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Awareness of antidepressants uses and their association with addiction and social stigma among university students

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RESERACH

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ABSTRACT

Objectives

Depression is a mood-related mental illness that is treated effectively by antidepressants. Most of the public are not aware of the various uses of antidepressants. Antidepressants are associated with controversial addictive false believes. They are also related to social stigma. This study determines the awareness of a representative sample of Imam Abdulrahman bin Faisal university (IAU) students' regarding the use of antidepressants to treat various diseases. It also evaluates their awareness about the side effects of antidepressants and their association with addiction and social stigma that may collectively lead to refusal of treatment.

Methods

A cross-sectional study involving 389 students who completed a 22-item validated questionnaire to measure their degree of awareness regarding uses, side effects and misconceptions related to antidepressants.

Results

Among the 389 participants, 196 are females. Only 28.5 Per Cent and 10.3 Per Cent were knowledgeable of the uses of antidepressants for other psychiatric and somatic diseases, respectively. Additionally, 47.3 Per Cent agreed that patients may stop taking antidepressants if they had a previous knowledge of their side effects. Also, 71 Per Cent of the participants falsely believed that antidepressants cause addiction, and many of them stated that this belief shall not prevent patients from taking medications. Two-third of the participants acknowledged that patients who are on antidepressants are concerned of social stigma, and 95 Per Cent of them believed this may be a reason for stopping medications.

Conclusion

This study concludes that there are alarming misconceptions regarding antidepressants. It also highlights the lack of awareness about uses of antidepressants and encourages further antidepressants' awareness campaigns

Key Words

Students, Addiction, Social Stigma, Antidepressants, Awaren ess.

Introduction

Depression is a well-known mood disorder that may affect both mental and physical aspects of health. It is mainly characterized by low mood, loss of interest, and difficulty enjoying life. It is among the most prevalent psychiatric disorders, with a lifetime risk of depression reaching up to 15 Per Cent and a high mortality rate, as it increases the risk of suicide by almost 2 Per Cent compared to the general population[1]. It is a mental illness with severe medical consequences if left untreated, which are found nearly in 70 Per Cent of patients with depression. It increases the risk of developing cardiovascular, musculoskeletal, and respiratory diseases and may lead to other diseases, such as hypertension, thyroid disorder, inflammatory arthritis, and asthma[2,3]. Depression also increases the possibility of cancers, ulcers, obesity, and diabetes. Additionally, it can increase the risk of getting psychopathologies, such as anxiety, obsessive compulsive disorder, and substance use disorder (Patella et al. 2019).

Depression is the leading cause of disability worldwide, and it is one of many mental illnesses that is treated effectively non-pharmacologically and/or pharmacologically [(Ng et al. 2021); (Timonen and Liukkonen 2008)]. Cognitive behavioural therapy (CBT) is one of the major non-pharmacological/ psychological treatment of depression. CBT helps patients promote positive emotions by modifying dysfunctional thoughts and behaviours. Pharmacological treatment mainly includes antidepressants, that are wide groups of drugs with various mechanisms of action and a wide range of both benefits and adverse effects. First line antidepressants include selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs). Second line antidepressants include tricyclic antidepressants (TCAs), and third line antidepressants include monoamine oxidase inhibitors (MAOIs) [4,5]. These medications can relieve many symptoms of depression but may also cause many unpleasant side effects that may affect the adherence to such drugs. These side effects include nausea, dizziness, drowsiness, postural hypotension, dry mouth, headache, diarrhea, decreased appetite, nervousness, insomnia, somnolence, sweating, impaired sexual functions, and increased suicidality in some patients.

In addition to treating depression, it was found that antidepressants can be used in treating a wide variety of both mental and physical diseases. It has been reported that in the last years, a progressive change in the prescribing pattern from benzodiazepines (anxiolytics) to newer antidepressants (SSRI, SNRI) has been observed for the treatment of anxiety disorders including phobias, panic disorder, generalized anxiety disorder (GAD), obsessive-compulsive disorders, and posttraumatic stress disorder [6,7]. Moreover, a meta-analysis of twelve randomized controlled trials regarding the use of antidepressants in the treatment of functional gastrointestinal illnesses was done and has concluded that the use of antidepressants in treating functional gastrointestinal disorders was effective[8]. Furthermore, giving its analgesic effect, antidepressants have shown efficacy in the management of neuropathic pain[9].Few studies have examined the misconceptions held by the general population about the use of antidepressants and the possibility that they may cause dependence in patients regularly prescribed these medications. It was reported that antidepressants do not have a clinically significant liability to cause addiction except for tranylcypromine and amineptine (antidepressants that are not structurally related to SSRIs, TCAs, or MAOIs). The above two drugs are usually not prescribed to patients with a history of substance abuse[10].

A study evaluated the stigma related to the use of antidepressants and how it affects the adherence to these medications. They concluded that this stigma is linked to the perception of these drugs being ineffective therapeutically, associated with someone's inability to solve problems, as well as emotional weakness[11]. Additionally, it has been shown that self-stigma is a reason for the discontinuation of treatment in patients who are taking antidepressants[12]. Moreover, researchers who interviewed more than a thousand primary health care patients indicated that 23 Per Cent of these patients will not tell their physicians about their depressive symptoms because they feared they would be prescribed antidepressants. Some feared the stigma, while others feared the side effects[13]. Properly educating patients about the nature of their illness and what is expected to occur when on medication may help in building a therapeutic alliance which will help in shared decision making, henceforth increasing the patients' adherence to the treatment[14]. This education cannot be properly achieved without thoroughly probing the beliefs and concerns potential patients may have toward these medications, most notably those associated with stigma.

Due to the importance of tackling the issues mentioned above, this study aims to evaluate a representative sample of IAU students' awareness regarding the side effects of

antidepressants and their association with addiction and social stigma that may collectively lead to refusal of treatment. This study also determines the students' awareness regarding the use of antidepressants to treat diseases other than depression.

This study will help enlightening health care professionals about the importance of spreading awareness regarding the uses of antidepressants and their side effects. We also expect that this study will shed a light on the need to minimize the social stigma regarding antidepressants. Eventually, this will lead to increasing the awareness regarding the importance of these medications in preventing complications and improving the quality of life.

Methods

Design and setting

A cross-sectional study conducted at IAU, Dammam, Saudi Arabia. The study is ethically approved by IAU institutional research board (IRB). IRB approval number IRB-UGS-2018-01-328.

Sample

The sample included 385 first year preparatory year students at IAU during the years 2019-2020. The exclusion criteria included any student below the age of 18 and/or is diagnosed with psychiatric illness by a family physician or a psychiatrist.

Procedure and Questionnaire

A predesigned 22-item validated questionnaire was distributed to participants who were advised to fill it out completely. All participants signed an informed consent prior to answering the pretested questionnaire. Questions raised by the participants were promptly clarified by a specified team member. Approximately 5 minutes were needed to fill out the questionnaire. A team member ensured that all questions were answered. The questionnaire was originally designed by the authors and approved by three specialized doctors in the field of psychiatry. A pilot study to assess the questionnaire's reliability was done by the participation of 30 subjects (not included in the final sample) with a Cronbach's alpha of 0.918.

Statistical Analysis

Data was entered in the computer. Data was analysed using SPSS package for windows version 25. Frequency distribution and percentages were calculated. Mean, Standard Deviation (SD), Chi square test and Fisher test were used to analyse quantitative, parametric data. $P<0.001$ was considered significant.

Results

Sample Characteristics

The questionnaire was answered by a total of 389 students attending IAU with an average age of 18 years old (mean=18.41). Almost half of the participants were females (50.4 Per Cent). Our sample included students at their preparatory year of the university who are planning to major in either health, engineering, or science specialty with a percentage of 34.4 Per Cent, 32.6 Per Cent, and 32.9 Per Cent respectively.

Participants' awareness of the use of antidepressants to treat diseases other than depression

The study shed a light on the participants' awareness of the use of antidepressants for both psychiatric and somatic conditions other than depression as follow:

Participants' awareness of the use of antidepressants for other psychiatric diseases

Among all participants, 18.3 Per Cent did not know any uses of antidepressants for other psychiatric diseases while 53.2 Per Cent gave a false answer. Moreover, only 28.5 Per Cent were knowledgeable of the uses of these drugs for other psychiatrics diseases (Table 1).

Participants' awareness of the use of antidepressants for somatic diseases

Similarly, 29.8 Per Cent of the participants were not knowledgeable of any uses of antidepressants for somatic diseases while 59.9 Per Cent gave a false answer. Surprisingly, only 10.3 Per Cent of the participants acknowledged the uses of these drugs for somatic diseases (Table 1).

Participants' awareness of the side effects of antidepressants and their influence on patients' compliance to medications

Table 2 shows the percentages of participants' regarding their knowledge about the side effects of antidepressants. Among the documented antidepressants' side effects in the literature, this study shows that almost half of the participants were aware of drowsiness (57.3 Per Cent), insomnia (52.4 Per Cent) and fatigue (50.4 Per Cent) as side effects caused by antidepressants. This knowledge of such side effects may hinder the patients' compliance towards antidepressants, since 184 (47.3 Per Cent) of the participants agreed that patients may stop taking antidepressants if they had a previous knowledge of their side effects. On the other hand, only 27.8 Per Cent of the participants believed that a prior knowledge of the side effects of antidepressants will not influence patients' decision in taking these medications. In addition,

surprisingly, Table 2 shows the dangerous lack of awareness of 35 Per Cent of the participants to the medically known fact that antidepressants increase suicidal thoughts, especially at the earlier stages of treatment.

Participants' awareness of the relation between antidepressants and addiction, based on their sex, and the influence of awareness on patients' compliance to medications

In contradiction with what is known medically, many participants (276), of which 60.1 Per Cent are females, had a misconception that antidepressants cause addiction. On the other hand, only 47 participants, of which 31.9 Per Cent are females, were aware that antidepressants do not cause addiction. Overall, there is a significant difference between the views of females and males in that regard ($p<0.001$) (Figure 1).

The study also ironically shows the views of 158 participants (40.6 Per Cent) who in their opinion stated that patients will not stop taking their medications even if they believed that antidepressants cause addiction. On the other hand, 28.8 Per Cent of them stated that these patients would stop taking antidepressants if they believed they are addictive. There is no significant difference between the males and females' views in that regard ($P=0.212$) (Table 3).

Participants' awareness of the relation between antidepressants and social stigma based on their sex and the influence of awareness on patients' compliance to medications

Among the participants, 255 believed that patients who are on antidepressants are concerned about the social stigma. Female participants mostly agreed (58 Per Cent). However, only 59 participants, 62.7 Per Cent of which are males, thought that social stigma is not associated with taking antidepressants. Males' views are significantly different than females' views in that regard ($P<0.001$) (Figure 2).

The study also shows that 224 participants believed that social stigma is a valid reason for patients to stop taking their antidepressants. Among these participants, 61.2 Per Cent are females. On the other hand, only 78 participants, of which 61.5 Per Cent are males, thought that social stigma is not a reason for discontinuing antidepressants. Males' views are significantly different than females' views in that regard ($P<0.001$) (Table 4).

Discussion

Depression is the most common mental health problem globally and is treated effectively by antidepressants. Up to our knowledge, this study is the first to evaluate the public awareness of the uses of antidepressants and their effects on the course of treatment in Saudi Arabia. The main findings reported in the study are: First, the lack of knowledge regarding the different uses of antidepressants for psychiatric and somatic illnesses. Second, the lack of awareness of the side effects of antidepressants that may lead eventually to discontinuing the course of treatment [15-17]. Third, although many participants stated falsely that addiction is a side effect of antidepressants, most of them reported that addiction is an invalid reason to stop the course of treatment. Forth, many participants reported that patients on antidepressants may have concerns regarding social stigma and believed that these concerns are valid reasons to stop the course of treatment [19-21].

Most of the participants stated that antidepressants are only used to treat depression and not any other diseases. This can be attributed to their misleading nomenclature since they include the word "depression". Previous studies showed that antidepressants are effective in treating other psychiatric and somatic conditions. However, only 28.5 Per Cent of our participants reported that antidepressants can be used in treating other psychiatric illness and 10.3 Per Cent reported their use in other somatic illnesses.

The lack of awareness regarding the side effects of antidepressants is an additional finding in the study. Increased suicidal thoughts is the mostly denied side effect of antidepressants which highlights a gap of knowledge that needs to be addressed. Multiple studies concerning adolescents have reported an increase in the suicidal ideation following the use of antidepressants[22-25]. Moreover, this is mostly significant in the initial course of antidepressants. However, in 2005, a systemic review concluded that antidepressants could reduce the suicidality in depressed patients[26-30]. This controversy between the relation of antidepressants and suicidality must be addressed to patients prior to the initiation of antidepressants course, for a better control of the outcome. On the other hand, the most acknowledged side effect of antidepressants is drowsiness which agrees with a study that reported drowsiness as one of the most common side effects of antidepressants (Fawzi et al. 2012).

An interesting finding in our study is that almost half of the participants reported that patients' prior knowledge of the side effects of antidepressants will mostly lead to them stopping the course of treatment. This correlates with several studies that viewed side effects as a major factor in patients' non-adherence to medications [(Wilson and Mottram 2004); (Tamburrino et al. 2009); (Ho, Jacob, and Tangiisuran 2017); (Crawford et al. 2014); (Wells and Kaptchuk 2012); (Sleath, Wurst, and Lowery 2003); (Martin-

Vazquez 2016)]. Consequently, an elaborate patient education plan about antidepressants may lead to better compliance and promising outcomes. Furthermore, health care professionals are ethically obligated to educate patients about side effects of medications before prescribing them. They are also obligated to protect the patient's autonomy by encouraging shared decision making.

Up to 71 Per Cent of the participants have the misconception that antidepressants cause addiction, the majority of which are females. This finding agrees with several social studies concerning the false public beliefs about antidepressants, since it is well known that antidepressants do not cause addiction[30-32]. Despite the high percentage of participants who stated that antidepressants cause addiction, surprisingly 40.6 Per Cent of the participants, both males and females, reported that addiction, from a patient's point of view, is an invalid reason to stop the course of treatment. These findings disagree with a couple of studies that reported that fear of addiction is a major factor for non-adherence[33]. This high percentage can be attributed to several factors. The demographical characteristics of the participants may be associated with a more positive attitude towards medications and health care professionals as one-sided decision makers. Moreover, the desperation that one can go through to get treated from depression can be a valid reason to disregard the false belief of the addictive nature of its medications.

Social stigma associated with the use of antidepressants is seen as one of the patients' concerns by 65.6 Per Cent of the participants. Furthermore, 57 Per Cent stated that social stigma is a valid reason for the patients to stop the course of antidepressants. The study also shows that females are significantly more concerned about social stigma compared to males and are more likely to stop the course of treatment for such reasons. A study done in Pakistan in 2015 reported that depressed females anticipated more stigmatized behaviour than males due to the culture of Pakistan[34]. Similarly, and although the society is changing to the better, Saudi Arabian culture still exhibits more tolerability towards men's mental issues compared to women. Social stigma towards psychiatric illnesses and its medications is a global concern and is found in different studies concerning the public[35-38]. Social stigma towards antidepressants specifically is reported as a major concern for antidepressants use and is highly associated with treatment discontinuation in psychiatric patients and the general population[39]. Social stigma to the use of antidepressants can be due to several reasons such as: Lack of knowledge of its uses, the misconception of its addictive characteristics and the vulnerability of the patients who are on it as perceived by the public.

This study is limited by the small-sized sample that may not represent the whole society. Additionally, not asking the participants to further explain their answers in the questionnaire led to difficulties in reasoning them [40-46].

Conclusion and Recommendations

A gap of knowledge about antidepressants' clinical uses and side effects is found in the study. Also, antidepressants are perceived as addictive and stigmatizing agents. These results are alarming and highlight lack of awareness about antidepressants in our society. Considering the huge burden social stigma represents, specially to females, this study recommends that immediate actions shall be taken to reduce the stigma and familiarize the public with antidepressants, specifically their documented side effects compared to those that are misconceived by the public. Moreover, this study can be repeated over a period to measure the change in the society members' actions based on the change in their thoughts after allocating resources and spreading awareness. More research covering larger samples including different age groups is advised to be done regarding the public knowledge and attitude towards antidepressants. Also, investigating the awareness of antidepressants uses in population with a diagnosis of psychiatric disorder in comparison with the current population of the study is recommended. Further, studies about the awareness of uses of complementary and alternative medicine for patients with depression are recommended. In addition, further research to explore the possible factors responsible for the lack of awareness and negative attitude towards antidepressants in Saudi Arabia is needed. Actions on raising the society's awareness and efforts to familiarize the concept of antidepressants are advised to be implemented.

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Data Availability

The data will be provided by the corresponding author upon request.

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Conflicts of Interest

The authors declare no conflict of interest.

Ethical approvement

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Author's contribution

R.A. conceived and designed the study, conducted research, provided research materials, and organized data. J.A. conducted research, organized data, and wrote initial draft of the manuscript. S.A. conducted research, analysed, and interpreted data. A.A. conducted research, analysed data, and revised initial draft of the manuscript. N.A. conducted research article and analysed data. S.S. conducted research and revised the initial draft of the manuscript. N.R.A. conducted research, supervised it, and provided logistic support. K.A. wrote the final draft of the manuscript and provided logistic support. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Tables & Figures

Table 1: Frequency of participants' knowledge of the use of antidepressants (n=389).

Based on the participants' awareness, are antidepressants used for:	No	Yes	Do not know
Other psychiatric diseases?	207	111	71
Somatic conditions?	233	40	116

Table 2: Frequency and (percentages) of participants' knowledge of the side effects of antidepressants (n=389).

Based on the participants' knowledge, do antidepressants cause:	Yes	No	Do not know
Drowsiness	223 (57.3 Per Cent)	63 (16.2 Per Cent)	103 (26.5 Per Cent)
Dry mouth	99 (25.4 Per Cent)	81 (20.8 Per Cent)	209 (53.7 Per Cent)
Hyperphagia	103 (26.5 Per Cent)	126 (32.4 Per Cent)	160 (41.1 Per Cent)
Anorexia	154 (39.6 Per Cent)	93 (23.9 Per Cent)	142 (36.5 Per Cent)
Blurred vision	104 (26.7 Per Cent)	90 (23.1 Per Cent)	195 (50.1 Per Cent)
Headache	174 (44.7 Per Cent)	84 (21.6 Per Cent)	131 (33.7 Per Cent)
Constipation	74 (19 Per Cent)	86 (22.1 Per Cent)	229 (58.9 Per Cent)
Sexual dysfunction	79 (20.3 Per Cent)	85 (21.9 Per Cent)	225 (57.8 Per Cent)
Nausea and vomiting	157 (40.4 Per Cent)	73 (18.8 Per Cent)	159 (40.9 Per Cent)
Urinary problems	62 (15.9 Per Cent)	92 (23.7 Per Cent)	235 (60.4 Per Cent)
Dizziness	175 (45 Per Cent)	69 (17.7 Per Cent)	145 (37.3 Per Cent)
Insomnia	204 (52.4 Per Cent)	83 (21.3 Per Cent)	102 (26.2 Per Cent)
Diaphoresis	117 (30.1 Per Cent)	80 (20.6 Per Cent)	192 (49.4 Per Cent)
Weight gain	101 (26 Per Cent)	114 (29.3 Per Cent)	174 (44.7 Per Cent)
Weight loss	125 (32.1 Per Cent)	100 (25.7 Per Cent)	164 (42.2 Per Cent)
Tremors	165 (42.4 Per Cent)	64 (16.5 Per Cent)	160 (41.1 Per Cent)
Fever	69 (17.7 Per Cent)	116 (29.8 Per Cent)	204 (52.4 Per Cent)
Diarrhea	55 (14.1 Per Cent)	106 (27.2 Per Cent)	228 (58.6 Per Cent)
Fatigue	196 (50.4 Per Cent)	65 (16.7 Per Cent)	128 (32.9 Per Cent)
Seizure	78 (20.1 Per Cent)	118 (30.3 Per Cent)	193 (49.6 Per Cent)
Increased suicidal thoughts	125 (32.1 Per Cent)	136 (35 Per Cent)	128 (32.9 Per Cent)
Palpitations	167 (42.9 Per Cent)	66 (17 Per Cent)	156 (40.1 Per Cent)

Table 3: Frequency of participants' views over patients stopping-continuing antidepressants if they believe they cause addiction (n=389).

Based on the participants' opinion, the number of them who:	Females	Males	Total
Think patients will stop antidepressants if they believe they cause addiction	66	46	112
Think patients will not stop antidepressants if they believe they cause addiction	79	79	158
Do not know	51	68	119
Total	196	193	389

Table 4: Frequency of participants' views over patients stopping-continuing antidepressants if they believe they cause social stigma (n=389).

Based on the participants' opinion, the number of them who:	Females	Males	Total
Think patients will stop antidepressants if they believe they cause stigma	137	87	224
Think patients will not stop antidepressants if they believe they cause stigma	30	48	78
Do not know	29	58	87
Total	196	193	389

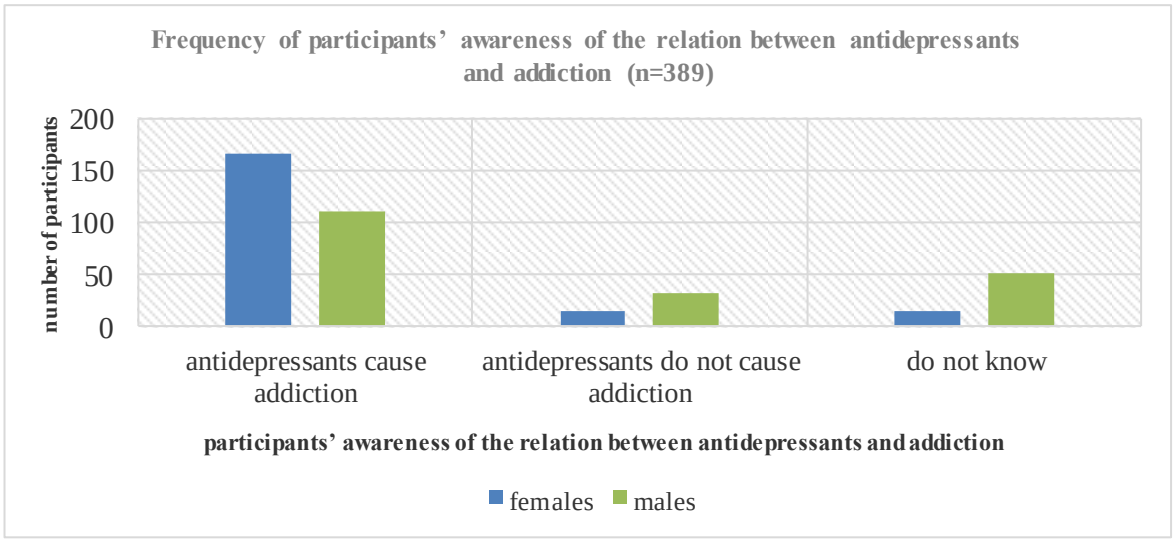

Figure 1: Histogram showing the Frequency of participants' awareness of the relation between antidepressants and addiction (n=389).

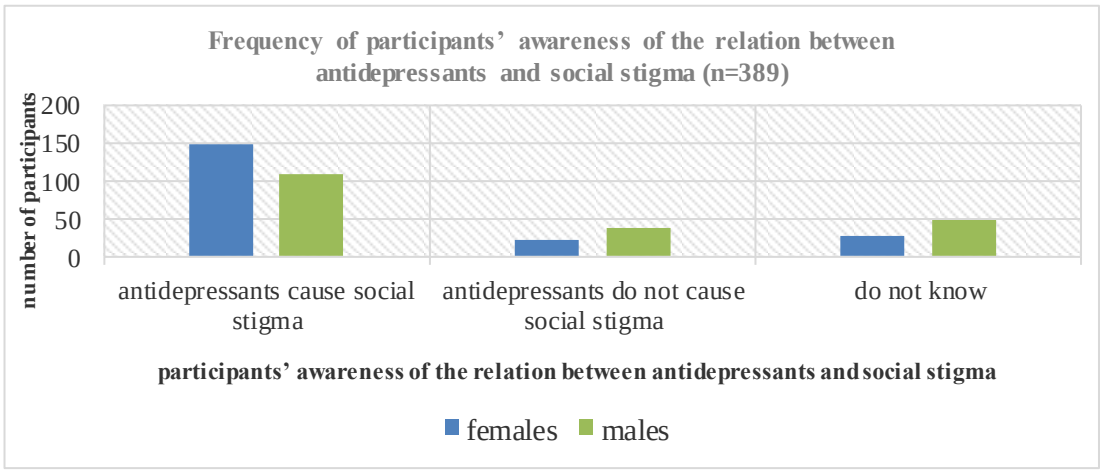

Figure 2: Histogram showing the Frequency of participants' awareness of the relation between antidepressants and social stigma (n=389).