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CLINICAL & BASIC RESEARCH

Reasons for Consultation among Patients attending Primary Healthcare Centres in Oman

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اسباب الأستشاره الطبيه لدى المرضى الزائرين لمراكز الرعايه الصحيه الأوليه في عمان

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الملخص: الهدف: السبيل للرعايه أو اللجوء للرعايه والتي بالتالي تؤدي لأستخدام الرعايه الصحيه قد تمت دراستها في العديد من مناطق العالم، ولكن هناك ندره في مثل هذه الدراسات في الخليج العربي. كان الهدف من هذه الدراسه هو معرفة خصائص الزائرين لمراكز الرعايه الصحيه الأوليه في الجزء الشمالي من عمان ومعرفة الأسباب المؤديه للزياره. **الطرق:** تم اجراء مقابله شخصيه لعدد 676 مشارك من الزائرين لاثني عشرة مركز من مراكز الرعايه الصحيه الأوليه خلال الفتره من يونيو الى يوليو من العام 2006. تم اختيار مناطق الدراسه لكي تعكس الوضع السكاني في عمان. تم قراءة اسئلة الأستبيان المكونه من 12 سؤال لكل خامس مريض يدخل المركز الصحي حسب الموعد المحدد له. تم تحليل البيانات بأستخدام التحليل الأحادي. **النتائج:** كان ما يقارب من ثلث المشاركين بالدراسه (عدد 200 مشارك: 29.6%) لديهم أمراض مزمنه. وكان عدد 231 (34%) يستخدمون أدويه بأنتظام. 211 (31%) كانوا يشاركون في برامج التثقيف الصحي وكان 130 (19%) منفتيحين على أستخدام الطب المساند. غالبية المشاركين ذكروا من أن نصيحة الطبيب (عدد 570 مشارك: 84%) كانت اقوى سبب لقرار اللجوء للمؤسسه الصحيه. على العكس كانت نصيحة الطبيب مرتبطة بقوة بعوامل ديموغرافيه معينه. **الأستنتاج:** هذه الدراسه حددت بعض الخصائص والأسباب المؤديه لزيارة المراكز الصحيه في شمال السلطنه. هذه بالتالي تم مناقشتها في اطار الترابط مع العوامل الأجتماعيه والثقافيه الخاصه بالسلطنه. كذلك تم مناقشتها من جانب الترابط مع الوقايه والكشف عن المرض في عمان.

مفتاح الكلمات: سلوك اللجوء للرعايه الصحيه؛ المركز المجتمعي الصحي؛ علاقة الطبيب مع المريض؛ عمان؛ العالم العربي.

ABSTRACT: ***Objectives:*** Pathways to care or care-seeking, which translate into healthcare utilisation, have been investigated in many parts of the world, but there is a dearth of studies in the Arabian Gulf. The aim of this study was to examine the characteristics of attendees at primary healthcare centres in northern Oman and their reasons for visiting. ***Methods:*** Face-to-face interviews were conducted with 676 participants attending 12 primary healthcare centres between June and July 2006. The catchment area was selected to represent the population structure in Oman. The 12-item questionnaire was read to every fifth eligible patient entering each healthcare centre for a routine appointment. Analyses were conducted using univariate statistics. ***Results:*** About a third (n = 200; 29.6%) of the participants had a history of chronic illness; 231 (34%) were on regular medications; 211 (31%) were taking part in health education programmes; 130 (19%) were open to complementary medicine. The majority of the participants mentioned physician's advice (n = 570; 84%) as the strongest reason for seeking consultation. Conversely, physician's advice was strongly related to particular demographic factors. ***Conclusion:*** This observational study identified some characteristics and reasons for visiting healthcare facilities in northern Oman. These are discussed within the context of prevailing sociocultural factors. The implications for the prevention and detection of ill health in Oman are also discussed.

Keywords: Patient Acceptance of Healthcare; Attitude to Health; Community Health Centers; Physician-Patient Relations; Oman.

Advances in Knowledge

- *The idea of illness as a sociocultural construct has been discussed in this study.*
- *It was found that pathways to care are shaped by a number of factors, such as proximity to a healthcare institution, and the reputation of the institutions as well as that of healthcare professionals.*
- *A better understanding of healthcare utilisation can be used as a springboard for redressing some of the disparities in healthcare services.*
- *The results of this study indicated that literate attendees were twice as likely to seeking a physician's advice compared to their illiterate counterparts.*

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Application to Patient Care

- *Maternal education should be prioritised as it is a strong predictor of care-seeking behavior.*
- *Physicians should strengthen their rapport with their patients, as physicians' advice plays a major role in the healthcare-seeking behavior of the community.*
- *Healthcare institutions should work on developing their reputation as well as the reputation of their staff, as this is found to be the most ranked reason for visiting healthcare centres.*
- *Broadcast media is considered a primary source of information in the Arab world; therefore, healthcare systems should make use of the media to disseminate healthcare information to the community.*

Social and cultural issues have a direct bearing on health, disease, and the practice of medicine.[1] This issue is pertinent when considered in the context of care-seeking behaviour, and related mechanisms such as healthcare utilisation or pathways to care. In the current age of a patient-centred approach to healthcare, studies in various parts of the world have documented what type of care services the public prefers.[2,3] International studies suggest that pathways to care are shaped by a number of factors, including proximity to the healthcare centre,[4] the reputation of the institution and its healthcare professionals,[5] advice from significant others,[6] and exposure to health education.[7] Other factors that contribute to care-seeking include the impact of the illness on quality of life, and the perceived threat of being ill.[8] The service accessibility, quality and cost of healthcare, as well as the social structures, health beliefs and personal characteristics of the healthcare consumers, have also been demonstrated to play a role in care-seeking behaviour.[9–11] A better understanding of healthcare utilisation can be used as a springboard for redressing some of the disparities in healthcare services.[12,13] This understanding has been used as the basis for devising preventive measures, allocating healthcare resources and dispensing relevant health education.[14]

While the pattern of care-seeking has been explored in different parts of the world,[15,16] there is a dearth of studies examining care-seeking in the Arab region of the world, with the notable exception of the United Arab Emirates.[17] Most of the available literature on care-seeking has been limited to mental health issues [18,19] or to Middle-Eastern migrants in Europe and North America.[20] Data from the Omani Ministry of Health have shown that, on average, healthcare centres cater to approximately 90% of the population's needs.[21] The majority of Oman's population is located either in the north or in the far south of the Sultanate; these two regions are separated by a stretch of desert known as the Empty Quarter.[22] For logistical reasons, the present study was limited to the northern region of Oman, which includes a number of large coastal towns, including the capital city Muscat, as well as a number of towns in the more mountainous interior region. The population of this region was found to reflect the ethnocultural diversity present in Omani society.[23] The northern region has a population of approximately two million Omani citizens.[24]

In order to lay the groundwork necessary for developing strategies to improve the awareness and delivery of healthcare in Oman, this paper examined the characteristics of attendees at primary healthcare centres and the factors influencing their care-seeking decisions, as well as identifying sociodemographic indices of healthcare resource utilisation that may contribute to care-seeking. Specifically, this paper examined: 1) the demographic characteristics of attendees seeking consultation at health centres in the northern region of Oman, and 2) the reasons behind their visit. To our knowledge, this is the first study on healthcare-seeking behaviour in Oman. The information derived from this study could be used by public health planners for evidence-based resource allocation in the country. An understanding of care-seeking behaviour would improve overall healthcare planning and health education programmes for the prevention and detection of ill health.

Methods

The protocol for the data collection has already been described elsewhere.[25,26] For the present study, the targeted region was the six *wilayats* (districts) of the northern region, each of which has two to four health centres. Two health centres were selected from each *wilayat* for inclusion in the study. For

Table 1: Demographic, clinical and healthcare resource characteristics of the study cohort (N = 676)

Characteristic	Total (N = 676)	Seeking physician's advice: Yes (n = 570)	Seeking physician's advice: No (n = 106)	*P* value
Age in years (mean ± SD)	32 ± 13	32 ± 12	32 ± 13	0.785
Gender, n (%)*				
Female	410 (61)	357 (63%)	53 (50%)	0.015
Male	266 (39)	213 (37%)	53 (50%)	
Marital status, n (%)				
Married	437 (65%)	374 (66%)	63 (59%)	0.222
Single, divorced, widowed	239 (35%)	196 (34%)	43 (41%)	
Literacy, n (%)				
Literate (can read or write)	559 (83%)	476 (84%)	83 (78%)	0.193
Illiterate (cannot read or write)	117 (17%)	94 (17%)	23 (22%)	
History of chronic illness, n (%)				
Yes	200 (30%)	172 (30%)	28 (26%)	0.436
No	476 (70%)	398 (70%)	78 (74%)	
On regular medication, n (%)				
Yes	231 (34%)	196 (34%)	35 (33%)	0.785
No	445 (66%)	374 (66%)	71 (67%)	
Source of healthcare, n (%)				
Government	473 (70%)	402 (71%)	71 (67%)	0.027
Private	73 (11%)	54 (9%)	19 (18%)	
Traditional	130 (19%)	114 (20%)	16 (15%)	
Reason to seek healthcare, n (%)				
Treatment of acute condition(s)	271 (40%)	228 (40%)	43 (41%)	0.656
Follow-up visit	227 (34%)	195 (34%)	32 (30%)	
Vaccination(s) or other	178 (26%)	147 (26%)	31 (29%)	
Number of visits attended per month				
Mean ± SD	1.29 ± 2.09	1.27 ± 1.87	1.39 ± 3.02	0.939
Median (IQR)	1 (0–1)	1 (0–1)	1 (0–1)	
Regularly attended health education programmes, n (%)				
Yes	211 (31%)	184 (33%)	27 (25%)	0.165
No	465 (69%)	386 (68%)	79 (75%)	

*SD = Standard deviation; * = Percentages are column percentages wherever appropriate; IQR=Interquartile range.*

those *wilayats* with more centres, two were selected randomly. Every fifth consecutive patient who visited a selected health centre for a routine consultation was invited to participate in the study, and a minimum of 50 participants were recruited from each health centre. The data were collected between June and July 2006. The participants were explicitly informed that any information they provided in the course of the interview would remain completely anonymous, and that their participation would not in any way affect their consultation with medical professionals. A total of 676 subjects participated in this study, and the data were collected through face-to-face interviews. The Medical Research & Ethics Committee of Sultan Qaboos University's (SQU) College of Medicine & Health Sciences approved the study (MREC #299).

The questionnaire collected information on the patients' gender, age, marital status, education level, history of chronic illness and use of regular medication. It also covered the reasons for the current visit, how many times they visited their healthcare facility in one month and if they attended health education sessions. The detailed questions (and results) about the specific reasons for their visit and the impact of these reasons on their decision to visit are shown in Table 1.

The rationale for particular variables merits some justification, as some variables were included in the questionnaire because of their relevance to the local situation. In a collectivist society like Oman, the family plays a central role in directing

an individual's social behaviour, and it was therefore deemed essential to gauge the role of significant others in care-seeking behaviours. Further, as healthcare is free for the Omani population, which is widely scattered over an area of 309,500 km^2,[27] it was therefore deemed essential to take into account proximity to a healthcare centre. In Oman, physicians are granted an esteemed status in society and are likely to be consulted on all manner of things. Therefore, it was important to include variables that indicate whether a physician's advice impacted the decision to seek care. In this study, physician's advice was operationalised as any contact with a doctor (inside or outside a health centre) on health-related issues that could lead to the respondent seeking formal healthcare. Variables eliciting the importance of health education were included because most of the health problems in Oman would require a degree of patient empowerment in order to achieve improved health outcomes.[28,29] The remaining variables, derived from the available international literature, were selected because they were considered to be important indicators of care-seeking behaviour.[4] The final questionnaire was piloted on a convenience-based sample among patients attending primary healthcare services in the vicinity of SQU, Oman, as already described elsewhere.[25,26]

To accommodate illiterate patients—without introducing methodological inconsistencies—the designated questionnaires were read aloud to all participants, rather than being self-administered. The interviews were conducted in Arabic by trained researchers, predominantly second and third year medical students from the College of Medicine & Health Sciences at SQU, who had been trained to read the questionnaire and to document participant responses with precision and reliability; substantial inter-coder agreement for the scale items was observed (r = 0.84, P <0.001).

Descriptive statistics were used to depict the data. For categorical variables, frequencies and percentages were reported. The association between the various possible contributors to healthcare utilisation and care-seeking, and the strength of these effects, were analysed using chi-square or Fisher's exact tests wherever appropriate. For continuous variables, means and standard deviations (SD) or medians were presented as appropriate. Analyses were conducted using the Students' t-test and Mann-Whitney U tests where appropriate. Multivariable logistic regression was also used to assess associations between some of the variables against physician's advice as a reason to seek healthcare. Statistical analyses were conducted using STATA software, Version 12.1 (STATA Corporation, College Station, Texas, USA).

Results

As depicted in Table 1, the overall mean age of the 676 participants was 32 ± 13 years with an age range of 15 to 80 years. A total of 61% (n = 410) of the participants were female. The majority of the participants were married (n = 437; 65%). A total of 17% of the cohort was classified as illiterate, i.e. people who could not read or write although they did have a cursory knowledge of religious teachings. A total of 30% of the cohort documented that they were suffering from chronic illness; this view is further substantiated by the fact that 34% were on regular medication.

Most of the participants listed government healthcare centres as their main source of healthcare (n = 473; 70%); however, 19% (n = 130) of the participants commonly received their healthcare from traditional healers. Only 11% of the participants received their care from private sources (n = 73). About 40% of the sample sought treatment for acute complaints; the second most common reason for seeking treatment was for follow-up visits (34%). Vaccinations or other reasons were ranked third and constituted 25% of the cohort. The median number of visits for participants per month was one. In the present sample, out of 676 people, only 211 (31%) individuals endorsed the view that they regularly attended health education programmes.

The most prevalent reason for visiting a healthcare facility was physician's advice (84%) [Table 2]. The reputations of the institutions (75%) and of the staff (75%) were the second and third most cited reasons respectively for visiting. Proximity to a facility was cited by 62% of the participants as a reason for visits, and was the sixth most important reason. The least common reason to visit a healthcare facility was to obtain sick leave (23%), and reading health education articles was the second least cited reason for visiting a healthcare facility. All patients who cited a reason for going to

Table 2: Reasons affecting healthcare resource utilisation stratified by their strength (N = 676)

Reason for visit		Strength of the effect			Total	*P* value*
		Strong	Mild	Don't know		
Physician advice, n (%)						
No†	106 (16)	10 (59)	6 (35)	1 (6)	17 (3)	0.067
Yes†	570 (84)	408 (73)	147 (26)	3 (1)	558 (97)	
Institution reputation, n (%)						
No	166 (25)	10 (42)	4 (16)	10 (42)	24 (6)	<0.001
Yes	510 (75)	276 (71)	110 (28)	4 (1)	390 (94)	
Staff reputation, n (%)						
No	172 (25)	12 (42)	8 (29)	8 (29)	28 (6)	<0.001
Yes	504 (75)	353 (74)	115 (24)	9 (2)	477 (94)	
Increased severity of symptoms, n (%)						
No	187 (30)	18 (60)	7 (23)	5 (17)	30 (7)	<0.001
Yes	430 (70)	383 (94)	22 (5)	2 (1)	407 (93)	
Advice from a relative, n (%)						
No	212 (31)	8 (4)	32 (15)	4 (2)	44 (9)	<0.001
Yes	464 (69)	262 (56)	184 (40)	3 (1)	449 (91)	
Distance of the institution from home, n (%)						
No	257 (38)	28 (61)	16 (35)	2 (4)	46 (11)	0.003
Yes	419 (62)	284 (74)	98 (26)	0 (0)	382 (89)	
Advice from a friend, n (%)						
No	258 (38)	4 (8)	36 (75)	8 (17)	48 (11)	<0.001
Yes	418 (62)	215 (54)	182 (46)	3 (1)	400 (89)	
Symptoms, n (%)						
No	280 (41)	13 (39)	12 (36)	8 (24)	33 (8)	<0.001
Yes	396 (59)	301 (82)	63 (17)	2 (1)	366 (92)	
Fear of dangerous disease(s), n (%)						
No	293 (43)	32 (56)	12 (21)	13(23)	57 (14)	<0.001
Yes	383 (57)	301 (84)	54 (15)	3 (1)	358 (86)	
Watching/listening to health education programmes, n (%)						
No	306 (45)	5 (11)	24 (53)	16 (36)	45 (12)	<0.001
Yes	370 (55)	174 (53)	153 (46)	3 (1)	330 (88)	
Reading health education article(s), n (%)						
No	360 (53)	18 (33)	26 (47)	11 (20)	55 (16)	<0.001
Yes	316 (47)	139 (48)	147 (51)	2 (1)	288 (84)	
Obtaining sick leave, n (%)						
No	523 (77)	11 (44)	8 (32)	6 (24)	25 (17)	<0.001
Yes	153 (23)	81 (56)	37 (27)	3 (2)	121 (83)	

** = P values are for the association between the reason (Yes/No) and the effect of the reason; † = Yes means cited reason; † = No means did not cite reason.*

a healthcare facility also indicated that the effect of that particular reason was strong. For example, for those who selected close proximity as a reason, the strength of this effect was ranked "strong" in 74% of the cases, while those who did not select close proximity as a reason to seek healthcare ranked the strength of this effect as "strong" in 61%, demonstrating a significant difference (P = 0.003) [Table 2]. The exception is that even those who did not visit a healthcare facility on the advice of a physician, mostly rated the effect of a physician's advice as very strong (P = 0.067). The 12 variables were internally consistent (Cronbach's alpha coefficient = 0.635).

As depicted in Table 3, after adjusting for age, gender, marital status, literacy, and use of regular medications, there was no association between physician's advice and a history of chronic illness (P = 0.383). However, there was a strong negative correlation between gender and physician's advice. Specifically, males were 46% less likely to seek a physician's advice compared to females (95%

Table 3: Predictors of physicians' advice as a reason for healthcare resource utilisation using multivariable logistic regression*

Predictor	Adjusted odds ratio	95% Confidence interval	*P* value
Age	1.00	0.98 – 1.03	0.853
Gender (male *versus* female)	0.54	0.35 – 0.85	0.007
Marital status (married *versus* single/ divorced/widowed)	1.30	0.80 – 2.12	0.288
Reading ability (literate *versus* illiterate)	2.09	1.01 – 4.29	0.046
History of chronic illness	1.41	0.65 – 3.02	0.383
Use of regular medications	0.94	0.47 – 1.86	0.849
Source of healthcare (private *versus* government)	0.51	0.28 – 0.94	0.032
Source of healthcare (traditional *versus* government)	1.49	0.80 – 2.75	0.207
Chronic follow-up *versus* acute condition	1.09	0.64 – 1.85	0.745
Vaccination *versus* acute illness	0.98	0.58 – 1.67	0.947
Number of hospital visits per month	0.98	0.90 – 1.07	0.600
Health education sessions (attending *versus* non-attending)	1.19	0.73 – 1.95	0.480

** = The final logistic model is statistically significant (LR χ^2 (12) = 21; P = 0.047). The Hosmer-Lemeshow χ^2 statistic (a measure of the goodness-of-fit) was 4.65 and the P value was 0.794.*

CI: 0.35 to 0.85; *P* = 0.007). Furthermore, literate respondents were also more than twice as likely to seek a physician's advice compared to their illiterate compatriots (95% CI: 1.01 to 4.29; *P* = 0.046). Additionally, those using private sources of healthcare (49%) were less likely to seek a physician's advice compared to those using government healthcare as their usual source of healthcare (95% CI: 0.28 to 0.94; *P* = 0.032). Even after the covariate adjustment mentioned above, no relationship was noted between age and physicians' advice as a reason to seek healthcare (*P* = 0.853).

Discussion

This observational study explored some characteristics of and reasons for visiting healthcare facilities among attendees at primary healthcare centres in northern Oman. The data unequivocally suggested that prevailing socio-cultural factors play a strong role in care-seeking behaviour among the population of northern Oman.

Previous studies have reported that females outnumber males in seeking care,[30] and this is reflected in the present study. One implicit assumption behind women's predominance in care-seeking could be that ideas of masculinity equate care-seeking with weakness.[31] Additionally, a reason for the high proportion of females seeking healthcare may be related to the well-known tendency for females to be diagnosed with more somatic diseases and medically-unexplained physical symptoms.[32–34] Furthermore, this study suggests that being married with a high level of education is an important predictor for care-seeking. Feminine identity in Oman is deeply tied to a woman's role as a mother which, in turn, has encouraged high fertility rates.[35] In Oman, this factor not only leads to many households with large numbers of children, but also to an often overlooked corollary, which is the high healthcare service utilisation for both antenatal care and postnatal care. This supports the view that the presence of children in a household is associated with more care-seeking.[36]

Another characteristic of the attendees at the primary healthcare centres is that literate attendees were twice as likely to seek a physician's advice compared to their illiterate counterparts. This finding is congruent with previous findings that mothers' education is a strong predictor of care-seeking behaviour.[37] It is possible that those with lower education may be constrained by their social status within the community, for example, in being more dependent on others for their mobility.

In addition to identifying the characteristics of the participants, the related aim of this study was to gauge the reasons for their visiting healthcare facilities. The most commonly reported reason for using healthcare resources was physician's advice. This echoes the traditional Omani concept of the physician as a *hakim*, (a sage, wise man or leader).[38] It therefore should be expected that the majority of the attendees in Oman would naturally respect a physicians' opinion; this may be the basis for endorsing a physician's advice as a strong catalyst for care-seeking.

Culturally, one would expect that if a physician's advice is held in the utmost respect, it would be natural to assume that the reputation

of the health centre and its staff would also be endorsed as reasons for seeking healthcare. In keeping with such a view, the present data suggested that a physician's advice was followed by the reputation of the health centre and its accompanying staff as the most ranked reasons for visiting healthcare centres. A final point worth noting is the fact that reading health education articles was among the least cited reasons for visiting a healthcare facility. It is possible that not enough literature exists, addressing matters of life and health related to the Arab world, or that such articles are not exciting or accessible enough.

One of the limitations of this study was that as the study was restricted to attendees of healthcare institutions, it is possible that a significant number of people in the community who do not seek medical attention were excluded[39,40] and that therefore their views were not available for scrutiny. Additionally, there is evidence to suggest that patients in a clinical setting tend to respond to enquiries differently than those elsewhere in the community.[41] Therefore, this preliminary study, which took advantage of the practicalities of using clinic attendees, should be followed up with a large-scale community survey to test the trends displayed here within the general population. A study comparing those who consulted other healthcare services with those who did not would be essential in order to determine which factors affected this decision. This should then be examined against the background of the recent major changes in Oman's delivery of primary healthcare. Furthermore, the data analysed in this study were collected by interview, rather than in a self-administered format. It is therefore possible that this approach may have resulted in the reluctance among participants to reveal sensitive information, due to the presence of the interviewer. Another limitation was that some of the questions in the questionnaire were specifically designed with an Omani population in mind; this may limit comparisons with studies from other parts of the world. The fact that the study only included participants from the northern region of Oman might also hamper the generalisation of the findings to the whole of Oman. Finally, the study team felt a sample size of at least 50 from each centre was reasonable and practical given cost and time constraints. Using this study as a basis, future studies will determine sample sizes that will ensure set error limits and confidence levels.

Conclusion

This study elicited the characteristics of and reasons for patients visiting healthcare facilities in northern Oman. The healthcare system could capitalise on the characteristics and reasons for patients visiting healthcare facilities in order to contribute to the improvement of overall healthcare planning and health education programmes for the prevention and detection of ill health.

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