<0.001
	Yes (ref)	51 (67.1)	193 (86.5)			
2	Do you suffer or have you suffered from a psychiatric disorder?					
	Yes	8 (10.5)	33 (14.8)	0.350		
	No (ref)	68 (89.5)	190 (85.2)			
3	Have you ever taken psychiatric medication?					
	Yes	8 (10.5)	27 (12.1)	0.711		
	No (ref)	68 (89.5)	196 (87.9)			
4	Has any member of your family experienced a psychiatric disorder?					
	Yes	26 (34.2)	75 (33.6)	0.927		
	No (ref)	50 (65.8)	148 (66.4)			
5	Has any member of your family taken psychiatric medication?					
	Yes	24 (31.6)	72 (32.3)	0.909		
	No (ref)	52 (68.4)	151 (67.7)			
6	What is your concern regarding the use of psychotropic medication in children?					
	It causes addiction.	39 (51.3)	93 (41.7)	0.076		
	It causes brain damage when used for long periods	21 (27.6)	61 (27.4)	0.291		
	It has serious side-effects (ref)	16 (21.1)	69 (30.9)			
7	If your child were diagnosed with a psychiatric disorder, would you prefer your child to receive psychotherapy before being started on medication?					
	Yes	68 (89.5)	206 (92.4)	0.287		
	No (ref)	8 (10.5)	17 (7.6)			

OR = odds ratio; ref = reference point.

*Using χ^2 test. [†]Logistic (Wald) regression: Hosmer & Lemeshow test (chi-square = 0.567, P = 0.967); Nagelkerke R square = 0.176; Sensitivity = 60.5%, Specificity = 65.8%, Overall = 65.9%.

FH than separated/divorced parents. Those parents with a monthly income below 500 OMR and between 500 and 1,000 OMR were 2.5 times ($P = 0.016$) and 3.2 times ($P < 0.001$), respectively, more likely to prefer to consult an FH than those with a monthly income of more than 1,000 OMR. Parents who disagreed with giving psychotropic medications to their children were 3.8 times ($P < 0.001$) more likely to consult an FH than parents who agreed to give psychotropic medications to their children, if necessary [Table 4].

Discussion

Over the past decades, there has been a rise in the prescription of psychotropic medications for mental health difficulties in children and adolescents.¹³ Oman is a country with a predominantly youthful population, and its economic growth and rapid demographic shift are witnessing a surge in mental health problems among young people.¹⁴ Yet, many do not seek care from qualified mental health professionals.¹⁵ However, since the development of child and adolescent mental health services (CAMHS) in Oman in the late 1990s, several challenges have emerged, specifically, the maldistribution and scarcity of services for young people and the lack of a mental health act.^{16,17} The current study identified the attitudes and concerns of parents and caregivers about using psychiatric medications for children attending the CAMHS in SQUH. In this study, one of the caregivers' central beliefs regarding psychotropic medicines was that they lead to addiction, indicated by 44.1% ($n = 132$) of the respondents, which echoes the findings of other studies.^{8,9} Similarly, 28.4% ($n = 85$) of the respondents believed that the medications may lead to toxic and severe side-effects, which is in line with a plethora of studies in the literature with similar findings.^{18,19} Regarding treatment modalities, the majority of the respondents preferred psychotherapy as a treatment for their children; this is consistent with the results of international studies in which parents chose counselling as the first line of treatment and believed it to be beneficial and to have fewer risks compared with medications.²⁰

Furthermore, although the vast majority of parents agreed they would give medications to their children, if necessary, 25.4% ($n = 76$) said they would first consult an FH, probably due to sociocultural beliefs and social stigma associated with mental disorders.²¹ The parents who disagreed with giving psychotropic medications to their children were 3.8 times ($P < 0.001$) more likely to consult an FH than

parents who agreed to psychotropic medications being prescribed to their children, if necessary. Therefore, consulting an FH before accessing mental health services causes a treatment delay and may result in negative mental health consequences.²¹ Among the various sociodemographic factors, marital status, unemployment, lower income and lower education level were found to be significantly associated with consulting an FH prior to a psychiatrist. The existing literature also suggests that being single is associated with a higher tendency to visit an FH.²² However, the finding of the current study was the opposite, as married couples were more likely to consult FHs. Though it must be added that this may not be an accurate representation, as more than 90% of the parents in this study were married, and the overall prevalence of single-parent families in Oman is low.

The results of this study showed that respondents having the education of grade 12 or lower were more likely to consult FHs, and the same applied to those with lower income and unemployment; this finding concurs with studies done elsewhere.²³ Furthermore, it is common for those living in low- and middle-income countries to have access to FHs.²⁴ Although Oman is a high-income country, yet, based on the findings of this study, apparently it remains influenced by such practices. Therefore, even in wealthier countries, the relative popularity of FHs and alternative medicine should be scrutinised in the context of broader social, cultural and religious perspectives, as local values and beliefs influence people in making such decisions;²⁵ this confers with a crucial national-level study conducted in Oman suggesting that there is an underutilisation of health-care services in people with mental health difficulties.²⁶ Finally, in Oman and the wider Arab region, there is a need for culture-specific psychoeducation to address the contextual and socio-religious factors and stigma to improve access to mental health services.^{27,28}

Despite offering detailed and updated information from Oman, this study has some limitations. Because of the social stigma, some responses given by parents, particularly in relation to personal or family history with regard to psychiatric problems, might be unreliable and should be treated with caution. As the study was conducted in a city like Muscat, although people from other parts of Oman were included, it may have missed a large proportion of the wider Omani community. Moreover, it is essential to acknowledge that the study is subjective and several findings depend on the parents' opinions that could be influenced by different factors.

Conclusion

Most parents agreed they would give their children psychotropic medications if deemed necessary. However, a sizeable proportion of parents and caregivers preferred to consult an FH before accessing mental health services. Parents' opinions about and beliefs in psychotropic medications are not in line with scientific facts. Concerted efforts and increased awareness are needed to address parents' concerns regarding the safety and effectiveness of psychotropic medications in children to improve treatment outcomes. Moreover, incorporating psychosocial and behavioural interventions, parent training and psychiatric rehabilitation must be an integral part of the holistic approach to manage mental health difficulties in children and young people. Overall, mental health professionals play a significant role in promoting the best practices in the Middle East region and offering psychoeducation to parents and caregivers on the safe use and side-effects of psychiatric medications in children, thus including them in shared decision-making about medication regimens.

AUTHORS' CONTRIBUTION

HM designed the study and drafted and critically reviewed the manuscript. SAH, MAS, TAM and MAB collected the data, while MFC analysed the data and interpreted the results. AAH revised the manuscript. All authors approved the final version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interests.

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