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Prevalence of somatisation and psychologisation among patients visiting primary health care centres in the State of Qatar

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Background: Medically unexplained somatic complaints are among the most common clinical presentations in primary care in developing countries and they are considerable burden for patients and health care system.
Objectives: The aim of this study was to determine the prevalence of somatisation in comparison to psychologisation among a sample of Qatari patients who were visiting primary health care (PHC) centres and to investigate the clinical and socio-demographic characteristics of somatisers (STs) and psychologisers (PGs).
Method: The survey was conducted among PHC Qatari patients during the period from January to July 2007. About 2,320 patients were approached, of whom 1,689 agreed to participate and responded to the questionnaire. Among the studied Qatari patients, 404 patients were identified for clinical interview. The first stage of the study was conducted with the help of general practitioners, using the 12-item General Health Questionnaire. The second stage was carried out by a consultant using the Clinical Interview Schedule. A specific operational criterion was used to identify STs and PGs.
Results: The prevalence rate of STs among the total studied sample was 12.4%, while the PGs were 11.5%. Among the identified psychiatric cases, the proportion of STs (52%) was higher than PGs (48%). Most of the diagnostic categories were more prevalent among PGs. The dissatisfaction at work and stressful life events within 12 months before the onset of the presenting symptoms were the three postulated determinants which were significantly more among STs than PGs.
Conclusion: The prevalence of somatised mental disorder was little higher than the psychologised mental disorder. The prevalence of somatisation and psychologisation is comparable with other reported studies from the Middle-East and Western countries. Dissatisfaction at work and stressful life events were significantly higher among STs than PGs.

Keywords: *somatisers*; *psychologisers*; *primary health care*; *determinants*; *Arab culture*

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Patients with depression show a combination of psychological and somatic symptoms. In primary care, somatic symptoms often dominate the clinical picture. Depression is highly prevalent and it is the most important mental health problem in primary health care (1, 2). Approximately 20% of patients in primary care present with clinically significant depressive symptoms (3). Somatisation occurs frequently in primary care, where up to half of all primary care visits for somatic complaints remain unexplained (4). Studies have shown a high worldwide prevalence of mental disorders in primary care (2–6). Many patients present with unexplained physical symptoms rather than psychological complaints, resulting in an excess number of costly

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clinical investigations (5–9). Somatisation disorder is characterised by a lifetime history of multiple, medically unexplained physical symptoms that produce discomfort and disabilities. Patients with somatic disorder are difficult to treat and they function poorly in their daily lives.

Somatisation has been defined as the experience and expression of psychological distress by somatic symptoms and the consequential need for medical condition. It is prevalent, expensive and difficult problem for general practitioners (GPs). Although it has been estimated that 5% of patients in general practices present with severe forms of somatisation (5), this disorder is clearly under-diagnosed and on many occasions physicians tend to repeatedly pursue an organic aetiology for the patients' complaints using multiple test procedures, medication and surgical operations instead of recognising a somatisation disorder (4, 5–9).

Research studies published over the last two decades indicate that patients presenting with symptoms lacking adequate medical basis are commonly encountered in all medical care settings (6–13). Most somatising patients present with multiple symptoms, referred to any body part or function or organ system and imitating any bodily disease.

Psychological problems have always been speculated as underlying cause of somatisation. Somatisation is hypothesised to be an expression of personal and social distress in the form of bodily complaints with medical help-seeking. It is also reported that some cultures stigmatise psychological disorder more than others (13). On the other hand, psychologisation was identified as operational criteria according to El Rufaie et al. (13) and Bridges et al. (14). This includes psychological presentation, psychological attribution and psychiatric illness.

To date, there has been a tendency to focus on the psychological symptoms of depression rather than the somatic symptoms. Failure to recognise somatic symptoms, such as low energy, sleep disturbance, reduced appetite, general aches and pains as components of depressive illness is associated with significant health care expenditure.

Several studies of the past years have shown that somatoform disorders are common in the community and the primary care system (10, 15). But in the Middle-East region, little is known about the prevalence of somatisation and psychologisation in the general population. In the State of Qatar, this is the first study about the prevalence of somatised mental disorder in comparison to psychologised mental disorder among a sample of Qatari primary care patients. The aim of this study was to determine the prevalence and to investigate the clinical and socio-demographic characteristics of somatisers (STs) and psychologisers (PGs).

Patients and methods

This is a cross-sectional study based on the primary health care clinics of Qatar. The survey was conducted among Qatari nationals between 25 and 65 years of age during a period from January to July 2007.

A multistage stratified sampling design was developed using the administrative divisions of the primary health centres in Qatar that had approximately equal numbers of inhabitants. The sample size was determined on a priori presumption that the prevalence rate of somatisation in Qatar would be more or less similar to rates found for several other countries in the Arabian Gulf and Eastern Mediterranean (13, 15), where the reported prevalence of somatisation among adults ranged from 15% to 20%. Assuming the prevalence of somatisation to be 17%, with the 99% confidence interval for an error of 2% at the level of significance, a sample size of 2,320 would be required to meet the specific objectives of the study. Of the total 22 primary health care clinics available, 10 were selected at random. Of these, eight were located in urban and two in semi-urban areas of Qatar. This study was approved by research and ethical committee of Hamad Medical Corporation, Qatar.

During the study period, a consecutive series of 2,320 patients were selected from the register of the recruited health centres. Only patients attending the primary health care centres for scheduled routine follow-up appointments or new complaints were approached. Of the approached 2,320 patients, 1,689 responded to the 12-item General Health Questionnaire (GHQ-12) with a response rate of 72.8%. The purpose of this study was explained to the patients for obtaining consent. We have assured them the confidentiality of their information. The research assistants conducted a face-to-face interview with the patients and completed questionnaires until they reached the required sample size. Patients with severe mental illness and chronic diseases diagnosed clinically by physicians were excluded. Also, patients who were not willing to disclose their personal information and medical history were not included in this study (631 patients).

A consultant and three GPs carried out the research assessments all of whom had previous training. Training held two sessions for administering the GHQ-12, the socio-demographic questionnaire, CIS and the procedure as a whole. After dealing with the presenting complaint, eligible patients were invited by the GP to take part.

The individuals were considered to be probable cases for clinical interview on the bases of scores above the cut-off point on GHQ-12 items. A sample of 404 out of 1,689 (23.9%) scored more than 13 in GHQ were planned for the Clinical Interview Schedule (CIS) using CIS questionnaire. Identified cases were assigned diagnoses according to the ICD-10 classification of Mental Illness (16). The severity of their illness was measured according to the total weighted score (TWS) scores.

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Psychiatric instruments

Arabic version of the 12-item General Health Questionnaire (GHQ-12)

The GHQ was developed by Goldberg et al. (17) as a self-administered questionnaire that would identify non-psychotic psychiatric cases. The GHQ-12 is the shortest version of the GHQ and it is concerned mainly with psychoemotional disturbance. The Arabic version of the GHQ-12 has already proven to be a valid instrument for screening psychiatry morbidity among Arab primary health care patients in Qatar (1).

The Clinical Interview Schedule (CIS)

CIS is a semi-structured psychiatric questionnaire developed for use in community surveys. It consists of questions designed to elicit the presence or absence of 10 defined psychiatric symptoms and 12 manifest abnormalities (17).

Each item of psychiatric symptoms and manifest abnormality was graded on 5 points (0–4), 0 = absent, 1 = mild, 2 = moderate, 3 = severe, 4 = very severe). The TWS is calculated by adding the sum of the 10 'reported symptoms' scores plus twice the sum of the 12 'manifest abnormality' scores. For the purpose of this study the criteria used to define a psychiatric case was a TWS of 20 or more. This threshold was found appropriate when previously used in UAE (13, 18, 19).

To avoid ambiguity and overgeneralisation in using the term 'somatisation' in this sample, we adopted the restrictive operational criteria set by Bridges and Goldberg (20) and El Rufaie et al. (13). The Bridges and Goldberg criteria for somatisation include two terms which are subject to rating bias. First is the decision required of the interviewer as to whether the physical symptoms can be

Table 1. The socio-demographic characteristics of somatisers and psychologisers

		Somatisers $n = 210$	Psychologisers $n = 194$		
Variables	Entire study group ($N = 1,689$)[a]	Frequency n (%)	Frequency n (%)	Total ($N = 404$)	p-Value significance
Age in years					
<30	226 (13.4)	40 (19.0)	15 (7.7)	55 (13.6)	0.010
30–39	727 (43.0)	85 (40.5)	86 (44.3)	171 (42.3)	
40–49	616 (36.5)	73 (34.8)	78 (40.2)	151 (37.4)	
50–60	120 (7.1)	12 (5.7)	15 (7.7)	27 (6.7)	
Sex					
Male	893 (52.9)	102 (48.6)	109 (56.2)	211 (52.2)	NS
Female	796 (47.1)	108 (51.4)	85 (43.8)	193 (47.8)	
Marital status					
Single	184 (10.9)	31 (14.8)	37 (19.1)	68 (16.8)	NS
Married	1,505 (89.1)	179 (85.2)	157 (80.9)	336 (83.2)	
Educational level					
Illiterate	240 (14.2)	21 (10.0)	35 (18.0)	56 (13.9)	NS
Elementary	313 (18.5)	42 (20.0)	34 (17.5)	76 (18.8)	
Intermediate	488 (28.9)	60 (28.6)	58 (29.9)	118 (29.2)	
Secondary	341 (20.2)	47 (22.4)	36 (18.6)	83 (20.5)	
University	307 (18.2)	40 (19.0)	31 (16.0)	71 (17.6)	
Occupation					
Business man	229 (13.6)	29 (13.8)	24 (12.4)	53 (13.1)	NS
Clerical/Administrative	544 (32.2)	70 (33.3)	63 (32.5)	133 (32.9)	
Police/Military	255 (15.1)	30 (14.3)	32 (16.5)	62 (15.3)	
House wife	363 (21.5)	40 (19.0)	44 (22.7)	84 (20.8)	
Professional	298 (17.5)	41 (19.5)	31 (16.0)	72 (17.8)	

[a]A total of 1,689 patients were the study patients who responded to the 12-item General Health Questionnaire (GHQ).
Note: NS, not significant.

explained by the psychiatric disorder, and second is the interviewer's opinion on whether these symptoms could be alleviated by suitable treatment. The classification of the PGs and STs is as follows:

1) STs: patients with psychiatric disorder who presented to their GP with physical complaints, but in whom a functional diagnosis was recorded.
2) PGs: patients with psychiatric disorder who presented to their GP with psychological complaints.

Among the 404 psychiatric cases identified, 210 patients were classified as STs and 194 patients were PGs according to Bridges and Goldberg's operational criteria (20).

The Statistical Package for Social Sciences programme was used for the statistical analysis. Student's *t*-test was used to ascertain the significance of differences between mean values of two continuous variables and confirmed by non-parametric Mann–Whitney test. Chi-square and Fischer's exact tests were performed. Multivariate stepwise linear regression analysis was performed to determine the predictors of STs and PGs. The level $p < 0.05$ was considered as the cut-off value for significance.

Results

From the total of 1,689 patients studied, 404 were identified for CIS (23.9%). Mean age ± SD of STs and PGs were 37.0 ± 7.2 and 39.4 ± 6.7, respectively.

The socio-demographic characteristics of STs and PGs are shown in Table 1. Among the 404 identified psychiatric cases, 210 patients were STs (52%) and 194 were PGs (48%), a ratio of 1.1:1. The prevalence of somatisation was 12.4% of the total studied sample, while for psychologisation it was 11.5%. There is a significant difference noted in respect of age between STs and PGs. Somatisation and psycholgisation were significantly more frequent among the middle-aged patients, especially in the age group of 30–39 years (40.5% vs. 44.3%; $p = 0.01$). Somatisation was higher in female patients (51.4%), whereas psychologisation was more frequent in male patients (56.2%). There were no significant differences observed in their gender, marital status, education and occupation.

The severity of psychiatric illness as measured by the TWS of the patients suffering from different types of disorders is given in Table 2. The severity of the psychiatric illness; generalised anxiety disorder, depressive episode, recurrent depressive disorder, dysthymia, prolonged depressive reaction were significantly more in PGs ($p < 0.001$).

Results of the comparison of postulated determinants in both STs and PGs are shown in Table 3. Family history of psychiatric disorder ($p = 0.014$) and physical illness during adulthood were higher in PGs than STs. Significant physical illness during adulthood before the onset of presenting symptoms was significantly higher in PGs (23.2%; $p = 0.007$). Dissatisfaction at work was significantly higher in STs (63.8%; $p = 0.007$), while dissatisfaction with social life was significantly higher in PGs (77.8%; $p = 0.007$).

Table 2. The severity of psychiatric illness in both somatisers and psychologisers

	Somatisers	Psychologisers	
Diagnosis	TWS Mean ± SD	TWS Mean ± SD	*p*-Value
Generalised anxiety disorder	22.9 ± 5.9	29.3 ± 8.7	<0.001
Mixed anxiety and depressive disorder	31.6 ± 9.0	31.1 ± 9.1	NS
Depressive episode	6.4 ± 7.7	25.0 ± 4.7	0.029
Recurrent depressive disorder	27.5 ± 4.5	33.3 ± 6.9	<0.001
Dysthymia	22.2 ± 1.1	27.7 ± 5.9	<0.001
Brief depressive reaction	24.4 ± 6.4	28.5 ± 9.4	<0.001
Prolonged depressive reaction	29.3 ± 6.4	29.6 ± 8.1	NS
Somatisation disorder	25.7 ± 4.0	[a]	–
Obsessive compulsive disorder	[a]	36.0 ± 0	–
Social phobia	[a]	29.0 ± 0	–

[a]No reported cases.
Note: NS, not significant; TWS, total weighted score.

The factors associated with STs and PGs using multivariate stepwise linear regression analysis is listed in Table 4. General health and adverse childhood experience were strong positive predictors for STs. General health and impairing family or social life were significant positive predictors for PGs.

Discussion

Most episodes of depression and anxiety – the common mental disorders – are contained and managed in primary care. Common somatic symptoms are the main reason for the primary health care visits; they are also concomitants of anxiety and depression (14). Many patients with psychological disorders present to their GP with common somatic symptoms. This combination has been referred to as 'somtisation' and is associated with lower rates of diagnosis of depression and anxiety. Most studies in other countries have looked at patients' beliefs about their symptoms that have focused on the dichotomy between somatising and psychologising. In the Arab region, very few studies have been conducted on somatisation and this study is the first attempt to document the differences between STs and PGs in primary care Qatari patients.

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Table 3. Results of the comparison of postulated determinants in both somatisers and psychologisers

Variables		Total ($n=404$)		Somatisers ($n=210$)		Psychologisers ($n=194$)		
		Yes, *n* (%)	No, *n* (%)	Yes, *n* (%)	No, *n* (%)	Yes, *n* (%)	No, *n* (%)	*p*-Value* significance
1	Significant physical illness during childhood	66 (16.3)	338 (83.7)	31 (14.8)	179 (85.2)	35 (18.0)	159 (82.0)	NS
2	Other adverse childhood experiences	177 (43.8)	227 (56.2)	98 (46.7)	112 (53.3)	79 (40.7)	115 (59.3)	NS
3	Significant physical illness during adulthood before the onset of presenting symptoms	72 (17.8)	332 (82.2)	27 (12.9)	183 (87.1)	45 (23.2)	149 (76.8)	0.007
4	Family history of significant physical illness	116 (28.7)	288 (71.3)	55 (26.2)	155 (73.8)	61 (31.4)	133 (68.6)	NS
5	Dissatisfaction, during the 12 months before the onset of symptoms, with:							
	(a) Marital and/or family life	202 (50.0)	202 (50.0)	98 (46.7)	112 (53.3)	104 (53.6)	90 (46.4)	NS
	(b) Work	232 (57.4)	172 (42.6)	134 (63.8)	76 (36.2)	98 (50.5)	96 (49.5)	0.007
	(c) Social life	289 (71.5)	115 (28.5)	138 (65.7)	72 (34.3)	151 (77.8)	43 (22.2)	0.007
6	Family history of psychiatric disorder	70 (17.3)	334 (82.7)	27 (12.9)	183 (87.1)	43 (22.2)	151 (77.8)	0.014
7	Stressful life events within the 12 months before the onset of the presenting symptoms (other than the above)	219 (54.2)	185 (45.8)	134 (63.8)	76 (36.2)	85 (43.8)	109 (56.2)	<0.001

*Chi-square test was performed.
Note: NS, not significant.

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Table 4. Factors associated with somatisers and psychologisers using multivariate stepwise linear regression analysis

	Regression coefficient (β)	Standard error	*t*-Value	*p*-Value
Somatisers				
Independent variables				
General Health (GHQ score)	1.012	0.072	14.075	<0.001
Dissatisfaction with social life	−6.451	1.077	−5.992	<0.001
Adverse childhood experience	2.530	0.851	2.974	0.003
Significant physical illness during childhood	−3.374	1.283	−2.629	0.009
Significant physical illness in adulthood	−2.519	1.216	−2.072	0.040
R^2 =52.7, Adjusted R^2 =50.9				
Psychologisers				
Independent variables				
General Health (GHQ score)	0.854	0.103	8.293	<0.001
Impairing family or social life	2.929	0.675	4.343	<0.001
R^2 =48.4%, Adjusted R^2 =46.7				

A WHO cross-cultural study reported the prevalence of somatisation (19.7%) with a range of 9–37% in 15 primary care centres (21). The prevalence rate of somatisation in Qatar (12.4%) was lower than the international prevalence of somatisation (19.7%), but similar to the proportion of UAE (12%) (19). In Saudi Arabia (22), psychiatric morbidity in primary care is estimated at 30–46% with a 19.3% prevalence of somatisation and 20% of depression which is higher than the prevalence found in Qatar. Also, the present study revealed a higher prevalence of somatisation (12.4%) than psychologisation (11.5%). Our results are comparable to UAE, but inconsistent with the study in Saudi Arabia which demonstrated a higher prevalence of psychologisation than somatisation. Our prevalence rates are comparable in relation to somatisation, but not to psychologisation which is consistent with another study that over half of their patients with diagnostic illness were STs, whereas only about one-fifth were PGs (14).

Ratio of STs: PGs in the present study was 1.1:1 which is similar to the ratio reported in a study on somatised mental disorders among primary care Arab patients conducted in UAE (13) (1.1:1). But the results of the Spanish study revealed that somatic patients were three times more prevalent than PGs in primary care (21). Among the identified psychiatric cases in the present study, 52% of them were STs and 48% of them were PGs. Our ratio is consistent with reports in non-western cultures claiming higher somatisation rates.

In conformity with other reports, there was no significant difference between the STs and PGs groups in relation to gender, educational level and marital status (22–24). But, a study (5) reported that the group of STs had a significantly lower level of education and tended to be older (p =0.05) which is consistent with the results of the study (14) that ST would have lower level of education and would belong to a lower social class. The reason for this finding is that patients who have received less education may be less able to elaborate and interpret their psychological distress. In the present study, 90% of the STs and 82% of PGs had education more than elementary school.

The diagnostic categories, mixed anxiety and depressive disorder and prolonged depressive reaction, were common in both PGs and STs in the current study. However, prevalence of generalised anxiety disorder, recurrent depressive disorder, dysthymia, depressive episode and brief depressive reaction were more prevalent among the PGs than the STs. The UAE study also reported that the severity of most psychiatric illness was estimated to be greater among the PG group than the STs (19). It is important that primary care physicians acquire specific skills for the recognition of depression.

Our study revealed that stressful life events was significantly more among STs than PGs which was comparable to the findings of another study (23). For STs, general health and adverse childhood experience were strong positive predictors, whereas for PGs general health and impairing life or social life were positive predictors. Somatisation disorder is an underdiagnosed and difficult problem for family physicians. Early diagnosis of STs is a very important factor in improving health outcomes. The erroneous diagnosis of depression in patients leads to the risk of unnecessary and potentially dangerous medication.

In conclusion, the present study revealed that the prevalence of somatised mental disorder was little higher than the psychologised mental disorder. The prevalence of somatisation and psychologisation is comparable with other reported studies from the Middle-East and Western countries. Dissatisfaction at work and stressful life events within the 12 months before the onset of the presenting

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symptoms were significantly more among STs than PGs. For STs, general health and adverse childhood experience were strong predictors for STs, whereas general health and impairing family or social life were significant predictors for PGs. It is important to have educational programmes that raise awareness of the full spectrum of somatic symptoms as well as aiming to improve attitudes and consulting skills in primary care.

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