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Knowledge, beliefs, attitudes and awareness level towards bipolar disorder among Saudi population: A national survey

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ABSTRACT

Background: Bipolar disorder is a mental disorder characterized by cycle patterns of depression and the condition in which patients increase their level of activity or energy, mood or behavior (mania) or hypomania. Although bipolar has not been fully understood until now, it is established to be one of the most disabling mental disorders. Our aim is assessing knowledge, attitude, beliefs and awareness level towards bipolar disorder among Saudi populations. **Methodology:** This is a cross sectional survey among Saudi general population. Data was collected by means of an online questionnaire. Males and females in Saudi Arabia between the ages of 17 and 65 who are willing to get involved in this study were enrolled. A scoring system was adopted to evaluate KAP of bipolar disorder among study participants. Data was analyzed by using version 26 IBM. **Results:** The study included 869 participants, 59.5% of them were males and 40.5% were females. 63.4% of participants aged between 17- 25 years old. 81.8% of studied sample have heard about bipolar disorder before. Source of information was cited as internet in 32.9% and social media in 29%. Bipolar disorder is frequent in Saudi Arabia, according to forty-nine percent of participants. 362 individuals (50.9 percent) had high knowledge, attitude and practice (KAP) about bipolar disorder, whereas 49.1 percent had poor KAP scores. **Conclusion:** The level of awareness was shown to be significantly related to marital status. Awareness initiatives are needed to educate the Saudi public about bipolar disorder.

Keywords: Bipolar disorder, Mental illness, Psychological disorders, General awareness, Saudi Arabia

1. INTRODUCTION

Bipolar is known for extreme mood changes from low state (depression) to

high that known as mania, changing thoughts, sleep and change in the way of behaving. This disorder frequently comes with increased risks of mortality and suicide, in comparison to the non-affected people, resulting in a massive burden for society and sick people. Bipolar Disorder is one of the mental disorders that have not been fully understood yet (Alosaimi et al., 2019). In general, these types of disorders accounting for 7.3% of the global burden of disease (Durand-Zaleski et al., 2012). Knowing about Bipolar disorder is of the utmost importance due to the fact that it's ranked the sixth leading cause of disability by the WHO (Humpston et al., 2021).

In 2016 in Riyadh, Saudi Arabia a cross sectional survey of 416 people from the community was conducted. Almost half of the participants (49.5%) had a previous notion about bipolar. At most, their previous knowledge derived from the internet and social networks. Question has been rises to the participants in order to determine their beliefs about what originate bipolar disorder. Almost half of them believe bipolar is provoked by the interference of the balance in neurophysiological or neurochemical. Moreover, they consider psychiatric medications as an enormous part of the management of such patients (Pini et al., 2005).

Furthermore, a recent study was conducted on university students in Pakistan regarding knowledge and awareness of bipolar disorder. 390 participants have been chosen aiming to gather and conduct the data. 71.8% of the patients were female while 28.2% were male. It is important to mention that a great part of the survey was conducted on 334 (85.6%) participants who work within the medical field and the other 56 (14.4%) participants are non-medical participants. Furthermore, an enormous part of the participants (82.2%) had previous notion about bipolar. Also, 89.8% of them stated that abnormal elevated levels of the energy, arousal and affect is part of the component of bipolar that usually happens for such a patient followed by extreme low mode that is expressed by depression (Merikangas et al., 2011).

Additionally, a national survey was conducted in France regarding understanding, impression and antics against autism, bipolar disorder and schizophrenia. With in five days sample were recruited and approximately, half of them females and other half males with a total of 1000 participant. Also, mean age of responders was 45 with standard deviations of 14 and about one-third were aged <35 and the same for 55- 64 years group. Most mental disorder names were universally recognized, to be exact 96% recognized the term bipolar. But this percentage decrease to 43% when were asked about characteristics (Kessler et al., 1994). The current study aims to assess knowledge, beliefs, attitude and awareness level towards bipolar disorder among Saudi population.

2. MATERIALS AND METHODS

Study design

This research uses a cross-sectional questionnaire design that will utilize a previously approved and validated questionnaire done by Alosaimi et al., (2019). The same questions were built upon Google form and distributed by authors and recruited data collectors to general population in Saudi Arabia using the well-known social media applications.

Study setting: Participants, recruitment and sampling procedure

The study was done in the kingdom of Saudi Arabia, which has a population of approximately 35 million. The study was based on the non-probability convenience sampling technique, where questionnaires was distributed among people living in Saudi Arabia and was conducted between May 2022 – January 2023.

Inclusion and Exclusion criteria

Males and females between the age of 17-65 living in Saudi Arabia who are willing to participate in this study was included. Contrary, people living outside of Saudi Arabia, those who refuse to participate and incomplete questionnaire was excluded.

Sample size

The sample size was calculated using Raosoft with a 5% margin of error. Also, 95% was selected as a value of the confidence interval Population size is 35 million and the response distribution was set at 50%. The sample size was determined to be at least 385.

Method for data collection and instrument (Data collection Technique and tools)

Scoring system

Our scoring system will depend only on awareness section with total score of 21 using bipolar awareness score ≤ 12 as a low awareness and more than 12 as a high. 5 minutes is required to complete the survey. The validated questionnaire and its parametrized responses were utilized in a study in Saudi Arabia. We add some modifications in beliefs and attitude section. Then,

we translated it into Arabic language to be proper for our targeted populations. The questionnaire contains three sections as shown below:

- 1) Socio-demographic data including age, sex, marital status, monthly income, nationality, career status, educational level Healthcare professions status
- 2) Bipolar awareness and knowledge section is structured into a) sources of information which divided from none to eight potential choices (friends/relatives, internet, social media, television, hospitals/clinics, pharmacist/chemist magazines/newspaper, leaflets/posters), b) knowledge about treatment and causes which have ten and nine choices respectively.
- 3) Attitude and beliefs toward bipolar patients that include 7 questions.

There were only two options for each response: "yes" or "no". By answering "yes" to the affirmative statements, points were counted (first two questions, seven choices in causes items and three items in treatment section). In contrast, saying "no" to erroneous statements was count as positive points (two choices in causes section and in knowledge part were seven responses).

Analysis and entry method

The presentation of categorical variables was as percentages and frequencies. However, data was obtained by electronic questionnaires then transferred to the Microsoft Office Excel Software program (2016). Lastly, Data was analyzed by using the Statistical Package of Social Science Software (SPSS) program, version 26 (IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.)

3. RESULTS

The study included 869 participants, 59.5% of them were males and 40.5% were females. 63.4% of participants were aged between 17- 25 years old while 62.1% were aged between 25- 44 years old. 65.7% were single and 34.3% were married. 95.6% of studied sample were Saudi. 77.7% had higher education as college or more. 30% of the sample was employed and 54.1% were students (Table 1).

Table 1 Socio-demographic characteristics of participants (n=869)

Parameter		No.	%
Age	17 – 25	551	63.4
	25 – 44	227	26.1
	44 – 65	88	10.1
	More than 65	3	.3
Gender	Male	517	59.5
	Female	352	40.5
Marital status	Single	571	65.7
	Married	298	34.3
Nationality	Saudi	831	95.6
	Non-Saudi	38	4.4
Educational level	High school or less	194	22.3
	College and above	675	77.7
Monthly income	Less than 5000 SR	574	66.1
	15,000-5000 SR	227	26.1
	More than 15,000 SR	68	7.8
Career status	Student	470	54.1
	Unemployed	138	15.9
	Employed	261	30.0

As in Table 2, 32.8% of participants were healthcare professionals. 81.8% of studied sample have heard about bipolar disorder before. The sources of information were cited as internet in 32.9%, social media in 29%, relatives and friends in 13.4% followed by hospitals or clinics in 8.4% of participants. 40.9% of participants reported that bipolar is common in Saudi Arabia. As for causes of bipolar disorder, 42.6% of participants thought it was hereditary or genetic, 67.5% reported neurophysiologic or neurochemical

imbalance, 26.3% substance abuse, 20.3% unhealthy lifestyle, 46.6% traumatic events in life and 16% weak faith. Treatment of bipolar disorder was reported as 82.7% psychiatric medications, 11.4% using brief counselling therapy, 8.4% talk to family or friends and 4.8% involve in recreational activities.

Table 2 Knowledge of participants of bipolar disorder (n=869)

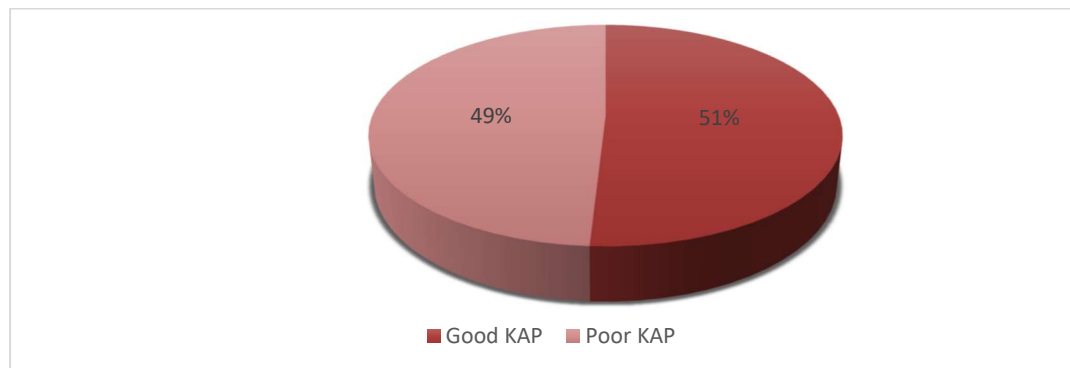
Parameter		No.	%
Healthcare professions status	Yes	285	32.8
	No	584	67.2
Heard about Bipolar Disorder	Yes	711	81.8
	No	158	18.2
Source of information	Social media	206	29.0
	Internet	234	32.9
	Relatives/friends/spouses	95	13.4
	Hospitals/ clinics	60	8.4
	Television	25	3.5
	Pharmacist/chemist	20	2.8
	Leaflets/posters	7	1.0
	Newspapers/magazine	4	0.6
Bipolar is a common disorder in Saudi Arabia	Yes	291	40.9
	No	420	59.1
Causes of bipolar disorder	Heredity or genetic	303	42.6
	Weak personality	120	16.9
	Neurophysiologic or neurochemical imbalance	480	67.5
	Unhealthy lifestyle	144	20.3
	Medications	108	15.2
	Weak faith	114	16.0
	Substance abuse	187	26.3
	Certain medical conditions, e.g., Cancer, Diabetes, Heart diseases, hypothyroidism	66	9.3
	Traumatic event in life, e.g., Death of a close one, physical injury, theft, disaster, etc	331	46.6
Treatment of bipolar disorder	Psychiatric medications (e.g., antidepressants, mood stabilizers, antipsychotics, sedatives) *	588	82.7
	Hitting and choking by faith healers	2	0.3
	Talk to family or friends	60	8.4
	Using brief counselling therapies (e.g., cognitive and/or behavioral therapies)	81	11.4
	Involve in recreational activities	34	4.8
	Electroconvulsive therapy under psychiatrist supervision	12	1.7
	Head bandage by traditional therapist	3	0.4
	Having an occasional alcoholic drink Amphetamine or Hash	4	0.6

Table 3 shows that 28.1% of participants agree about If someone is suffering from bipolar, he/she must pull him/herself together for getting over it. 32.6% of participants neutral about a person with bipolar disorder can work effectively and 30.8% of participants disagree regarding you would not be willing to marry a person who has family members diagnosed with bipolar disorder.

Table 3 Participants practice towards bipolar disorder (n=711)

	Agree	Strongly agree	Neutral	Disagree	Strongly disagree
If someone is suffering from bipolar, he/she must pull him/herself together for getting over it	200 28.1%	202 28.4%	169 23.8%	79 11.1%	61 8.6%
A person with bipolar disorder can work effectively	230 32.3%	72 10.1%	232 32.6%	137 19.3%	40 5.6%
It is a shame to mention that someone in a family has bipolar disorder	85 12.0%	51 7.2%	147 20.7%	204 28.7%	224 31.5%
You would not be willing to maintain a friendship with someone with bipolar disorder	87 12.2%	43 6.0%	215 30.2%	216 30.4%	150 21.1%
You would not be willing to marry a person who was previously diagnosed with bipolar disorder	166 23.3%	123 17.3%	246 34.6%	109 15.3%	67 9.4%
You would not be willing to marry a person who has family members diagnosed with bipolar disorder	82 11.5%	45 6.3%	203 28.6%	219 30.8%	162 22.8%
You would not tell your future spouse if you were diagnosed with bipolar disorder	59 8.3%	40 5.6%	128 18.0%	200 28.1%	284 39.9%

As in Figure 1, 362 (50.9%) of participants had good knowledge, attitude and practice (KAP) towards bipolar disorder while 49.1% had poor KAP scores. KAP score was significantly associated with marital status only but not with age, gender, educational level or work profession.

**Figure 1** Knowledge, Attitude and Practice scores among study participants

As in Table 4, participants' knowledge scores regarding bipolar disorder were not significantly associated with any of their demographic characters except marital status ($P < 0.05$).

Table 4 Association between KAP scores with sociodemographic characters of participants (n=711)

		KAP score		Total (N=711)	P value
		Good	Poor		
Gender	Male	199	213	412	0.102
		28.0%	30.0%	57.9%	
	Female	163	136	299	
		22.9%	19.1%	42.1%	
Age	17 – 25	231	250	481	0.129
		32.5%	35.2%	67.7%	
	25 – 44	96	77	173	
		13.5%	10.8%	24.3%	
	44 – 65	34	21	55	

	Older than 65	4.8%	3.0%	7.7%	
		1	1	2	
		0.1%	0.1%	0.3%	
Marital status	Single	240	261	501	0.013
		33.8%	36.7%	70.5%	
	Married	122	88	210	
		17.2%	12.4%	29.5%	
Nationality	Saudi	347	333	680	0.774
		48.8%	46.8%	95.6%	
	Non-Saudi	15	16	31	
		2.1%	2.3%	4.4%	
Educational level	High school or less	70	82	152	0.176
		9.8%	11.5%	21.4%	
	College and above	292	267	559	
		41.1%	37.6%	78.6%	
Monthly income	Less than 5000 SR	243	253	496	0.278
		34.2%	35.6%	69.8%	
	5000- 15000	93	77	170	
		13.1%	10.8%	23.9%	
	More than 15,000 SR	26	19	45	
		3.7%	2.7%	6.3%	
Career status	Student	207	219	426	0.095
		29.1%	30.8%	59.9%	
	Unemployed	64	42	106	
		9.0%	5.9%	14.9%	
	Employed	91	88	179	
		12.8%	12.4%	25.2%	
Healthcare profession	Yes	130	137	267	0.357
		18.3%	19.3%	37.6%	
	No	232	212	444	
		32.6%	29.8%	62.4%	

4. DISCUSSION

Bipolar affective disorder is a significant mental condition that causes disabilities in daily functioning, resulting in higher expenditures for both patients and society. For BD I, the lifetime frequency in the general population is roughly 1% (Lazowski et al., 2012). According to a major cross-sectional survey of 11 nations, the overall cumulative incidence of bipolar spectrum disorders was 2-3%, with BD II having a frequency of 0.4% (Durand-Zaleski et al., 2012).

Epidemiologic evidence on cyclothymia is ambiguous due to the complexity of its phenomenology, implying a range of 0.5 to 6.3%. Unfortunately, having bipolar disorder carries a significant stigma. Patients may feel alone, ashamed or discriminated against as a result of this, all of which might prevent them from seeking assistance and healing. It also makes it difficult for the patient's family and community to offer appropriate assistance.

In the current study, (50.9%) of participants had good knowledge, attitude and practice (KAP) towards bipolar disorder while 49.1% had poor KAP scores. This was lower than reported in a previous study as in a study in France, name identification for mental diseases was high (Kroon et al., 2013) and marginally higher than in Australia 61% (Lazowski et al., 2012) and Scotland 72% (Griffiths et al., 2006). Nevertheless, awareness of psychological disorders was not always followed by understanding of the features of the specific disorders and there were also low expectations for treatment efficacy, particularly among men.

Research in the United Kingdom investigated lay people's perceptions about the cause and treatment of BP. The most often cited causes were chemical imbalances in the brain, drug use, emotional childhood trauma and genetics (Durand-Zaleski et al., 2012). A study in Spain on the ideas and beliefs concerning schizophrenia and BP discovered that 72% of the Spanish people supported

psychological therapy as a viable therapeutic option (Ruiz-Díaz et al., 2012). As for causes of bipolar disorders, 42.6% of participants thought it was hereditary or genetic, 67.5% reported neurophysiologic or neurochemical imbalance, 26.3% substance abuse, 20.3% unhealthy lifestyle, 46.6% traumatic events in life and 16% weak faith.

According to comparable findings from a Saudi Arabian study investigating the prevalence of psychiatric disorders among visitors to faith healers, 12.3% of participants attributed their psychiatric illnesses to the evil eye, magic (5.5%), social and financial stress (16.5%) and 49.3% reported more than one of the reasons. None of the individuals, however, linked psychiatric disease to a biological cause. The Holy Quran (95.9%) and sanctified water (71.3%) were the most used treatments in the same survey (Alosaimi et al., 2014). In addition, a Sudanese survey found that 20.7% of people blamed their mental illnesses on jinn, 19.3% on Shiatan, 28.4% on bad spirits and 43.7% on magic (Sorketti et al., 2012).

In an Egyptian study, 40.8% of BP patients sought traditional religious healers and 62.2% did so before looking for psychiatric council services (Assad et al., 2015). Patients may develop symptoms and signs such as sadness, hypomania, mania, irritability and sleeplessness, resulting in long-term psychological suffering. Bipolar disorder is frequently misdiagnosed because many patients and their families fail to present their healthcare practitioner with a complete picture of their condition. They normally exclusively discuss symptoms of depression because signals of mania are often dismissed as just reckless, careless and nonconformist behavior (Alosaimi et al., 2019).

Regarding treatment, 82.7% of study participants reported psychiatric medications, 11.4% using brief counselling therapy, 8.4% talk to family or friends and 4.8% involve in recreational activities. Despite being a safe and very effective method for managing BP that is severe, Saudi study found that treatment resistant or occurs during pregnancy, just 12.7% of Saudis believe that ECT can treat it (Alosaimi et al., 2019). Short educational interventions have been shown to increase ECT knowledge and attitudes (Hoffman et al., 2018).

ECT, but not antidepressant prescription use, is linked to global government spending on mental health. Despite annual increases in the general health budget in Saudi Arabia, there is still no separate budget for mental health (Koenig et al., 2014). Patients are sometimes abandoned by their family and communities due to a lack of understanding and awareness concerning bipolar disease. They are branded as lazy, insane, demon-possessed, violent, out of control or dangerous to be around. They are stereotyped as persons who are unable to hold down a job or start a family.

However, by expanding awareness, families and communities will regard bipolar disorder as a treatable illness. They will learn to collaborate with patients to manage expectations and establish an environment conducive to the latter's achievement. Patients benefit from social support while they recover and maintain their health. It is critical to educate patients and family on the necessity of medication adherence, as well as the symptoms of hypomania and mania. One of the most difficult issues is maintaining treatment engagement because most patients have repeated manic, hypomanic or depressed episodes in their lives, which are frequently the result of medication noncompliance. Patients' and families' continued support and psychoeducation are critical components of ongoing treatment.

5. CONCLUSION

In conclusion, Saudi general population exhibited good knowledge, attitude and practice towards bipolar disorder. Awareness score was significantly associated with marital status. Awareness campaigns are recommended to raise awareness of Saudi population on bipolar disorder. While public education is critical to long-term aims of reducing stigma, it is equally critical to reveal the amount to which people living with mental illness are affected and the impact this has on their lives and everyday functioning. Future studies with larger sample size are recommended.

Ethics statement

Ethical approval was obtained from the Research Ethical Committee at Faculty of Medicine in Imam Abdulrahman Bin Faisal University, Dammam City, Saudi Arabia (Ethical approval number:2023-01-175). Participants were informed that their participation is voluntary and filling the questionnaire indicates their consent to participate.

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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