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Relationship between prospective teachers' deontic justice attitudes and academic dishonesty tendencies

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The aim of the study was to determine the relationship between deontic justice attitudes among prospective teachers and their tendencies towards academic dishonesty. Participants in the study were 403 university students attending different departments of the Education Faculty of the Hacettepe University, a state university in the Central Anatolia Region of Turkey. The sample was determined by means of a stratified sampling technique, and students were chosen randomly from different departments. Attitudes towards deontic justice and tendencies towards academic dishonesty among the participants were stratified in terms of gender and students' affiliation to a specific department of education. The findings suggested that female students and participants from the English Language Education Department had the highest deontic justice attitudes; male students and participants from the Physical Education and Sports Department had the highest tendencies towards academic dishonesty. A low, negative and statistically significant relationship between deontic justice attitudes and academic dishonesty tendencies exists.

Keywords: academic dishonesty tendency; deontic justice attitude; prospective teachers

Introduction

Justice and ethics persist as central concerns throughout human history (Cropanzano, Stein & Goldman, 2007). Justice as a concept can not be limited to individual matters; it also concerns the way in which others are treated, and the reactions of people towards events by which they are not directly affected (Skarlicki & Kulik, 2005). Justice is more than reasonableness (Du Preez & Simmonds, 2011).

According to the notion of deontic justice, fairness is considered as an end in itself and is perceived as a moral virtue, independent from the group-based identity and personal interest (Beugré, 2010). Justice is also related to behaviour motives and social behaviour (Lerner, 1975). Therefore, in this study, the concept of deontic justice was paired with academic dishonesty tendencies. Academic dishonesty involves different forms of cheating behaviour, which occur with different motives. Orosz, Dombi, Tóth-Király, Bóthe, Jagodics and Zimbardo (2016) claim that students' perspective of time influences their cheating behaviours. Having long-term goals may hinder students from cheating or display academic dishonesty, whereas seizing the day and low academic motivation may result in different levels of cheating behaviour. In addition, a tendency towards dishonesty in referencing and research may stem from insufficiencies in the education system and students' lack of knowledge about the requisite research stages. These are the motives known to push students to behave dishonestly. This study questioned whether the perception of justice affected the students' academic dishonesty behaviours or not, so the relationship between the concept of deontic justice and the tendencies towards academic dishonesty were examined. Prospective teachers were chosen as a target group because learning to teach is a complex, interactive, and dynamic situation, affected by individual and contextual variables (Quick & Siebörger, 2005). Another reason for choosing prospective teachers as participants was that the attitudes of educators play an important role in reducing the cheating behaviour of students. If educators do not care about cheating, students tend to show more cheating behaviour (Gresley, Wallace, Hubb & Staats, 2009). Moral values and academic integrity should therefore be promoted by educators (McCabe, Trevino & Butterfield, 2001).

In such a dynamic situation it is crucial to determine the possible motives for teacher dishonesty. It is believed that this study will have cross-border importance, because the concept of justice is universal and not region-specific, implying possible value in raising awareness among educators globally.

Literature Review

Justice is generally explained based on the motives behind it, and three models that reflect different perspectives about motives exist. These are the instrumental model, the relational model, and the deontic model. The instrumental model proposes that individuals prefer justice in pursuit of favourable outcomes where they can exercise long-term control over the results. The relational framework emphasises the relationship between an individual and the social group s/he values. According to this view, fair treatment indicates respect and regard towards a particular person. Although the first two models are supported by research, neither seems to explain every dimension of justice (Cropanzano, Massaro & Beckers, 2017). These models have arguably ignored moral obligations and have pointed essentially to personal aspirations as the reason for behaving in a negative way to

justice and injustice. More recent studies have included a moral dimension and emphasise that justice is not only about economic interests or group-based identity, but also related to that which people regard to be ethically appropriate. In this vein, Folger (2001) developed the concept of deontic justice to express the extent to which moral responsibility and sense of responsibility are related to judicial judgements and actions. A deontic justice viewpoint takes correctness as a moral virtue. At the basis of the concept is the notion of caring about others. For any behaviour to be perceived as fair, it is expected that the conduct is not only fair to the individual, but to others as well (Beugré, 2012).

Despite extensive research related to ethics and moral justice, dishonesty is seemingly progressively more prevalent in the world today. Academic dishonesty is a pervasive problem throughout the world (Blankenship & Whitley, 2000). According to O'Neill and Pfeiffer (2012) one's moral compass affects students' actions: if students believe cheating to be ethically unacceptable, they are reluctant to become involved in any cheating behaviour. Students' perceptions about cheating and the reaction of society towards those engaged in cheating also influence the frequency of the behaviour. The way in which students perceive cheating is therefore crucial in determining whether they will engage in or refrain from academic dishonesty.

Deontic justice

Deontic justice proposes that justice is important for its own sake and that standards of fairness exist. According to this view, people care for justice towards everyone, even when they are not directly involved. They follow principled moral obligations – even when the obligations do not serve their own self-interest – because they value the standards of justice (Cropanzano et al., 2017). However, in daily life people do not always pay attention to the mistreatment that others face due to the difference between the social groups to which they belong (Greene, 2013). When people are concerned about the fair treatment of other people, regardless of their social group, it is possible to infer deontic justice. The basic principal of deontic justice is to care for oneself and others; behaviour is considered ethically appropriate only when it conforms to moral norms that are valid not only for oneself, but also for others (Folger, 2001). The concept of deontic justice has multiple dimensions, namely, moral obligation, moral accountability, and moral outrage. Moral obligation is conceptualised as an experience of a moral imperative to act according to moral norms and being consistent with moral principles. Moral accountability is the desire to hold offenders responsible for unfair conditions when witnessing actions violating justice. Moral

outrage refers to the negative feelings, anger and resentment when witnessing unfairness, and an effort to restore unfairness (Beugré, 2012). Deontic justice is therefore related to the socialised and internalised values of the individual (Lau & Wong, 2009); it comprises the moral obligation to conform to moral norms, holding those lacking morality accountable for their misdeeds, and experiencing discomfort when observing a violation of justice.

Academic dishonesty

Academic dishonesty can take various forms of cheating, such as copying during exams, letting someone else look at one's paper, writing crib notes, copying assignments, and plagiarism (O'Neill & Pfeiffer, 2012). Lin and Wen (2007) argue that academic dishonesty is related to the desire of students to obtain higher grades and certain interests. According to Odabaşı, Birinci, Kiliçer, Şahin, Akbulut and Şendağ (2007), the reasons for academic dishonesty in referencing include the difficulty students have in citing a source in their native language, tiring procedures of preparing a bibliography, and not questioning the source of online materials. In his study on the cheating motives of prospective mathematics teachers, Eraslan (2011) revealed that participants considered some courses to be unnecessary, therefore they chose an easy way to pass the course. Eraslan (2011) also suggests that a teaching and learning system based on memorising and retrieval of information causes academic dishonesty and cheating behaviour. Tsui and Ngo (2016) emphasise the relationship between students and their peers where a student's positive attitude toward his/her peers' cheating behaviours may affect the frequency of his/her own cheating actions. In that vein, educators' attitudes are also important. Ersoy and Özden (2011) found that students' tendency towards plagiarism from the internet is related to the attitude of the instructor; if the instructor is strict about the issue, the tendency towards dishonest conduct is lower.

Certain demographic features are also influential in predicting one's inclination towards cheating. Studies have revealed that males are generally more likely to cheat than females (Dawkins, 2004). There is also a negative correlation between academic dishonesty and academic performance; successful students are less likely to cheat during their education (Burrus, McGoldrick & Schuchmann, 2007; Dawkins, 2004; Finn & Frone, 2004; Karim & Ghavam, 2011). Moral beliefs and values are also crucial factors that hinder students to engage in cheating (Eraslan, 2011). Although many studies pertaining to the frequency of academically dishonest behaviour have been done, studies on factors that may predetermine a tendency toward academic dishonesty among students may play an important

role in preventing misbehaviour (Eminoglu & Nartgün, 2009). This study was aimed at determining the relationship between a deontic justice attitude and a tendency towards academic dishonesty among prospective teachers. It was hypothesised that – as deontic justice requires of people to have a sense of moral obligation and accountability – individuals with a deontic justice attitude are likely to display less of a tendency towards academic dishonesty. Although studies on the tendencies towards academic dishonesty among students exist, studies specifically addressing the relationship between an attitude of deontic justice and a tendency towards academic dishonesty could not be found. It was therefore believed that this research could contribute to the field, by addressing the following research questions:

- Do deontic justice attitudes of prospective teachers show significant differences according to their gender and department of education?
- Do academic dishonesty tendencies of prospective teachers show significant differences according to their gender and department of education?
- Does a relationship exist between deontic justice attitudes and academic dishonesty tendencies of prospective teachers?

Methodology

This research was a quantitative and descriptive study conducted to explore deontic justice attitudes and tendencies towards academic dishonesty among a cohort of prospective teachers. Quantitative research aims to determine the relationship between an independent and a dependent variable, and a descriptive study establishes associations between them (Hopkins, 2008). To this aim, participants were asked to indicate their gender and the department of education they were involved with because it was believed that these variables could potentially affect the deontic justice attitudes and academic dishonesty tendencies of the prospective teachers. Both the attitudes and the tendencies were measured with standardised measurement scales and the relationship between these was statistically determined.

The participants comprised 403 university students attending the Education Faculty of a state university located in the Central Anatolia Region, in the 2016–2017 education year. The population consisted of students who continued their education in one of seven teaching departments in the faculty: Social Sciences Education, Primary Mathematics Education, Turkish Education, English Language Education, Science Education, Physical Education and Primary Education. The sample was determined with 95% confidence level and 0.03 sampling error (Yazıcıoğlu & Erdoğan, 2004). The stratified random sampling method was applied so that the entire population was divided into strata, which were the departments in the Education

Faculty. For this study the departments were considered as homogeneous groups. The proportionate stratification method was implemented to adequately represent each subgroup. In other words, the sample size of each department was ensured to be proportionate to the population size of the department. After determining the strata sample size, the simple random sampling method was applied to each stratum to select participants for the study. Voluntary participation was always considered imperative and before research surveys were distributed to students, each potential participant was reminded that s/he could withdraw from the study whenever s/he wanted, and that their personal information would remain anonymous, that their answers would be confidential and used only for scientific research. The participants only received the scales once they had agreed to take part. Two scales, the Deontic Justice Scale and the Academic Dishonesty Tendency Scale, were applied in this research. Prior to the research, consent to use the scales was gained via email. The implementation process was completed in the Education Faculty where the participants were requested to complete the questionnaires distributed to them. The participants' demographic features are reflected in Table 1.

Table 1 Demographic features of the participants

Demographic variable	<i>f</i>	%
Gender		
Female	286	71
Male	117	29
Department of Education		
Primary Education	66	16.4
Turkish Education	72	17.9
Social Sciences Education	34	8.4
Science Education	65	16.1
Physical Education and Sports	40	9.9
Primary Mathematics Education	31	7.7
English Language Education	95	23.6

Female participants represented 71% of the sample ($n = 286$) and male participants 29% ($n = 117$). Participants were distributed across all seven departments within the Education Faculty with the lowest number of participants in the Primary Mathematics Education Department (7.7% of the sample) and the highest number in the English Language Education Department (23.6% of the sample).

Beugré (2012) developed the Deontic Justice Scale to measure the properties related to deontic justice. The validity and reliability study of the Turkish version of the deontic justice scale was undertaken in 2013 (Akin, Sarıçam, Kaya, Akdeniz, Gediksiz, Toprak & Yıldız, 2013). The scale comprises 18 items and three sub-scales. These sub-scales are **moral obligation**, which has eight items, **moral accountability**, with six items, and **moral outrage** with four items. Each item is

rated according to a typical five-level Likert rating scale, namely: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. The alpha internal consistency coefficients for the overall scale were found to be .87, and for the sub-scales .75, .77, and .85 respectively (Akin et al., 2013).

Eminoglu (2008) developed the Academic Dishonesty Tendency Scale to measure the academic dishonesty tendency of university students. It consists of 22 items and four sub-scales: **tendency towards cheating** with five items; **tendency towards dishonesty in assignments, and studies such as projects**, which has seven items; **tendency towards dishonesty in the process of research and report** with four items; **dishonesty tendency towards ascriptions** with six items. Responses were evaluated on a five-level Likert-type scale: (1) strongly agree; (2) disagree; (3) neither agree nor disagree; (4) disagree; and (5) strongly disagree. The Cronbach alpha reliability coefficients of the overall scale are .90 and .71, .82, .78, and .77 for the sub-scales respectively.

Participants' scores on the Academic Dishonesty Tendency Scale and Deontic Justice Scale were treated as dependent variables; participants' gender and departments of education were treated as independent variables. The demographic features of the participants were analysed with the use of descriptive statistics. An independent samples *t*-test was applied to explore a potential difference in deontic justice mean scores or academic dishonesty

tendency mean scores between male and female participants. One-way analysis of variance (ANOVA) and the TUKEY test were performed to make sense of the possible differences in mean scores between each of the seven departments of education. Lastly, correlation analysis was done to reveal meaningful relationships between any dimension of deontic justice and any dimension of academic dishonesty tendency; also between deontic justice and academic dishonesty tendency as unidimensional constructs. Data was analysed with version 16.0 of the Statistical Package for the Social Sciences (SPSS).

Findings

The study aimed to shed light on the deontic justice attitudes and the academic dishonesty tendencies of a sample of prospective teachers. Demographic variables – gender and the specific education department that participants were attached to – were taken into consideration and examined to determine whether either of these were related to the dependent variables in any way. The possibility of a relationship between deontic justice attitudes and tendencies towards academic dishonesty was also examined.

Deontic Justice Attitudes and Gender

To determine whether any relationship existed between gender and one's deontic justice attitude, an independent samples *t*-test was performed of which the results are presented in Table 2.

Table 2 Deontic justice attitudes in terms of gender

Sub-scales of deontic justice scale	Gender	<i>N</i>	\bar{X} *	<i>SD</i>	<i>t</i> -test	<i>p</i> -value
Moral obligation	Female	286	35.47	4.70	1.46	.145
	Male	117	34.42	7.05		
Moral accountability	Female	286	26.27	3.95	1.28	.203
	Male	117	25.62	4.93		
Moral outrage	Female	286	17.63	2.54	2.25	.026
	Male	117	16.91	3.10		
Deontic justice (combined score)	Female	286	79.37	9.87	1.77	.078
	Male	117	76.95	13.35		

Note. * \bar{X} refers to mean score.

Table 2 indicates that there are no significant differences in the mean scores between male and female participants for the following: deontic justice (combined score), moral obligation (sub-scale), and moral accountability (sub-scale). However, in terms of moral outrage, the mean score of female participants is higher than that of males ($\bar{X} = 17.63$ and $\bar{X} = 16.91$ respectively) (*t*-test = 2.25; *p* < .05) implying a meaningful difference between the average scores of the two groups. *P*-value indicates whether a difference is statistically significant or not. If the value is lower than 0.05, it is accepted as significant (Pallant,

2010). Here, the female group's *p*-value is 0.026, which is lower than 0.05, so the difference is statistically significant.

Deontic Justice Attitudes and Affiliation

To determine whether a differentiation in deontic justice scores of students in terms of their departments existed, ANOVA was applied. The results show that students from the English Language Education Department had the highest combined score for deontic justice. The variance analysis was then performed to determine differences between and within the groups.

Table 3 Deontic justice attitudes between and within groups

Sub-scales of deontic justice scale	Departments	SS	MS	F	p-value
Moral obligation	Between groups	318.57	53.10	1.8	.102
	Within groups	11830.62	29.88		
Moral accountability	Between groups	224.47	37.41	2.10	.053
	Within groups	7078.99	17.87		
Moral outrage	Between groups	131.76	21.96	3.03	.007
	Within groups	2866.53	7.24		
Deontic justice (combined score)	Between groups	1682.26	280.38	2.35	.031
	Within groups	47261.51	119.35		

When Table 3 is examined, the *F* value ($F = 3.034$; $p < .05$), related to moral outrage and the *F* value ($F = 2.349$; $p < .05$) for deontic justice (combined score) indicates that there is a statistically significant difference between groups in each respective case. The *p*-value for the moral outrage score between groups is 0.007, which is lower than 0.05; similarly the *p*-value for deontic justice between groups is 0.031, which is also lower

than 0.05, means that there is a statistically significant difference between groups.

As there was evidence that group means differed, the TUKEY test was performed to investigate which of the means were different. When more than two groups are used, the TUKEY test compares the difference between each pair of means. The results of the TUKEY test are reported in Table 4.

Table 4 Deontic justice attitudes in relation to specific departments

Dependent variable	(I) Department	(J) Department	Difference between means	
			(I-J)	p-value
Moral outrage	English Language Education	Primary Mathematics Education	1.80	.022
	English Language Education	Science Education		
Deontic justice (Combined score)	English Language Education	Science Education	5.80	.018

With reference to the sub-scale, moral outrage, the *p*-value ($p = 0.022$; $p < .05$) shows that there is a significant difference between participants affiliated to the English Language Education Department and participants related to the Primary Mathematics Education Department. The moral outrage attitude of participants from the English Language Department is significantly higher than that of participants from the Primary Mathematics Education Department. With reference to the deontic justice combined score, there is a significant difference ($p = 0.018$; $p < .05$) between participants from the English Language Education

Department and participants from the Science Education Department. Overall deontic justice attitudes among participants from the English Language Education Department are significantly higher than those of participants from the Science Education Department.

Academic Dishonesty Tendencies and Gender

To determine whether the academic dishonesty tendencies of female and male participants differed, an independent samples *t*-test was applied, of which the findings are reported in Table 5.

Table 5 Academic dishonesty tendency in terms of gender

Sub-scales of the academic dishonesty tendency scale	Gender	N	\bar{X}	SD	t-test	p-value
Tendency towards cheating	Female	286	10.10	4.20	-2.19	.030
	Male	117	11.27	5.09		
Tendency towards dishonesty in studies e.g. assignments, projects, etc.	Female	286	14.50	4.05	-4.28	.000
	Male	117	16.68	4.87		
Tendency towards dishonesty in the process of research and report	Female	286	8.72	2.84	-2.22	.028
	Male	117	9.49	3.27		
Dishonesty tendency towards ascriptions	Female	286	12.85	3.62	-3.28	.001
	Male	117	14.19	3.92		
Academic dishonesty (combined score)	Female	286	46.17	11.33	-4.06	.000
	Male	117	51.62	12.58		

Table 5 indicates that the tendency towards academic dishonesty among females – with regard to overall dishonesty and in relation to each of the sub-scales – is significantly lower than among males. *T*-test scores in each instance confirm this finding, with scores ranging from ($t = -2.189$; $p <$

$.05$) in the case of cheating and ($t = -4.275$; $p < .05$) in the case of dishonesty in assignments and projects. The *p*-value of female participants for each sub-scale is lower than 0.05, which is an indicator for statistical significance.

Academic Dishonesty Tendencies and Affiliation
To determine whether there was a differentiation in academic dishonesty tendency scores of students in terms of their departments, ANOVA was performed. The results show that students from the Physical Education and Sports Department have the highest combined score of academic dishonesty

tendency. The variance analysis was then performed to determine differences between and within groups.

Table 6 displays the variance in the scores for academic dishonesty tendency among participants related, firstly, to their own groups and secondly, among all groups.

Table 6 Academic dishonesty tendencies within and among groups

Sub-scales of academic dishonesty tendency	Departments	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i> -value
Tendency towards cheating	Between groups	767.52	127.92	6.89	.000
	Within groups	7357.74	18.58		
Tendency towards dishonesty in studies such as assignments, projects, etc.	Between groups	389.16	64.86	3.46	.002
	Within groups	7418.13	18.73		
Tendency towards dishonesty in the process of research and reporting	Between groups	93.10	15.52	1.76	.107
	Within groups	3500.59	8.84		
Dishonesty tendency towards ascriptions	Between groups	467.59	77.93	5.95	.000
	Within groups	5190.07	13.11		
Academic dishonesty	Between groups	5617.93	936.32	7.16	.000
	Within groups	51775.26	130.75		

From Table 6 it is clear that significant differences in the scores of participants' tendencies towards cheating ($F = 6.885$; $p < .05$), tendency towards dishonesty in studies such as assignments, projects, etc. ($F = 3.462$; $p < .05$), dishonesty tendency towards ascriptions ($F = 5.946$; $p < .05$), and dishonesty overall ($F = 7.161$; $p < .05$) are found between groups. Apart from the sub-scale of

tendency towards dishonesty in the process of research and reporting, for all sub-scales the p -value is lower than 0.05, which indicates the significancy.

As there was evidence that group means differed, the TUKEY test was performed to investigate which of the means were different and the results are presented in Table 7.

Table 7 Academic dishonesty tendency in relation to specific departments

Dependent variable	(I) Department	(J) Department	Difference between means (I-J)	<i>p</i> -value
Tendency towards cheating	Physical Education and Sports	Primary Education	3.20	.005
		Turkish Education	4.02	.000
		Social Sciences Education	5.07	.000
		Science Education	2.68	.034
		Primary Mathematics Education	3.89	.005
		English Language Education	4.63	.000
Tendency towards dishonesty in studies such as assignments, projects, etc.	Physical Education and Sports	English Language Education	3.42	.001
Dishonesty tendency towards ascriptions	Science Education	Turkish Education	2.00	.023
		English Language Education	2.01	.011
	Physical Education and Sports	Turkish Education	3.19	.000
		English Language Education	3.20	.000
Academic dishonesty	Primary Education	English Language Education	5.92	.022
		English Language Education	6.55	.008
	Physical Education and Sports	Turkish Education	10.83	.000
		Social Sciences Education	10.41	.002
		English Language Education	12.35	.000

The TUKEY test results confirm the relatively high tendencies towards academic dishonesty among participants from the Physical Education and Sports Department. The tendency to cheat is significantly higher than that of participants from any other department. Their tendency towards dishonesty in assignments and projects is significantly higher than that of participants from the English Language Education Department. The

tendency to dishonesty in ascriptions is significantly higher than that of participants from the Turkish Education Department and the English Language Department. The tendency towards academic dishonesty overall (combined score) is significantly higher than that of participants from the Turkish Education Department, the Social Sciences Education Department, and the English Language Education Department. The positive

outcomes of the analysis for the Language Education Department are noticeable at face level.

The Relationship Between the Deontic Justice Attitudes and Academic Dishonesty Tendencies of Prospective Teachers

Table 8 presents the correlation between the deontic justice attitudes of the participants and their tendencies towards academic dishonesty.

Table 8 Relationship between the deontic justice attitudes and academic dishonesty tendencies

Sub-scales		Moral obligation	Moral accountability	Moral outrage	Tendency toward cheating	Dishonesty in studies such as assignments, projects, etc.	Dishonesty in research and reporting	Dishonesty tendency towards ascriptions	Deontic justice	Academic dishonesty
Moral obligation	<i>r</i>	1								
Moral accountability	<i>r</i>	.695	1							
	<i>p</i>	.000								
Moral outrage	<i>r</i>	.621	.632	1						
	<i>p</i>	.000	.000							
Tendency towards cheating	<i>r</i>	-.105	-.086	-.109	1					
	<i>p</i>	.035	.083	.029						
Dishonesty in assignments and projects	<i>r</i>	-.096	-.115	-.075	.464	1				
	<i>p</i>	.053	.021	.134	.000					
Dishonesty in research and reporting	<i>r</i>	-.173	-.148	-.127	.357	.573	1			
	<i>p</i>	.000	.003	.011	.000	.000				
Dishonesty in ascriptions	<i>r</i>	-.169	-.177	-.206	.271	.496	.514	1		
	<i>p</i>	.001	.000	.000	.000	.000	.000			
Deontic justice	<i>r</i>	.920	.889	.801	-.113	-.111	-.175	-.203	1	
	<i>p</i>	.000	.000	.000	.024	.026	.000	.000		
Academic dishonesty	<i>r</i>	-.171	-.167	-.165	.722	.842	.757	.727	-.191	1
	<i>p</i>	.001	.001	.001	.000	.000	.000	.000	.000	

Table 8 reveals the following statistically relevant correlations between the different dependable variables:

- strong, positive, and statistically significant relationship between **moral obligation** and moral accountability ($r = .695$), moral outrage ($r = .621$), and deontic justice (combined score) ($r = .920$)
- low, negative, and statistically significant relationship between **moral obligation** and cheating ($r = -.105$), dishonesty in research and reporting ($r = -.173$), dishonesty in ascriptions ($r = -.169$), and academic dishonesty (combined score) ($r = -.171$)
- strong, positive, and statistically significant relationship between **moral accountability** and moral obligation ($r = .695$), moral outrage ($r = .632$), and deontic justice (combined score) ($r = .889$)
- low, negative, and statistically significant relationship between **moral accountability** and dishonesty in assignments and projects ($r = -.115$),

dishonesty in research and reporting ($r = -.148$), dishonesty in ascriptions ($r = -.177$), and academic dishonesty (combined score) ($r = -.167$)

- strong, positive, and statistically significant relationship between **moral outrage** and moral obligation ($r = .621$), moral accountability ($r = .632$), and deontic justice (combined score) ($r = .801$)
- low, negative, and statistically significant relationship between **moral outrage** and cheating ($r = -.109$), dishonesty in research and reporting ($r = -.127$), dishonesty in ascriptions ($r = -.206$), and academic dishonesty (combined score) ($r = -.165$)
- strong, positive, and statistically significant relationship between the tendency towards **cheating** and academic dishonesty (combined score) ($r = .722$)
- moderate, positive, and statistically significant relationship between the tendency towards **cheating** and dishonesty in assignments and projects ($r = .464$), and dishonesty in research and reporting ($r = .357$)

- low, positive, and statistically significant relationship between **cheating** and dishonesty in ascriptions ($r = .271$)
- low, negative, and statistically significant relationship between **cheating** and moral obligation ($r = -.105$), moral outrage ($r = -.109$), and deontic justice (combined score) ($r = -.113$)
- strong, positive, and statistically significant relationship between **dishonesty in assignments and projects** and dishonesty in research and reporting ($r = .573$), and academic dishonesty (combined score) ($r = .842$)
- moderate, positive, and statistically significant relationships between **dishonesty in assignments and projects** and cheating ($r = .464$), and dishonesty in ascriptions ($r = .496$)
- low, positive, statistically significant relationship between **dishonesty in assignments and projects** and moral accountability ($r = -.115$), and deontic justice ($r = -.111$)
- strong, positive, and statistically significant relationship between **dishonesty in research and reporting** and dishonesty in assignments and projects ($r = .573$), dishonesty in ascriptions ($r = .514$), and academic dishonesty (combined score) ($r = .757$)
- moderate, positive, and statistically significant relationship between **dishonesty in research and reporting** and cheating ($r = .357$)
- low, negative, and statistically significantly relationship between **dishonesty in research and reporting** and moral obligation ($r = -.173$), moral accountability ($r = -.148$), moral outrage ($r = -.127$), and deontic justice (combined score) ($r = -.175$)
- strong, positive, and statistically significant relationship between **dishonesty in ascriptions** and dishonesty in research and reporting ($r = .514$), and academic dishonesty (combined score) ($r = .727$)
- moderate, positive, and statistically significant relationship between **dishonesty in ascriptions** and dishonesty in assignments and projects ($r = .496$)
- low, positive, and statistically significant relationship between **dishonesty in ascriptions** and cheating ($r = .271$)
- low, negative, and statistically significant relationship between **dishonesty in ascriptions** and moral obligation ($r = -.169$), moral accountability ($r = -.177$), moral outrage ($r = -.206$), and deontic justice (combined score) ($r = -.203$)
- strong, positive, and statistically significant relationship between **deontic justice** (combined score) and moral obligation ($r = .920$), moral accountability ($r = .889$), and moral outrage ($r = .801$)
- low, negative, statistically significant relationship between **deontic justice** (combined score) and tendency towards cheating ($r = -.113$), dishonesty in assignments and projects ($r = -.111$), dishonesty in research and reporting ($r = -.175$), dishonesty in ascriptions ($r = -.203$), and academic dishonesty (combined score) ($r = -.191$)
- strong, positive, and statistically significant relationship between **academic dishonesty tendency** (combined score) and tendency towards cheating ($r = .722$), dishonesty in assignments and projects

($r = .842$), dishonesty in research and reporting ($r = .757$), and dishonesty in ascriptions ($r = .727$)

- low, negative, and statistically significant relationship between **academic dishonesty tendency** (combined score) and moral obligation ($r = -.171$), moral accountability ($r = -.167$), moral outrage ($r = -.165$), and deontic justice (combined score) ($r = -.191$)

Discussion and Conclusion

The study reveals that there is a relationship between academic dishonesty tendency and deontic justice, which is an important finding implying that perceptions of justice affect students' behaviour in terms of dishonesty. It is essential to reduce dishonesty behaviour because academic dishonesty is globally becoming more common. Grimes' (2004) cross-cultural study on dishonesty in academics and business revealed that nearly three-fourths of college students in Eastern Europe were involved in some form of cheating. The situation in Turkey is similar to that of developed countries, where a study conducted on cheating behaviours of students attending the Education Faculty of Inonu University revealed that nearly 70% of students cheated in their exams (Akdağ & Günes, 2002). Another study conducted with students of the Faculty of Medicine at Firat University found that 80% of the participants cheated at times (Semerci, 2004).

The motives for cheating are students' ambitions to achieve higher marks, the effort it takes to complete an assignment in a limited amount of time, a lack of self-confidence or self-control, lower academic motivation, and a tendency to violate rules (Oran, Can, Şenol & Hadımlı, 2016). As the study results show, another important factor is the perception of justice, which has an influence on cheating behaviour. Personal and socially constructed values, beliefs, and assumptions affect people's choices and understanding of what is morally right or wrong (Potgieter, 2011). In other words, choices and perceptions influence behaviour standards. This study reveals that there is a strong, positive and meaningful relationship between the combined score for deontic justice and sub-scales of moral obligation, moral accountability, and moral outrage. If a person feels obliged to behave morally, s/he feels deontic justice stronger. Transparency and accountability in terms of the moral issues are also important motives to feel deontic justice. If a person chooses to be morally responsible, s/he will behave accordingly, and as deontic justice implies, s/he will have the same feelings not only for her/himself, but also for others. There is a negative and meaningful relationship between combined the deontic justice score and the sub-scales of cheating, dishonesty in assignments, projects, dishonesty in research, reporting, and dishonesty in ascriptions. Although there is no strong

relationship, it implies that, as the deontic justice score increases, dishonesty tendencies in academic studies decrease.

The findings also show that the academic dishonesty tendency combined score has a strong, positive, and meaningful relationship with its sub-scales of cheating, dishonesty in assignments, projects, dishonesty in research, reporting, and dishonesty in ascriptions. If an individual has a higher academic dishonesty tendency score, s/he more often acts dishonestly in academic studies. On the other hand, there is a low, negative, and meaningful relationship between academic dishonesty tendency and sub-scales of moral obligation, moral accountability, and moral outrage. Having a higher tendency towards academic dishonesty signals a lower moral obligation, moral accountability, and moral outrage scores. It can be said that if an individual has a tendency towards academic dishonesty, s/he doesn't have a strong feeling or a sense of responsibility to behave morally. The inverse relationship between combined scores of deontic justice and academic dishonesty tendency supports this view. Whitley (1998) found that students who have a negative attitude towards cheating do not cheat, even when they are less likely to get caught. In other words, students who do not find cheating moral, do not cheat, even if they have the opportunity to do so. At this point, moral obligation, accountability, and outrage gain importance. If students have a positive attitude towards deontic justice, they are less likely to exhibit the tendency towards academic dishonesty. In this respect, the study leads educators to have an impact on students' justice perception. If students are motivated to adopt the view of justice for all, less academic dishonesty behaviour may be observed.

This study also indicates that male students are more prone to cheat, or to display academic dishonesty. The finding supports the results of the study conducted by Küçüktepe and Küçüktepe (2012), which investigated the tendency of prospective teachers of history towards academic dishonesty, and found that male participants had a higher tendency to cheat than female teacher candidates. Yangin and Kahyaoglu (2009) found similar results in terms of gender in their study on cheating tendencies among prospective teachers of Primary Education. Likewise, most of the academic dishonesty research done in the United States of America and other western countries revealed that male students are more inclined to cheat in the exams. This may possibly be explained by the fact that male students feel less guilty when they cheat (Gümüşgöl, Üstün, Işık & Demirel, 2013). Likewise, in respect of the sub-scale, moral outrage, female students have significantly higher scores, which reveal that female students have

more positive deontic justice attitudes than do male students. This finding aligns with the findings from a study conducted by Ekşi, Okan and Güner (2016), which revealed that females have higher scores than males in terms of deontic justice. It can be inferred that the attitude of females towards deontic justice lowers their tendency towards academic dishonesty when compared to males.

When considering deontic justice attitudes and tendencies towards academic dishonesty among participants from different departments of education, the findings revealed that students of the Physical Education and Sports Department are more inclined to show academic dishonesty. This finding aligns to that of a study conducted by Omur, Aydın and Argon (2014), which investigated the relationship between the fear of negative evaluation and tendency towards academic dishonesty. It was found that students of the Fine Arts Education Department also had a relatively higher level of academic dishonesty tendency. This finding was explained by referring to the aptitude tests that are taken as a part of the admissions examinations. This is also true with reference to the Physical Education and Sports Departments. It can be inferred that the students who attend departments requiring physical or artistic aptitude do not place as much importance on written exams. Aptitude tests are seen to be more crucial for their future careers, and they may rationalise the tendency towards dishonesty with this kind of thinking. On the other hand, students of the English Language Education Department had the highest scores on the Deontic Justice Scale. Further research should possibly be undertaken to understand the reasons behind such a difference.

To reduce the prevalence of academic dishonesty, the importance of academic integrity is emphasised. Teacher educators intentionally prepare prospective teachers as knowledgeable, thinking practitioners who are sensitive to moral and ethical issues (Rusznayak, 2018; Uredi & Akbasli, 2015). Students should take part in the enforcement of academic integrity initiatives (Melgoza & Smith, 2008). Ethical values ought to be stressed, and ethical development of students ought to be supported (Pavela, 1999). The importance and value of honesty, integrity, and courage should be emphasised, and students ought to be discouraged from cheating (Hinton, 2004). Educators' positive and supportive attitudes may decrease the frequency of cheating. Students' deontic justice attitudes should be developed because deontic perspectives emphasise ethical and fair behaviour (Beugré, 2010). It should be emphasised that honesty is a crucial merit, and it ought to be preferred over personal interests. For this reason, educators' attitudes are important, and as it is believed that attitudes are not like personality traits (Nel, Müller, Hugo, Helldin,

Bäckmann, Dwyer & Skarlind, 2011), they can be changed. The attitudes of students of education towards academic dishonesty is, therefore, especially important. When they become teachers, they are expected to inculcate moral values in their students. The education system, therefore, needs individuals with moral maturity, and this may be possible to a greater degree if educators help their students to internalise the moral standards embodied by a deontic justice attitude.

In closing. This study focused on deontic justice attitudes and academic dishonesty tendencies of prospective teachers. The results are limited with findings relating to 403 participants attending an Education Faculty in Turkey. Future studies can be done in different regions with different participants or variables.

Authors' Contributions

Each author contributed equally to the manuscript in terms of data collection, statistical analyses, and conceptual framework. All authors reviewed the final manuscript.

Notes

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