Feature Article

Descriptive profile of the academic integrity of Australian occupational therapy students

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Background: *Academic integrity is the moral code of academia. Students who demonstrate trustworthiness in an academic setting are more likely to be dependable in a clinical setting. It is, therefore, important for occupational therapy academic and fieldwork educators to know the academic integrity profile of their students and to address any areas of academic dishonesty in curriculum design and delivery. To date, there has been no baseline description of the academic honesty profile of Australian occupational therapy students.*

Aim: *To establish a baseline of academic integrity and academic dishonesty among occupational therapy undergraduate and graduate-entry masters students in a cohort of Australian students.*

Methods: *Seven hundred and one students from five Australian universities completed a self-report questionnaire comprising demographic questions and six standardised scales measuring academic integrity.*

Results: *Overall, occupational therapy students reported high levels of academic and fieldwork integrity; however, some areas of concerns exist. Students report copying material without citations at least once during their studies (55%), obtaining test questions at least once during their studies (42.6%) or padding out a bibliography (39.5%).*

Conclusion: *Occupational therapy education needs to continue to emphasise the importance of academic and fieldwork integrity. Students need to be explicitly taught what academic honesty and dishonesty is and be provided with the resources and time to complete academic work to reduce the risk of academic dishonesty.*

KEY WORDS academic dishonesty, academic integrity, graduate entry, students, undergraduate.

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Conflict of interest

None declared. None of the contributing authors have any conflicts of interest to declare in relation to the manuscript.

Introduction

Academic integrity may be defined as honest and responsible scholarship and is the moral code of academia (McCabe, Trevino & Butterfield, 2001). It involves students and academic staff submitting original work and providing credit to others' work and ideas. Academic integrity includes acknowledging all sources of information, reporting findings accurately, independently completing assessment tasks and being trustworthy during examinations (University of Michigan, 2015).

Dishonest academic behaviour in classroom environments can include copying or giving answers in an examination situation, paying for essays, impersonation during exams, using an electronic device during a written examination, or plagiarism from printed or electronic sources (Ip, Nguyen, Shah, Doroudgar & Bidwal, 2016; Krueger, 2014).

With the increase in the online delivery of courses in the higher education sector, unique modes for cheating are more challenging to detect than in traditional

classroom settings. Plagiarism is more prevalent with the ability to purchase custom-written essays online or/ and to 'cut and paste' the ideas of another individual without citation made easy and accessible with online technology (Kim, Hwang, Lee & Shim, 2016). The extent to which specific examples of academic dishonesty, such as plagiarism, is linked to on-campus or fieldwork learning environments has not been explored. In addition, studies have found a significant link between students' academic dishonesty and unethical professional behaviours in clinical fieldwork and practice settings (Balik, Kelisheck & Tabak, 2010; Papdakis, Hodgson, Teherani & Kohatsu, 2004). Therefore, this topic warrants further investigation in the health-care disciplines, including occupational therapy. It is also important to establish baselines of student academic integrity to inform curriculum planning, design and delivery, as well as determine predictors of students' academic dishonesty in academic contexts, fieldwork settings and clinical practice environments.

Literature review

Incidence of academic dishonesty

It has been reported that between 2002 and 2015, the number of university students who admitted to some form of academic cheating was and continues to be widespread (McCabe, 2015). Based on samples of 17,000 graduate students and 71,300 undergraduate (UG) students from the United States and Canada, 43% and 68% of those two groups disclosed that they had cheated on written assignments or examinations (McCabe). Evidence of the prevalence of academic dishonesty and cheating at Australian universities have not been as widely researched, with only some preliminary investigations to date (Brimble & Stevenson-Clarke, 2005; Ehrich, Howard, Mu & Bokosmaty, 2016).

Curtis and Popal (2011) reported the levels of plagiarism at the University of Western Sydney as being 81% in 2004 and 74% in 2009. In a survey of 1194 accounting students from four Queensland universities by Brimble and Stevenson-Clark (2005), 23% of the students reported that they had engaged in one or more incidents of academic dishonesty during the past year. Sheard, Dick, Markham, MacDonald and Walsh (2002) investigated the perceptions of 287 first-year information technology students at two Australian Universities regarding cheating and plagiarism. Their findings revealed that between 69.3% and 85.4% of students were admitted to cheating. Collectively, these results indicate that the prevalence of academic dishonesty may be high at tertiary education levels nationally and internationally and secondary schools internationally. Further research is necessary.

Academic dishonesty in health professional programmes

Academic dishonesty has been studied in several health professional courses, including nursing (Krueger, 2014), dentistry (Ford & Hughes, 2012), pharmacy (Emmerton, Jiang & McKauge, 2014), physiotherapy (Montuno et al., 2012), medicine (Roff, 2012), psychology (Lucas & Friedrich, 2005) and social work (Collins & Amodeo, 2005). However, no reported studies have been conducted to date with UG or graduate-entry masters (GEM) occupational therapy students internationally or in Australia.

Reasons why students cheat and plagiarise

A previous study exploring dishonest behaviour found that peer behaviour was the most influential factor (McCabe, Butterfield & Trevino, 2006). However, peer behaviour may take many forms, as breaches in academic integrity policies often occurs when students are unable to differentiate between working with peers on some form of intellectual activity (collaboration) and copying work directly from peers (collusion) (Arhin & Jones, 2009; Garrand, 2016; Montuno et al., 2012; Savin-Baden, 2005).

Additional factors that led to dishonest behaviour included pressure to obtain high grades, parental pressure, part-time job leaves little time for academic study, scholarship funding depends on high-grade point average, poor self-image, lack of responsibility and a lack of personal integrity (McCabe et al.).

The student of today has access to unlimited sources of information, and this may blur the boundary for what is considered ethical behaviour that demonstrates integrity and dishonest practice (Bretag et al., 2014). A study of pharmacy students revealed that students commonly used inappropriate strategies to source materials and displayed a lack of understanding of the basic elements of academic writing to the point of not recognising plagiarism or appropriate acknowledgements and citations to original sources as a serious issue (Ryan, Bonanno, Krass, Scouller & Smith, 2009).

It is suggested that the provision of information about academic integrity alone is insufficient to counter students' interpretations of how to apply the conventions of academic integrity (McCabe et al., 2001). It is argued that explicit support and training should be offered based on the student's current awareness of academic integrity and behaviours (McCabe et al.). In the United States, McCabe et al. report the need to instil a culture of integrity in students by determining the levels of awareness of academic integrity. It is argued that by offering explicit support and training to students, the perceptions and understanding of the academic conduct expected of students will be better understood by students. Others have recommended hands-on activities

repeated over the course of programmes that engage students and teach them the skilful application of honest academic practices (McCabe, 2005). Postgraduate students have been identified as a potentially vulnerable group because they are disadvantaged in terms of academic integrity education and training due to less classroom contact time and higher degrees of independent study (McCabe).

Students have been known to place blame for their own dishonest behaviours outwardly and towards the academic staff or educational institutions (Bretag *et al.*, 2014). For example, research has identified the following student reasons for cheating: lecturers and tutors do a poor job in the classroom by not explaining material clearly; academic staff 'look the other way' when they observe cheating occurring; educators do not protect students' rights; academic staff do not put adequate measures in place to minimise cheating (e.g., failing to supervise examinations closely enough, using the same exam questions twice, not using or enabled misuse of plagiarism detecting software); educators provide too much reading and homework; and students are asked to complete assessment tasks that are not authentic or 'real world' (Bretag *et al.*). Further, students have reported that university administration can be a contributing factor to students' duplicitous academic activities. Stated reasons for this include low-level punishments for academic dishonesty need to be stronger, institutional policies on cheating are outdated, universities not trying very hard to stop cheating, and students not sufficiently actively involved enough with formulating and revising institutional policy and the judicial process for students who do cheat (Tanner, 2004).

Relationship of academic behaviour and future behaviour as a health-care professional

Student academic dishonesty appears to be a predictor for future unprofessional behaviour in the workplace. Correlations between unprofessional behaviours as students and unethical behaviours post-graduation have been reported in medicine (Papdakis *et al.*, 2004) nursing (Krueger, 2014) and physical therapy (Mohr, Ingram, Fell & Mabey, 2011). For example, a study of internal medicine residents determined that there were two significant predictors of subsequent disciplinary action by a licensing board: unprofessional behaviour during their medical residency and low scores on the internal medicine residency examination (Papdakis *et al.*, 2004). This shows that there is evidence that academic dishonesty within tertiary education may predict increased risk of unethical and unprofessional behaviour in the workplace. Therefore, an emphasis on academic integrity and professional conduct for health professional students while enrolled in their respective entry-to-practice education programme is paramount. Hence, the need to investigate this issue among

occupational therapy students is timely and warranted. Research can assist with curriculum planning, design and implementation. It may also assist students who may be at risk for unethical or unprofessional behaviour while completing practice education placements to address and remediate potential unethical behaviours.

Aims

The aim was to establish a baseline of academic dishonesty among occupational therapy students as and to investigate any links between academic dishonesty and unprofessional behaviour in clinical fieldwork settings.

Research Questions

1. What are the most and least likely self-reported indicators of dishonesty in academic settings of occupational therapy UG and GEM students?
2. What are the most and least likely self-reported indicators of dishonesty in fieldwork practice settings of occupational therapy UG and GEM students?
3. What is the correlation between academic dishonesty in the classroom and during fieldwork, among occupational therapy students?

Method

Participants

Undergraduate and GEM occupational therapy students enrolled at five universities across Australia were recruited into the study. Inclusion criteria were that students had to be enrolled in an accredited entry-level occupational therapy course at one of the five participating university programmes, provide consent to take part in the study, and be able to answer self-report questions.

Instrumentation

The questionnaire consisted of five existing scales (Academic Dishonesty Scale (ADS; McCabe, 2009), Moral Development Scale for Professionals (MDSP; Skisland, Bjornestad & Soderhamn, 2012), Academic Dishonesty in the Classroom Setting Scale (Krueger, 2014), Academic Dishonesty in the Clinical/Practice Education Setting Scale (ADCS; Krueger), and Attitudes Towards Plagiarism Scale (ATPS; Mavrinac, Brumini, Bilic-Zulle & Petrovecki, 2010)), the data of which two are reported in this study. The questionnaire was trialled with two occupational therapy students and two therapists to seek their feedback prior to finalisation. The first section elicited demographic information. The two standardised scales reported in this paper were the ADCS (Krueger) and the Academic Dishonesty in the Clinical/Practice Education Setting Scale (ADCPES) (Krueger).

The ADCS is a 20-item test that asks respondents to answer on a 5-point Likert scale their tendency to be

dishonest in a classroom setting (1 = *never*; 5 = *very often*). Respondents were also asked to rate the seriousness of the behaviours (1 = *not serious at all*; 5 = *very serious*). The questions asked in the ADCS included the following: 'Getting test questions from another student who has taken the examination or quiz at an earlier time' and 'Padding out a bibliography/references that were not actually used'. The scales all have established reliability and validity and also have been used previously in published studies with university students (Krueger, 2014; Skisland *et al.*, 2012).

The ADCPES is an nine-item scale that asks respondents to answer on a 5-point Likert scale their tendency to engage in academic dishonesty in a practice education setting (1 = *never*; 5 = *very often*). Respondents were also asked to rate the seriousness of the behaviours (1 = *not serious at all*; 5 = *very serious*). The questions asked in the ADCPES include 'Discussing patients in public places or with non-medical personal' and 'Reporting patient information or personal data that was not taken or recalled accurately'.

Data analysis

Data were analysed using statistical analysis software for sciences IBM Corp.© (2015). Demographic data were summarised descriptively and the summaries of responses to items in each scales were collated. The ADCS and ADCPES were scored according to published instructions. The mean frequency and seriousness scores were calculated for each item and for the total scales. The total mean frequency and seriousness scores for the ADCS and ADCPES were entered into correlational analyses, with the aim of investigating associations between dishonesty in the classroom and clinical setting.

Procedures

Approval from the relevant University Human Ethics Committees was granted (Monash University Human Research Ethics Committee approval number: CF16/609–2016000298). Students were asked to complete the self-report questionnaire either in hard copy or electronically using an online survey platform (Qualtrics). Students were either invited at the end of a tutorial to complete a hard copy of the questionnaire or they were sent an email with a link to the online version of the questionnaire. Participation was voluntary and questionnaires were completed anonymously.

Results

Demographic data

Of the students who completed the survey ($N = 701$), 193 were men (27.5%) and 72.5% were women. There were 98 international students and 603 domestic students across four GEM ($N = 92$) and four UG

TABLE 1: *Demographic data* (n = 701)

	Frequency	Percentage
Year of enrolment		
2nd-year graduate-entry masters	45	6.4
1st-year graduate-entry masters	47	6.7
4th-year undergraduate	106	15.1
2nd-year undergraduate	164	23.4
3rd-year undergraduate	167	23.8
1st-year undergraduate	172	24.5
Enrolment status		
Part-time	19	2.7
Full-time	682	97.2
Age range (years)		
17–19	173	24.7
20–24	398	56.8
25–29	71	10.1
30–34	24	3.4
35–39	10	1.4
40 or older	25	3.6

programmes ($N = 609$). The complete demographic details are outlined in Table 1.

Academic dishonesty in the classroom scale

The responses to the ADCS (Table 2) indicated that the most frequently self-reported behaviour of academic dishonesty was to gain test questions from another student who had already completed the exam or quiz (42.6%), followed by working with another student on an out-of-class assignment that should be completed individually (40.1%). Students were least likely to ask someone to impersonate them in a test (2%) or pay someone to complete an assignment or assessment task (3.2%). The total mean score for classroom academic dishonesty frequency was 1.25 (SD = 0.338, range = 3.40, IQR25 = 1.05, IQR50 = 1.15, IQR75 = 1.35), indicating that students rarely or never to seldom, participated in dishonest behaviours. The total mean classroom academic dishonesty seriousness level was 4.19 (SD = 0.698, range = 4.00, IQR25 = 3.85, IQR50 = 4.35, IQR75 = 4.70), indicating that students rated behaviours as 'serious' to 'very serious' dishonesty behaviours.

Academic dishonesty in the clinical/practice education setting scale

When considering academic dishonesty in the clinical or practice education setting, students were more likely to report discussion of patients in public places or with non-medical personal (32.6%) and least likely to enter into the clinical practice setting and provide patient care under the influence of drugs or alcohol (1.7%). The total mean fieldwork dishonesty frequency was 1.11 (SD = 0.29,

TABLE 2: *Academic dishonesty in the classroom scale (ADCS) (Krueger, 2014)*

	Never % (n)	Seldom/ sometimes % (n)	Often/very often % (n)	No response % (n)	Frequency Mean (SD)	Seriousness Mean (SD)
1. Getting test questions from another student who has taken the examination or quiz at an earlier time	54.1 (379)	40.9 (287)	1.7 (12)	3.3 (23)	1.61 (0.79)	3.71 (1.09)
2. Working with another student on an out-of-class assignment when it should be individual and was not allowed by the lecturer/tutor	56.6 (397)	37.5 (243)	2.6 (18)	3.3 (23)	1.57 (0.80)	3.68 (1.10)
3. Padding out a bibliography/reference list with references that were not actually used	57.2 (401)	36.1 (254)	3.4 (24)	3.3 (23)	1.63 (0.88)	3.50 (1.16)
4. Paraphrasing or copying material from another source (e.g., web site, book, journal article, etc.) without referencing the original source	59.8 (419)	34.6 (242)	20.4 (17)	3.3 (23)	1.50 (0.75)	3.87 (1.06)
5. Copying information directly from a web site, book or journal article with reference to the original source but no quotation marks	63.1 (442)	31.6 (222)	2.9 (13)	3.3 (23)	1.45 (0.71)	3.65 (1.13)
6. Copying information directly from a web site, book or journal article without referencing the original source	74.3 (521)	20.3 (142)	2.0 (14)	3.3 (23)	1.30 (0.63)	4.09 (1.01)
7. Allowing another student to copy your answers during a test/exam	76.2 (534)	19.7 (138)	0.8 (6)	3.3 (23)	1.27 (0.58)	4.25 (0.93)
8. Fabricating or falsifying lab or research data	79.3 (556)	16.4 (115)	0.8 (6)	3.3 (23)	1.26 (0.64)	4.27 (1.01)
9. Copying information directly from another students' assignment/assessment task (current or past) **with** their consent	81.3 (570)	14.1 (24.3)	1.3 (9)	3.3 (23)	1.21 (0.55)	4.13 (1.00)
10. Copying from another student's test/exam with their knowledge	83 (582)	13.5 (94)	0.2 (2)	3.3 (23)	1.17 (0.46)	4.28 (0.96)
11. Receiving answers from another student during a test/exam	84.6 (593)	11.9 (83)	0.2 (2)	3.3 (23)	1.14 (0.42)	4.36 (0.93)
12. Requesting special consideration/deferred exam or test (e.g., for illness) knowing that the conditions are not genuinely met	83.6 (586)	11.7 (82)	1.4 (10)	3.3 (23)	1.19 (0.55)	3.98 (1.05)
13. Writing an assignment or assessment task for someone else	84.9 (595)	10.6 (74)	1.3 (9)	3.3 (23)	1.18 (0.55)	4.36 (0.95)
14. Copying from another student's test/exam without their knowledge	88.7 (622)	7.7 (54)	0.2 (2)	3.3 (23)	1.10 (0.35)	4.59 (0.76)
15. Copying information directly from another students' assignment/assessment task (current or past) *without* their consent	89.2 (625)	6.8 (48)	0.7 (5)	3.3 (23)	1.10 (0.42)	4.47 (0.85)
16. Preventing other students accessing resources required to complete an assignment	89.7 (629)	6.1 (43)	0.9 (6)	3.3 (23)	1.11 (0.46)	4.21 (1.01)
17. Developing a personal relationship with a lecturer/tutor to gain information about a test/exam	91.9 (644)	4 (28)	0.9 (6)	3.3 (23)	1.09 (.46)	4.39 (1.01)
18. Using notes, books and mobile phones during a closed-book test/exam to gain answers	93.2 (653)	3.0 (21)	0.6 (4)	3.3 (23)	1.06 (0.35)	4.64 (0.76)
19. Pay another person to complete an assignment or assessment task	93.6 (656)	2.3 (13)	0.9 (9)	3.3 (23)	1.07 (0.41)	4.53 (0.92)
20. Getting someone else to pretend that they are the student—impersonating the student in a test	94.7 (664)	1.5 (11)	0.5 (4)	3.3 (23)	1.05 (0.34)	4.79 (0.66)

TABLE 3: *Academic Dishonesty in the Clinical/Practice Education Setting Scale (ADCPES) (Krueger, 2014)*

	Never % (*n*)	Seldom/ sometimes % (*n*)	Often/very often % (*n*)	No response % (*n*)	Frequency Mean (SD)	Seriousness Mean (SD)
1. Discussing patients in public places or with non-medical personal	74.9 (525)	31.9 (154)	0.7 (7)	2.3 (16)	1.31 (0.61)	4.45 (0.87)
2. Reporting patient information or personal data that was not taken or recalled accurately	88.3 (649)	8.6 (60)	0.7 (5)	2.3 (16)	1.14 (0.48)	4.51 (0.82)
3. Reporting assessment results that were not completed	89 (624)	8.3 (58)	0.2 (2)	2.3 (16)	1.10 (0.36)	4.53 (0.83)
4. Not reporting an incident or error that involves a patient or family member	88.7 (622)	8.2 (58)	0.7 (5)	2.3 (16)	1.12 (0.43)	4.59 (0.75)
5. Attempting to perform a procedure on a patient without adequate knowledge or failing to obtain guidance from your clinical educator	90.2 (632)	7.3 (50)	0.2 (2)	2.3 (16)	1.11 (0.42)	4.69 (0.68)
6. Reporting or recording treatments/sessions that were not performed or observed	92.4 (648)	4.6 (32)	0.7 (5)	2.3 (16)	1.08 (0.38)	4.58 (0.77)
7. Losing, breaking or damaging patients' belongings and not reporting it	93.9 (658)	3.7 (26)	0.1 (1)	2.3 (16)	1.07 (0.36)	4.52 (0.78)
8. Reporting patient responses to treatments that were not observed	94.2 (660)	2.9 (20)	0.4 (3)	2.3 (16)	1.06 (0.32)	4.63 (0.75)
9. Going to the clinical area and providing patient care under the influence of drugs (including alcohol)	96 (673)	1.3 (9)	0.4 (3)	2.3 (16)	1.03 (0.27)	4.76 (0.69)

range = 3.67, IQR25 = 1.00, IQR50 = 1.00, IQR75 = 1.11), indicating that students 'never' to 'seldom' participated in dishonest behaviours. The total mean fieldwork dishonesty seriousness level was 4.59 (SD = 0.63, range = 4.00, IQR25 = 4.44, IQR50 = 4.89, IQR75 = 5.00) indicating that students rated behaviours as predominantly 'serious' to 'very serious' dishonesty behaviours. Table 3 outlines the full results of the ADCPES.

Relationships between academic and clinical dishonesty

Correlational analyses (Table 4) identified statistically significant positive and negative relationships between the total mean scores ranging from weak to moderate in strength for the relationship between academic and clinical dishonesty. For example, there was a strong negative correlation (−0.485, *P* < 0.01) between classroom

seriousness and classroom frequency of behaviours meaning as the reported seriousness went up, the frequency of that behaviour reduced. A strong positive correlation (0.641, *p* < 0.01) was seen between classroom academic dishonesty seriousness and fieldwork dishonesty seriousness.

Discussion

The aim of this paper was to establish a baseline of academic dishonesty among occupational therapy students and to investigate any correlations between academic dishonesty and unprofessional behaviour in clinical fieldwork settings. Overall, the occupational therapy students surveyed for this research reported high levels of academic and fieldwork integrity. The frequency at which students reported they engaged in

TABLE 4: *Spearman rho correlations between classroom academic dishonesty frequency, classroom academic dishonesty level of seriousness, fieldwork dishonesty frequency, and fieldwork dishonesty level of seriousness* (n = 701)

	Classroom academic dishonesty frequency	Classroom academic dishonesty seriousness level	Fieldwork dishonesty frequency
Classroom academic dishonesty seriousness level	−0.485**		
Fieldwork dishonesty frequency	0.240**	−0.178**	
Fieldwork dishonesty seriousness level	−0.295**	0.641**	−0.314**

**P < 0.001.

dishonest behaviours in the academic and clinical setting was low (never to seldom) and the seriousness of which these behaviours was seen was high (serious to very serious). The results suggest that Australian occupational therapy students display academic integrity and they appreciate the seriousness of engaging in this behaviour.

In relation to the first research question we found that the least reported indicator of academic dishonesty to be paying another person to complete an assignment (93.6% of students never reported this behaviour) and impersonating a student in a test (94.7% of students never reported this behaviour). The most reported indicator of academic dishonesty was getting test questions from another student were reported (42.6% of students) or padding out bibliography/reference list by (39.5% of students). The types and incidence of academic dishonesty reported in this study are similar to the literature. Brimble and Stevenson-Clarke (2005) reported 23% of students engaged in at least one form of academic dishonesty, with up to 85% reported in another study (Sheard *et al.*, 2002). In this study, we report that 55% of occupational therapy students engaged in one form of academic dishonesty at least once during their studies.

In relation to the second research question, the incidence of dishonesty in the clinical setting, or unprofessional behaviours, was low in this study. The least reported academic dishonesty behaviour in a fieldwork setting was providing patient care under the influence of drugs or alcohol (1.7%) with the most reported behaviour being discussing patient details in a public place (32.6%). This may have been influenced by the demographics with a predominance of participants from the earlier years in the UG programmes, in which practice education experiences are closely supervised and tend to be on a sessional basis. Regardless, the significant negative correlation between frequency of academic dishonesty and reported seriousness of behaviours in a clinical setting suggests that students who reported a higher frequency of academic dishonesty were more likely to underestimate the seriousness of behaviours in a clinical setting. This finding addresses the third research question and is consistent with the positive correlation between academic and fieldwork dishonesty frequency and the literature that clearly links dishonest or unprofessional behaviours in the academic setting with prospective dishonest or unprofessional behaviours in the workplace (Krueger, 2014; Mohr *et al.*, 2011; Papdakis *et al.*, 2004). Therefore, the students who engaged in academic misconduct in this study are at risk of carrying this dishonest behaviour into their professional practice. These findings may highlight the importance of detecting and reporting unprofessional behaviours in the academic setting with the aim of ameliorating the carryover of behaviours into occupational therapy practice. Given that a significant association between academic misconduct and practice education has been established as well as previous research indicating that the current academic misconduct as a student can be a predictor of future transgressions in future professional practice, it is imperative that occupational therapy educators instil the importance of ethical, appropriate care for clients.

The participants in this study rated the seriousness of a range of academic and fieldwork dishonesty behaviours. The seriousness at which the students rated misconduct may be influenced by the potential consequences of that behaviour. For example, most universities would give a warning to a student for plagiarising a small section of a written assignment, but would take much stronger action if the student was practising under the influence of alcohol for example. While there will be different consequences for different academic dishonesty, it is important that students know that any form of academic misconduct is wrong.

Implications for education and practice

The academic honesty profile of Australian occupational therapy students is positive, with students generally reporting low academic and fieldwork dishonesty. However, this study has highlighted that some behaviours seen as less serious are being reported 'often', 'sometimes' or 'seldom'. If the definition of academic dishonesty includes the notion that a student has engaged in dishonest academic or fieldwork practice even once, this study indicates that 55% of students

have engaged in some form of academic misconduct (copying without referencing) or fieldwork misconduct 32.6% (discussing patients in public places or with non-medical personal). While it is encouraging that the majority of Australian occupational therapy students are honest in their academic and fieldwork behaviours, there are some areas of concerns with specific behaviours that are more likely to occur. Addressing these areas of concern should address three major areas. First, occupational therapy education needs to be explicit about what academic integrity is and is not. The results of this study indicate that students rate certain dishonest behaviours less serious than others, leading to a high proportion of students engaging in what is regarded as academic misconduct at least once. Occupational therapy education needs to be explicit in explaining to students that there is no grey area in academic and fieldwork dishonesty. Copying test questions from another student or discussing patient information outside the professional setting is dishonest practice even if it happens just once. The literature reports that when academic dishonesty is not explicitly explained to students it can lead to unintended dishonest behaviours (Garrand, 2016; McCabe, 2005; Savin-Baden, 2005). In addition to explicitly defining academic dishonesty, academics are also encouraged to challenge students about their perceptions around academic dishonesty. For example, Eastman, Iyer and Reisenwitz (2008) suggest that academics need to challenge students particularly in the area of rationalisation of academic misconduct. In Australia, occupational therapy students are required to show competence in a number of different domains as defined in the Australian Minimum Competency Standards for New Graduate Occupational Therapists (2010). These standards give students a guide to what is required of them in professional attitudes and behaviours, which is, therefore, a strategy in teaching students what practice integrity means in occupational therapy.

Second, occupational therapy education needs to be taught and structured to allow for ethical skills, attitudes and behaviours to develop from an academic and fieldwork perspective. This should allow students the time, resources and supervision to complete assessment tasks without the need to resort to dishonest practices. This should include teaching students the link between academic integrity and professional behaviours from an ethical and procedural perspective. This is consistent with recommendations made in the literature where it is reported that instilling a culture of academic integrity requires support and training to students (Savin-Baden, 2005), particularly with a focus on regular 'hands-on' training throughout the course of study (McCabe, 2005).

Third, students need support and education to know what academic and fieldwork dishonesty is and is not, therefore, reducing the risk of it occurring. Many universities offer first-year academic integrity training, including basic teaching around good referencing and avoiding plagiarism. Students also need to know that their work will be checked for academic misconduct via plagiarism detection software. Having a suite of policies that highlight the importance of academic honesty as well as robust procedures around detection and enforcement of the consequences of academic misconduct is seen as important (Broussard & Hurst, 2015; McCabe, 2005). Good practices should be reinforced in every assessment item, particularly in items that involve group work and project-based assessments. Professional fieldwork practice in relation to patient confidentiality and documentation should be reinforced prior to every practice education opportunity.

Limitations

The current study had a number of limitations. As the preliminary benchmarking investigation of academic integrity, convenience sampling was used to recruit UG and GEM occupational therapy students from the four participating universities. Within Australia, there are 22 universities with occupational therapy programmes, and therefore, the sample was not representative of all occupational therapy students. Future research should sample more broadly to determine similarities and differences between programmes and collect data that is generalisable.

To collect data, online and hard copies of the questionnaire were used to optimise the response rate. We estimate that 35% of students from participating universities responded which is an acceptable response rate, particularly for online surveys. However, a larger response rate would have reduced possible bias such as volunteer bias. Future studies may increase the length of the recruitment period or use other strategies such as using students in co-design to recruit and engage students more broadly, thereby increasing the proportion of students who participate. We used a self-report questionnaire and the extent to which students respond honestly is unknown. It is possible that students did not respond accurately, given the sensitive topic of academic integrity for university students. Although the questionnaire was anonymous, students knowingly undertaking dishonest behaviours may have been reluctant to fully disclose. Future studies may include qualitative interviews to further investigate student's experiences, opinions and suggestions around academic honesty and ways to support students and prevent dishonesty and associated behaviours.

Conclusion

Academic integrity is a critical trait that academics and students should demonstrate at all times. Academic integrity forms the moral code of academia and is important to the development of the ethical values, attitudes

and behaviours that permeate into clinical practice. Academic integrity has been measured and described in many different health and non-health-related professions and is consistently shown to be prevalent across professions (Curtis & Popal, 2011; Ford & Hughes, 2012; Krueger, 2014; McCabe, 2015). This study is the first to measure academic integrity among Australian occupational therapy students. The results show that Australian occupational therapy students do demonstrate academic integrity; however, some areas of concerns exist with specific areas of academic dishonesty that may be seen as less serious than others. Occupational therapy education should be explicit in what constitutes academic and fieldwork dishonesty and should allow students the time and resources to minimise the risk of academic dishonesty.

Key points for occupational therapy

·   Academic integrity is a critical trait that students and academics should show at all times.
·   Occupational therapy students in Australia show academic integrity in the classroom and during practice education; however, some areas of concerns exist.
·   Students should be taught what academic dishonesty is and the importance of maintaining integrity in the classroom and during practice education.

Ethics approval

Ethics approval for the current study was obtained from the Monash University Human Research Ethics Committee, University of Canberra Human Research Ethics Committee, La Trobe Human Ethics Committee, University of Queensland Human Research Ethics Committee and Australian Catholic University Human Research Ethics Research Committee in 2016.

Authors' declaration of authorship contribution

All authors contributed to the conception and design of the study; the acquisition, analysis, and interpretation of data for the work; drafting the manuscript and approve the final version of the work.

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References

Arhin, A. O. & Jones, K. A. (2009). A multidiscipline exploration of college students' perceptions of academic dishonesty: Are nursing students different from other college students? *Nurse Education Today*, *29*, 710–714. https://doi.org/10.1016/j.nedt.2009.03.001.

Balik, C. S., Kelisheck, S. & Tabak, N. (2010). Attitudes towards academic cheating during nursing studies. *Medicine and Law*, *29*, 547–563.

Bretag, T., Mahmud, S., Wallace, M., Walker, R., McGowan, U., East, J. *et al.* (2014). Teach us how to do it properly! An Australian academic integrity student survey. *Studies in Higher Education*, *39* (7), 1150–1169. https://doi.org/10.1080/03075079.2013.777406.

Brimble, M. & Stevenson-Clarke, P. (2005). Perceptions of the prevalence and seriousness of academic dishonesty in Australian Universities. *The Australian Educational Researcher*, *32* (3), 19–44. https://doi.org/10.1007/bf03216825.

Broussard, L. & Hurst, H. (2015). Plagiarism prevention and detection: A challenge. *Nurse Education*, *40* (4), 168.

Collins, M. & Amodeo, M. (2005). Responding to plagiarism in schools of social work: Considerations and recommendations. *Journal of Social Work Education*, *41*, 527–543. https://doi.org/10.5175/JSWE.2005.200303131.

Curtis, G. & Popal, R. (2011). An examination of factors related to plagiarism and a five-year follow-up at an Australian university. *International Journal for Educational Integrity*, *7*, 30–42. https://doi.org/10.21913/ijei.v7i1.742

Eastman, J., Iyer, R. & Reisenwitz, T. (2008). The impact of unethical reasoning on different types of academic dishonesty: An exploratory study. *Journal of College Teaching and Learning*, *5*, 7–15. https://doi.org/10.19030/tlc.v5i12.1211

Ehrich, J., Howard, S. J., Mu, C. & Bokosmaty, S. (2016). A comparison of Chinese and Australian university students' attitudes towards plagiarism. *Studies in Higher Education*, *41* (2), 231–246. https://doi.org/10.1080/03075079.2014.927850.

Emmerton, L., Jiang, H. & McKauge, L. (2014). Pharmacy students' interpretation of academic integrity. *American Journal of Pharmaceutical Education*, *78* (6), 119. https://doi.org/10.5688/ajpe786119.

Ford, P. J. & Hughes, C. (2012). Academic integrity and plagiarism: Perceptions and experience of staff and students in a school of dentistry: A situational analysis of staff and student perspectives. *European Journal of Dental Education*, *16*, E180–E186. https://doi.org/10.1111/j.1600-0579.2011.00695.x.

Garrand, K. I. (2016). Academic dishonesty and the student. *PT in Motion*, *28* (6), 7.

IBM Corp.©. (2015). *IBM SPSS statistics*. [Computer program on CD-ROM].32 bit ed. Version 23. New York, NY: IMB Corp.

Ip, E., Nguyen, K., Bijal., M., Doroudgar, S. & Bidwal, M. (2016). Motivations and predictors of cheating in pharmacy school. *American Journal of Pharmaceutical Education*, *80* (8), Article 133. https://doi.org/10.5688/ajpe808133

Kim, K., Hwang, J., Lee, D. & Shim, M. (2016). Medical student plagiarism in problem-based learning courses. *Medical Education Online*, *21* (1), 1. https://doi.org/10.3402/meo.v21.30537.

Krueger, L. (2014). Academic dishonesty among nursing students. *Journal of Nursing Education*, *53*, 77–87. https://doi.org/10.3928/01484834-20140122-06.

Lucas, G. & Friedrich, J. (2005). Individual differences in workplace deviance and integrity as predictors of academic dishonesty. *Ethics & Behavior*, *15*, 15–35. https://doi.org/10.1207/s15327019eb1501_2.

Mavrinac, M., Brumini, G., Bilic-Zulle, L. & Petrovecki, M. (2010). Construction and validation of attitudes toward plagiarism questionnaire. *Croatian Medical Journal*, *51*, 195–201. https://doi.org/10.3325/cmj.2010.51.195.

McCabe, D. L. (2005). It takes a village: Academic dishonesty. *Liberal Education*, *Summer/Fall*, 26–31.

McCabe, D. L. (2009). Academic dishonesty in nursing schools: An empirical investigation. *Journal of Nursing Education*, 48, 614–623. https://doi.org/10.3928/01484834-20090716-07.

McCabe, D. L. (2015). Statistics on academic integrity. International Center for Academic Integrity. Retrieved 6 September 2017, from http://www.academicintegrity.org/icai/integrity-3.php

McCabe, D. L., Trevino, L. K. & Butterfield, K. D. (2001). Cheating in academic institutions: A decade of research. *Ethics & Behavior*, 11, 219–232. https://doi.org/10.1207/S15327019EB1103_2.

McCabe, D. L., Butterfield, K. D. & Trevino, L. K. (2006). Academic dishonesty in graduate business programs: Prevalence, causes, and proposed action. *Academy of Management and Learning Education*, 5, 294–305. https://doi.org/10.5465/amle.2006.22697018

Mohr, T., Ingram, D., Fell, N. & Mabey, R. (2011). The case for academic integrity in physical therapy education. *Journal of Physical Therapy Education*, 25 (2), 51–56.

Montuno, E., Davidson, A., Iwasaki, K., Jones, S., Martin, J., Brooks, D. *et al.* (2012). Academic dishonesty among physical therapy students: A descriptive study. *Physiotherapy Canada*, 64 (3), 245–254. https://doi.org/10.3138/ptc.2011-13.

Papdakis, M., Hodgson, C., Teherani, A. & Kohatsu, N. (2004). Unprofessional behaviour in medical school is associated with subsequent disciplinary action by a state medical board. *Academic Medicine*, 79, 244–249. https://doi.org/10.1097/00001888-200403000-00011.

Roff, S. (2012). Medical student rankings of proposed sanction for unprofessional behaviours relating to academic integrity: Results from a Scottish medical school. *Scottish Medical Journal*, 57 (2), 76–79. https://doi.org/10.1258/smj.2012.012003.

Ryan, G., Bonanno, H., Krass, I., Scouller, K. & Smith, L. (2009). Undergraduate and postgraduate pharmacy students' perceptions of plagiarism and academic honesty. *American Journal of Pharmaceutical Education*, 73 (6), 1–8. https://doi.org/10.5688/aj7306105.

Savin-Baden, M. (2005). Why collaborate when you can cheat? Understanding plagiarism in occupational therapy education. *British Journal of Occupational Therapy*, 68 (1), 11–16. https://doi.org/10.1177/030802260506800103.

Sheard, J., Dick, M., Markham, S., MacDonald, I. & Walsh, M. (2002). Cheating and plagiarism: Perceptions and practices of first year IT students. *ACM SIGCSE Bulletin*, 34, 183–187. https://doi.org/10.1145/544414.544468.

Skisland, A., Bjornestad, J. O. & Soderhamn, O. (2012). Construction and testing of the Moral Development Scale for Professionals (MDSP). *Nurse Education Today*, 32, 255–260. https://doi.org/10.1016/j.nedt.2011.04.002.

Tanner, C. A. (2004). Moral decline or pragmatic decision making? Cheating and plagiarism in perspective. *Journal of Nursing Education*, 43, 291–292. https://doi.org/10.3928/01484834-20040701-06.

University of Michigan. (2015). What is academic integrity? Retrieved 11 September 2017, from https://www.msu.edu/unit/ombud/academic-integrity/What%20is%20Academic%20Integrity.html