The predictors of cheating in singapore schools

Oxford English Reference Dictionary (Pearsall & Trumble, 1996) defines cheating as " to deceive or trick, deprive of, or to gain unfair advantage by deception or breaking rules, especially in a game or examination" (p. 249). In the field of educational psychology, there has been an interest in the causes of student dishonesty in schools since ancient times to the present day as it is a prevalent and perennial phenomenon. For example, in ancient China, job applicants for the civil service sector were sat apart to prevent potential cheating on the major entrance exam. The consequence or penalty for being caught cheating or aiding in the act, was death (Jackson, Levine, Furnham, & Burr, 2002).

The primary focus and aim of an educational institution is to provide an environment for personal development of youth and to promote academic honesty and integrity. In the educational setting, statistics have indicated an increase in the prevalence of academic dishonesty from 23% in 1941 (Drake, 1941) to 91% of students who admit to some form of cheating today (Sims, 1995). Indeed, it is suggested that academic cheating is endemic to education (Haines, Diekhoff, LaBeff, & Clark, 1986).

Research has shown that academic cheating in schools is a predictor of unethical behavior in subsequent professional settings (Sierles, Hendrickx, & Circel, 1980). In addition, Sims (1993) also found academic dishonesty to be significantly related to employee theft and other forms of dishonesty at the workplace. Sim's findings suggest that people who engaged in dishonest behaviors during their school days continue to do so in their professional careers.

Past Research

Some researchers have explained dishonesty, as partly a function of demographic characteristics (Whitley, 1998). However, several studies have reported no significant differences between the incidence of cheating and gender (Roig & DeTommaso, 1995), while others have reported that women are less likely than men to cheat (Whitley, 1998). Ones and Viswesvaran (1998) found that women scored higher than did men on tests of integrity. Furthermore, their findings indicated no significant differences between age and cheating. However, a review of the cheating literature indicates that those who cheat are older (Whitley, 1998). Some studies have indicated that those with lower actual school achievement cheat more (Bushway & Nash, 1997), while other studies have indicated the reverse to be the case (Whitley, 1998).

Personality variables implicated as determinants of cheating range from irresponsibility, lack of dependability, and disregard for rules and social norms (Collins & Schmidt, 1993), to extraversion, neuroticism, and conscientiousness (Bushway & Nash, 1977). However, these findings are ambiguous and unclear. Some have found no relationship between neuroticism, extraversion, and unethical behavior, while others have reported a significant relationship. Relationships for other variables (locus of control, economic orientation, and political value orientation) have also been investigated (Hegarty & Sims, 1979).

Examination of the relationship between personality and cheating led Hetherington and Feldman (1964) to describe the personality of student cheaters as dependent on four different types of cheating behaviors:

individualistic opportunistic, cheating by impulsive and unplanned people; individualistic planned, cheating is preconceived; social-active, occurs when more than two people cooperate to cheat and both parties actively investigate the cheating possibilities; and social-passive, cheating occurs when the individual's role is passive (Jackson, Levine, Furnham, & Burr, 2002).

Asian Context

Existing research on academic dishonesty has largely been conducted in Europe and North America. The results of these studies suggest that a large percentage of university students indulge in some form of cheating behaviors during their undergraduate studies (Newstead, Franklyn-Stokes, & Armstead, 1996). Although the research conducted in the Western context has increased our understanding of academic dishonesty among students, the relevance of these results to the Asian context is questionable. Differences in sociocultural settings, demographic composition, and specific educational policies may render some comparisons between both Western and Asian students meaningless. Different schools also vary widely in fundamental ways, such as size, admission criteria, and learning climate. These factors render the comparability of results obtained from different schools difficult.

Cross-cultural studies conducted to examine students' attitudes toward academic dishonesty have found evidence that students of different nationalities and of different cultures vary significantly in their perceptions of cheating (Burns, Davis, Hoshino, & Miller, 1998). In view of findings from these comparative studies, information on the topic of academic dishonesty

in other countries, particularly Asian societies, is required to evaluate the applicability of findings and explanations of why this occurs in other cultures. This is especially important in an era in which school populations are becoming more diverse and student exchange programs are becoming more common.

Singapore

The educational system in Singapore is one of the most competitive in the world. A major concern of many parents in Singapore is how well their children will perform on the national examinations and whether they will be able to gain admission to the university. Parents do not spare any efforts or cost to ensure that their children gain a head start in the educational process (Lim & See, 2001). They devote considerable amounts of time and money in hiring tutors to provide their children with additional coaching in their academic studies. Hence, in addition to this study, the pressure to cheat as one of the predictors would be examined, as this variable has been absent in most studies. Therefore, I thought it would be interesting to examine the predictors of cheating in Singapore government schools in the context of such an intensely competitive academic environment.

Present Study

This study represents such an initial attempt as most studies have concentrated on the university level and western context. Furthermore, there has been no study conducted in depth in Singapore regarding the predictors of cheating. The objective of this study was to examine the significant predictors (demographic and personality variables) that would predict the likelihood of cheating among students in Singapore.

Based on this previously discussed research, this leads to the first following hypothesis regarding demographic antecedents of cheating. Demographic variables such as age (continuous variable), gender (dichotomous variable), socioeconomic status (categorical variable), academic grades (continuous variable) and pressure to cheat (dichotomous variable) would be significant predictors of the likelihood of students cheating in schools.

In addition, consideration of the role of personality as an antecedent of cheating leads to the second following hypothesis: Personality variables such as extraversion, neuroticism, psychoticism and lie scores would be significant predictors of the likelihood of students cheating in school. Hence, the total number of independent variables is nine. The continuous dependent variable is measured by self-reported cheating behaviour.

Method
Participants

Demographics. Because this study is an evaluation of cheating in Singapore, only students in government schools will be able to participate. As students progress from primary school, secondary school, junior college and university, there would be four main levels, hence four age groups. The age group for primary school would be 7-12 years old, secondary school would be 13-16 years old, junior college would be 17-20 years old and university students would be 21-25 years old. Students from polytechnics and Institute of Technical Education are excluded from this study as their courses in school differ from the rest. Hence, in order to avoid any confounding and overlapping variables, the above institutions have been excluded. As this is a nationwide study, the number of participants has to be large so as to be

representative of the Singapore student population. Furthermore, the number of females and males participating in this study has to be equal to avoid any disruption of demographic interpretation.

As Singapore is a multiracial and harmonious country, the racial and ethnic make up of the participants has to reflect that of the greater Singapore population. According to the 2010 Census data, the racial and ethnic composition of Singapore is approximately 74. 08% Chinese, 13. 36% Malay, 9. 23% Indian and 3. 33% other ethnic groups which include Eurasians and Caucasians. Furthermore, in regards to the socioeconomic status, most Singaporeans are from a middle-income family. Hence, there would be a need to have a representative sample of the socioeconomic background as well.

Recruitment of Participants. Firstly, an application will be sent to the Ministry of Education (MOE) to allow the participation of schools in such studies. Once it has been approved by MOE, all students in Singapore government schools will be invited to participate in the study. Participants will be individually informed about the aims of the study and also assured of absolute confidentiality by means of an introductory letter. If a student expresses interest in the study, the administrator will hand out the consent form, which describes its purpose and procedures in detail.

Procedures for Obtaining Informed Consent. Written informed consent to participate in this study from students will have to be obtained. For the participation of minors, in this case, those in the primary school group (7 – 12 years old), parental consent also has to be obtained. Once parental

consent is obtained, children will be asked separately for their consent to participate. This will be done in the absence of parents so as to prevent parental coercion. However, students will be encouraged to discuss the study with their parents before deciding whether to participate. For students who have any form of difficulty of reading or comprehending, the administrator will read the consent form aloud to them. This will avoid any form of miscommunication or unnecessary mistakes when carrying out the study. Should a student refuse to sign the consent form, the student will be excluded from the study. Should a parent provide consent, but any of their children twelve years and below denies to participate, the student will then be excluded from the study.

Potential Risks to Participants. There are no foreseeable risks to participants in this study. All information collected is confidential and there is no requirement of the participants' name on the survey forms. There will be no psychological distress or social harm to the participants. Should there be any such discomfort or distress, the participant will be referred to the school counsellor and excluded from the study.

Power Analysis. In regards to the required sample size, Tabachnick and Fidel (2007, p. 123) gives a formula for calculating sample size requirements, taking into account the number of independent variables that I have. The formula is N > 50 + 8m (where m = number of independent variables). Applying this formula to my future study and taking into account the nine independent variables, my number of participants would have to be more than 122. However, as this is a nationwide study, I would prefer to have more participants so that it would be more representative of the gender,

racial and socioeconomic status of Singaporean students. Hence, a larger sample size would be more beneficial.

Measures

Eysenck Personality Questionnaire (EPQ-R; Eysenck & Eysenck, 1975). This questionnaire measures personality in terms of extraversion/introversion (E), neuroticism/stability (N), and psychoticism (P). A lie scale (L) is also included. People high in extraversion are described as sociable, lively, and impulsive and have a need for stimulation. People high in neuroticism are described as nervous and depressive. People high in psychoticism are described as tough-minded, solitary, brutal, and uncaring. Psychoticism may be a composite of both agreeableness and conscientiousness, as defined by the five-factor model (Eysenck, 1994). People high on the lie scale attempt to present a positive self-image. In this questionnaire, there are four main independent variables measured for personality – extraversion, neuroticism, psychoticism and lie scales.

The EPQ-R will be used, as opposed to a questionnaire based on the Big Five personality factors, for the following reasons. First, notable previous studies used Eysenck's questionnaire of personality (Hegarty & Sims, 1978). Second, the scale descriptions of the five-factor models vary by theorist. Third, Eysenck's EPQ contains a lie scale, and previous research has suggested a relationship between the EPQ lie scale and integrity tests (Sackett & Waneck, 1996). Finally, Eysenck's (1997) theory of personality is more closely associated with psychophysiological functioning than the Big Five (Jackson, Levine, Furnham, & Burr, 2002).

Self-reported Cheating Questionnaire. This questionnaire was especially developed to measure the person variables of interest in the present study. It was developed from the literature review, but was especially based on the work of Waugh, Godfrey, Evans, and Craig (1995). The final version of the questionnaire provides information on the following variables: (a) sample demographics – gender, age, socioeconomic status, average grades obtained during school, and pressure to cheat. Pressure to cheat would be a Yes/No questionnaire, hence it is a dichotomous variable. (b) self-reported cheating behavior – measures dishonest behavior in course work, group work, and examinations. This is the dependent variable. The scale consists of 21-item scale (see Appendix 1) adapted from Newstead, Franklyn & Armstead. (1996) (e. g., " Presented another student's work as your own") rated on a 5-point Likert scale ranging from 1 (never) to 5 (frequently). As a precautionary measure against contamination, this scale was presented at the end of the survey. High scores reflected high levels of self-reported cheating behaviour.

Procedure

Depending on the number of educational institutions in Singapore which agree to participate in the study, the liaison persons at each institution will randomly select students in which the surveys will be administered. Respondents will be given a 10-min briefing on the aims and background of the study and instructions for the survey. The researchers will be present during the survey administration to answer any questions raised by the respondents. Respondents will be given the demographics questionnaire, followed by the personality questionnaire and then the self-reported

cheating questionnaire. Each administration will probably last an average of 45 minutes.

Statistical Analysis

Aims

As stated earlier, the aim of the study is to identify the significant predictors of cheating in the local Singapore context. It also aims to find out the amount of variance in the self-reported cheating behaviour can be explained by the independent variables (demographic and personality).

Standard Multiple Regression

Quantitative data analysis procedures will be employed. Survey data will be analysed using descriptive statistics, frequency distributions and standard multiple regression. In order to use standard multiple regression, one must have two or more continuous (or categorical) variables and one continuous dependent variable. Hence, standard multiple regression would be ideal as all the independent (or predictor) variables are entered into the equation simultaneously. Each independent variable will be evaluated in terms of its predictive power, compared to other independent variables entered. In this study, standard multiple regression will be ideal to achieve the aims. This is because there is a set of independent variables (demographic and personality) and the aim is to find out the amount of variance in the dependent variable (self-reported cheating behaviour) that the independent variables were able to explain as a group and individually.

Test Assumptions

Now that the type of statistical test has been decided, there are a few test assumptions that need to be considered. Firstly, sample size needs to be adequate in order for the results to be generalized to the Singapore student population. Hence, an adequate and accurate sample size would increase the external validity of the study, hence increasing its scientific value in the field of psychology. As mentioned above, the amount has already been calculated and verified in the ' participants' section of this proposal.

Secondly, there should be an absence of multicollinearity and singularity as both does not contribute to a good regression model. Multicollinearity exists when the independent variables are highly correlated ($r = .$ 8 and above). On the other hand, singularity occurs when one independent variable is actually a combination of other independent variables. Hence, when checking the Coefficients table in the SPSS output the tolerance level has to be more than . 2 and VIF less than 4. 0 for non-violation of the test assumption of multicollinearity and singularity. However, in the case of violation, independent variables that are highly correlated should be removed as it will affect the regression model and act as a confounding variable instead.

Next, as multiple regression is very sensitive to outliers (very high or very low scores), checking for extreme scores should be part of the initial data screening process. Outliers should be deleted for both dependent and independent variables that will be used in the regression analysis. Additional procedure for detecting outliers would be using the Mahalanobis distance that is produced by the multiple regression program. To identify which cases are outliers, the critical chi-square value has to be determined using the

number of independent variables as the degrees of freedom (Tabachnick & Fidell, 2007). In addition, outliers on the dependent variable can also be identified from the standardised residual plot that can be requested. Tabachnick and Fidell (2007, p. 128) define outliers as those with standardised residual values above 3. 3 or less than -3. 3. Furthermore, assumptions of normality, linearity, homoscedasticity and independence of residuals should not be violated in order to achieve a good regression model.

Significance & Conclusion

As not much research in the area of cheating has been done in the Asian context, particularly in the Singapore context, the implications if both hypotheses are accepted would be significant. This is because it would place more emphasis on the predictors that are unique to Singapore as the study takes into account that Singapore's education system is one of the most competitive in the world. As cheating constitutes a major problem in education, it would be necessary and beneficial for prevention measures if predictors of cheating is known.

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