Student Perceptions of and Attitudes towards Academic Integrity Policies at an Omani University
Do healthcare students differ from others?

Mickael A. Joseph[1] and *Jansirani Natarajan[2]

ABSTRACT: *Objectives:* This study aimed to investigate Omani university students' perceptions of and attitudes towards academic integrity policies through a comparison between healthcare (nursing and medicine) and non-healthcare students. *Methods:* A cross-sectional study design was conducted during the 2018–2019 academic year wherein students were asked to complete an anonymous questionnaire. Data were collected from nine colleges at Sultan Qaboos University and analysed. *Results:* A total of 579 students completed the questionnaire (response rate: 90%). The results revealed that healthcare students have a significantly higher perception of and better attitudes towards academic integrity policies compared to their non-healthcare counterparts. *Conclusion:* The results of this study should motivate faculty to foster better understanding and implementation of the honour code to encourage an environment of academic integrity for students.

Keywords: Perception; Attitude; Ethics Code; Students; University; Oman.

ACADEMIC INTEGRITY IS DEFINED AS THE adherence to five fundamental values: honesty, trust, fairness, respect and responsibility.[1] Most universities around the world are committed to academic integrity and ethical standards and invest in creating policies and codes of honour to direct student behaviour.[2] Yet, incidents of academic dishonesty are on the rise and becoming a matter of increasing concern.[3] One of the greatest challenges many universities face is upholding academic integrity and limiting unethical behaviour, dishonesty and misconduct.[4] Studies have suggested that students who engage in academic dishonesty at the undergraduate level are likely to participate in dishonest behaviours in their subsequent work life.[5] This is particularly troublesome among healthcare professionals who are expected to be sincere and trustworthy given that patients need to be able to trust their caregivers with their health and life.[6]

One of the most effective strategies to combat academic dishonesty is creating policies and codes of honour to nurture a culture of academic integrity.[7] It has been shown that students who engage in cheating behaviours have little knowledge of these policies.[8] On the other hand, students who are involved with, committed to and satisfied with honour codes tend to uphold academic integrity.[9] Therefore, there is a need to investigate the perceptions of academic integrity policies and the attitudes towards joining a university with an honour code for undergraduate students, especially those in healthcare programmes (nursing and medicine). There is a dearth of studies on

academic integrity policies and students' perceptions of and attitudes towards these policies based on their degree and fewer still about whether these differ among healthcare students relative to other majors. Moreover, few studies have investigated academic integrity among undergraduate students in the Gulf region as a whole and fewer still in Oman. This study provides a comparison of the differences in perceptions and attitudes of academic integrity policies among healthcare and non-healthcare students. Healthcare students should have a high level of integrity as they are expected to become healthcare professionals in the future who abide by a high standard of ethical principles. Any dishonest behaviour can be detrimental, not only to the healthcare profession but also to patient safety. Therefore, the results of this study may provide important insights to healthcare and non-healthcare educators to enhance the quality of education in order to reach the highest standards.

Methods

This cross-sectional study was conducted during the 2018–2019 academic year at Sultan Qaboos University (SQU), a public university in Muscat, Oman. The approximate student population of the University at the time of data collection was 18,000. A power analysis using the G-power computer programme indicated that a total sample of 580 students would be needed to detect moderate effects (d = 0.3) with 95% power using a t-test between means with alpha at 0.05. Keeping the attrition rate of 10%, the required

1Department of Fundamentals and Administration, 2College of Nursing, Sultan Qaboos University, Muscat, Oman
*Corresponding Author's e-mail: jannat@squ.edu.om

sample size was 638. University students enrolled in the nine colleges were made aware of the current research through emails accessed with the help of the Deanship of Student Affairs. Two research assistants approached the colleges with a list of randomised student names based on the number of students in each of those colleges and the inclusion criteria. After explaining the purpose of the study, the voluntary nature of participation, confidentiality and anonymity of the information, students were required to sign the informed consent form and complete the self-reported questionnaire.

The data collection tool was a questionnaire developed by Dr. Donald McCabe of Rutgers University, who administered his survey through the Center for Academic Integrity.[10] The questionnaire attempts to measure university students' perceptions of and attitudes towards the academic integrity policies of the institution and their understanding and support of policies against cheating. Perceived understanding/acceptance of the university's academic integrity policies (six items) was measured using five-point Likert scales with values ranging from one (very low) to five (very high). Thus, the perceived understanding/acceptance variable ranged from six (low) to 30 (high). Students' attitudes were assessed with two questions on the awareness of the presence of an honour code at the university and whether the presence of an honour code affected their decision to enrol at SQU. The Cronbach's alpha for this scale was 0.797 for the American population.[10] In the current study population, Cronbach's alpha coefficient for the internal consistency of the scale was 0.644.

Statistical Package for the Social Sciences (SPSS), Version 22.0 (IBM Corp., Armonk, New York, USA) was used for data analysis after the investigators entered and audited the data. The data were analysed using descriptive (frequencies and percentages) and inferential statistics (Chi-squared). The statistical significance was assessed at the $P < 0.05$ level.

The ethics committee of the College of Nursing and the ethics committee of SQU provided the authors with permission to conduct the study (REC/2018-2019/3). Participants were informed that their participation was voluntary and that they could withdraw at any time. Written informed consent was provided by participants before they began the survey questionnaire. To ensure participants' anonymity, only code numbers were used for identification.

Results

A total of 579 students responded to the survey on academic integrity (response rate: 90%). The results were analysed and the healthcare colleges (Colleges of Medicine and Nursing) were compared with the non-healthcare colleges (Colleges of Engineering, Agriculture, Education, Arts, Science, Law and Economics) at the University.

The majority of participants were from non-healthcare colleges (395, 68.2%) compared to those from healthcare colleges (184, 31.8%). Most respondents were in the third and fourth years of their programmes in the non-healthcare (n = 225; 57.0%) and healthcare colleges (n = 126; 68.5%). While a majority of participants in the non-healthcare colleges were male (n = 199; 50.4%), healthcare colleges had more female participants (n = 117; 64.0%). The mean age was 20.94 ± 1.36 years among non-healthcare students and 21.18 ± 2.34 years among healthcare students.

There were six aspects analysed for the perception of the academic integrity environment at the University. Students from the healthcare colleges had a higher level of understanding than those from non-healthcare colleges with the total mean scores of 18.87 ± 3.52 and 17.96 ± 3.44 respectively (t [569] = -2.873; $P = 0.004$) [Table 1].

When asked about their awareness of the honour code at SQU before applying, healthcare college students showed more awareness than their non-healthcare counterparts (91 [49.7%] versus 153 [39.0%]; $P = 0.015$). This awareness was more likely to affect the decision of healthcare college students to join the University than non-healthcare students (108 [59.6%] versus 190 [48.2%]; $P = 0.012$).

Moreover, students' attitudes were analysed after dividing the study population based on gender. The results showed that female students from the healthcare colleges were more aware of the honour

Table 1: Comparison between healthcare and non-healthcare students' perceptions of the academic integrity environment at a public university (N = 579)

Variable	College	n*	Mean ± SD	t	df	P value[†]
Perception of Academic Integrity Environment[‡]	Non-healthcare	393	17.96 ± 3.445	-2.873	569	0.004
	Healthcare	178	18.87 ± 3.528			

SD = standard deviation.

There were missing data from eight students. *[†]Statistically significant at P <0.05; [‡]Questionnaire included questions regarding: 1) The severity of penalties for cheating at Sultan Qaboos University; 2) The average student's understanding of campus policies concerning student cheating; 3) The faculty's understanding of these policies; 4) Student support for these policies; 5) Faculty support for these policies; 6) The effectiveness of these policies.*

Table 2: Comparison between healthcare and non-healthcare students' attitudes towards the academic integrity environment at a public university (N = 579)

Questions	College	Response	n (%)			Chi-squared value	P value*
			Female	Male	Total		
Before you came to SQU, were you aware that the school had an honour code?	Non-healthcare†	Yes	82 (20.9)	71 (18.1)	153 (39.0)	1.488	0.255
		No	113 (28.8)	126 (32.1)	239 (61.0)		
		Total	195 (49.7)	197 (50.3)	392 (100.0)		
	Healthcare‡	Yes	65 (35.5)	26 (14.2)	91 (49.7)	5.043	0.018
		No	51 (27.9)	41 (22.4)	92 (50.3)		
		Total	116 (63.4)	67 (36.6)	183 (100.0)		
Did the fact that SQU has an honour code impact your decision to attend?	Non-healthcare‡	Yes	105 (26.7)	85 (21.6)	190 (48.2)	4.889	0.034
		No	90 (22.8)	114 (28.9)	204 (51.8)		
		Total	195 (49.5)	199 (50.5)	394 (100.0)		
	Healthcare†	Yes	75 (41.4)	33 (18.2)	108 (59.7)	3.338	0.083
		No	41 (22.7)	32 (17.7)	73 (40.3)		
		Total	116 (64.1)	65 (35.9)	181 (100.0)		

SQU = Sultan Qaboos University.

*Statistically significant at P <0.05. †There were missing data for three students. ‡There were missing data for one student.

code than male students (65 [35.5%] versus 26 [14.2%]; *P* = 0.018). On the other hand, the fact that SQU has an honour code had a greater effect on the decision of female as opposed to male students from non-healthcare colleges to attend the University (105 [26.7%] versus 85 [21.6%]; *P* = 0.034) [Table 2].

Discussion

The results from the current study indicate that healthcare students have a higher perception of and a better attitude towards academic integrity policies than non-healthcare students. A study by McCabe, Treviño and Butterfield found that students at universities with an honour code better understood and supported academic integrity policies, severity of academic dishonesty and effectiveness of penalties compared to universities without an honour code.[11]

Considering that SQU has an honour code, the discrepancy in students' perceptions of the academic integrity policy between healthcare colleges and non-healthcare colleges could result from the honour code being brought to the attention of students at the healthcare colleges more frequently. Tatum and Schwartz have suggested that for an honour code to work properly, universities need to not only create one but also discuss it with and emphasise its importance to students.[12] The code of honour at SQU is publicly available on the University's website as a Student Academic Misconduct Policy in which the University pledges to ensure high standards of academic integrity.[13] The College of Nursing at SQU, for instance, publishes the code of honour along with the consequences of dishonest behaviours in the student academic handbook which is distributed to students every semester. To the best of the authors' knowledge, none of the non-healthcare colleges at SQU appear to publish the code of honour in their student academic handbook at the time of this study. Nursing and medical students also watch their peers pledge to uphold the honour code every year at a large graduation ceremony. When graduating, students take an oath as they receive their degrees. Awareness that this will happen may enhance the perception of and attitudes towards academic honesty policies among these students. Such understanding and approval of university policies have been found to correlate with higher academic integrity.[14] Indeed, Vandehey *et al.* have found that students who endorse the honour code and do not cheat tend to act with significantly stronger integrity than those who cheat.[15] Reminding students of such policies is thought to contribute to lower rates of academic dishonesty.[15] Therefore, it is recommended that all colleges at SQU include the honour code and academic integrity in their curricula and constantly remind students of its importance throughout the semester.

Gender differences could be another reason for this discrepancy in the perceptions and attitudes of SQU students. It has been shown that women abide by the rules and are more sensitive to penalties than men.[16] More importantly, instructions about ethics are more impactful on women than men.[16] Having a female majority among the participants from the healthcare colleges may have affected the results of this study, leading to the conclusion that healthcare students have higher perceptions of and better attitudes towards academic integrity policies. It is

worth noting that researchers believe that teaching students about the importance of ethical behaviour at the undergraduate level has a greater effect on men who can improve their honest behaviour to reach a level equivalent to their female counterparts.[17]

The current study has some limitations: one is the relatively small size of the healthcare students group compared to non-healthcare students. The fact that statistically significant results were obtained with the current sample size suggests that it is adequate; however, the samples are from only one institution which makes it difficult to generalise the results. Therefore, more studies need to be conducted among larger cohorts to discern whether the results are replicable. The cross-sectional research design is also a possible limitation that curtails the ability to establish causal associations. Moreover, since it is difficult to obtain an objective measure of academic integrity, another limitation is the self-reported nature of this study.

Conclusion

With the rise in incidents of academic dishonesty becoming a matter of increasing concern, many universities are facing the major challenge of upholding academic integrity and limiting unethical behaviour. The results from the current study indicate that healthcare students have higher perceptions of academic integrity and better attitudes towards having an honour code when compared to students from non-healthcare colleges. Students should have a clear understanding of the policies, which will allow them to distinguish between what constitutes unethical behaviour and what does not. Therefore, education is paramount to enhancing students' knowledge of the honour code and academic integrity, which will, in turn, promote their perceptions and attitudes about academic integrity and ultimately decrease incidents of dishonest behaviour.

AUTHORS' CONTRIBUTION

MAJ and JN contributed equally in the conception of the idea, proposal writing, data collection, screening and analysis as well as manuscript drafting. Both authors approved the final version of the manuscript.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

FUNDING

References

1. Fundamental Values of Academic Integrity. International Center for Academic Integrity. From: https://academicintegrity.org/resources/fundamental-values Accessed: May 2021.

2. MacLeod PD, Eaton SE. The paradox of faculty attitudes toward student violations of academic integrity. J Acad Ethics 2020; 18:347–62. https://doi.org/10.1007/s10805-020-09363-4.

3. Henning MA, Ram S, Malpas P, Shulruf B, Kelly F, Hawken SJ. Academic dishonesty and ethical reasoning: Pharmacy and medical school students in New Zealand. Med Teach 2013; 35:e1211–7. https://doi.org/10.3109/0142159X.2012.737962.

4. Gottardello D, Karabag SF. Ideal and actual roles of university professors in academic integrity management: A comparative study. Stud Higher Educ 2022; 47:526–44. https://doi.org/10.1080/03075079.2020.1767051.

5. Brown T, Bourke-Taylor H, Isbel S, Gustafsson L, Mckinstry C, Logan A, et al. Establishing similarities and differences among the self-reported academic integrity of Australian occupational therapy undergraduate and graduate-entry Master's students. Open J Occup Ther 2019; 7:1–16. https://doi.org/10.15453/2168-6408.1558.

6. Al Gahtani HMS, Jahrami HA, Silverman HJ. Perceptions of medical students towards the practice of professionalism at the Arabian Gulf University. BMC Med Educ 2021; 21:1–9. https://doi.org/ 0.1186/s12909-020-02464-z.

7. Raman V, Ramlogan S. Academic integrity and the implement-ation of the honour code in the clinical training of undergraduate dental students. Int J Educ Integrity 2020; 16:1–20. https://doi.org/10.1007/s40979-020-00058-2.

8. Von Dran GM, Callahan ES, Taylor HV. Can students' academic integrity be improved? Attitudes and behaviors before and after implementation of an academic integrity policy. Teach Bus Ethics 2001; 5:35–58. https://doi.org/10.1023/A:1026551002367.

9. Dix EL, Emery LF, Le B. Committed to the honor code: An investment model analysis of academic integrity. Soc Psychol Educ 2014; 17:179–96. https://doi.org/10.1007/s11218-013-9246-2.

10. McCabe DL, Feghali T, Abdallah H. Academic dishonesty in the Middle East: Individual and contextual factors. Res Higher Educ 2008; 49:451–67. https://doi.org/10.1007/s11162-008-9092-9.

11. McCabe DL, Treviño LK, Butterfield KD. Cheating in academic institutions: A decade of research. Ethics Behav 2001; 11:219–32. https://doi.org/10.1207/S15327019EB1103_2.

12. Tatum H, Schwartz BM. Honor codes: Evidence based strategies for improving academic integrity. Theory Pract 2017; 56:129–35. https://doi.org/10.1080/00405841.2017.1308175.

13. Sultan Qaboos University. Student Academic Misconduct Policy. From: https://www.squ.edu.om/Portals/14/Users/027/27/27/Students%20Academic%20Misconduct%20Policy.pdf Accessed: May 2021

14. McCabe DL, Trevino LK. Academic dishonesty: Honor codes and other contextual influences. J Higher Educ 1993; 64:522–38. https://doi.org/10.1080/00221546.1993.11778446.

15. Vandehey M, Diekhoff G, LaBeff E. College cheating: A twenty-year follow-up and the addition of an honor code. J Coll Stud Dev 2007; 48:468–80. https://doi.org/10.1353/csd.2007.0043.

16. Zhang Y, Yin H, Zheng L. Investigating academic dishonesty among Chinese undergraduate students: Does gender matter? Assess Eval Higher Educ 2018; 43:812–26. https://doi.org/10.1080/02602938.2017.1411467.

17. Luthar HK, Karri R. Exposure to ethics education and the perception of linkage between organizational ethical behavior and business outcomes. J Bus Ethics 2005; 61:353–68. https://doi.org/10.1007/s10551-005-1548-7.