

Do tourists suffer from depression and anxiety disorders?

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Abstract

Objective: To explore the prevalence of depression and anxiety among tourists in Aseer region, KSA.

Method: This is a cross-sectional study conducted during summer 2017 in Abha city, KSA. A quantitative questionnaire was distributed to a sample of 504 participants who attended Summer recreational activities. The questionnaire included demographic data and screening questions for depression (PHQ-9) and Generalized Anxiety Disorder (GAD-7). Data entry and analysis were done using SPSS version 25.

Results: The mean age of the participants was 31 ± 12.5 years; women represented 56%, and 53% were married. More than half of participants (56%) complained of physical symptoms, i.e. chronic headache (14%), chronic joint pain (12%), IBS (10%), and chronic back pain (9%). More than half of participants reported that they visited the PHCC at least once in the past few months.

More than two-thirds had depression (68.9%), (59.5%) have GAD, while both disorders affect (28.4%). Mild depression affects (30.4%), moderate depression (19.8%), while severe depression was reported among (18.7%). Regarding GAD, mild anxiety affected (33.3%), moderate anxiety (17.3%), and severe anxiety was reported among (8.9%).

Moderate to severe depression was 38.5%. Women were more affected (44%) than men (31.4%) with a significant difference (p -value = 0.004). Moderate to severe anxiety was more in women (30.3%) compared to men (20.9%) with a significant difference (p -value = 0.018). Age groups did not show significant association with depression or anxiety.

Conclusion and recommendations: This study revealed the high prevalence rates of depression and anxiety among tourists. Most of them complained of physical symptoms, and it could be the cause of frequent health care centres visits. Therefore, depression and anxiety need to be considered in all health care providing levels. Empowering primary mental health care in PHC centres is crucial for providing effective health care for the population.

Key words: Depression, Anxiety, PHQ-9, GAD-7, Tourists, Saudi Arabia

Introduction

Depression and anxiety are two common mental disorders worldwide. More than 300 million people are suffering from depression, as reported by the World Health Organization(1). WHO/Wonca report in (2017) demonstrated that 60% of patients attending the Primary care setting are suffering from depression and or anxiety which is mostly missed (2). In a recent study conducted in an Eastern Province of Saudi Arabia high rates of depression and anxiety reported similar high figures (3). Depression and Generalized Anxiety Disorder(GAD) could coexist in about 30-50% of affected people, and they have common prevention and management strategies (3-4). A recent WHO study estimated that depression and anxiety disorders cost about US\$ 1 trillion each year regarding lost productivity (5).

In the Kingdom of Saudi Arabia, a few studies have been conducted to estimate the prevalence of depression and GAD(6-9). Most of these studies reported high rates of prevalence of depression and GAD among the Saudi population. However, these studies targeted either patients attending primary health care settings (3,6-8), or students at colleges (9). This study was conducted during the summer season to estimate the prevalence of

depression and GAD among a selected sample of people who attended summer tourist events executed in Abha city, Aseer region, KSA.

Methods

This is a cross-sectional study that was conducted in Aseer region, southwest Saudi Arabia during summer 2017. According to previous studies, the prevalence rate of mental disorder was 60% .

The sample calculation was used as following: margin error=5%, Confidence interval =95%, the total target population = 2,000 individuals. Based on the previous values, the required sample was calculated to be 323.

All individuals 18 years and above, who attended Summer recreational activities, were invited to participate in this study. After obtaining informed consent from the participants, the self-administered questionnaire was distributed and supervised by three of the investigators who explained the purpose of the study and helped participants when needed.

The questionnaire consisted of demographic data, Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety

Disorder-7 (GAD-7) as diagnostic screening tools for depression and GAD, respectively. According to PHQ-9, depression was classified into five categories based on the total score as following: none (0-4), mild (5-9), Moderate (10-14), moderate-severe (15-19) and severe (20-27). On the other hand, GAD was classified according to the total score as following: minimal (0-4), mild (5-9), moderate (10-14) and severe (15-21).

Data were entered and analyzed using SPSS version 25. Chi-square test was used to test the association of non-parametric variables with the severity of depression and anxiety. P-values of less than 5% were considered significant.

Official permission to conduct this study was obtained from the concerned authority in General Directorate of Health Affairs, Aseer region. Informed consent was taken from all participants before completing the study questionnaire.

Results

The total participants who completed the questionnaire were 504 individuals. Table 1 shows the participants' characteristics. The mean age (mean \pm SD) was 31 \pm 12.5 years, women represented 56%, and 96% were Saudi. More than half (53%) of participants were married while 96% were educated.

Table 2 depicts the current complaints among participants. More than one third (44%) had no complaints. Thus, most of the participants had complaints of physical symptoms 283 (56%), i.e. chronic headache (14%), chronic joint pain (12%), IBS (10%), and chronic back pain (9%). Only 47 (9%) had chronic organic diseases, i.e. diabetes, hypertension and bronchial asthma. Among females, 13% had menstrual cycle disturbances. More than half of participants reported that they visited the PHCC at least once in the past few months while 30% of them did not visit a PHCC during the last 12 months.

Table 3 depicts the rate of depression and GAD among participants. Depression was reported among 347 (68.9%), GAD affects 300 (59.5%), while 143 (28.4%) have both depression and GAD. The grades of depression were mild (31%), moderate (20%), and severe (19%) while that for GAD were mild (33.3%), moderate (17.3%), and severe anxiety 45 (8.9%).

Table 4 summarizes the association between some demographic data and moderate-severe depression and anxiety in this study. It is obvious that the rate of depression was high among females, illiterates, and housewives while GAD was high among women, illiterates and housewives also.

Moderate to severe depression affects 194 (38.5%) participants. It affects women 125 (44.0%), more than men 69 (31.4%) with a significant difference ($x^2 = 8.38$, p -value = 0.004). Depression decreases in prevalence as a person has higher education, those who had intermediate or less

had prevalence (47.1%), and those who had secondary school (43.7%), university (35.1%), and postgraduate (20%) with significant difference ($x^2 = 17.6$, p -value = 0.007). Age groups were not significantly associated with depression or anxiety.

Moderate to severe anxiety affects 132 (26.2%) of participants. Women showed more anxiety compared to males (30.3%) versus (20.9%) with a significant difference ($x^2 = 5.63$, p -value = 0.018). Also, anxiety prevalence decreased as a person had higher education, those who had secondary school or lower had prevalence (30.0%), whereas those who had graduated from university were (24.0%) with significant difference ($x^2 = 19.03$, p -value = 0.004).

Table 1 : Socio-demographic characteristics of participants, Abha, KSA, 2017

Demographic character	No. (%)
Gender	
Male	220(44%)
Female	284(56%)
Nationality	
Saudi	489(96%)
Non-Saudi	15(4%)
Marital status	
Married	261(52%)
Single	225(44%)
Divorced	10(2%)
Widow	8(2%)
Educational status	
Illiterate	24(5%)
Primary-intermediate	46(9%)
Secondary	151(30%)
University	245(49%)
High education	38(7%)
Living status	
Own house	279(55%)
In rented house	157(31%)
Not mentioned	68(14%)
Job	
Jobless	49(10%)
Housewife	88(18%)
Student	166(33%)
Governmental officer	123(24%)
Free work	11(2%)
Private sector	21(4%)
Retired	26(5%)
Others	20(4%)

Table 2: Utilization of PHCC services and common complaints among participants, Abha, KSA,2017

Item	No. (%)
Current complaints:	
No complaint	221(44%)
Physical complaints:	283(56%)
<i>chronic headache</i>	62(12%)
<i>chronic joint pain</i>	47(9%)
<i>chronic back pain</i>	15(3%)
<i>chronic dizziness</i>	51(10%)
<i>Irritable Bowel Syndrome</i>	38(13%)
<i>menstrual cycle disturbance</i>	47 (9%)
Chronic organic diseases:	
<i>hypertension</i>	17(3%)
<i>diabetes</i>	15(3%)
<i>bronchial asthma</i>	13(2.6%)
<i>infertility</i>	2(0.4%)
Visiting PHC during last year:	
No visit	152(30%)
1	86(17%)
2	107(21%)
3-4	163 (32%)

Table 3 : Prevalence of Depression and anxiety among participants, Abha, KSA,2017

		Depression PR=347(68.9%)				
Grade		None	Mild	Moderate	Severe	Total
Score			(5-9)	(10-14)	≥ 15	
Anxiety PR= 300 (59.5%)	None ≤ 4	117	67	15	5	204
	Mild (5-9)	35	66	45	22	168 (33.3%)
	Moderate (10-14)	4	17	30	36	87 (17.3%)
	Severe ≥ 15	1	3	10	31	45 (8.9%)
	Total	157	153 (31%)	100 (20%)	94 (19%)	504

Table 4: Association between some participants' characteristics and moderate-severe depression and anxiety, Abha, KSA, 2017

Character	Depression		Anxiety	
	N (%)	X ² (P-value)	n(%)	X ² (P-value)
Gender				
Men	69 (31.4%)	x ² = 8.38, p-value = 0.004	46 (20.9%)	x ² = 5.63 p-value = 0.018
Women	124 (44.0%)		86 (30.3%)	
Marital status				
Married	94 (36.0%)	x ² = 7.87 p-value = 0.096	67 (25.7%)	x ² = 4.11 p-value = 0.39
Single	87 (41.2%)		58 (27.5%)	
Education status				
Illiterate	15 (71.4%)	x ² = 17.60 p-value = 0.007	12 (57.1%)	x ² = 19.03 p-value = 0.004
Elementary-intermediate	17 (37.0%)		9 (19.6%)	
Secondary	66 (43.7)		46 (30.5%)	
University	6 (19.4%)		62 (22.5%)	
Job				
Jobless	18 (38.3%)	x ² = 21.06 p-value = 0.007	14 (29.8%)	x ² = 19.68 p-value = 0.012
Housewife	44 (50.0%)		33 (37.5%)	
Students	67 (39.9%)		42 (25.0%)	
Government employee	38 (30.9%)		30 (24.4%)	
Others	21 (33.3%)		10 (15.9%)	

Discussion

This study revealed that more than two-thirds of the participants had depressive or/and anxiety with various severity. It reflects the magnitude of the high prevalence of the commonest two mental health problems, depression and anxiety disorders. It has consistencies with other recent studies conducted in the PHC centres. Therefore, this study augments the concept that, depression and anxiety has a role in the suffering of one to two-thirds of the population (2,3,8).

Table 2 represents that over half of participants complain of physical symptoms despite the absence of well-defined organic diseases, e.g. headache, LBP, joint pain, IBS with frequent visits to PHC centres. Compared with the prevalence of depression and anxiety in this study, we could conclude that depression and anxiety are playing a role behind the suffering of two-thirds of participants.

This study found that depression was significantly associated with female gender and higher educational level. In contrast, no association was found between depression and age group, gender, nationality, or marital status. However, severe depression was common among those with less education, jobless, divorced, and widowed.

In a study conducted among university students in Riyadh using PHQ9, the major depression was 9.9% (10). At the same time, in the Qassim region, Alharbi et al. found that moderate-severe depression and severe depression were 10.4% and 5% respectively among secondary school students with the high rate among females students (11). In a community-based study conducted by Alrashid et al. in Al-Hasa region, Saudi Arabia (12), a prevalence of 9.7% was reported and showed high rates among females, those with low educational status and jobless participants. Another study by Najeeb et al. which included 1,171 medical students from different regions in Saudi Arabia revealed that depressive symptoms were prevalent and vary from 23.4% with minimal symptoms to 17.8% with severe depressive symptoms and 6.3% had depressive diseases, and female students were affected more than males(13). In Malaysia, Kader et al(14) reported a prevalence rate of depression of 10.3%.

In this study, we found that the prevalence of moderately severe and severe GAD was 17% and 9% respectively. In a study conducted by AlHarbi, similar figures were reported, 19.5% and 9.8% respectively (11). While Mostafa et al. reported 14% among university students in Riyadh(10).

In Sweden, a community-based study which included 1,329 adults, reported a rate of GAD as 14.7 % (15) while in Malaysia, Kader et al. found the prevalence of anxiety was 8.2 % (16).

GAD was more prevalent among females, non-educated, housewives and participants who suffer from chronic headache, IBS or females with menstrual disturbance. The association regarding female gender was reported by Mostafa et al. and AlHarbi et al. also(10,11). The association between such variables and GAD could be explained as GAD has similar features of IBS, chronic headache and menstrual cycle-related symptoms. In this regard, patients with such problems should be assessed for GAD and managed accordingly.

Conclusion and Recommendation

This study revealed that the prevalence rates of depression and GAD among tourists are high, as among the general population. Many factors contribute significantly to the occurrence of depression and GAD, which should be identified and managed to relieve mental disorders symptoms. All opportunities such as summer health campaign could be appropriately utilised to detect and to manage common mental disorders. PHQ-9 and GAD-7 are two simple tools that can be used to detect depression and GAD among the community and manage them earlier.

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