

# Knowledge and attitudes of physicians toward forensic psychiatry in Saudi Arabia

Saleh A. Alghamdi, MBBS, MD, Lujain S. Alfayez, MBBS, Taif F. Alnojaidi, MBBS, Mohammed A. Aljaffer, MBBS, MD.

## ABSTRACT

**الأهداف:** تقييم معرفة وموافق الأطباء من - التخصصات المختلفة - بما في ذلك الأطباء النفسيين، فيما يتعلق بالطب النفسي الشرعي وذلك: لمعرفة موقفهم تجاه هذا المجال الرئيسي للطب النفسي وأيضاً لتوضيح ما إذا كان هناك حاجة إلى التتعديل في برامج الإقامة للطب النفسي.

**المنهجية:** تم نشر استبيان من 3 صفحات، مكون من 3 أقسام يحتوي على 21 سؤالاً بشكل عشوائي عبر الإنترنت عبر نماذج Google باستخدام منصات التواصل الاجتماعي. كان المشاركون من الأطباء المقيمين والاختصاصيين والاستشاريين من مختلف التخصصات. أجريت الدراسة خلال الفترة من سبتمبر 2020 وأغسطس 2021م في مستشفيات مختلفة في المملكة العربية السعودية، وكان حجم العينة 482. وقد تم الحصول على موافقة لجنة الأخلاقيات الطبية (IRB) من كلية الطب بجامعة الإمام محمد بن سعود الإسلامية.

**النتائج:** بناءً على النتائج، فقد تم تحديد مستوى معرفة الأطباء على الطب النفسي الشرعي بأنها «ضعيفة» في 89% بينما كانت «جيدة» في 11% منهم. وفيما يتعلق بموقفهم من الطب النفسي الشرعي فقد وجد أنه «سلبي» في 16.4% و «إيجابي» في 83.6% من الأطباء.

**الخلاصة:** يعتبر موقف الأطباء في المملكة العربية السعودية إيجابياً تجاه الطب النفسي الشرعي بينما كانت معرفتهم به ضعيلة.

**Objectives:** To assess the knowledge and attitudes of physicians of different specialties, including psychiatrists, regarding forensic psychiatry to determine whether further modification or training is needed in the psychiatry residency program.

**Methods:** This cross-sectional study was carried out using a 3-page, 3-section questionnaire containing 21 questions disseminated randomly online via Google forms using social media platforms. The 482 participants were residents, specialists, and consultants of various specialties. The study was conducted between September 2020 and August 2021 in various tertiary hospitals across Saudi Arabia.

**Results:** A total of 482 physicians were recruited. The most common age group was 25-35 years, comprising mostly Saudis (62.4%). Based on the results, “poor” and “good” knowledge of forensic psychiatry was identified in 89% and 11% of the

physicians, while “negative” and “positive” attitudes were identified in 16.4% and 83.6% of the physicians.

**Conclusion:** Although the perspective of physicians regarding forensic psychiatry was found to be positive, their knowledge of the topic seems to be lacking.

**Keywords:** forensic psychiatry, awareness, psychiatry, medicolegal

*Saudi Med J 2022; Vol. 43 (1): 98-104  
doi: 10.15537/smj.2022.43.1.20210669*

*From the Department of Clinical Neurosciences (Alghamdi); from the College of Medicine (Alfayez, Alnojaidi), Imam Mohammad Ibn Saud Islamic University, and from the Department of Psychiatry (Aljaffer), College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia.*

*Received 23rd August 2021. Accepted 23rd November 2021.*

*Address correspondence and reprint request to: Dr. Saleh A. Alghamdi, Department of Clinical Neurosciences, College of Medicine, Imam Mohammad Ibn Saud Islamic University, Riyadh, Kingdom of Saudi Arabia. E-mail: saalghamed@imamu.edu.sa  
ORCID ID: https://orcid.org/0000-0003-3264-7397*

Forensic psychiatry is one of the chief subspecialties of psychiatry that deals with issues at the intersection of both law and psychiatry, thus making it related to criminology as well. This field of psychiatry is less prioritized than are other fields. However, while both national and international research studies are limited, they are increasing. For the past decade, forensic psychiatry studies have accelerated noticeably, and many people are being educated on the importance of this field in the community.

Several studies have been conducted to determine the attitudes and knowledge of the public, medical students, and physicians of varying specialties regarding forensic psychiatry. The extant literature is limited, and few studies have been conducted worldwide. Although most studies differ in their results, several agree on certain points: for instance, a Japanese article

highlighted the immediate need of increasing the number of psychiatrists who are capable of working in the field of forensic mental health.<sup>1</sup> Another article mentions the need to integrate forensic psychiatry with other psychiatric services, disregarding the fact that forensic psychiatry was concerned mainly with inpatient care in the past, compared to the present when psychiatrists treat patients within the community.<sup>2</sup> Several studies have pointed out that although younger medical students usually have some general knowledge and positive attitudes toward forensic psychiatry, there are limitations to their specific medicolegal knowledge.<sup>3</sup> A Chinese study discussed attitudes of the community and psychiatrists regarding forensic psychiatric assessment for public-security, revealing that, relative to psychiatrists, community members have lower confidence in the validity of forensic psychiatric assessments.<sup>1</sup>

Psychiatrists' main point of contention with forensic psychiatrists is that they believe that forensic services are over-funded and offer relatively less help in managing risky community patients compared to psychiatrists.<sup>2</sup> The fewer number of forensic psychiatrists reflects the lack of educational programs for students and physicians on the importance of forensic services.<sup>1</sup> A Canadian study suggests that a minority of residents undertake forensic psychiatry rotations and gain exposure to common medicolegal matters. These findings may explain the unfavorable attitudes of residents toward medicolegal topics and forensic patients.<sup>1</sup> However, some studies suggest that the residents' knowledge of forensic psychiatry could depend on their interest and early rotations. These studies mention that efforts should be made to identify residents with positive attitudes toward forensic psychiatry early on so that they can be mentored and encouraged to pursue this career.<sup>1</sup> Because more forensic psychiatrists are needed, present studies suggest that a large number of general psychiatrists could potentially serve in the field of forensic mental health in the future, once nationwide educational programs, such as post-graduate education, are established.<sup>1</sup> This study addresses the knowledge of forensic psychiatry in Saudi Arabia, which will have a major impact on the training programs for both under- and post-graduate.

**Methods.** A cross-sectional study was employed using a 3-page, 3-section questionnaire containing 21

questions disseminated randomly online via Google forms using social media platforms between September 2020 and August 2021 to 482 participants at different tertiary hospitals in Saudi Arabia. The participants were residents, specialists, and consultants of various specialties.

The inclusion criteria was as follow: participants had to be consultants, specialists, residents, or general practitioners of any medical specialty and English speakers. Non-English speakers and non-practicing physicians were excluded from the study.

Data was tabulated using MS Excel. The questionnaire's first section comprised items to collect demographic data, such as nationality, specialty, age group, and medical hierarchy. The second section included items to determine attitude, and a Likert scale was used to assess the role of forensic psychiatry, mental health acts or laws, forensic psychiatry exposure, investment in forensic psychiatry, and criminal eligibility after treatment. The third section comprised items on knowledge and was assessed using simply-designed scenarios that addressed the duty of forensic psychiatry, legal authority of psychiatric patients, therapeutic abortion for pregnant women, psychiatric patients who committed crimes, and mental eligibility of older patients who intended to donate their property.

Participants' overall knowledge of forensic psychiatry was assessed using a 10-item questionnaire; each correct answer was identified and coded "1", while each incorrect answer was coded "0". Total knowledge score was generated by adding the scores of all 10 items; the scores ranged from 0-10 points, with higher scores indicating higher knowledge of forensic psychiatry. By using 60% of the total score points as the cut-off to determine the level of knowledge, physicians were classified as having "poor knowledge" if they scored 60% or below and as having "good knowledge" if they scored above 60%. Participants' attitudes were assessed using an item questionnaire rated on a 5-point Likert scale, ranging from "strongly disagree," coded "1", to "strongly agree," coded "5". Total attitude score was calculated by adding the scores of all 8 items; the total ranged from 5-40 points, with higher scores indicating better attitude toward forensic psychiatry. By using 60% of the total score points as the cut-off to determine attitude, physicians were considered to have a "negative attitude" if they scored 60% or below and a "positive attitude" if they scored above 60%.

Institutional Review Board (IRB number: 75-2020) approval was issued and obtained from Imam Mohammad Ibn Saud Islamic University, Riyadh, Saudi Arabia.

**Disclosure.** Authors have no conflict of interests, and the work was not supported or funded by any drug company.

**Statistical analysis.** Descriptive statistics were presented using counts, proportions (%), and means, with standard deviation applied. Before conducting the statistical test, the Shapiro-Wilk test of normality test was performed to determine the overall distribution of study data. Because both knowledge and attitude scores were found to follow the non-normal distribution, non-parametric tests including the Mann-Whitney-U test (2 categories) and Kruskal-Wallis-H test (3 or more categories) were applied to determine the differences in the knowledge and attitude scores in accordance with the basic demographic characteristics. A *p*-value cut-off point of 0.05 at 95% confidence interval determined statistical significance. Pearson's correlation coefficient was assessed to determine the correlation between the knowledge and attitude scores.

All statistical analyses were carried out using Statistical Package for the Social Sciences for Windows, version 21 (IBM Corp., Armonk, NY, USA).

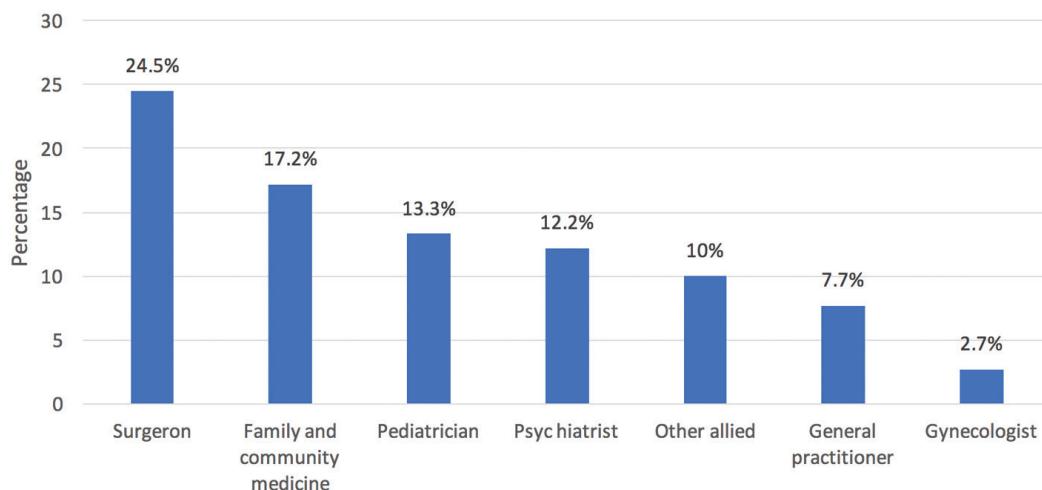
**Results.** A total of 482 physicians participated in the study. **Table 1** presents the sociodemographic characteristics of the physicians. The most common age group was 25-35 (62.4%) years, and nearly all the participants were Saudis (87.3%). With respect to their occupations, more than half (51.9%) were residents, some (30.1%) were consultants, and the rest (18%) were specialists. With regard to their specialty, approximately one-fourth (24.5%) were surgeons, and approximately one-fifth (17.2%) were family and community doctors (**Figure 1**).

**Table 1** - Basic demographic characteristics of the physicians (N=482).

Study data	n (%)
<i>Age group</i>	
25-35 years	301 (62.4)
36-45 years	104 (21.6)
46-55 years	48 (10.0)
56-65 years	27 (05.6)
>65 years	2 (0.40)
<i>Nationality</i>	
Saudi	421 (87.3)
Non-Saudi	61 (12.7)
<i>Position</i>	
Resident	250 (51.9)
Specialist	87 (18.0)
Consultant	145 (30.1)
<i>Physician's specialty</i>	
Psychiatrist	59 (12.2)
Surgeon	118 (24.5)
Family and community medicine	83 (17.2)
Pediatrician	64 (13.3)
General practitioner	37 (07.7)
Gynecologists	13 (02.7)
Other medical allied	48 (10.0)

The assessment of physicians' knowledge of forensic psychiatry is depicted in **Table 2**. The results reveal that the proportion of physicians who were aware of existing mental health acts or laws in Saudi Arabia was 33.8% while the proportion of those who obtained knowledge during medical school regarding forensic psychiatry was 29.7%. Furthermore, nearly 60% knew that the role of forensic psychiatry was to determine the criminal responsibility of psychiatric patients. Conversely, physicians' knowledge of the legal authority to determine criminal responsibility of psychiatric patients was poor, with only 24.9% correctly identifying the court as having legal jurisdiction, while 66.2% incorrectly identified forensic psychiatrists. In addition, physicians' knowledge of who should investigate a pregnant woman undergoing a therapeutic abortion due to mental illness was also poor, with only 15.6% correctly identifying the gynecologist, while 40.5% indicated the forensic psychiatrist. When asked who is responsible for the treatment of patients with schizophrenia who committed crimes, half of the physicians (50.8%) incorrectly identified the forensic psychiatrist, while 39.4% stated correctly that it should be a general psychiatrist. Similarly, 51.5% of the physicians knew that a mentally retarded patient who commits a crime can be deemed fit to stand trial when provided with certain rules and regulations. Likewise, 31.1% were sure that examining the mental health of couples before marriage was not considered the duty of the forensic psychiatrist. When asked to describe the meaning of "unfit to stand trial because of a mental disorder", 37.1% responded correctly that "it is the inability to defend against the charges he or she is facing". When asked to state their opinion regarding who could perform a mental health evaluation of an 82-year-old man who intends to donate all of his assets, 30.1% correctly identified the Civilian Forensic Committee.

**Table 3** depicts the assessment of physicians' attitudes toward forensic psychiatry. It can be observed that 30.9% of physicians "agreed" and 16% "strongly agreed" that the rules of forensic psychiatry are clear and understandable; 32.2% "agreed" and 37.3% "strongly agreed" that forensic psychiatry is an important specialty that plays a partial role in protecting the public from criminal patients. Furthermore, 33% "agreed" and 29.3% "strongly agreed" that an expansion in the number of beds for forensic psychiatry patients is a necessary investment, while 29.5% "agreed" and 33.6% "strongly agreed" that forensic psychiatry should be more community-based rather than inpatient focused. Similarly, 32.8% "agreed" and 39.8% "strongly

**Figure 1** - Distribution of physician's specialty.**Table 2** - Assessment of physician's knowledge toward forensic psychiatry (N=482).

Statements	n (%)
<i>In your opinion, what does "unfit to stand trial because of a mental disorder" mean?</i>	
Inability to defend against the charges he is facing or to tell his lawyer what he wants to do with his case*	179 (37.1)
Incapable of appreciating the nature and quality of the act or omission he made	201 (41.7)
Presence of chronic mental illness with delusions or hallucinations	78 (16.2)
Refusing to accept the court order to assess his mental capacity for trial	24 (5)
<i>In your opinion, in Saudi Arabia if an 82-year-old man who intends to donate all of his properties needs the mental health evaluation from one of the notary offices, which following offices are responsible for issuing the approval?</i>	
A trusted physician in the judiciary	76 (15.8)
The public prosecution	66 (13.7)
Civilian forensic committee*	145 (30.1)
A trusted psychiatrist in the judiciary	195 (40.5)

\*indicates correct answer

agreed" that health authorities should spend more on improving community psychiatric services rather than on imprisoning more patients, 27.2% "agreed" and 26.1% "strongly agreed" that forensic psychiatry experts should only provide their services as witnesses in litigations related to mental illness from a neutral position without favoring either the prosecution or the defense. In addition, 35.5% "agreed" and 25.7% "strongly agreed" that forensic psychiatry patients are generally not easily likable or acceptable, while 24.5% "agreed" and 17.6% "strongly agreed" that the criminal patient can be released after receiving adequate treatment.

Descriptive statistics of physicians' knowledge and attitudes toward forensic psychiatry is shown in **Table 4**. The mean knowledge score was  $3.52 \pm 1.63$  out of 10 points with 89% "poor" and 11% "good" knowledge identified among the physicians. The mean attitude

score was  $29.5 \pm 4.72$  out of 40 points where 16.4% "negative" and 83.6% "positive" attitudes were classified among the physicians.

When assessing the differences in the knowledge and attitude scores in accordance with the sociodemographic characteristics of the physicians, the knowledge scores of the older age group ( $U=30521$ ;  $p=0.024$ ) and those whose specialty was psychiatry ( $H=63.544$ ;  $p<0.001$ ) were significantly better than those of the other physicians. We further observed that non-Saudis ( $U=15775$ ;  $p=0.004$ ) and psychiatrists ( $H=29.604$ ;  $p<0.001$ ) had significantly better attitudes than did the other groups.

**Discussion.** The purpose of the present study was to evaluate the knowledge and attitudes of physicians of different specialties regarding forensic psychiatry. We found that physicians' knowledge on

forensic psychiatry was suboptimal with the majority having “poor” knowledge. This is consistent with the findings of a study by Haraguchi et al,<sup>1</sup> which revealed that general psychiatrists in Japan tend to possess insufficient knowledge, perhaps due to the reluctance of psychiatrists to work in forensic mental health. Another study conducted in Iran revealed similar findings of a low-level of knowledge among physicians towards forensic psychiatry.<sup>2</sup> Conversely, staff nurses were found to have better knowledge of forensic psychiatry, as reported by Bajwa et al.<sup>2</sup> In the specific assessment of knowledge in our study, we noted that only one-third of physicians were aware of mental health acts or laws in Saudi Arabia, with even fewer having sufficient knowledge regarding forensic psychiatry gained during

medical school. Furthermore, we learned that the increase in knowledge is associated with increased age and being a psychiatrist. There were limited studies that considered the factor associated with knowledge, although a study by Memerian et al,<sup>3</sup> documented that the level of knowledge was associated with their specialized education but not with their demographics, the university attended, or years of education.

Our study revealed that physicians’ knowledge of the legal authority in deciding the criminal liability of psychiatric patients was poor. Furthermore, they were also unaware that gynecologists should investigate pregnant women with mental disorders who intend to undergo therapeutic abortions and seem confused on the specialist who should ideally treat patients with schizophrenia who commit crimes, as half of them indicated “forensic psychiatrist” when in fact it should be “general psychiatrist.” Physicians showed adequate knowledge of mentally challenged patients being fit to stand trial, provided certain rules and regulations are met, and they were aware that examining the mental health of couples before marriage was not considered a function of forensic psychiatry; some knew the meaning of “unfit to stand trial because of a mental disorder”. Finally, only approximately one-third were able to correctly identify the “Civilian Committee” as the place that issues approval regarding the mental health evaluation of an 80-year-old man who intends

**Table 3 -** Descriptive statistics of the level of knowledge and attitude toward forensic psychiatry (N=482).

Variables	n (%)
Knowledge score, mean±SD	3.52±1.63
<i>Level of knowledge</i>	
Poor	429 (89)
Good	53 (11)
Attitude score, mean±SD	29.5±4.72
<i>Level of attitude</i>	
Negative	79 (16.4)
Positive	403 (83.6)

SD: standard deviation

**Table 4 -** Differences in the scores of knowledge and attitude in relation to the socio-demographic characteristics of the physicians (N=482).

Factor	Knowledge score (10)			Attitude score (40)		
	Mean±SD	U/H test	P-value	Mean±SD	U/H test	P-value
<i>Age group<sup>†</sup></i>						
25-35 years	3.37±1.60			29.4±4.77		
>35 years	3.78±1.66	U=30521	0.024*	29.7±4.66	U=28531	0.382
<i>Nationality<sup>‡</sup></i>						
Saudi	3.48±1.60			29.3±4.62		
Non-Saudi	3.85±1.82	U=14.355	0.129	31.1±5.15	U=15772	0.004*
<i>Position<sup>‡</sup></i>						
Resident	3.44±1.59			29.4±4.84		
Specialist	3.80±1.76	H=2.077	0.354	29.9±4.39	H=1.109	0.574
Consultant	3.50±1.62			29.5±4.39		
<i>Physician’s specialty<sup>‡</sup></i>						
Psychiatrist	5.12±1.59			32.1±4.16		
Surgeon	3.26±1.40			28.5±4.12		
Family and community medicine	3.54±1.47			28.4±0.25		
Pediatrician	3.00±1.33	H=63.544	<0.001*	29.4±4.89		
Internist	3.58±1.83			30.1±5.22	H=29.604	<0.001*
General practitioner	3.22±1.75			30.4±5.64		
Gynecologists	3.15±1.86			28.9±4.61		
Other medical allied	3.15±1.32			29.6±4.82		

SD: standard deviation, U: Mann-Whitney U, H: Kruskal-Wallis H, <sup>†</sup>p-value has been calculated using Mann-Whitney-U test,

<sup>‡</sup>p-value has been calculated using Kruskal-Wallis test, \*significant at p<0.05 level

to donate all his assets. In Iran, 41% of the physicians answered questions on the role of forensic psychiatry correctly, while in our study, 59.3% of the physicians were aware of the role, which was higher than previous reports.<sup>2</sup>

Despite their poor knowledge, physicians performed better in terms of attitude, as the majority had a positive attitude with only a few having a negative attitude. This is consistent with a study by Warnke et al,<sup>4</sup> which found that medical students' attitudes toward forensic psychiatry were "neutral" to "positive." However, studies conducted in Canada documented that psychiatry residents exhibited unfavorable attitudes toward forensic psychiatry primarily due to the misinformation about this subspecialty.<sup>3-5</sup> It is interesting to note that physicians' positive attitude was associated with being non-Saudi and being a psychiatrist. This differs from the findings of a study by Booth et al,<sup>5</sup> who reported that medicolegal education correlated negatively with unfavorable attitudes toward forensic psychiatry.

Pertaining to the specific assessment of attitude, the majority of physicians "agreed" or "strongly agreed" that the role of forensic psychiatry is well defined, it is an important entity protecting the public from criminal patients, its expansion is an important investment, and it should be more community-based. Further, many physicians agreed that health authorities should prioritize improving community psychiatric services than on imprisoning patients and that forensic experts should focus their work on mental illnesses without favoring any side during litigation. Similarly, they were aware that forensic psychiatry patients are not easily likable or acceptable, and they believed that criminal patients can be released after the necessary treatment. These findings concurred with those of Hill et al,<sup>6</sup> who compared the attitudes of forensic and non-forensic psychiatrists toward the subject and found that both groups tended to agree with the expansion in the number of forensic beds. Non-forensic psychiatrists wanted a lower threshold for admission to secure units. However, forensic psychiatrists opposed this. They also noted that non-forensic psychiatrists felt that forensic psychiatry has been over-funded compared with other psychiatric services, commenting that forensic services should be more closely integrated with other non-secure psychiatric services, rather than concentrating care on inpatients. In China, researchers provided conflicting views, reporting that, compared to psychiatrists, community members have lower confidence in the validation of forensic psychiatry assessment and stricter attitudes toward offenders with psychiatric disorders.<sup>7</sup>

Although the perspective of physicians regarding

forensic psychiatry is positive, their knowledge of it seems to be lacking. Better knowledge was found to be associated with increasing age, while better attitude was found to be associated with being non-Saudi. Besides psychiatrists, physicians of other specialties need more education in forensic psychiatry.

**Study limitations.** The questionnaire was developed by the researchers, hence, it was not a well-established, standardized questionnaire. Moreover, because the findings were based on a survey including physicians working exclusively in Saudi Arabia, generalizability was limited. There may also be a higher degree of selection bias due to the online distribution of the questionnaire. In addition, the study measured the attitudes of physicians toward forensic psychiatry without addressing the explanation of their attitudes. To overcome the following limitations, it is recommended to generate a standardized questionnaire that can be generalized to any country or center. Moreover, if additional studies are to be conducted regarding this topic, reporting the explanation of the physician's attitudes can be beneficial to build more research onto it.

In conclusion, the lack of knowledge regarding the appropriate authorities who investigate certain situations involving crimes committed by patients with mental illness is clear in this study. Thus, continuous efforts are imperative in order to address the gaps in the knowledge of this subspecialty.

Further research is needed to shed more light on this field, which may lead to better perspectives in forensic psychiatry. It is important since it will help the authorities to improve forensic psychiatry services by implementing good teaching and training for the under- and post-graduate programs. Forensic psychiatrists have a major role in helping the authorities to take the right decision regarding forensic patients in the interest of both patients and the community.

**Acknowledgment.** The authors gratefully acknowledge Editage (<https://www.editage.com/>) for English language editing.

## References

1. Haraguchi T, Fujisaki M, Shiina A, Igarashi Y, Okamura N, Fukami G, et al. Attitudes of Japanese psychiatrists toward forensic mental health as revealed by a national survey. *Psychiatry Clin Neurosci* 2011; 65: 150-157.
2. Bajwa AK, Kaur R, Kaur S, Shabnam, Sharma S, Kaur S, et al. Descriptive study to assess the knowledge of staff nurses' regarding forensic psychiatry at selected hospitals, Amritsar. *AMEP's Curr Trends Diag Treat* 2019; 3: 56-58.
3. Memarian A, Saberi SM, Aghakhani K, Abdolkarimi L, Soltanti S, Amiri A. Physicians' awareness towards forensic psychiatry, a survey of physicians who work in an Iranian general hospital. *J Punjab Acad Forensic Med Toxicol* 2019; 19: 76.

4. Warnke I, Gamma A, Buadze A, Schleifer R, Canela C, Rüsch N, et al. Status quo of German-speaking medical students' attitudes toward and knowledge about central aspects of forensic psychiatry across four European countries. *Int J Law Psychiatry* 2018; 58: 9-16.
5. Booth BD, Mikhail E, Curry S, Fedoroff JP. Shaping attitudes of psychiatry residents toward forensic patients. *J Am Acad Psychiatry Law* 2016; 44: 415-421.
6. Hill SA, Mather G, Laugharne R. Attitudes of psychiatrists towards forensic psychiatry: a survey. *Med Sci Law* 2007; 47: 220-224.
7. Shaoling Z, Jun W, Graham M, Chen C, Simei Z, Qiguang L, et al. Attitudes of Chinese community members and psychiatrists towards forensic psychiatric assessments. *Psychiatry Res* 2017; 258: 283-288.