

Sensation Seeking and the Intention to Cheating among College Students: An Application of the Theory of Planned Behavior

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Abstract: Cheating is immoral phenomenon common in the educational system. The aim of this study was to determine the factors associated with the exam cheating among college students based on theory of planned behavior. This cross-sectional study was conducted among 230 college students in Kermanshah University of Medical Sciences, during 2014. Participants selected in random sampling with probability proportional to size and data were collected by using questionnaire in self-report. Data were analyzed by using SPSS-21. The results showed that 126 of the participants (60.9%) had a history of cheating in exams during their university studies. The intention to cheat, have shown a significant correlation, respectively with, perceived behavioral control (0.629), attitude (0.489), sensation seeking (0.336) and subjective norms (0.321). The linear regression indicated, TPB variable, accounted for 46% of the variation in the outcome measure of the intention to cheating. In addition, Logistic regression showed, intention (OR: 1.290), perceived behavioral control (OR: 1.182) and sensation seeking (OR: 1.077) were a best predictor for cheating. It seems that the implementation of educational interventions in the context of increasing perceived behavioral control to not cheating and reduce beliefs related to sensation seeking may be usefulness of the results in order to prevent of cheating.

Key words: Cheating, theory of planned behavior, sensation seeking, college students, cheating

INTRODUCTION

Cheating on exams has been known as a major educational problem in educational settings (Williams, 2001). Cheating is defined as any behaviors among students to gain higher scores or avoid low scores in an exam or in their assignments which cause disorders to precise measurement of students' abilities (Harding *et al.*, 2007). Frequent cheating on exams in educational settings may have several negative consequences. On one hand, cheaters enjoy an unfair priority over other students. On the other hand, it causes disappointment among the students who see their classmates cheating and success, which could encourage them to cheat at their exams (Ejei *et al.*, 2012). Also, several studies reported the correlation between cheating at educational settings and cheating at work settings (Nonis, 2001; Trevin, 2006; Lawson, 2004). Considering the negative consequences

of cheating at exams emphasize the importance to prevent the behavior in educational settings. Therefore, it seems essential to investigate the effective factors on cheating behaviors at exams to introduce preventive programs. Reviewing the related literature, several factors have been known to be effective on tendency to cheat at exams, including personal, (e.g., age, gender, etc.) and situational, (e.g., educational level, penalties, supervision, opportunity to cheat, etc.) Nonis (2001), Trevin (2006), Lawson (2004) and Stone *et al.* (2007). Also, Deandrea *et al.* (2009) introduced sensation seeking as a predictor to cheating on exams. Furthermore, due to the increasing press on students to gain higher scores, some students mentioned cheating as a proper alternative (Klein, 2007). Several studies on the issue showed that students who cheated on exams considered cheating as a norm and a normal behavior and committed it while it was prohibited (Donald *et al.*, 2002 Lynette *et al.*, 2004).

McCabe and Trevia studied 750 college students and suggested that peer behavior could be a proper predictor to students' cheating on exams (McCabe *et al.*, 1997). Also, pressures and fear to fail exams had been known as motives to cheating (Hsiao, 2015). Notice that various factors affect human behavior and it is essential to know the casual network to influence effective factors on behaviors; it has been the goal of behavioral scientists for many years and the resulted theories guided the experts to recognize effective factors on behaviors (Glanz *et al.*, 2008). Meanwhile, a very practical theory applied in various studies is the theory of planned behavior, which suggests the primary behavioral intentions resulting from attitudes, subjective norms and perceived behavior control (Ajzen *et al.*, 1991). Several studies have been used theory of planned behavior in different contexts (Jalilian *et al.*, 2016; Mirzaei-Alavijeh *et al.*, 2016; Harding *et al.*, 2012; Mayhew *et al.*, 2009; Passow *et al.*, 2006; Stone *et al.*, 2010; Whitley, 1998). About, cheating, several studies around the world made use of theory of planned behavior to predict cheating behavior on exams (Harding *et al.*, 2012; Mayhew *et al.*, 2009; Passow *et al.*, 2006; Stone *et al.*, 2010; Whitley, 1998). Considering the importance of preventing cheating on exams in educational settings such as universities and the necessity to recognize influential factors on that, the aim of this study was to determine the factors associated with the exam cheating among college students based on theory of planned behavior.

MATERIALS AND METHODS

This cross-sectional study was conducted on 230 college students in Kermanshah University Medical Science, the west of Iran, during. The sample size was calculated at 95% significant level according to the results of a pilot study and a sample of 230 was estimated. Of the population of 230, 207 (90%) signed the consent form and voluntarily agreed to participate in the study, which has been approved from Kermanshah University of Medical Sciences' institutional review board and informed consent was obtained from participants.

The variables assessed in this study included three sections. Prior to conducting the main project, a

pilot study was carried out. Initially, the relevant questionnaires were administered to 30 students who were similar to study population in order to estimate the duration of the study conduction and to evaluate the reliability of the questionnaire.

Background questions: Background variables included 10 questions such as age (year), gender (male, female), collage study (medical, dentistry, pharmacy, health and nutrition, nursing and midwifery, para-medicine), educational level (undergraduate, graduate, professional doctorate), marital status (single, married), living in dormitory (yes, no), semester, the parents' educational level (high school diploma, diploma and university education) and occupation (just students, staff and students).

Sensation seeking scale: The second part included items on sensation seeking. Short form of sensation-seeking questionnaire was used to evaluate sensation-seeking. In 1964, Zuckerman first developed 40 questions in the main questionnaire of sensation-seeking. Later in 2002, Hoyle et al. modified the short form of sensation-seeking questionnaire to include 8 items, (e.g., "I would like to experience risky activities." and "I would like to travel without planning"). Responses are chosen in five Likert scales. Cronbach's alpha of the questionnaire was calculated from 0.74-0.85 in various societies (Hoyle *et al.*, 2002). A pilot study was run on 30 students due to the purpose of the study and Cronbach alpha was estimated 0.76.

TPB variables: TPB scale was designed based on a standard questionnaire (Harding *et al.*, 2012; Mayhew *et al.*, 2009; Passow *et al.*, 2006; Stone *et al.*, 2010; Whitley, 1998) and included 17 items under four constructs including attitude; subjective norms; perceived behavioral control; behavioral intention. Prior to conducting the main project, a pilot study was carried out. Initially the relevant questionnaires were administered to 30 students who were similar to study population in order to estimate the duration of the study conduction and to evaluate the reliability of the questionnaire. Table 1 shows the samples of each structure.

Table 1: Summary and samples of TPB variables questionnaire using the Cronbach's alpha

Structures	Items	Score range	Alpha coefficient	Examples
Attitudes to cheating on exams	5	5-35	0.79	I think the right thing to do is cheating
Subjective norms to encourage cheating on exams	4	4-20	0.71	If I would cheat in examinations, my friends confirmed it
Perceived behavior control to cheat on exam	4	4-20	0.73	It is difficult for me to avoid cheating if the supervision is weak
Intention to cheat on exams	4	4-20	0.75	I'm going to cheat on exams this semester

RESULTS AND DISCUSSION

The mean age of respondents was 22.44 years [SD: 3.96], ranged from 18 to 39 years. About, 60.9% (126/207) were female. Also, 82.6% (171/207) of respondents were single. In addition, 41.1% (85/207) were MD students and 58.9 % (122/207) of them were under graduate students. Almost, 126 of the participants (60.9%) had a history of cheating in exams during their university studies. Table 2 shows the results of the correlation of the structures of theory of planned behavior and sensation seeking.

Table 3 reports the results of linear regression analyses to predict TPB structures to behavior intention to cheat on exams. As can be seen in Table 3, were statistically significant predictors of the outcome measure. Collectively, TPB variables were accounted for (46%) of the variation in intention to cheating.

Finally, a step-wise model building procedure was conducted and finally on 3rd step the procedure stopped and the best model was selected, among the TPB constructs and sensation seeking: intention, perceived behavior control and sensation seeking were the more influential predictor on cheating (Table 4).

Our findings indicated 60.9% of students had a history of cheating on a test in collage; in this regard, studies showed a high prevalence of cheating among students is the exam. As an example, Williams reported that three-quarters of American college students experienced cheating on an exam at least once (Williams *et al.*, 2001). Also, McCabe studied 18000 students in 61 schools in America and Canada and suggested 71% prevalence of cheating in exams (McCabe, 2005). Lin and Wen (2007) reported cheating prevalence in Greece as 61.7%. Considering the studies on the issue in Iran, Nakhaee and Seyyed Hosseini reported cheating prevalence of 50% (Nakhaee and Hosseini, 2005). Moradi and Saeedi Jam reported 66.4% (Moradi and Saeidi-Jam, 2000). Generally, speaking, studies showed that cheating has been known as an educational problem in many countries (Brimble and Stevenson-Clarke, 2005; Christensen-Hughes and McCabe, 2006). The high prevalence of cheating on the exam and its complications act as a warning to policy-makers in educational environments which reveals the need to implement preventive interventions in this field.

As mentioned earlier, structures of planned behavior theory predicted 46% of the variance of behavioral intention of cheating on exams. Stone *et al.* (2010) reported that structures of the theory of planned behavior predicted 21% variance of behavioral intention and 36% variance of cheating behaviors on exams. Whitley (1998)

Table 2: Predictor variables correlation matrix

Variables	Mean (±SD)	X1	X2	X3	X4
X1, Attitude	18.51 (8.18)	1			
X2, Subjective Norms	11.77 (3.28)	0.295*	1		
X3, Perceived behavioural control	10.53 (3.75)	0.434*	0.380*	1	
X4, Sensation Seeking	23.22 (7.07)	0.288*	0.192*	0.361*	1
X5, Behaviour Intention	10.29 (4.11)	0.489*	0.321*	0.629*	0.336*

*p<0.05

Table 3: Predictors of the cheating intention among the participants using the linear regression analyses

Variable	B	SE (B)	B	t-value	p-value
Step 1					
Attitude	0.133	0.032	0.260	4.144	0.001
Subjective Norm	0.086	0.079	0.066	1.086	0.279
Perceived behavioural control	0.553	0.072	0.479	7.735	0.001
Step 2					
Attitude	0.139	0.032	0.272	4.398	0.001
Perceived behavioural control	0.574	0.069	0.516	8.327	0.001

Adjusted R² = 0.46, F = 75.730, p<0.001

Table 4: Multiple logistic regression analysis for TPB variables and sensation seeking related to cheating behavior

Variables	Odds ratio	95% confidence intervals		p-value
		Lower	Upper	
Perceived behavioral control	1.182	1.023	1.366	0.024
Behavioral intention	1.290	1.122	1.482	0.001
Sensation seeking	1.077	1.005	1.155	0.036

Method: Backward Stepwise (Wald); Final model Step 3

reported the variance of 27.8%. Passow *et al.* (2006) showed that structures of theory of planned behavior predicted 36% variance of cheating behavior on exams. Results from the present study correspond to the results introduced. Also, results from the present study introduced behavioral intention, perceived behavior control and sensation seeking as the strongest predictors to students cheating behavior on exams, which highly corresponded to the results from other studies. DeAndrea *et al.* (2009) reported sensation seeking as an effective factor to cheating behavior. Also, Matthew *et al.* (2009) suggested the theory of planned behavior as a proper model to predict students' cheating behavior on exam. Furthermore, Stone *et al.* (2010) and Whitley *et al.* (1998) reported attitudes to cheating on exams as a predictor to cheating behavior which was along with the results from the present study. Results from the present study showed that considering the meaningful correlation between attitudes and cheating behavior intention, although attitude was known as a predictor to cheating behavior on exam, it was not a strong predictor of cheating behavior on exam. On the other hand, as seen, the present study suggested perceived behavior control as a major predictor of cheating behavior on exam and according to the theory of planned behavior perceived behavior refers to understanding of individual's ability to do something (Ajzen, 1991). Therefore, the more the understanding of individual on his ability to cheat, the more the opportunity to commit cheating on exam is. Also, sensation seeking is

introduced as a personal characteristic defined based on the need to experience different complex, novel and unprecedented feelings and the willingness to experience financial, physical and social risks (Legrand *et al.*, 2007). However, it is worth noticing that high levels of sensation seeking are not always inefficient but increasing the tendency to do risky behavior could result in committing dangerous and, in cases, illegal behaviors (Rahmanian and Hasani, 2005). The results from the present study confirmed the above statements and reported higher chance of cheating on exam due to higher sensation seeking. It suggests the importance of paying attention to this problem in the design of educational and behavioral interventions to prevent cheating behavior in learning environments.

Considering the results from the present study and high prevalence of cheating behavior among college students, it seems essential to conduct educational interventions to prevent and decrease cheating behavior in educational settings. Therefore, it could be helpful to hold seminars and conferences to avoid cheating on exams, improve the interactions among professors and college students, making use of students' opinions to better teaching-learning procedures and improving final assessment of students in courses at universities.

Considering the limited information on cheating condition in Iran educational settings and effective factors on that, the present study can be considered practical. However, there were some limitations to the present study. First, the data was collected through students' self-reports in questionnaires (which is usually prone to recall bias). Second, all samples included medical care students. Therefore, further research on the effective factors to cheating behavior on exams is suggested.

CONCLUSION

Considering the results from the present study and the influential role of structures such as perceived behavior control and sensation seeking to predict cheating behavior on exam, it seems necessary to focus on these structures while planning intervention programs which could be practical to prevent cheating or decrease its prevalence among college students.

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