

Awareness of medical students toward forensic medicine at Albaha University medical college, Saudi Arabia

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Abstract

Awareness of medical students towards forensic medicine was assessed at Albaha University, Saudi Arabia in 2016. This report aimed to provide detail descriptive and analytical findings of the cross-sectional survey conducted to explore the medical students' awareness towards forensic medicine and the factors affecting their choice of this specialty in the future. It was found that more than half of the students (63.3%) had poor awareness towards forensic medicine. Personal reasons (84.2%) were the main factors affecting the students' choice of forensic medicine as specialty in the future. Students' level of study was solo predictive for their awareness level using binary logistic regression ($B = -2.485$, Wald test = 14.276, $P = 0.000$). Early exposure to, and well-distributed forensic medicine themes throughout the medical school phases, is needed to pivotally include this specialty in the students' future alternatives.

Keywords: Forensic medicine, Medical students, Awareness level.

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Introduction

Study of Forensic Medicine is substantial and has the capacity to upgrade medical knowledge and enhance clinical performance. It has been central for medical education, despite the sharp decline in the use of autopsy tools for teaching undergraduate medical students in recent years.¹ Medical students have a good attitude towards observing Forensic Medicine procedures.² An Indian study on medical students of Kerala revealed a high percentage of medical students who appreciated the medico-legal and forensic medicine procedures. They considered it a learning experience as more than 90% of the students agreed that autopsy was mandatory in their education.³ Study done by Madadin et al⁴ among medical

students in Saudi Arabia showed that forensic medicine was a part of the curriculum in more than half undergraduate medical colleges (59.3%). Of those universities 43.8% provided practical and mortuary visits, while 56.3% had theoretical aspects of teaching.⁴ The aim of the present study was to assess the awareness of medical students towards forensic medicine and identify the influencing factors of choosing this specialty as a future career at Albaha University, Saudi Arabia.

Methods and Results

This study was conducted in the faculty of Medicine, Albaha University at Albaha area, Saudi Arabia in 2016. Data was collected from the medical students using simple random sampling procedures. Ninety-eight medical students were selected using Raosoft sample size calculator programme.⁵ Confidence level used was 95%, total population was 130 students, accepted margin of error was 5% and response distribution was 50%. Data was collected using self-administered questionnaires. The questionnaire included information such as students' personal data, knowledge about forensic medicine, source of knowledge and factors affecting the choice of forensic medicine as specialty in the future among medical students. Voluntarily consents were taken from the participations. Six questions were used to estimate the level of awareness among the study participants using the three-answer questions model. The answers include "agree, disagree and I don't know". To assess the questions, (1) point was given to the right answer and (0) point was given to the wrong and don't know answers. The total score of awareness ranged from 0 to 6 and it was categorized based on the percentage cut-off point out of the total expected score for each. Total level of awareness was categorized into "good" for those students scored $\geq 75\%$, "poor" for participants having score $\leq 50\%$ and "moderate" for those having the score between 74% and 51%. For statistical analysis, data were analyzed using SPSS version 23. The relations between the explanatory variables and the awareness of the students were tested by Chi-squared test in addition to Binary Logistic regression using 95% confidence interval and P-value of less than 0.05 as statistically significant.

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Table-1: Frequency and percentage distribution of the medical students in Albaha University, Saudi Arabia, 2016 by their awareness level towards forensic medicine.

Awareness level	Frequency	Percent
Poor	63	66.3
Moderate	8	8.4
Good	24	25.3
Total	95	100.0

In this study, we found that most of the students had poor awareness towards forensic medicine 63 (66.3%) as shown in Table-1. Poor awareness was more apparent when we assessed the following concerns of forensic medicine: assessment of forensic medicine for the medical malpractice, disputed paternity, inheritance and change of newborns in hospital and injuries of children that may be related to neglect or abuse. On the other hand, personal reasons (interest, effect of the family

Table-2: Association between the students' personnel characteristics and their awareness level towards forensic medicine in Albaha University, Saudi Arabia, 2016.

Age Group in Years		Awareness level			Total	P-value
		Poor	Moderate	Good		
Less than 21	Count	31	4	0	35	P < 0.000
	% Within Age Group	88.6%	11.4%	0.0%	100.0%	
	% Of Total	32.6%	4.2%	0.0%	36.8%	
21-22	Count	25	4	5	34	
	% Within Age Group	73.5%	11.8%	14.7%	100.0%	
	% Of Total	26.3%	4.2%	5.3%	35.8%	
More than 22	Count	7	0	19	26	
	% Within Age Group	26.9%	0.0%	73.1%	100.0%	
	% Of Total	7.4%	0.0%	20.0%	27.4%	
Total	Count	63	8	24	95	
	% Within Age Group	66.3%	8.4%	25.3%	100.0%	
	% Of Total	66.3%	8.4%	25.3%	100.0%	

Study level		Awareness level			Total	P-value
		Poor	Moderate	Good		
Preliminary (1-2)	Count	21	4	1	26	P < 0.000
	% Within study level group	80.8%	15.4%	3.8%	100.0%	
	% Of Total	22.1%	4.2%	1.1%	27.4%	
Preclinical (3-6)	Count	24	4	2	30	
	% Within study level group	80.0%	13.3%	6.7%	100.0%	
	% Of Total	25.3%	4.2%	2.1%	31.6%	
Clinical (7-12)	Count	18	0	21	39	
	% Within study level group	46.2%	0.0%	53.8%	100.0%	
	% Of Total	18.9%	0.0%	22.1%	41.1%	
Total	Count	63	8	24	95	
	% Within study level group	66.3%	8.4%	25.3%	100.0%	
	% Of Total	66.3%	8.4%	25.3%	100.0%	

Did you study forensic medicine?		Awareness level			Total	P-value
		Poor	Moderate	Good		
YES	Count	0	0	12	12	P < 0.000
	% Within Did you study forensic medicine	0.0%	0.0%	100.0%	100.0%	
	% Of Total	0.0%	0.0%	12.6%	12.6%	
NO	Count	63	8	12	83	
	% Within Did you study forensic medicine	75.9%	9.6%	14.5%	100.0%	
	% Of Total	66.3%	8.4%	12.6%	87.4%	
Total	Count	63	8	24	95	
	% Within Did you study forensic medicine	66.3%	8.4%	25.3%	100.0%	
	% Of Total	66.3%	8.4%	25.3%	100.0%	

and/or friends) affected most of the students 80 (84.2%) choices of selection of forensic medicine as specialty in the future, and the nature of the work (dealing with dead bodies and crimes) affected 78 (82.1%) of the students' choices of selection of forensic medicine. In addition to, financial rewards, time of work and job opportunities affected the choice of 76 (80%) of the students. Most of the students 74 (77.9%) gained their awareness towards forensic medicine from their teachers during teaching activities in the medical college and social media 68 (71.6%).

Poor awareness was significantly more apparent among the students with age group less than 21 years, preliminary and preclinical study levels and those who didn't study forensic medicine course in their college (P-value < 0.000) as shown in Table-2. Using the binary logistic regression test, student's study level was independently predictive for his awareness (B = -2.485, Wald test = 14.276, P = 0.000).

Discussion and Conclusion

The overall awareness towards forensic medicine among medical students in the study area was low, with almost two thirds having poor awareness. This finding was consistent with the study done by Madadin MS among medical students in Dammam, Saudi Arabia, which showed poor knowledge and inadequate awareness towards the importance of the forensic medicine course.⁶ On the other hand, another study done by Hamdi A and Zaki M among medical students in different universities in Jeddah, Saudi Arabia, revealed that awareness was good and forensic medicine and autopsy were highly accepted.⁷ Another study done in B.J Medical College, Ahmedabad, Gujarat, India showed that medical students considered forensic medicine procedures demonstration an important learning experience.⁸ Poor awareness score showed in this study in comparison to the studies showed good awareness might be due to the concentration of forensic medicine teaching activities in the final clinical years in our medical college. Because of that, the students in the preclinical years have poor awareness towards this important branch of medicine. Moreover, the lack of public awareness about forensic medicine and its importance might have contributed to the students' poor awareness. Moreover, our study showed that the student's study level was independently predictive for their poor awareness towards forensic medicine and its importance, illustrating the need to improve the awareness among the medical students and the desire of getting early educational exposures to this essential medical education issue.

Concerning the factors, affecting medical students' choice of forensic medicine as a future specialty, personal reasons (interest, family influence and/or friends), nature of the work of forensic medicine (dealing with crime and dead body) and (financial rewards, time of work and job opportunities) were highly effective on the choice of the students. Our results were comparable to the results of the study done by Alawad A, et al,⁹ who found that forensic medicine was among the least selected specialty (0.9% and 0.8% among male and female medical students respectively). Concerning the factors affecting their choice, we found that the five most effective factors were: personal interest, being helpful to their community, job opportunities, financial rewards and advice from others. Several limitations were observed in this study, were the use of self-reported questionnaire, which could reflect on subjective responses of the respondents, the use of the three-point scale questions, which might not be adequate to reflect participants' awareness in comparison to the five-point scale.

In spite of the previous limitations, we suppose that this study might be helpfully for researchers and medical educationists. The medical educationists could promote early exposure to forensic medicine in the medical colleges' curriculum in order to improve the medical students' awareness and facilitate their future specialty choices. Moreover, the early educational exposure to forensic medicine can improve medical students' tolerance to the nature of the work of forensic medicine. Public awareness about forensic medicine and its importance can help to modulate the personal reasons (interest, influence of the family and/or friends) and promote the students choice for forensic medicine in the future.

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