Testing the Effectiveness and Psychology of Different Types of Pre-warnings in Reducing Applicant Faking on Personality Tests within Selection Contexts

by

Lu Zheng

A thesis submitted to the Graduate Faculty of
Auburn University
in partial fulfilment of the
requirements for the Degree of
Master of Arts

Auburn, Alabama
December 12, 2015

Keywords: faking, pre-warning, moral,
shame, fear of punishment, guilt

Approved by

Jinyan Fan, Chair, Department of Psychology, Associate Professor of Psychology
Daniel Svyantek, Department of Psychology. Professor of Psychology
Alejandro Lazarte, Professor of Psychology

Abstract

Research has consistently found that pre-warning can reduce faking. This study included four pre-warnings: (1) the detection and consequence warning, (2) reasoning warning, (3) subjective norm warning, and (4) moral conviction warning. Regarding warnings as moral priming, I categorized the detection and consequence warning as proscriptive warning and the others as prescriptive warnings based on the dual moral regulation framework. I had several hypotheses: (1) the use of pre-warnings should reduce applicants' faking, as well as, enhance the criterion-related validity of personality test; (2) the proscriptive warning should be more effective than the prescriptive warning but had some side effects; and (3) the prescriptive and proscriptive warnings should reduce faking via guilt, shame and fear of punishment.

One hundred eighty-two undergraduate students were recruited in the study. Participants completed two parallel forms of personality test, one in a baseline setting and the other in the lab setting. In the lab setting, they were told that they had a chance to apply for a summer internship position while completing a company's pre-employment assessment. Results showed that: (1) the detection/consequence warning and the subjective norm warning showed acceptable effectiveness in reducing faking; (2) warnings did not influence the criterion-related validity of personality scores; (3) the use of proscriptive warning enhanced participants' test anxiety and reduced positive affect; and (4) the fear of punishment could reduce faking. The contributions and future research directions were discussed.

Table of Contents

List of Tables

List of Figures

Introduction and Background

Organizations evaluate the qualifications of a specific applicant mainly based on (a) what the applicant "*can do*" and (b) what applicant "*will do*" in a work setting. It indicates that both cognitive abilities and noncognitive factors are important elements to promote applicants' future adjustment and development in the workplace. Personality, as one of the most prevalent noncognitive factors, has shown an incremental predictive validity of job performance over cognitive abilities (Barrick & Mount, 1991; Hough & Oswald, 2008). Further, personality can predict contextual or citizenship performance better than cognitive abilities (Hurtz & Donovan, 2000). Personality measures also excel cognitive abilities tests in showing less adverse impact (Sackett, Schmit, Ellingson, & Kabin, 2001). Despite these advantages, personality measures' susceptibility to faking weakens their utility in personnel selection processes (Rothstein & Goffin, 2006). The term "faking", which has also been labeled as response distortion, response bias, motivated distortion, dishonest responding, elevation, dissimulation, socially desirable responding, favorable self-presentation, impression management, is used to describe the phenomenon that individuals slant their responses in a job desirable or socially desirable way, or present themselves in the best light when completing personality tests (Christiansen, Goffin, Johnston, & Rothstein, 1994; Fan et al., 2012; McFarland & Ryan, 2000; Paulhus, 1984).

Many studies have examined issues related to faking such as how test-takers fake on noncognitive measures (e.g., Ellingson, Sackett, & Connelly, 2007; Kluger & Colella, 1993; Lanyon, Goodstein, & Wershaba, 2014), whether faking reduces the validity of noncognitive measures (e.g., Hogan, Barrett, & Hogan, 2007; Hough, Eaton, Dunnette, Kamp, & McCloy,

1990; Mueller-Hanson, Heggestad, & Thornton, 2003), and how to deter this faking effect (e.g., Dwight & Donovan, 2003; Hough, 1998; McFarland, 2003; McFarland & Ryan, 2006). The general conclusions drawn from these studies are (a) some applicants do fake on personality measures or other noncognitive tests in selection contexts (Donovan, Dwight, & Schneider, 2014; Fan et al., 2012), and (b) faking can increase the percentage of fakers being selected, especially when the selection ratio is small and a top-down selection procedure is used (Donovan et al., 2014; Mueller-Hanson et al., 2003). Therefore, studies on how to control and deter faking was one of the mainstreams in faking research (Rothstein & Goffin, 2006).

The strategies that have been used to reduce faking on personality tests can be roughly categorized into one of the three approaches (Fan et al., 2012). The first approach, referred to as the proactive approach, involves attempts to either dissuade applicants from faking, or making it difficult to fake successfully (Vasilopoulos, Cucina, & McElreath, 2005). Examples include warnings against faking (e.g., Dwight & Donovan, 2003; Pace & Borman, 2006), forced-choice items (e.g., Christiansen, Burns, & Montgomery, 2005; Converse et al., 2008; Jackson, Wroblewski, & Ashton, 2000), subtle items (e.g., Holden & Jackson, 1979, 1981), and speeding (Khorramdel & Kubinger, 2006; Komar, Komar, Robie, & Taggar, 2010; Robie, Taggar, & Brown, 2009). The second strategy, referred to as the reactive approach, involves techniques dealing with the faking issue after the administration of the personality inventory (Fan et al., 2012). Examples include score adjustment based on social desirability scores (e.g., Christiansen et al., 1994; Ellingson, Sackett, & Hough, 1999; Goffin & Christiansen, 2003; Hough, 1998) and statistical modeling (e.g., Kuncel & Borneman, 2007; Smith & Ellingson, 2002; Zickar & Robie, 1999). The third strategy, referred to as the combined approaches, entails warning and retesting applicants who are identified as fakers based on their social desirability scores during the early

2

stage of the testing process (e.g., Ellingson, Heggestad, & Makarius, 2012; Fan et al., 2012; Landers, Sackett, & Tuzinski, 2011). Whereas the effectiveness of the third strategy (the combined approaches) has not been fully established due to its short history, the empirical evidence for the effectiveness of the first two strategies (the proactive and reactive approaches) has been mixed (Kuncel & Borneman, 2007; Ones, Viswesvaran, & Reiss, 1996), with one exception. That is, research has pretty consistently demonstrated the moderate effectiveness of pre-warnings against faking (Dwight & Donovan, 2003).

The current study will focus on pre-warnings, which represent those warning instructions being provided before the personality tests. The term "pre-warnings" are used to differentiate them from real-time warnings delivered in the middle of a testing process, that is, the combined strategy (e.g., Fan et al., 2012; Landers et al., 2011). Throughout this document, the words "warnings" and "pre-warnings" are used interchangeably.

Overall the years, scholars have developed several types of pre-warnings. Specifically, the most traditional pre-warnings entail alerting test-takers to the existence of social desirability scales and/or to the potential negative consequences of being caught as fakers (Dwight & Donovan, 2003). Pace and Borman (2006) proposed three new pre-warnings: Reasoning warning, educational warning and moral conviction warning. In addition, drawing from McFarland and Ryan's (2006) model, Turcu (2011) also created a new type of pre-warning called "subjective norm warning" with a focus on the construct of subject norms. (These pre-warnings will be discussed in detail subsequently.)

The purpose of the current study is to examine and compare the effectiveness and psychology of both traditional and new pre-warnings in reducing faking on personality tests. There are three main goals. First, I attempt to provide a theoretical basis for various pre-warnings

by framing pre-warnings as linguistic moral priming. Second, guided by the above theoretical ground, I propose and empirically test the relative effectiveness of various pre-warnings on score accuracy, criterion-related validities, and applicant perceptions in a simulated selection context. Third, I explore psychological mechanisms underlying these pre-warnings.

In the following sections, I first introduce various pre-warnings and review prior empirical research on pre-warnings. I argue that pre-warnings are essentially linguistic moral priming. Drawing on basic research in the moral domain, I suggest a tentative taxonomy that enables better organization of various pre-warnings. Next, based on the taxonomy and moral research, I discuss different effects and mechanisms of various pre-warnings and propose research hypotheses and research questions.

Traditional Pre-warnings

In a highly influential review and meta-analysis on pre-warnings, Dwight and Donovan (2003) summarized that a pre-warning might consist of (a) information that specifies faking can be identified (the detection component), (b) information that specifies faking will be punished (the consequence component), and (c) both the detection and consequence components.

The detection component reminds applicants of the existence of some detection methods in a personality test to identify those who provide dishonest responses (Pace & Borman, 2006). The detection component that has appeared in this literature can be further divided into (a) the identification method, (b) the verification method, or (c) no specific method. The use of various validity scales, such as lie scales, social desirability scales or impression management scales to identify fakers is considered as the identification method (e.g., Duvernet, Whelan, Seiler, & Hess, 2014; Dwight & Donovan, 2003). On the other hand, cross-checking or verifying applicants' responses with their information from other sources, such as their friends, previous employers,

their archival documents or face-to-face interview video is considered as the verification method (e.g., Doll, 1971; Fox & Dinur, 1988). Still, some detection components do not provide any specific detection information to test-takers (e.g., Braun & Constantni, 1970; Mitchell & Adair, 2014). Several studies conducted in the lab setting (e.g., Braun & Gomez, 1966; Doll, 1971; Nias, 1972; Power & O' Donovan, 1969; Schrader & Osburn, 1977) and in the field setting (e.g., Fox & Dinur, 1988; Honkaniemi & Feldt, 2008) found that participants warned of the presence of social desirability scales reported less favorable scores than control participants. Research comparing the relative effectiveness of different detection components has been very rare.

Regarding the consequence component, the pre-warning attempts to convey the message that identified fakers will be punished in some way. There are two commonly used forms of punishment in this literature: (a) being eliminated from the applicant pool (e.g., Lee et al., 2014), and (b) the downward adjustment of personality scores (Kluger & Colella, 1993). Kluger and Colella (1993) used a consequence warning in their field study. They found that the use of consequence warning reduced the means and increased the variance of job desirably transparent items. For those nontransparent items, warning did not have an effect on their means, but actually reduced their variance. These results indicate the effectiveness of the consequence warning on reducing faking on both transparent and nontransparent items.

Relative to pre-warnings that contain only the detection component or only the consequence component, the combined detection and consequence pre-warnings have been more frequently used by researchers (e.g., Goffin & Woods, 1994; Kuroyama, Wright, Manson & Sablynski, 2010; Kuschnereit, 2000; McFarland, 2003; Robie et al., 2009). Kuroyama et al. (2010) argued that the combined pre-warnings should be more convincing to test-takers than the detection-only and consequence-only pre-warnings. This is because if a pre-warning only

contains the detection message, applicants may persist on faking because they assume there is no immediate punishment; on the other hand, if a pre-warning only informs applicants of the negative consequences of faking, applicants may still take the risk to fake because they are suspicious about how faking can be detected. Supporting the above argument, Dwight and Donovan's (2003) meta-analysis indicated that the combined pre-warnings tended to have stronger effects than the detection-only and consequence-only pre-warnings. Based on this empirical evidence, I will use the combined pre-warnings to represent the traditional methods of pre-warning. Further, given my focus on new types of pre-warnings, I will test the relative effectiveness of the combined detection and consequence warning with new pre-warnings.

The Drawbacks of Traditional Warnings

Despite the fact that all three types of traditional warnings have showed some effectiveness on faking reduction (Dwight & Donovan 2003), they have been criticized on several grounds. First, researchers are concerned that informing test-takers of the presence of lie scales or socially desirability scales might steer their focus on these social desirable items. There is some evidence that social desirability scales can also be faked (Braun & Costantini, 1970; Power & O' Donovan, 1969), that is, test-takers might elevate their scores on personality items without elevating their social desirability scores. It is believed that a detection pre-warning helps subjects know more about the construction of a selection test. This gained knowledge would then facilitate their successful faking behaviors (McFarland & Ryan, 2006).

Second, the traditional warnings might increase the correlations between test-takers' personality scores and cognitive ability scores (Vasilopoulos et al., 2005). This is because if test-takers intends to fake after receiving the traditional pre-warnings, they tend to adopt a more complex faking pattern called "faking without arousing suspicion" to escape from being caught

6

(Paulhus, Bruce, & Trapnell, 1995). This faking pattern involves the use of several strategies such as making favorable and justifiable responses rather than simply overt reporting one's characteristics (Vasilopoulos et al., 2005), or just faking on some job desirable items and being honest on other items (Kluger & Colella, 1993). Applicants with high cognitive abilities are better able to engage in such complex faking behaviors, thus resulting increased correlations between personality scores and cognitive ability scores (Vasilopoulos et al., 2005). In a two-study article, Vasilopoulos et al. provided quite robust empirical support for the above argument. Therefore, the increased cognitive load on applicants to complete personality measures might accidently increase the adverse impact, whereas low adverse impact, ironically, has been the hallmark advantage of personality measures over cognitive measures as useful selection tools (Sackett et al., 2001).

Third, the typical punitive tone of traditional pre-warnings might evoke a fear of punishment among test-takers, who would in turn adopt an over-compensatory response pattern. This response pattern limits test-takers' ability to reveal their true self. In other words, some test-takers receiving the traditional pre-warning may report lower scores on personality tests than their true scores, in order to avoid being mistakenly identified as fakers and being punished (Griffith, Yoshita, Gujar, Malm, & Socin, 2005; Kuncel & Borneman, 2007; Robson, Jones, & Abraham, 2008). In an interesting study, Regan, Gosselink, Hubsch, and Ulsh (1975) found a slight evidence for the above argument. Participants in their study were assigned in either the actor role or bystander role. Actors were required to answer several questions orally and asked to rate their own performance, whereas the bystanders were asked to rate the performance of one actor. Regan et al. found the actors, who believed their performance would be rated further by the interviewers, rated their performance less favorably than bystanders did. When they believed

that there was no further evaluation, however, actors rated their performance as favorably as bystanders did. Regan et al. noted that actors rated themselves less favorably to maintain a sense of self-esteem. In order to reduce the over-compensatory bias, Griffith et al. (2005) called for the use of less punitive pre-warnings.

Finally, McFarland (2003) suggested that the seemingly negative tone of the traditional pre-warnings might result in test-takers' negative perceptions of the personality test. Specifically, they might feel a sense of threatening (Mitchell & Adair, 2014), distrusting (McFarland, 2003), limited ability to reveal themselves (Regan et al., 1975), and invasion of privacy (Pace & Borman, 2006). McFarland (2003) expressed the concern that negative applicant perceptions might lead some well-qualified candidates to self-selecting out of the selection processes. The empirical evidence for such a negative effect, however, has been mixed (Converse et al., 2008; McFarland, 2003). More studies are needed to examine this issue. Due to the above limitations of the traditional pre-warnings, it seems useful to develop and test some new types of pre-warnings.

The Emergence of New Types of Pre-warning

Pace and Borman (2006) suggested several new pre-warnings, i.e., reasoning warning, educational warning, and moral conviction warning. Unlike the traditional pre-warnings (i.e., identification and consequence components), whose content reflects the interests of the hiring organization, these new types of pre-warnings emphasize the interests of the applicants. For instance, a reasoning warning uses a friendly and trusting tone to convince the applicant that responding honestly is in his/her own best interests, such as good person-job fit and person-organization fit, high job satisfaction, or a prospective long-term career development. A moral conviction warning tries to prime the applicant's self-standards and moral beliefs, which

encourage the applicant to respond honestly in order to confirm their positive moral image (McFarland & Ryan, 2000; Pace & Borman, 2006).

An educational warning explains the purposes of personality tests, dimensions of personality measured, and how each dimension relates to job performance, how honest responses in these tests facilitate better selection decisions. Drawing on the concept of norm of reciprocity (Gouldner, 1960), it is assumed that the hiring organizations' open gesture may motivate applicants to respond honestly to personality tests to return the favor (Pace & Borman, 2006). On the other hand, however, these information about personality tests and their usage in selection processes might increase applicants' knowledge of the selection tests, and thus might improve their abilities to fake (McFarland & Ryan, 2006), resulting more faking. Because of this issue, I will not use educational warning in this study.

Besides these three new pre-warnings, Pace and Borman (2006) have also recommended researchers to develop other new pre-warnings grounded on faking theories. In response, Turcu (2011) developed two new pre-warnings, called "subjective norm warning," "attitudes towards faking warning," based on the concept of subjective norms and attitudes toward faking in McFarland and Ryan's (2006) faking model. McFarland and Ryan's model, which was based on Ajzen's (1991) Theory of Planned Behavior, considers "attitudes toward faking," "subjective norms" against faking, and "perceived behavioral control" as three antecedents of intention to fake. According to Ajzen, subjective norms refer to an individual's perceived social pressure from some important individuals, such as their friends, parents or supervisors who hold certain attitudes, to behave in certain way in order to gain their approval. A subjective norm warning informs applicants that the organization to which they are applying values honesty and welcomes honest individuals to join them; in addition, their future supervisors and coworkers regard

9

honesty as the most valuable virtue for newcomers. The "attitudes toward faking warning" essentially combines a detection/consequence component and a reason component.

I was able to locate five empirical studies that examined and compared the effectiveness of the aforementioned pre-warnings (see Table 1). Pace, Xu, Penny, Borman, & Bearden (2005) conducted a study in a military setting comparing the effect of a reasoning pre-warning and a detection and consequence pre-warning; however, because this study was terminated prematurely, I cannot discuss their findings in detail.

Dullaghan (2010) conducted a study using two samples (nurses and undergraduate students). In both samples, participants were randomly assigned to one of the four conditions: (a) the for-research-only condition, (b) the detection and consequence pre-warning, (c) the reasoning pre-warning, and (d) no warning condition. Except for the for-research-only condition, participants in other three conditions were asked to pretend applying for a nursing job while completing a personality test. For the nursing sample, the study was conducted during two work days; whereas for the student sample, participants completed an online survey. They only found some significant results for the nurse sample: (a) participants in the no-warning condition reported more favorable personality scores than participants in the detection and consequence and for-research-only conditions, (b) there was no significant group mean differences between the detection and consequence and for-research-only conditions, (c) participants receiving the reasoning pre-warning reported more favorable personality scores than participants in the for-research-only condition. As such, it appears that whereas the detection and consequence pre-warning was quite effective in reducing faking, the reasoning pre-warning was not as effective. For the student sample, there were no statistical group-mean differences across the four experimental conditions.

Table 1. *Components of Pre-warning Messages*

Warnings	Sub-type	Description	Empirical Studies
Detection		Faking will be detected	
	Verification	The results will be checked with other resources (e.g., other people, interview, etc.)	Doll (1971); Fox & Dinur (1988); Khorramdel & Kubinger, (2006); Schrader & Osburn (1977)
	Identification	Alerts the existence of an SD scale or lie scale	Braun & Gomez (1966); Doll (1971); Duvernet, et al., (2014); Dwight & Donovan (2003); Gomez & Braun (1967); Honkaniemi, & Feldt (2008); Nias (1972); Power & O' Donovan (1969); Schrader & Osburn (1977)
	Abstract identification	No mention of a specific detection method	Braun & Costantini (1970); Mitchell & Adair (2014); Power & O' Donovan (1969)
Consequence		Faking will lead to negative consequences	
	Score reduction	Faking will lead to lower scores because a special scoring system is embedded	Kluger & Colella (1993)
	Being eliminated	Faking will lead to elimination from the applicant pool.	Converse et al (2008); Dwight & Donovan (2003); Mitchell & Adair (2014);
Detection and consequence		Faking will be detected and will lead to negative consequences	Dullaghan (2010); Dwight & Donovan (2003); Goffin & Woods (1995); Griffith et al., (2005); Illingworth (2004); Kuroyama et al., (2010); Kuschnereit (2000); Lammers et al., (2014); Lee et al., (2014); McFarland (2003); McFarland & Ryan (2006); Robie et al., (2009); Robson et al., (2008); Turcu (2011); Vasilopoulos et al., (2005)
Reasoning		Reason with test-takers that (a) personality test is relevant to jobs; and (b) honest responses will lead to good fit.	Dullaghan (2010); Lammers et al., (2014); Mitchell & Adair (2014)
Educational		Educate test-takers about testing and why honesty helps organizations in enhancing the fairness of selection decision.	Mitchell & Adair (2014)
Moral conviction		Increases the salience of test-takers' associations of honesty with appropriate behavior and positive self-image	Mitchell & Adair (2014)
Subjective Norm		Test-takers are alerted that honesty and openness were valued by organization and society.	Turcu (2011)

Lammers, Macan, Hirtz, and Kim (2014) distinguished the traditional warnings with reasoning warnings in terms of short vs. long-term consequences. Specifically, Lammers et al. (2014) proposed that traditional warnings emphasizes the immediate organizational punishment associated with faking, whereas the reasoning warning emphasizes the long-term consequence of faking such as physical, emotional, and mental distress resulting from poor person-job fit. In their study, participants were instructed to complete a personality assessment as if they were applying for a customer service representative position. They were randomly assigned to a no warning instruction, a detection and consequence warning, and a reasoning warning. Resulted indicated that there is no significant group mean differences in personality scores.

In another lab study, Turcu (2011) randomly assigned participants (psychology undergraduate majors) to one of the five conditions: an honest condition, a fake good condition, an identification and consequence warning condition, a subjective norm warning condition, and an attitudes toward faking condition (a mixed warning with both reasoning and detection/consequence components). In the honest condition, participants were asked to respond honestly to the personality test, whereas in other conditions, participants were instructed to pretend that they were applying for a job as a psychologist while completing a personality measures. Turcu found that all of the pre-warnings were effective when compared with the fake good condition and the honest condition. Specifically, personality scores in the fake good condition were significantly higher than personality scores in the three pre-warning conditions, which were similar to personality scores in the honest condition. In addition, there was no group mean score difference among the three warning conditions, that is, the detection and consequence warning, the reasoning warning, and the attitudes toward faking warning.

Mitchell and Adair (2014) conducted a lab study, in which participants were told that (a) the study had two sessions, and only those who passed the first session would be qualified for the second session, and (b) the top three scorers in the second session would each receive a $20 cash reward. Participants were randomly assigned to one of the six conditions: the no-warning condition, the detection-only warning, the consequence-only warning, the reasoning warning, the educational warning, and the moral conviction warning (i.e., they called it moral principles warning developed based on Pace and Borman's chapter). The results indicated that compared with the no-warning condition, only participants in the moral conviction condition exhibited significantly lower personality scores than those in the no warning condition. In addition, there was no significant group mean difference among various warning conditions. Taken together, the moral conviction pre-warning seemed effective in reducing faking.

In sum, these few empirical studies examining the effects of various pre-warnings have yielded mixed results. As such, more studies are needed to further explore the effectiveness and mechanisms of various pre-warnings, particularly those new types of pre-warnings. The proposed study attempts to do just that. However, considering the concern of educational warning I mentioned above, the current study only focus on other three new warnings. That is, reasoning warning, subjective norm warning, and moral conviction warning. In the following section, I discuss several limitations of prior pre-warning research.

Limitations of Previous Research on Pre-warnings

Weak Theoretical Bases

Despite the fact that a considerable number of empirical studies have confirmed the effectiveness of warnings in reducing faking, only a few have attempted to explain why and how

warnings worked. In fact, in various faking models, warnings itself has never been a primary focus. McFarland and Ryan's (2000, 2006) model is the only conceptual faking model that includes warnings as a variable. In their model, a detection warning is hypothesized as a moderator that weakens the positive effect of the "beliefs towards faking" on "intention to fake". Being inspired by this model, Pace and Borman (2006) stated that both the traditional warnings and the new warnings should reduce the prevalence of faking behaviors through their influence on "intention to fake." However, empirical evidence (McFarland & Ryan, 2006) did not support the above moderation effect of warnings, although warnings were found to reduce faking behaviors, which has been consistently documented (e.g., Converse et al., 2008; Dwight & Donovan, 2003; Kluger & Colella, 1993; Kuroyama et al., 2010; McFarland, 2003).

Therefore, there seems to be a lack of theory on how and why pre-warnings should reduce faking on personality tests. The proposed study attempts to address this important gap in faking research. Specifically, I will introduce research on morality to this literature to provide a potential sound theoretical basis for various types of pre-warnings (to be discussed subsequently).

Methodological Weaknesses

I observe that prior warning research has suffered from three major limitations: (a) the motivation techniques used to motivate participants have been less optimal, (b) a lack of baseline personality measure, and (c) lack of studies examining warnings' effects on the validities of personality scores.

Motivation techniques used in faking and warning studies. Despite the fact that using applicants in the real selection context is the ideal option, only four studies on pre-warnings were conducted in the real application setting (i.e., Fox & Dinur, 1998; Kluger & Colella, 1993; Kuroyama et al., 2010; Vasilopoulos et al., 2005). The limited number of such studies might be

due to the limited opportunity for researchers to conduct field studies. As such, the majority of pre-warning studies were conducted in the lab setting, which makes the techniques used to motivate participants to fake good an important issue to consider.

One commonly used motivation technique is instructed faking, in which participants are instructed to "look as good as possible" or "make a good impression" as though they were applying for a job (e.g., Braun & Costantini, 1970; Braun & Gomez, 1966; Braun & LaFaro, 1968; Gomez & Braun, 1967; Power, 1968; Power & O' Donovan, 1969; Robie et al., 2009). Another commonly used motivation technique involves providing top scorers some incentives (e.g., Converse et al., 2008; Dwight & Donovan, 2003; McFarland, 2003; Mitchell & Adair, 2014; Robie et al., 2009; Robson et al., 2008; Vasilopoulos et al., 2005). McFarland and Ryan's (2000, 2006) empirical studies, however, did not find that cash incentives were effective in motivating faking behaviors. What is more important has been the concern that faking behaviors generated using the above techniques might not be comparable to faking behaviors that occur naturally in the real-world selection contexts (Schrader & Osburn, 1977). For instance, there is some evidence that instructed faking led to higher levels of faking than the real-world selection contexts (Schrader & Osburn, 1977).

Another less common motivation technique uses deception to make participants believe that they are being considered for a real job opportunity while completing the personality test (e.g., Ellingson et al., 2012; Griffith et al., 2005). The current study uses the deception technique developed by Ellingson et al. (2012) (to be discussed in detail in the Method section). I believe that the deception technique should boost the ecological validity of lab faking studies.

A lack of baseline personality measure. In previous warning studies, the group-level mean score differences between warned and unwarned groups have been the most frequently

used evidence to show that warnings reduced faking (e.g., Converse et al., 2008; Doll, 1971; Dwight & Donovan, 2003; Fox & Dinur, 1988; Honkaniemi & Feldt, 2008; Kuroyama et al., 2010; Lammers et al., 2014; McFarland, 2003). However, there is one problem in the above tacit assumptions. The mean score differences cannot be attributed entirely to the decrease of faking because of some individual difference in two groups (Dwight & Donovan, 2003). For instance, some honest test-takers may report lower-than-accurate personality scores due to the warning message (Griffith, Chmielowski, & Yoshita, 2007; Kuncel & Borneman, 2007).

To address the above limitations of prior warning studies, the current study will use a test-retest study design recommended by Ellingson et al. (2012) and Donovan et al. (2014). Specifically, participants will complete two parallel forms of a personality measure with one under the honest condition (baseline) and the other under an application condition, respectively. Then score discrepancy, defined as the distance between baseline scores and scores in the application condition under different pre-warning conditions, can be used to gauge the effectiveness of various pre-warnings, with smaller score discrepancy indicating more effective pre-warning (McFarland & Ryan, 2000, 2006).

Lack of studies examining validity of personality scores. Another tacit assumption of prior warning and faking studies has been that warning should lead to more honest personality scores, which in turn should increase the concurrent and/or criterion-related validity of personality scores. However, such an assumption has received very limited empirical scrutiny. I was able to locate only two published studies that have examined the effect of pre-warnings on the concurrent validity of personality scores (Robie et al., 2009; Robinson, Jones, & Abraham, 2008), with Robie et al. reporting that warning boosted current validity, and Robinson et al. failing to find such results. I was able to locate only two published studies (Converse et al., 2008;

Fox & Dinur, 1988), as well as one dissertation (Illingworth, 2004) that have looked at warning's effect on criterion-related validity. Although Fox and Dinur (1988) documented the tendency that the warned group had somewhat higher criterion-related validity than the unwarned group, the difference was not statistically significant. On the other hand, Converse et al. reported a mixed pattern: On some personality dimensions, the warned group had higher criterion-related validity than the unwarned group; however, on other personality dimensions, the pattern was reversed. Illingworth (2004) found the evidence that the use of detection and consequence could enhance the criterion-related validity of personality measure. Therefore, the lack of such studies as well as the inconsistent conclusions showed in such studies urges the requirement of more studies focusing on warnings' effectiveness on validity of personality inventories. Addressing this gap, I will compare criterion-related validities of personality scores across different treatment groups (groups not receiving the warning and groups receiving different types of pre-warning).

Providing a Theoretical Basis for Pre-warnings

Warnings as Moral Priming

As mentioned earlier, there are seven types of pre-warnings (see Table 1), among which four are the focus of this study: (1) the detection and consequence warning (Dwight & Donovan, 2003); (2) the reasoning warning (Pace & Borman, 2006); (3) the moral conviction warning (Pace & Borman, 2006); and (4) the subjective norm warning (Turcu, 2011). One of the purposes of the proposed study is to explore how and why these warnings would differ in their effectiveness. I argue that research in the moral domain can be applied to the pre-warning

literature, because (a) faking can be considered an immoral behavior, and (b) pre-warnings can work as moral priming to persuade subjects to act morally.

There are several reasons to believe that faking on personality tests within selection contexts is a kind of immoral behaviors. First, according to its definition, faking involves applicants providing some exaggerated or false information to compete for the limited job opportunities, which by and in itself is immoral and deceptive (Christiansen et al., 1994; Peterson & Griffith, 2006). Second, researchers in the faking field have suggested that faking might reflect some immoral features. For instance, Snell, Sydnell and Lueke (1999) wrote that faking behaviors were quite similar to some immoral behaviors, such as theft, cheating, lying and antisocial behaviors. Snell et al. (1999) also speculated that the occurrence of faking would be low among individuals with high integrity, low Machiavellianism and manipulativeness. Supporting this argument, McFarland and Ryan (2000) found in a lab study that individuals with a high integrity score faked less than those with a low integrity score. Further, some empirical studies have already showed the link between faking and some deceptive or deviant behaviors. For instance, in a within-subject field study, Peterson, Griffith, Isaacson, O'Connell, and Mangos (2011) reported a positive relationship between applicant faking and post-hire counterproductive work behavior. Therefore, based on the above argument and evidence, I conclude that faking on personality tests within selection context is an immoral behavior.

Given the immoral nature of faking behavior, I further argue that a pre-warning can be conceptualized as a linguistic moral priming to dissuade test-takers away from faking. This analogy between a pre-warning and a linguistic moral priming was implied by Pace and Borman (2006) when they stated that "warning could make the virtue of honesty more salient" (p. 296). Based on this view, using specific priming information, a pre-warning can prime applicants'

morality and ideal self-standards, which in turn can enhance applicants' honest responses. Generally, there are two theories in the moral domain that can be applied to faking research: (a) the six-stage moral development theory (e.g., Kohlberg, 1963, 1971), and (b) dual moral regulation system (e.g., Janoff-Bulman, Sheikh, & Hepp, 2009).

Kohlberg's six moral development stages. Kohlberg's six moral development stages can be grouped into three moral levels (See Table 2). In the Pre-moral level, the judgement of right of wrong is based on the rewards and punishments received or anticipated. Specifically, Stage 1 is related to the definitions of right and wrong in terms of punishments and conformity to power-figures. The detection and consequence warning corresponds to this stage because it emphasizes that participants should obey the warning instructions to avoid being detected as fakers and being punished (see Table 2). That is to say, individuals regard faking as morally wrong because they will be punished if they fake, not because they truly understand morality (Kohlberg, 1963; Colby et al., 1983). Further, the detection and consequence warning mainly focuses on the organization's interests instead of the individual's interest (Pace & Borman, 2006). From this aspect, the use of detection and consequence warning also makes participants conform to the powerful figure, i.e., the organizations.

Stage 2 indicates the importance of individual's own interests and the exchanges of ego-interests. The reasoning warning corresponds to this stage because this type of warning emphasizes self-interests, such as career development, person-job fit, or higher job satisfaction (see Table 2). Participants receiving the reasoning warning tend to respond honestly to exchange for these ego-interests. In this case, individuals judge a behavior (i.e., faking) as good based on whether this behavior can fulfil their own needs (Kohlberg, 1963, 1971). As such, detection and consequence warning and reasoning warnings both belong to the pre-moral level. This is

19

consistent with Lammers et al.'s (2014) idea that the reasoning warning shares some conceptual similarities with consequence warning, such that the consequence warning is related to immediate consequence while the reasoning warning is related to long-term consequence.

At moral level II, called "morality of conventional role conformity", individuals judge right and wrong based on the anticipation of social praise and blame. The moral motivation in this stage is guided by anticipated social approval or disapproval. More specifically, Stage 3 is good-boy morality of maintaining good relations, and gaining approval of others; Stage 4 is authority maintaining morality, which is concerned about the expectations of rule-enforcers and showing respect for authority (Kohlberg, 1963, 1971). Individuals in Stage 3 judge right and wrong based on others' approval, whereas individuals in Stage 4 judge morality based on social order or norms. The subjective norm warning corresponds to these two stages because it emphasizes that (a) the applicant's future coworkers would value honest and integrity (maintaining good relationships with others corresponds to Stage 3), and (b) the organization also expects the applicant to be honest (authority maintaining morality corresponds to Stage 4) (see Table 2). That is, test-takers receiving the subjective norm warning tend to respond honestly in order to gain social approval from peers (e.g., future coworkers) and authority figures (e.g., future supervisors).

Moral level III is the morality of self-accepted moral principles, which is the highest level of moral development (Kohlberg, 1963, 1971). At this level, an individual's conduct is regulated by an ideal regardless of the external praise or blame. According to Kohlberg, many adults may not reach the third level (Kohlberg, 1971). Stage 5 represents understanding social contract and social mutuality. Individuals at this stage begin to acknowledge different people have different values, opinions and beliefs. Rules of law should be reached the agreement by the whole society

and with the purpose to maintain a good society. Even when individuals' own interests conflict

with the law, individuals in this stage will follow the law to protect the basic right of most people.

It is important to note that individuals in this stage have a genuine interest in the welfare of

others (Colby et al., 1983). Stage 6 is heavily related to moral principles, which are the social

ideals without legal or social prescriptions. The Golden rule and the utilitarian principle are

typical moral principles. Individuals at this stage respect for human life, nonviolence, and

equality (Colby et al., 1983). In Stages 5 and 6, individuals act morally not out of the desire to

satisfy their own self-interests, but due to the motivation to pursue some ideal moral principles,

such as justice, equality of human rights, or respect for people (Kohlberg, 1963, 1971). The

moral conviction warning corresponds to the final two stages (see Table 2). That is, individuals

receiving the moral conviction warning tend to respond honestly to pursue organizational justice.

A moral conviction warning is the only pre-warning that not aim to accomplish some

instrumental purposes.

Table 2. *Pre-warnings' relationship with moral development stages*

Level	Stage	Motive	Pre-warnings
I. Pre-moral	1. Punishment and obedience orientation	Punishment by another	Detection and consequence warning
	2. Naïve instrumental hedonism	Manipulation of goods, rewards by another	Reasoning warning
II. Morality of conventional role conformity	3. Good-boy morality of maintaining good relations, approval of others	Disapproval by others	Subjective norm warning
	4. Authority maintaining morality	Censure by legitimate authorities	
III. Morality of self-accepted moral principles	5. Morality of contract and of democratically accepted law	Community respect and disrespect	Moral conviction warning
	6. Morality of individual principles of conscience	Self-condemnation	

Dual moral regulation framework. Pace and Borman (2006) hinted that traditional warnings might induce participants to form a prevention focus to avoid negative outcomes or goals, whereas the new warnings (e.g., reasoning, moral conviction) might induce participants to form a promotion focus to obtain some positive outcomes or goals. This indicates that the use of pre-warnings to regulate applicants' test-taking behaviors is related to the approach-avoidance self-regulation framework (Pace & Borman, 2006; Carver & Scheier, 2008). This approach-avoidance self-regulation framework corresponds to the prescriptive-proscriptive moral regulation system proposed by Janoff-Bulman et al. (2009). Prescriptive morality involves activating positive moral goals to approach, whereas proscriptive morality involves inhibiting immoral goals to avoid (Janoff-Bulman et al., 2009). In other words, prescriptive regulation focuses on *"what we should do"* to attain positive outcomes, whereas the proscriptive regulation emphasizes "*what we should not do*" to avoid negative outcomes (Janoff-Bulman et al., 2009). When scrutinizing the effectiveness of pre-warnings, it is more accurate to use the moral regulation framework than the self-regulation framework considering that pre-warning is a typical moral priming. According to the dual moral regulation system, it is apparent that the pre-warnings can either promote the honest responding behaviors (a moral behavior), or avoid faking (an immoral behavior).

The interpretive devise of a promotion (i.e., approach) and prevention (i.e., avoidance) framework is crucial in thoroughly understanding the distinction between prescriptive and proscriptive morality regulation systems, because it is the original basis for the formation of this dual moral distinction system (Janoff-Bulman et al., 2009). Higgins (1997) summarized that nurturance needs, hopes, wishes and strong ideals induce a promotion focus, and security needs, duties and strong oughts induce a prevention focus. A promotion focus is sensitive to the

presence or absence of positive outcomes and uses approach as a strategic means. To the contrary, a prevention focus is sensitive to the presence or absence of negative outcomes and takes avoidance as its strategic means (Higgins, 1997). Based on these principles, prescriptive morality with its underlying promotion focus is more related to being ideal or not ideal, and thus, involves pursuing prosocial behaviors (e.g., helping others, being honest) and Protestant ethics (e.g., industriousness, self-reliance and hard work) (Sheikh & Janoff-Bulman, 2010b). To the contrary, proscriptive morality with its underlying prevention focus is more related to being evil or not evil, and thus, involves duties, responsibilities and obligations (e.g., do not cheat, do not lie) (Sheikh & Janoff-Bulman, 2010b).

There are several ways to activate (prime) the prescriptive morality system versus proscriptive morality system. One such way is through linguistically presenting "I should" versus "I should not" forms of moral information (e.g., Janoff-Bulman et al., 2009; Sheikh & Janoff-Bulman, 2010a, 2013). Another way is through non-linguistic way by presenting a reward vs. a threat. For instance, Janoff-Bulman et al. (2009) asked college undergraduate students to play a maze game to take a mouse to its home, and placed a piece of cheese beside the entrance to the mouse's home (a reward) in the approach-prime condition and a large dark silhouette of an owl set above the maze (a threat) in the avoidance-prime condition. These authors found that the presence of a reward activated more prescriptive morality among participants, whereas the presence of a threat was more related to proscriptive morality.

A careful review of the content of various pre-warning instructions reveals that these warnings convey either a "you should be honest" or a "you should not fake" message, as well as list the positive outcomes (e.g., good P-J fit) or the negative outcomes (e.g., punishment) to test-takers. Therefore, the presence of a specific pre-warning can prime applicants' prescriptive

morality or proscriptive morality. That is, some pre-warnings can prime applicants to form a

prescriptive morality and motivate them towards a good behavior or advancement. Conversely,

other pre-warnings can prime applicants to form a proscriptive morality and inhibit their

movement towards immoral acts. Based on these ideas, all of the four warnings can be

categorized into two types: (a) prescriptive warnings and (b) proscriptive warnings. Prescriptive

warnings encourage individuals to tell the truth, whereas proscriptive warnings admonish

applicants not to lie.

The detection and consequence warning emphasizes that "*you should not lie*" because

you will be detected and punished, which is clearly related to the proscriptive moral regulation

system. To the contrary, three new pre-warnings emphasize that "*you should be honest*" because

you can gain some positive outcomes, which are more related to the prescriptive moral

regulation system. Specifically, a reasoning warning tries to convince applicants that their honest

responses will lead to a good fit and promote their career development, and thus is a typical

prescriptive warning because it emphasizes wishes and hopes (Higgins, 1997). A moral

conviction warning tries to encourage applicants to be moral and honest, which is also a typical

prescriptive warning because it emphasizes ideals (Higgins, 1997). Finally, a subjective norm

warning tries to persuade applicants that their honest responses may gain them social approval

from important others, and thus should also be regarded as a prescriptive warning because it

emphasizes desires and hopes (Higgins, 1997).

Despite the fact that Pace and Borman (2006) mentioned the link between pre-warnings

and the self-regulatory framework. They did not make the explicit and close connections

between their categorization to moral regulation research. Drawing on Pace and Borman's

argument, Mitchell and Adair (2014) introduced another categorization that regarded the

traditional warnings (i.e., detection, and consequence) as negatively framing warnings, and the new warnings (i.e., reasoning, educational, and moral conviction) as positively framing warnings. Their classification mainly focuses on whether the pre-warning instructions are based on the organization's vs. test-takers' interests. Their system has also failed to consider moral regulation perspective.

Using Theory to Explain the Effectiveness of Pre-warnings

Pace and Borman (2006) argued that a warning could be regarded as effective only if it can lower the expected utility of faking or raise the value of honesty (p. 293). A proscriptive warning can lower the expected utility of faking because it emphasizes that faking may bring subjects some negative consequences, whereas a prescriptive warning can raise the value of honesty because it emphasizes some benefits resulting from honest responding. Therefore, both prescriptive and proscriptive warnings should be useful methods to deter faking. Indeed, it has been consistently shown that participants tend to respond to personality measures in a less favorable way after receiving a pre-warning (e.g., Dwight & Donovan, 2003; Robie et al., 2009). Since I will arrange for a baseline personality measure in the current study, I will calculate score discrepancy for each personality dimensions by subtracting personality scores in the motivated condition (post-warning) from the baseline personality scores (Ellingson et al., 2012). Usually, the smaller score discrepancy indicates more effective pre-warnings (McFarland & Ryan, 2000, 2006). Thus, I proposed the following hypotheses.

> ***Hypothesis 1:*** *Participants in various pre-warning conditions will have smaller score discrepancy on personality measures than participants in the control condition.*

Various studies have also indicated that personality scores can predict job performance (Barrick & Mount, 1991; Hurtz & Donovan, 2000). Faking, on the contrary, reduces the predictive power of personality scores because it lowers the accuracy of personality scores (Ellingson et al., 2012). The use of pre-warnings is assumed to reduce faking, and thus, would increase their predictive validity on performance, such as GPA. Therefore, I proposed the following hypothesis.

> *Hypothesis 2: The criterion-related validity of personality scores in various*
> *warning conditions within the motivated (selection) context will be higher than*
> *that in the control condition.*

I argue that the proscriptive warning should be more effective than prescriptive warnings in lowering personality scores, because the proscriptive morality is mandatory, stricter, and a harsher regulatory system than the prescriptive morality (Janoff-Bulman et al., 2009). There was some empirical evidence that the proscriptive morality had higher potency and dominance than the prescriptive morality, and the proscriptive immorality engendered greater blame than the prescriptive immorality (Study 3 and Study 5; Janoff-Bulman et al., 2009). Further, research from several different fields seems to suggest that individuals are more sensitive to negative consequences than positive outcomes. For instance, Baumeister, Bratslavsky, Finkenauer, and Vohs (2001) reported that a punishment was more effective than a reward when being used to encourage children's correct responses. Kochanska, Coy, and Murray (2001) showed that children were more easily complied with don'ts (i.e., prohibiting an activity) than do's (i.e., activating an activity). Kahneman and Tversky's (1979) prospect theory holds that individuals are biased toward loss aversion such that they feel more strongly toward loss than gain even

though these two outcomes are objectively equivalent. Therefore, based on the above discussions, I proposed:

> ***Hypothesis 3:*** *Participants in the proscriptive warning condition (i.e., detection and consequence warning) will have smaller score discrepancy than participants in the prescriptive warning conditions (i.e., reasoning warning, subjective norm warning, and moral conviction warning). In other words, the proscriptive warning should be more effective in lowering personality scores than prescriptive warnings.*

This relative powerfulness of a proscriptive warning on reducing personality scores or score discrepancies, however, may yield some side effects. One such side effect is the overcompensating response pattern (Griffith et al., 2005). As we know, the proscriptive moral regulation takes a negative outcome as the reference value and involves maximizing the absence and minimizing the presence of the negative outcomes (Carver & Scheier, 1990). When a proscriptive warning is presented, test-takers may be scared by the negative outcomes mentioned in the warning and therefore tend to use a discrepancy-amplifying system to avoid these negative consequences (Carver & Scheier, 1990). In other words, test-takers will attempt to rate their responses on personality items as low as possible as a way to amplify the discrepancy between their response pattern and the faking response pattern. In this case, some of them may even rate their personality scores lower than their honest levels to avoid punishments (Arkin, 1981; Griffith et al., 2005; Regan et al., 1975; Robson et al., 2008).

This overcompensating response pattern, however, is not likely to occur when the prescriptive warnings are used. The prescriptive regulation system takes some positive outcomes as the reference point and involves maximizing the presence of these positive outcomes and

27

minimizing the absence of these positive outcomes. When a prescriptive warning is presented, a discrepancy-reducing system is activated such that test-takers will strive to minimize the distance between their actual responses and honest responses (Higgins, Roney, Crowe & Hymes, 1994). By so doing, test-takers will approximate their personality responses to their true characteristics in order to gain the positive outcomes mentioned in the prescriptive warnings. In this case, test-takers have no reason to present themselves less favorably than their true self.

Griffith et al. (2005) noted that there might be individual difference in the overcompensation pattern: some honest applicants may choose to be conservative, while other individuals may choose to ignore the proscriptive warning and continue to elevate their scores. In a lab study, Griffith et al. showed that 48% and 35% of participants, after receiving a detection and consequence pre-warning, had lower scores than their honest scores on Agreeableness and Conscientiousness, respectively. In the current study, I reasoned that relative to the prescriptive warning conditions, the proscriptive warning would result in more applicants engaging in the over-compensatory response pattern. Thus,

> *Hypothesis 4: There will be more participants in the proscriptive warning*
>
> *condition (the detection and consequence warning) demonstrating an over-*
>
> *compensatory response pattern (i.e., having negative score discrepancy) than*
>
> *those in the prescriptive warning conditions (i.e., the reasoning warning,*
>
> *subjective norm warning, and moral conviction warning).*

Another side effect of using a proscriptive warning, with the activation of the mandatory, strict, and harsh proscriptive morality system, may lead to test-takers' negative reactions to personality tests. McFarland (2003) speculated that the threat and punishment in the identification and consequence warning should be related to applicants' negative reactions such

as an anxious feeling, and/or perceived procedural unfairness. On the contrary, the prescriptive warnings use positive outcomes to encourage applicants to respond honestly and test-takers should perceive prescriptive warnings to be more considerate and friendly. Supporting the above argument, Converse et al. (2008) found in a lab study that participants receiving a negatively worded warning reported greater test anxiety and less test ease than participants receiving a positively worded warning. Therefore, I proposed:

>*Hypothesis 5: Participants in the proscriptive warning condition (i.e., the detection and consequence warning) will have more negative applicant reactions than those in the prescriptive warning conditions (i.e., the reasoning warning, moral conviction warning, and subjective norm warning).*

Furthermore, it is unclear whether the proscriptive warning is more effective in boosting criterion-related validity of personality scores than prescriptive warnings. As discussed earlier, the reason warnings may boost criterion-related validity because they increase the accuracy of personality scores. However, for the proscriptive warning, there might be two opposite effects. On one hand, such a warning may lower personality scores (i.e., less faking), which should increase score accuracy; on the other hand, however, the same warning may lead to the overcompensation response pattern, which may decrease score accuracy. It is difficult to predict what net-effective emerge. As such, I raised the following research question:

>*Research Question 1: should the criterion-related validity of personality scores in the proscriptive warning conditions (i.e., detection and consequence warning) be higher than that in the prescriptive warning condition (i.e., the reasoning warning, moral conviction warning, and subjective norm warning)?*

Another interesting research question concerns the relative effectiveness of the three prescriptive warnings. Based on the Kohlberg's six moral development stages, I speculate that pre-warnings that correspond to the lower levels of moral development may be more effective in reducing faking. As described before, the reasoning, subjective, and moral conviction warnings correspond to the first, second, and third level of moral development, respectively. The reasoning warning may be the most effective because the reward-related information makes it clear to participants regarding behavioral expectations. By contrast, the moral conviction warning should be the least effective because many adults do not reach this moral development level (Kohlberg, 1971). The effectiveness of the subjective norm warning should be between the reasoning and moral conviction warnings because many individuals value and care about interpersonal relationships.

Individual difference in moral development may moderate the above effective such that moral conviction warning may be most effective among adults who reach the third-level moral development, and may be less effective among adults who do not reach this specific level. However, since the original moral develop stage of participants was not measured in the current study, I could not test this assumption. In addition, without this information, the pattern of the relative effectiveness of the three new pre-warnings was reliable and clear. What's more, the lack of empirical studies on new pre-warnings made it even difficult to form a strong hypothesis about the relative effectiveness of the three new pre-warnings. As such, I raised the following research question:

> **Research Question 2:** *Do three prescriptive warnings differ on their effect on personality discrepancy scores?*

Mechanisms Underlying Different Pre-warnings

As a linguistic moral priming, one reason why a pre-warning can reduce the immoral faking behavior is because it is related to some moral experiences. Among all of the moral experiences, shame and guilt are central to moral regulations (Tangney & Dearing, 2002). Sheikh and Janoff-Bulman (2010b) further suggested that shame and guilt are important evaluators and regulators for moral behaviors. Besides the shame and guilt, fear can also regulate moral behaviors. Fear plays a key role for people to comply with the law or moral rules (Wikström, Tseloni, & Karlis, 2011; Zimring & Hawkins, 1973). Wikström et al. (2011) proposed that fear of caught or punishment when considering breaching a moral rule or committing an act of crime can be viewed as a mechanism that links threat of punishment and lawful behaviors among people who have motivation to commit a crime. The idea that fear can regulate future moral behaviors is supported by fear hypothesis (Gwinn, 1949), which holds that (a) fear is a central reaction to noxious or threatening stimuli, and (b) fear can directly mediate the Stimulus-Reaction link (Gwinn, 1949). Therefore, I argue that the feeling of shame, guilt, and fear can work as the mediators between pre-warnings and faking behaviors. Figure 1 depicts the possible mechanisms linking different pre-warnings with different moral emotions, and in turn, different amount of faking (score discrepancies).

As moral evaluators, shame and guilt differ in their focus on self vs. behavior such that shame is resulted from a negative evaluation of self (i.e., the bad self), whereas guilt is resulted from a negative evaluation of specific behavior (i.e., the bad act) (Tangney & Dearing, 2002; Lewis, 1971). When people acknowledge that they are immoral and bad, they will feel ashamed; when people only acknowledge that they failed to conduct a right moral behavior, they will feel guilty. From the moral regulation perspective, shame, more than guilt, is related to proscriptive

morality, and guilt, more than shame, is related to prescriptive morality (Sheikh & Janoff-Bulman, 2010a, 2010b). This is because the discretionary and credit-worthy prescriptive morality system limits the negative evaluation associated with prescriptive transgression, while the condemnatory and punishment-worthy proscriptive morality system makes the negative evaluation associated with proscriptive transgression harsher and stricter (Sheikh & Janoff-Bulman, 2010a). For example, people will be more likely to feel guilty when they fail to help their friends (prescriptive morality), but will be more likely to feel ashamed when they cheat in a test (proscriptive morality).
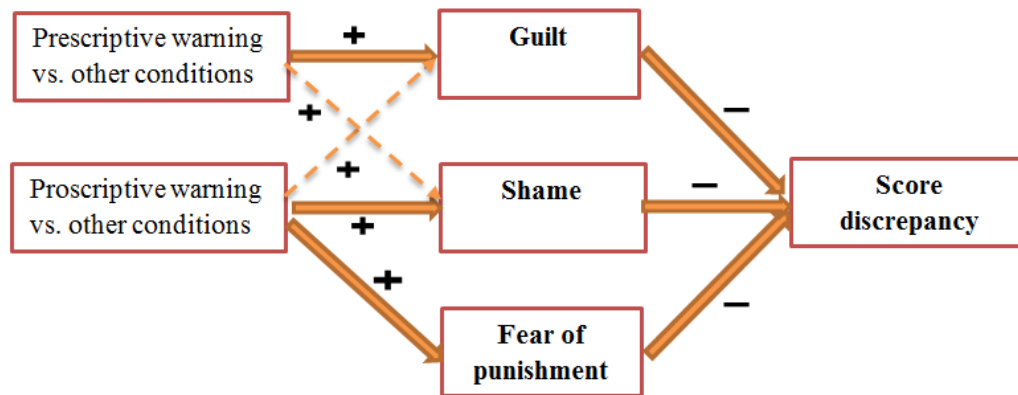

Figure 1. The mechanism underlying the effectiveness of pre-warnings

Sheikh and Janoff-Bulman (2010a) conducted three studies to explore the positive associations between shame and proscriptive morality, and between guilt and prescriptive morality. In Study 1, they found the dispositional avoidance orientation measured by BIS scale (Carver & White, 1994) was related to shame proneness; and the dispositional approach orientation measured by BAS scale (Carver & White, 1994) was related to guilt proneness. In study 2, they assigned participants into either a proscriptive or a prescriptive morality prime condition. To prime the prescriptive morality, participants were asked to write down what they *should do* if their goal is to be moral and not immoral. To prime the proscriptive morality,

participants were asked to write down *what they should not do*. These authors found that participants reported more guilt than shame when their prescriptive morality was primed. In contrast, participants reported more shame than guilt when their proscriptive morality was primed. In study 3, participants were asked to read a scenario in which a target person was involved in a proscriptive or prescriptive transgression act, and were to choose whether the target people should feel from two options: shame and guilt. Participants chose more guilt for prescriptive transgressions, and more shame for proscriptive transgressions. Thus, Sheikh and Janoff-Bulman's findings suggested that shame and guilt can be induced by both actual and anticipated transgression.

In the current study, the presence of a proscriptive warning (i.e., the detection and consequence warning) may make participants concerned about the possibility of being caught and punished. The proscriptive warning emphasizes that participants *should not* fake. If participants persist in faking, they may consider the consequence of being caught and thus feel ashamed. The presence of a prescriptive warning (i.e., reasoning warning, subjective norm and moral conviction warning) may make positive outcomes derived from honest responding salient to participants. If they persist in faking, they may consider the fact that they disappoint the organizations and thus feel guilty. Generally, the presence of prescriptive warnings may prime participants' wish to be ideal (i.e., to be an honest applicant) and the presence of proscriptive warning may prime participants' wish not to be immoral (i.e., do not fake). In other words, participants who receive prescriptive warnings would feel guilty because of the anticipated failing to be ideal, whereas participants who receive proscriptive warnings would feel shame because of the anticipated being immoral.

The proscriptive warning (i.e., the detection and consequence warning), but not prescriptive warning, is also related to the feeling of fear. Fear is tightly associated with receiving a concrete and sudden threat or danger (Witte, 1998; Lazarus, 1991). The detection and punishment message clearly constitute a threat to test-takers (Pace & Borman, 2006). Generally, fear is associated with the proscriptive morality system (avoidance orientation) rather than the prescriptive morality system (approach orientation). There is some direct evidence showing that fear is related to avoidance orientation (i.e., proscriptive system) rather approach orientation (i.e., prescriptive system). First, based on the physiological responses of fear, fear is always related to escape or flight from threatening situations to avoid potential punishment (Gwinn, 1949; Lerner, Dahl, Hariri, & Taylor, 2007). Second, the avoidance orientation or Behavioral Inhibition Sensitivity (BIS, Carver & White, 1994) is regarded as proneness to experience fear and anxiety in stressful condition (Leen-Feldner, Zvolensky, & Feldner, 2004). Perceiving threats in a proscriptive warning, individuals tend to worry about being caught and fear about the possible punishment. Based on the above discussions, I proposed:

> *Hypothesis 6: The proscriptive warning (the detection and consequence warning) will arouse higher levels of feeling of shame and fear than prescriptive warnings (i.e., the reasoning warning, moral conviction warning, and subjective norm warning) and the control condition; prescriptive warnings will arouse a higher level of feeling of guilt than the proscriptive warning and the control condition.*

As moral regulators, shame and guilt are associated with different behavioral tendencies (for a review, see Tangney & Dearing, 2002). In general, guilt experiences motivate individuals to take reparative actions to "right the wrong" such as apologizing, confessing, and prosocial behaviors; on the other hand, shame experiences motivate individuals to hide or avoid further

shame-induced events such as withdrawing, denying, and escaping (Tangney, Miller, Flicker, & Barlow, 1996; Sheikh & Janoff-Bulman, 2010b). In other words, the feeling of guilt highlights the positive acts (e.g., right, good, and moral) that we *should do*, and the feeling of shame highlights the negative acts (e.g. wrong, bad, and immoral) that we *should not do* (Sheikh & Janoff-Bulman, 2010a). For instance, if individuals feel guilty about being unable to help their friends, they may be more willing to offer help next time. If individuals feel ashamed about cheating, they may avoid cheating later. Thus, guilt can prompt individuals to engage in prescriptive moral behaviors (i.e., *I should help*) while shame can prompt individuals to adopt proscriptive moral behaviors (i.e., *I should not cheat*) (Sheikh & Janoff-Bulman, 2010a).

In the current study, when participants anticipate that faker would be caught and punished, they may have the shame experience, which may then motivate participants to avoid being caught and punished by lowering their personality scores. When participants anticipate their failing to meet organizations' expectations when responding dishonestly, they may have guilt experience which may then motivate them to follow the instruction and respond honestly.

Similar to shame, fear may also provoke individuals to inhibit proscriptive transgressions (Dienstbier, 1984; Nabi, 2003). Kochanska et al. (2001) proposed that fear was the inhibitory system children used to inhibit behaviors. The proscriptive moral behaviors elicited by fear aim to avoid the potential dangerous or negative outcomes (Lerner & Keltner, 2000; Tiedens & Linton, 2001). Further, since fear is characterized as uncertainty and low individual controllability, it is related to risk-aversive behaviors (Lerner & Keltner, 2000, 2001). For instance, both dispositional fear and momentarily induced fear was shown to increase individuals' risk perceptions and pessimistic risk estimate (Lerner & Keltner, 2000, 2001), and to lead individuals to preferring low risk and low-reward options (Raghunathan & Pham, 1999). Finally,

fear can boost information seeking, enhance systematic processing, and induce wise judgment or decision making (Huddy, Feldman, Tabler, & Lahav, 2005; Kligyte, Connelly, Thiel, & Devenport, 2013; Nabi, 2003; Parker & Isbell, 2010; Tiedens & Linton, 2001; Valentino, Hutchings, Banks, & Davis, 2008). For instance, Kligyte et al.'s (2013) found that fearful individuals tended to assess their circumstances more seriously and to adopt more ethical decision making than others. Thus, based on above arguments, I argue that in the current study context the feeling of fear can induce participants to inhibit immoral behaviors (i.e., avoid faking) to protect themselves from being punished, to avoid taking risk (i.e., faking behavior) after cautious deliberations (Tiedens & Linton, 2001).

Therefore, shame and fear tend to make individuals avoid faking, and guilt tends to make individuals to respond honestly. Both of these behavioral tendencies should lower personality score reduction discrepancy. Thus, I proposed:

Hypothesis 7: *the feelings of shame, fear, and guilt will be negatively related to score discrepancies.*

Taken together, the prescriptive and proscriptive warnings prime participants' prescriptive morality and proscriptive morality, respectively. The activated moral regulation system will then provoke participants' feeling of shame, fear and guilt directly. These moral emotions will then steer applicants to avoid faking or to respond honestly, both of which should result in smaller score discrepancies than the control condition. As such, I conclude that feelings of shame, fear and guilt should mediate the effects of pre-warnings on applicant faking behaviors (score discrepancies), but with different routes (See Figure 1). Specifically, prescriptive warnings work primarily through activating feeling of guilt, whereas the proscriptive warning works primarily through activating feeling of shame and fear. Thus, I proposed:

Hypothesis 8: *The feeling of shame and fear will mediate the effect of the proscriptive warning (the detection and consequence warning) on discrepancy scores, whereas the feeling of guilt will mediate the effect of prescriptive warnings (i.e., the reasoning warning, moral conviction warning, and subjective norm warning) on discrepancy scores.*

Overview of the Current Study

The purpose of this study is to examine the effectiveness of prescriptive and proscriptive warnings on reducing faking, and to explore the psychological mechanisms underlying different types of pre-warnings. It is assumed that pre-warnings can prime participants' morality, which will then guide them to approach honest responding or avoid faking. The four types of pre-warning messages included in the present study are the detection and consequence, reasoning, moral conviction, and subjective norms warning (Pace & Borman, 2006). A control condition with no warning messages is also included.

I attempt to approach the mechanisms of various pre-warnings from a moral regulation framework. The detection and consequence warning, which provides information about potential punishment outcomes in order to persuade participants not to fake, will prime subjects' proscriptive morality; whereas, the reasoning, subjective norm and moral conviction warnings, which provide positive information to encourage participants to respond honestly, will prime subjects' prescriptive morality. Since the proscriptive morality and prescriptive morality differ in several aspects, the prescriptive and proscriptive warnings are assumed to reduce faking through different mechanisms.

A test-retest study design, which was recommended by Ellingson et al. (2012) and Donovan et al. (2014), was used. Participants completed the baseline personality test (half of the

personality items) before coming to the lab, and then completed the other half of personality measure in the lab setting. In order to motivate student participants to fake, the deception method used by Ellingson et al., (2012) was adopted. That is, participants were led to believe that they were able to apply for an intern position while participating in this research (Ellingson et al., 2012). After completing the lab portion of the study, students' academic performance criteria (i.e., GPA) were collected. This information was used to examine warnings' effects on criterion-related validities of personality measures.

Method

Participants

Participants were undergraduate students from a large university in the Southeastern United States. The Department of Psychology at this university used a web-based system (SONA) to recruit participants for psychology studies, and provided extra credit hours to students for participating in research studies. Participants were required to complete two sessions: a baseline online survey in the SONA system (the Mass Screening; $n = 167$), and a lab study ($n = 182$). I collected their demographical information in the Mass Screening. Participants' age ranged from 18 to 54 years old, with an average age of 20.14 (with 2 missing values). One hundred twenty-three of the participants (74.5%) were women (with 2 missing values). With the exception of two people who did not report their grade, the distribution was as follows: 36 were freshmen (21.8%), 71 were sophomores (43.0%), 35 were juniors (21.2%) and 23 were seniors (13.9%). Most of the participants were Caucasian (82.9%), followed by African American (11.0%), Native American (1.2%), Hispanic (3.0%), and Asian or Pacific Islander (1.8%). Three participants did not report their ethnicity.

Procedures

The study consisted of two sessions: the Mass Screening online survey (the baseline setting) and the lab study (the application setting) (see Figure 2 for study procedure). The Mass Screening online survey and the lab study were independent studies shown in the SONA system. Different surveys from researchers in the Psychology Department were put in the Mass Screening, among which, a personality test was my focus. Participants were rewarded with 1 hour of SONA credit for completing the Mass Screening questionnaires. The lab study consisted of three parts: (i) resume content analysis, (ii) pre-employment assessment (i.e., personality test

and application motivation test), and (iii) the feedback seeking session. Participants could earn 2 hours of SONA credit for attending this lab study. The personality tests included in the Mass Screening and the pre-employment assessment were in parallel forms. Specifically, I used two personality tests (i.e., IPIP-100 and School-specific Conscientiousness) in the current study. I split the whole pool of personality items into two halves and created these two parallel forms of personality test. Only students who had participated in the Mass Screening could sign up for my lab study. Due to some system problems, fifteen participants' baseline data were missing.
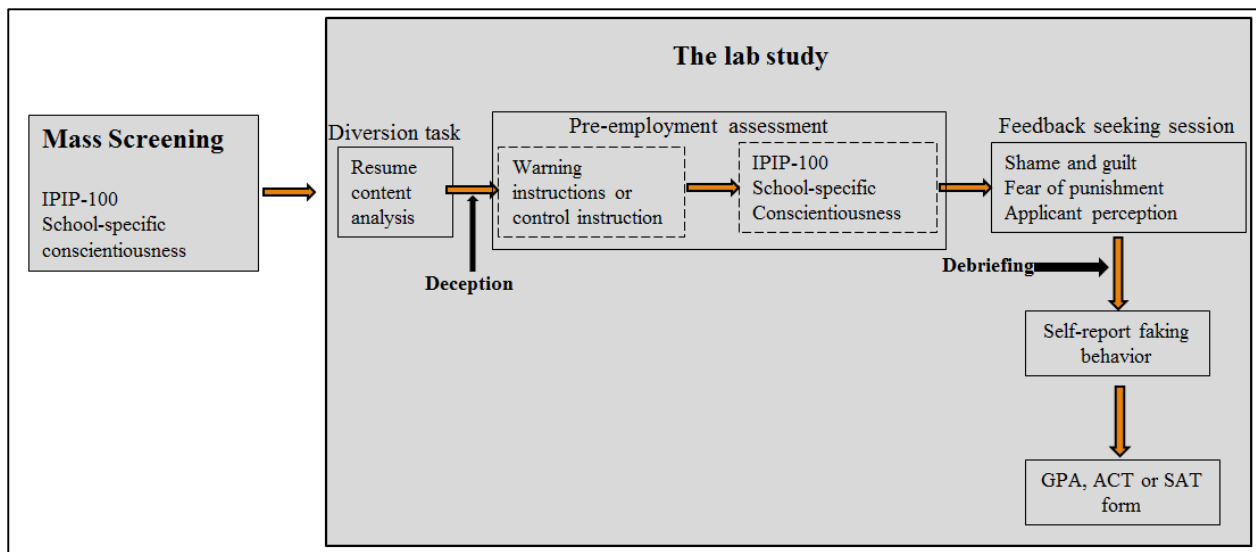

Figure 2. The study procedures

In the lab study, the measurement and procedures used in the first and second part of the survey were similar to Ellingson et al.'s (2012) study. For the first part of the survey, participants were asked to analyze different resume content and to judge whether the specific content represented some types of abilities, work styles, or cross-functional skills. Participants were convinced that this part (which is actually a diversion task) was the primary focus of the lab study (Ellingson et al., 2012). Immediately after participants completed the first survey, Dr. Jinyan Fan (advisor of Lu Zheng) came to the lab and provided the deceptive job information to

participants (see Appendix 1 for deception script). The deception technique used here was developed by Ellingson et al. (2012). Participants were told that one of Dr. Fan's friends, a CEO of a company called InSat Corporation, asked him for help to validate a pre-screening assessment for hiring college students into a paid summer internship program at InSat Corporation. The participants learned that InSat Corporation needed a group of college students to tryout this pre-employment assessment. For those who completed this assessment, InSat Corporation would provide them with two benefits: (a) ten $50 cash drawing and (b) an earlier consideration for the paid summer internship program if they performed well on the assessment. The nature of the internship positions and the remuneration were provided to participants. The information was as follows:

> In case you want to know a little bit more about this paid summer internship program, you will be paid at the rate of $15/hour, and may earn up to $8,000 for the whole summer. In the program, majority (about 70%) of the work you will do are basic clerical, for example, working with Microsoft office software, sending and receiving emails, organizing files, setting up meetings, and taking memos for meetings. However, you will also get a chance to complete more advanced tasks, such as selling ideas to potential clients, working in a team to come up business plans, and conducting basic level data analysis. InSat has written up an introduction to their paid summer internship program and you can find more details about it on the first page of the pre-employment assessment.

After the deception, participants were required to complete the pre-employment assessment (i.e., personality test and application motivation test). A mock logo of InSat Corporation was placed on the top left screen to make the assessment appear more realistic. The job descriptions were provided before the personality test as follows:

> Thank you for your willingness to help us develop our pre-employment assessment for our Summer Internship Program. As we told Dr. Fan, we do have openings in the program. At the end of this part, you'll be asked to indicate if you would like us to contact you about a position. If you select "yes", we'll take a close look at your responses to these questions and evaluate them given our needs. Please write down your name here first.

Here is a brief description of the summer internship program: InSat Corporation's Summer Internship Program offers college students excellent development opportunities involving real-world job experience. The program consists of multiple paid summer internships, and placements will be available in various areas such as: human resource management, marketing, leadership development, technology, etc. Through a series of rotating assignments, young professionals receive focused development and a mentor. When screening for the Summer Internship Program, we are interested in selecting college students from a variety of backgrounds who are hardworking, detail-oriented, sociable, working well with others, bright, open-minded, and able to tolerate stress. In addition, they need to have some basic skills and broad knowledge background.

Afterwards, participants were randomly assigned to either one of five instruction conditions: detection and consequence warning ($n = 32$), reasoning warning ($n = 33$), moral conviction warning ($n = 44$), subjective norm warning ($n = 38$), and control condition ($n = 35$). All of the instructions were titled as "**IMPORTANT NOTICE!!**" (see Appendix 2). Participants were required to read this notification before completing the pre-employment test. To ensure participants not skip this instruction page, the instruction screen was frozen for 15 seconds and all participants were required to check a box to indicate that they had read and understood the instruction.

Participants in the control condition were asked to respond as honestly as possible. Participants in the detection and consequence warning condition, however, were told the following:

Thank you for participating in this portion of the selection process. The pre-employment assessment you will complete has several embedded social desirability items. This means that, contained within the inventory, there are items in place to identify individuals who attempt to falsify their responses. Those applicants who have been identified as distorting their responses on this pre-employment assessment will be removed from the selection process. In other words, if you are discovered providing dishonest responses, you will be disqualified from the position provided by InSat Corporation. Therefore, when you complete the pre-employment assessment, be honest and answer each question as it best describes you.

Participants in the reasoning warning condition were told the following:

Thank you for participating in this portion of the selection process. Research has convincingly demonstrated that accurate information through honest responses to pre-employment assessment, if used as the basis for selection, may promote person-job fit and/or person-organization fit. These

best-fit placements will most likely result in the interns feeling adequate, satisfied in their job, and motivated to apply themselves wholly, yielding higher job performance/commitment and possible promotion by the organization. Therefore, it is in your best interest to answer the questions in the pre-employment assessment honestly. So, be yourself and answer each question as it best describes you.

Participants in the subjective norm warning condition were told the following:

Thank you for participating in this portion of the selection process. We would like to emphasize that only honest applicants will be compatible with InSat Corporation. Our organization values, and operates on honesty and integrity. If you're hired, you will find that your colleagues, supervisors, and coworkers all view honesty and openness as integral to their work. Therefore, we look for honesty and transparency in anyone seeking to join us. Providing honest responses to the pre-employment assessment is a primary way to show your honesty and integrity. Therefore, be yourself, and answer each question as it best describes you.

Participants in the moral conviction warning condition were told the following:

Thank you for participating in this portion of the selection process. As a moral and honest individual, you should respond honestly. Responding honestly is morally appropriate, and will have two positive effects. First, it will provide all honest candidates a fair and equal chance of getting the job in InSat Corporation. Second, it will enhance the quality of our hiring decisions, which will eventually lead to a boost in the firm's competitive advantages. Therefore, to show your trustworthiness and integrity, you should answer the questions in the personality inventory honestly. Be yourself, and answer each question as it best describes you.

After reading the warning or control instructions, participants started to complete the pre-employment assessment. After participants finished the pre-employment assessment, they were required to provide some feedback and reactions to the assessment they had just completed. They were informed that InSat Corporation needed some honest and straightforward suggestions to help improving and validating their selection assessment. The feedback seeking part contained several emotion measures, i.e., fear of punishment, State and Shame and Guilt Scale (SSGS), and Positive and Negative Affect Schedule (PANAS), as well as some test-taker reaction measures (test anxiety survey, perceived test fairness, and test satisfaction).

After participants finished all three parts of survey, they were fully debriefed by Dr. Jinyan Fan on the purposes and nature of the study, as well as why we should use the deception

method to simulate the application setting (see Appendix 3 for debriefing script). Participants were notified that they had the choice to withdraw their data from further analysis without any penalty. Finally, they were asked to complete a self-report faking behavior survey to indicate their levels of faking. At the end of study, participants were required to sign the GPA, ACT and/or SAT form to allow me access to this information from the University Registrar.

Measures

  International Personality Item Pool (IPIP). The 100-item IPIP (Goldberg, 1992) was used as one measure of personality. It measured the big five dimensions of personality: extroversion, conscientiousness, openness to experience, agreeableness, and emotional stability. The 100 items of IPIP were split into two sub-scales, each containing 50 items (Ellingson et al., 2012). We put the first sub-scale in the Mass Screening as a baseline personality measure and the other sub-scale in the pre-employment assessment. This personality scale used a 7-point Likert scale from (1) strongly disagree to (7) strongly agree.

  School-specific Conscientiousness (SSC). The 24-item school-specific conscientiousness measure (Schmit, Ryan, Stierwalt, & Powell, 1995) measured three dimensions of conscientiousness: achievement striving, competitiveness, and self-discipline. We randomly divided this scale into two halves and put 12 items in the Mass Screening and the other 12 items in the lab study. All the items were rated on a 7-point Likert scale from (1) strongly disagree to (7) strongly agree.

  Applicant motivation survey. The valence and instrumentality dimensions in Valence, Instrumentality, Expectancy Motivation Scale (VIEMS) developed by Sanchez, Truxillo, and Bauer (2000) were used to measure application motivation. Only valence and instrumentality dimensions were measured. Three items measured valence, with an example item, "I would like

to be hired for this job". Four items measured instrumentality, with an example item, "If I do well on this pre-employment test, I think I can have a good chance of being hired." The survey used a 5-point Likert scale from (1) strongly disagree to (5) strongly agree.

Fear of punishment. Three self-developed items were developed to measure the fearful feeling of participants after receiving the warning message using a 5-point Likert-type scale from (1) not at all to (5) extremely. An example item is "the message made me very concerned about possibly of failing the pre-employment assessment".

State Shame and Guilt Scale (SSGS; Marshall, Sanftner, & Tangney, 1994). The 15-item SSGS used brief phenomenological descriptions of shame and guilt experiences to measure participants' state shame and state guilt. Both shame and guilt were measured by 5 items with the remaining 5 items measuring proud experiences. All the items were rated on a 5-point scale ranged from (1) not at all to (5) often.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellengen, 1988). The 20-item Positive and Negative Affect Schedule (PANAS) was used to measure positive affect and negative affect (which includes fear). Each affect was measured by 10 adjective words. Respondents used a 5-point scale to rate how frequently they experienced the feeling describe by each item ranging from (1) not at all to (5) extremely.

Test anxiety survey. A 12-item scale developed by Leary and Kowalski (1993) was used to assess applicant arousal and anxiety. Participants responded on a 7-point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Four items about physiological descriptions were deleted and 8 items about feeling anxious were retained. An example item follows: "I was anxious when taking this test".

Perceived test fairness. A 10-item scale was used to measure applicants' perceived test fairness (Quinones, 1995). Participants needed to indicate the extent to which they agreed or disagreed with each item using 5-point scale from (1) strongly disagree to (5) strongly agree. An example item was "Overall, I believe that the assessment was fair."

Test satisfaction: An 8-item scale developed by Tonidandel, Quinones, and Adams (2002) was used to measure applicant satisfaction with the testing process. Participants responded on a 5 point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). An example item was "I enjoyed the test to a great degree."

Results

Manipulation Check

All the participants attended two sessions: the Mass Screening online survey (the baseline setting) and the lab study (the application setting). A total of 182 participants completed the lab study; however, only 167 participants completed the baseline survey, resulting in 167 participants completed both parts. To check whether the deception was successful, participants were asked the question: "Would you like us to contact you about a position in our Summer Internship Program? If yes, please enter your email address so that we may contact you for a copy of your resume." Ninety-three out of 182 (51.1%) participants shared their email addresses, indicating that they were interested in the position. As another manipulation check, participants' application motivation was measured. The reliability for the application motivation measure was .90. For all 182 participants, the mean application motivation was 3.53 ($SD = .88$), indicating a moderately high level of application motivation. Based on the above results, the deception seemed a success.

Equating

In the present study, participants were required to complete two parallel forms of personality tests under two contexts: the baseline context and the lab application context. Score differences between the two contexts can be attributed to several factors including (a) participants' motivation levels, which were manipulated, (b) item-inequity of parallel forms of personality tests, and (c) different testing environments between the baseline and the lab study. Given my focus on factor (a), it is important to address the other two factors as potential confounders. My master thesis study is similar to an earlier master thesis study conducted in the same lab (Yuan, 2015) using the same method. Yuan's study contained a sample of participants

47

who completed the same two parallel forms of the personality test under the honest condition.

Yuan found that these participants' personality scores increased from the baseline to the lab

study. Such differences captured item-inequity of parallel forms of personality tests, and

different testing environments between the baseline and the lab study. As such, I used these

differences to equate the two parallel forms of the personality test before conducting subsequent

analyses.

Specifically, I equated the baseline scores based on Yuan's data. All participants'

baseline personality scores were adjusted by adding the increased means from the baseline to the

application context in Yuan's data: Equated baseline scores in the current study = Raw baseline

scores in the current study + (Mean $_{\text{Honest condition (Time 2) in Yuan's data}}$ − Mean $_{\text{Baseline condition (Time 1) in}}$

$_{\text{Yuan's data}}$). Table 3 presents the means, standard deviations, and reliabilities for all personality

dimensions in the baseline (i.e., the Mass-screening) and application (the lab study) settings, as

well as the adjusted means for baseline personality scores.

Table 3. *Descriptive Statistics and Reliability for all Personality Dimensions*

	Baseline (Time 1) ($n = 167$)			Adjusted Baseline ($n = 167$)	Application (Time 2) ($n = 182$)		
Personality dimensions	*M*	*SD*	*α*	*M*	*M*	*SD*	*α*
Extroversion	4.22	1.00	.82	4.81	5.19	.94	.88
Conscientiousness	4.69	.99	.84	5.04	5.75	.68	.80
Emotion stability	4.34	.98	.83	4.15	4.88	.96	.86
Agreeableness	5.13	.94	.81	5.87	6.05	.60	.84
Openness to experience	4.55	.75	.72	4.85	5.37	.69	.75
School conscientiousness	4.62	.89	.83	5.16	5.87	.72	.89

Note. Equated baseline scores in the current study= Raw baseline scores in the current study + (Mean $_{\text{Honest condition (Time 2) in Yuan's data}}$ − Mean $_{\text{Baseline setting (Time 1) in Yuan's data}}$)

Score Discrepancy as a Faking Indicator

I calculated the score discrepancies for each participant by subtracting the adjusted baseline personality scores from personality scores in the application setting (McFarland & Ryan, 2000, 2006). For instance, the score discrepancy of Extroversion= Extraversion score in the application setting – adjusted baseline Extraversion score. Larger score discrepancies indicate higher level of faking. For each participant, I averaged the score discrepancies for all big five dimensions and treated the mean as an indicator of faking on the IPIP-100 measure. I denoted this indicator as IPIPfaking. As for the school-specific conscientiousness inventory, the score discrepancy was calculated as another indicator of faking, i.e., SSCfaking. Table 4 presents the means and standard deviations of IPIPfaking and SSCfaking in all five conditions. As can be seen, the means of SSCfaking were larger than the means of IPIPfaking. A paired *t*-test showed these mean differences reached statistical significance (t (166) = 4.16, $p < .01$), indicating that participants faked significantly more on the school-specific conscientiousness measure than on the IPIP-100 measure.

Warnings' Effect on Faking

Hypothesis 1 predicted that participants in various pre-warning conditions should fake less than participants in the control condition. In other words, participants in the warning conditions should have smaller score discrepancies than participants in the control condition. Table 4 indicates that the means of IPIPfaking and SSCfaking in the warning conditions were all smaller than the means in the control condition, which was consistent with Hypothesis 1.

I conducted contrast tests in ANOVA to test Hypothesis 1. The contrast tests indicated that the warning effect (i.e. warnings vs. control) was not significant for both IPIPfaking and SSCfaking (see Table 5). I then calculated the effect sizes of warnings using the standardized

mean difference (d) in discrepancy scores (i.e., IPIPfaking and SSCfaking) between unwarned

(the control condition) and warned applicants. A positive d indicates that warned applicants

faked less than unwarned applicants. According to Table 5, $d = .19$ for the IPIP scores, which

should be considered a small effect, and $d = .28$ for the school-specific conscientiousness scores,

which should be considered a small to moderate effect. To place these results into a large context,

I note that Dwight and Donovan (2003) reported, based on a meta-analysis, that the averaged

effect size of various pre-warnings was .23. Although these warning effect sizes were not

negligible, they were not statistically significant. Taken together, Hypothesis 1 was not

supported.

Table 4. *The descriptive statistics of score discrepancies for each warning condition*

	Detection/ Consequence [a]		Reasoning [b]		Subjective Norm [c]		Moral Conviction [d]		Control [e]	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
IPIPfaking	.35	.50	.52	.61	.44	.47	.51	.67	.57	.60
SSCfaking	.62	.76	.70	.99	.41	.73	.84	1.01	.86	.59

Note. [a]$n = 29$. [b]$n = 30$. [a]$n = 42$. [b]$n = 35$. [a]$n = 31$. IPIPfaking is the average score discrepancy for all big five dimensions and SSCfaking is the score discrepancy for school-specific conscientiousness. The larger faking indicators reveal the higher extent of faking.

Next, the four warnings were categorized into two types: (a) proscriptive warning (i.e.,

detection and consequence warning) and prescriptive warnings (i.e., reasoning warning,

subjective norm warning, and moral conviction warning). I examined the effect of the

proscriptive warning (vs. control) and the prescriptive warnings (vs. control) in reducing faking

separately. The results for proscriptive warning are presented in Table 5. As can be seen, two *t*-

tests showed no significant group mean differences (proscriptive warning vs control) in

IPIPfaking and SSCfaking. As for warning's effect size, $d = .40$ for IPIPfaking, $d = .35$ for

SSCfaking. These effect sizes indicate moderate effects of the proscriptive warning in reducing

faking. The results for the prescriptive warnings are also presented in Table 5. As can be seen, contrast tests yielded non-significant results. Table 5 shows the effect sizes of prescriptive warnings (vs. control), d = .14 for IPIPfaking, and d = .23 for SSCfaking. The results indicated the use of prescriptive warnings had a weak effect on faking.

Table 5. *Results comparing prescriptive, proscriptive, and control conditions*

	Condition	n	M	SD	d	*Contrast test vs. t-test*
IPIPfaking	Warning	136	.46	.57	.19	F (1, 162) = 1.09, p = .30
	Control	31	.57	.60		
SSCfaking	Warning	136	.65	.90	.28	F (1, 162)= 1.63, p = .20
	Control	31	.86	.59		
IPIPfaking	Prescriptive warning	107	.49	.59	.14	F (1, 162)= .52, p = .47
	Control	31	.57	.60		
SSCfaking	Prescriptive warning	107	.66	.93	.23	F (1, 162)= 1.45, p = .23
	Control	31	.86	.59		
IPIPfaking	Proscriptive warning	29	.35	.50	.40	t (58) = 1.57, p = .12
	Control	31	.57	.60		
SSCfaking	Proscriptive warning	29	.62	.76	.35	t (58) = 1.36, p = .18
	Control	31	.86	.59		

Note. Positive d values indicate the warned participants fake less than unwarned participants on the personality measures in the lab study.

There were three types of prescriptive warnings used in the current study. The effect size of each prescriptive warning compared with control condition is shown in Table 6. Specifically, for reasoning warning, d = .10 for IPIPfaking, t (59) = -.75, p = .46; d =.19 for SSCfaking, t (59) = -.38, p = .71. For subjective norm warning, d = .25 for IPIPfaking, t (64) = -1.00, p = .32; d = .68 for SSCfaking; t (64) = -2.75, p < .01. For moral conviction warning, d = .10 for IPIPfaking, t (71) = -.08, p = .94, and d =.02 for SSCfaking, t (71) = -.43, p = .67. Thus, it appears that both reasoning warning and moral conviction warning had little effects on reducing faking, whereas subjective norm warning had a significant effect on reducing faking.

Warnings' Influence on Criterion-related Validity of Personality Scores

For all IPIP dimensions, in the control condition ($n = 35$), there were no significant correlations between IPIP dimension scores with GPA; whereas in the warning conditions ($n = 147$), Extraversion and Emotional Stability were negatively correlated with GPA. For school-specific conscientiousness, in the control condition ($n = 35$), the correlation between school-specific conscientiousness scores and GPA was .44 ($p < .01$); and in the warning conditions ($n = 147$), the correlation between school-specific conscientiousness and GPA was .22 ($p < .01$). These findings were opposite to what was expected. Therefore, Hypothesis 2 was not supported.

Research Question 1 asked whether the criterion-related validities of personality scores in the proscriptive warning condition (i.e., detection and consequence warning) were higher than those in the prescriptive warning conditions (i.e., the reasoning warning, moral conviction warning, and subjective norm warning). In the proscriptive warning condition ($n = 32$), IPIP dimension scores were not significantly correlated with GPA; whereas in the prescriptive warnings ($n = 115$), Extroversion, Emotional Stability and Agreeableness scores were negatively correlated with GPA ($r = -.24$, $-.30$, and $-.19$ for Extroversion, Emotional Stability and Agreeableness, respectively). In the proscriptive warning condition ($n = 32$), school-specific conscientiousness scores was not significantly correlated with GPA ($r = .30$, $p = .09$); whereas in the prescriptive warning conditions ($n = 115$), school-specific conscientiousness scores was positively correlated with GPA ($r = .20$, $p < .05$). Therefore, there was no clear pattern showing that criterion-related validities of personality scores differed between the prescriptive and proscriptive warning conditions.

Table 6. *Score discrepancy difference (d's) across all warning and control conditions*

	1	2	3	4	5
IPIPfaking					
1 Detection & Consequence warning [a]	-				
2 Reasoning warning [b]	.30	-			
3 Subjective norm warning [c]	.19	-.14	-		
4 Moral conviction warning [d]	.26	-.01	.12	-	
5 Control [e]	.40	.10	.25	.10	-
SSCfaking					
1 Detection & Consequence warning [a]	-				
2 Reasoning warning [b]	.09	-			
3 Subjective norm warning [c]	-.29	-.34	-		
4 Moral conviction warning [d]	.24	.14	**.49**[*]	-	
5 Control [e]	.35	.19	**.68**[**]	.02	-

Note: [a]$n = 29$. [b]$n = 30$. [a]$n = 42$. [b]$n = 35$. [a]$n = 31$. Positive effect size (*d*) indicates smaller score discrepancies in the column condition than those in the row condition. In other words, positive effect indicates that participants in the column condition fake less than participants in the row condition. [*] $p < .05$. [**] $p < .01$.

Relative Effectiveness between the Proscriptive and Prescriptive Warnings

Hypothesis 3 stated that participants in the proscriptive warning condition should have smaller score discrepancy than participants in the prescriptive warning conditions. The means of IPIPfaking and SSCfaking for participants in the proscriptive warning conditions were smaller than that for participants in the prescriptive warning. These mean difference patterns were consistent with Hypothesis 3. Contrast tests were conducted to examine the relative effectiveness of the proscriptive and prescriptive warnings. However, the contrast test results were not significant: for IPIPfaking, $F(1, 162) = 1.30$, $p = .26$; and for SSCfaking, $F(1, 162) = .03$, $p = .87$. I then calculated the mean difference (*d*) in IPIPfaking and SSCfaking between the proscriptive warning condition and the prescriptive warning conditions. A positive *d* value indicates that the proscriptive warning is more effectiveness than the prescriptive warnings on deterring faking. The resulting effect sizes were as follows: $d = .26$ for IPIPfaking, and $d = .05$

for SSCfaking. These results indicated that the proscriptive warning had a similar effect as the prescriptive warnings on reducing faking on both IPIP-100 and school-specific conscientiousness scores. Thus, Hypothesis 3 was not supported.

Relative Effectiveness among Three Prescriptive Warnings

Research Question 2 asked whether three prescriptive warnings (i.e., the reasoning warning, the subjective norm warning, and the moral conviction warning) differed on their faking reduction effectiveness. To answer this question, I conducted t-tests to test the mean differences of IPIPfaking and SSCfaking for each pair of the prescriptive warnings. The results were as follows: (a) for the comparison between the subjective norm warning and the reasoning warning, $t(63) = -.55$, $p = .58$ for IPIPfaking and $t(63) = -1.38$, $p = .17$ for SSCfaking; (b) for the comparison between the moral conviction warning and the reasoning warning, $t(70) = -.04$, $p = .97$ for IPIPfaking and $t(70) = .59$, $p = .56$ for SSCfaking; (c) for the comparison between the moral conviction warning and the subjective norm warning, $t(75) = .50$, $p = .61$ for IPIPfaking, and $t(75) = 2.12$, $p < .05$ for SSCfaking. Therefore, the subjective norm warning was significantly more effective than the moral conviction warning.

I also calculated the mean differences of IPIPfaking and SSCfaking for each pair of prescriptive warnings comparison. As can be seen in Table 6, for the comparison between the subjective norm warning and the reasoning warning, $d = -.14$ and $d = -.34$ for IPIPfaking and SSCfaking respectively, indicating that the subjective norm warning was more effective than the reasoning warning. For the moral conviction warning and the reasoning warning comparison, $d = -.01$ and $d = .14$ for IPIPfaking and SSCfaking respectively. For the moral conviction warning and subjective norm warning comparison, $d = .12$ and $d = .49$ for IPIPfaking and SSCfaking respectively. Thus, it could be concluded: (a) the reasoning warning did not differ from the moral

54

conviction warning; and (b) the subjective norm warning was more effective than the reasoning and the moral conviction warnings.

The Warnings' Side Effects

Hypothesis 4 suggested that there would be more participants in the proscriptive warning condition demonstrating an over-compensatory response pattern than those in the prescriptive warning conditions. The over-compensatory cases refer to participants who had significant negative score discrepancies. Following Griffith et al.'s (2005) method, I constructed the 90% confidence interval for baseline scores and considered individuals whose personality scores in the application setting were lower than the lower bound of the 90% CI as over-compensatory respondents.

For the IPIP-100 measure, results showed that only 1 out of 29 participants (3.1%) in the proscriptive condition fell within the over-compensatory respondent category. Furthermore, 2 out of 107 participants (1.7%) in the prescriptive warning conditions could be regarded as over-compensatory respondents. No participants in the control condition were categorized as over-compensatory respondent. It showed a higher percentage of over-compensatory participants than those in the prescriptive warning conditions and the control condition. Although these results were consistent with Hypothesis 4, the Chi-square test was not significant: $\chi^2(2) = 1.02$, $p = .60$. For the school-specific conscientiousness measure, over-compensatory response pattern did not occur. Therefore, Hypothesis 4 was not supported.

Hypothesis 5 suggested that participants in the proscriptive warning condition should have more negative applicant reactions than those in the prescriptive warning conditions. In the current study, I measured five types of test-taker reactions, i.e., test anxiety, test satisfaction, test fairness, positive affect, and negative affect. For test anxiety, I found participants in the

proscriptive warning condition had the highest test anxiety, followed by participants in the

prescriptive warning conditions, and then by participants in the control condition (see Table 7).

However, the F-test was not significant (F (2, 179) = 1.74, p = .18). As for positive affect,

participants in the control condition had the highest positive affect, followed by participants in

the prescriptive conditions, and then by participants in the proscriptive warning condition had the

lowest positive affect (see Table 7). The F-test, however, did not show any significant results (F

(2, 179) = 1.74, p = .18). For test satisfaction, test fairness, and negative affect, the differences

across three conditions were not obvious (see Table 7). F-tests showed no significant results (F

(2, 179) = .06, p = .94 for test satisfaction; F (2, 179) = .19, p = .83 for test fairness; F (2, 179) =

1.03, p = .36 for negative affect). I found that to a small extent, proscriptive warning (vs. control

condition) tended to increase individuals' test anxiety (t (65) = 1.67, p = .10), and reduce the

positive affect (t (65) = -1.87, p = .07); whereas prescriptive warnings did not show such effects.

In general, Hypothesis 5 was not supported.

Table 7. *Test reactions across different conditions*

	Test anxiety		Test satisfaction		Test fairness		Positive affect		Negative affect	
Condition	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Proscriptive warning [a]	1.77	.88	3.47	.51	3.61	.45	2.84	.78	1.12	.17
Prescriptive warnings [b]	1.63	.63	3.51	.59	3.54	.64	2.97	.94	1.17	.29
Control	1.46	.61	3.48	.72	3.58	.50	3.24	.92	1.11	.18

Note. [a]n =32. [b]n =115.

Testing Mechanisms Underlying Pre-warnings' Effects

Hypothesis 6 predicted that the proscriptive warning (the detection and consequence

warning) should arouse higher levels of shame and fear than the prescriptive warnings (i.e., the

reasoning warning, moral conviction warning, and subjective norm warning) and the control; and

that the prescriptive warnings should arouse a higher level of guilt than the proscriptive warning

and the control. I created two dummy variables for the three experimental conditions to test

Hypothesis 6. Specifically, for the first dummy variable - proscriptive warning, the proscriptive

warning condition was denoted as 1, and the prescriptive warning conditions and the control

condition were denoted as 0; and for the second dummy variable – the prescriptive warning, the

prescriptive warning conditions were denoted as 1, and the proscriptive condition and control

condition were denoted as 0. According to Hypothesis 6, the dummy variable proscriptive

warning should be positively related to participants' feeling of shame and fear of punishment,

and the dummy variable prescriptive warning should be positively related to participants' feeling

of guilt. Regressions analyses showed that the two dummy variables were not significantly

related to fear of punishment, shame and guilt (see Table 9). Thus, Hypothesis 6 was not

supported.

Hypothesis 7 stated that the feelings of shame, fear, and guilt would be negatively related

to score discrepancies (i.e., IPIPfaking and SSCfaking). According to Table 8, fear of

punishment was negatively correlated with SSCfaking ($r = -.19$, $p < .05$); shame was negatively

correlated with SSCfaking ($r = -.16$, $p < .05$), and IPIPfaking ($r = -.15$, $p = .05$); guilt was

negatively correlated with SSCfaking ($r = -.17$, $p < .05$). Regression analyses showed that only

the regression weight for fear of punishment on SSCfaking was significant ($\beta = -.18$, $p < .05$)

indicating that the higher fear of punishment was associated with lower levels of faking. Thus,

Hypothesis 7 was partially supported.

Finally, Hypothesis 8 stated that the feeling of shame and fear would mediate the effect

of the proscriptive warning on faking, whereas the feeling of guilt would mediate the effect of

the prescriptive warnings on faking. Since the regression analyses showed that the proscriptive

warning did not significantly arouse the feeling of shame and fear of punishment and that the

prescriptive warnings did not lead to higher levels of feeling of guilt, Hypothesis 8 did not

receive support.

Table 8. *Means, Standard Deviations, Reliabilities, and Intercorrelations*

	M	*SD*	1	2	3	4	5	6	7
1. Prescriptive warning [a]	.63	.48	-						
2. Proscriptive warning [a]	.18	.38	-.61[**]	-					
3. Fear of punishment [a]	2.03	.83	-.10	.11	(.47)				
4. Shame [a]	1.12	.26	-.02	.00	-.01	(.58)			
5. Guilt [a]	1.14	.31	-.04	.01	.03	.51[**]	(.74)		
6. IPIPfaking [b]	.48	.58	.02	-.10	-.13	-.15*	-.11	(.73)	
7. SSCfaking [b]	.69	.85	-.05	-.04	-.19*	-.16*	-.17*	.63[**]	-

Note. [a]$n = 182$. [b]$n = 167$.
*$p < .05$. **$p < .01$.

Table 9. *Hierarchical Regression results: Testing mediating hypothesis*

	Mediators			Dependent variables		Dependent variables	
Predictors	Fear of punishment	Shame	Guilt	IPIPfaking	SSCfaking	IPIPfaking	SSCfaking
Prescriptive warning	-.06	-.02	-.04			-.09	-.14
Proscriptive warning	.07	-.01	-.01			-.14	-.10
Fear of punishment				-.12	-.18*	-.12	-.19*
Shame				-.13	-.11	-.13	-.11
guilt				-.04	-.09	-.04	-.10
R^2	.01	.00	.00	.04	.07	.05	.08

Note. [a]$n = 182$. [b]$n = 167$.
*$p < .05$.

Discussion

Warnings' Effectiveness in Reducing Faking

The main purpose of my study was to examine the effectiveness of both new and traditional pre-warnings in deterring faking, as well as the mechanisms of these warnings. Participants in the study completed two parallel forms of two personality tests (IPIP-100 and school-specific conscientiousness) under two different settings: a baseline setting and a simulated application setting. An equating process was conducted to adjust the baseline personality scores. This allowed me to rule out some confounding factors caused by measurement and environment inequity within two settings. The personality score discrepancy between personality scores in the application setting and adjusted baseline personality scores was regarded as a direct indicator of individual-level faking (Griffith et al., 2005; McFarland & Ryan, 2006). Comparing score discrepancies across warned and unwarned groups, thus, is an accurate way to draw an appropriate conclusion about the warning's effectiveness in reducing faking.

By examining score discrepancies, several hypotheses focused on pre-warnings' effect on reducing faking were tested. The results showed that the subjective norm warning had a significant effect in reducing faking on the school-specific conscientiousness measure ($d =.68$); whereas the effectiveness of other three warnings (detection and consequence warning, reasoning warning, and moral conviction warning) on the two personality measures did not reach statistical significance. However, a more careful look at the results indicated that the effect sizes of the detection and consequence warning (vs. control) were moderate ($d = .40$ and $.35$ for IPIPfaking and SSCfaking, respectively). These effective sizes were larger than the effect size ($d = .25$) of the detection and consequence warning reported in Dwight and Donovan's (2003) meta-analysis. In general, whereas the subjective norm warning and the detection and consequence warning

59

showed some effects on faking reduction, the reasoning warning and the moral conviction warning did not reduce faking.

The null findings of the reasoning warning were consistent with prior studies (e.g., Dullaghan, 2010; Lammers et al., 2014; Mitchell & Adair, 2014). The reasoning warning emphasized that responding honestly could promote person-job (P-J) and/or person-organization (P-O) fit, could boost their job satisfaction and job performance, and could increase the chance of promotion in the long run (Pace & Borman, 2006). The assumed effectiveness of the reasoning warning lies in an underlying assumption that responding honestly is a way for participants to exchange for their long-term interests, such as P-J fit and job satisfaction. However, if job applicants do not value these long-term benefits, they may not be influenced by the reasoning warning and persist in faking. In the current study, the advertised job was a summer internship job, not a permanent job, and as such, our participants might not be interested in the long-term benefits listed in the reasoning warning. In other words, for a short-term summer internship position, the benefit of getting the job may outweigh the benefit of P-J fit /P-O fit in the long-run.

The current study did not find support for the moral conviction warning, which was opposite to Mitchell and Adair's (2014) who reported that this type of warning effectively reduced faking. The moral conviction warning works via priming individuals' morality such that the primed individuals would act morally without considering their own self-interests. One explanation of this inconsistency might be that the incentive in the current study (with the possibility of earning $7,000-$8,000 during the summer internship and gaining valuable work experience) was much more attractive than the incentive in Mitchell and Adair's study (with the

possibility of earning $20 cash reward) such that individuals were more motivated to pursue self-interest at the expense of morality.

Our finding that the subjective norm warning was able to reduce faking was in agreement with Turcu's (2011) findings. The concept of "subjective norms" derives from the Theory of Planned Behavior (TPB), which refers to an individual's behavior being affected by important others' attitudes and norms (Ajzen, 1991). The subjective norm is similar to the concept of "others' attitudes" discussed by Snell et al. (1999) in their faking model. McFarland and Ryan (2006), as well as Snell et al. (1999), believed that the widely-held belief and norm about the inappropriateness of faking would influence subjects' own attitudes toward faking, and in turn, actual faking behaviors. Participants in our study and in Turcu' study were college students, who tend to care about others' attitudes toward themselves and try to win social approvals from others (e.g., future coworkers and supervisors) (Twenge & Im, 2007).

Warnings' Side Effects

It was assumed that the use of a proscriptive warning had some side effects, for instance, an over-compensatory response pattern and negative test perceptions. Despite that the percentage of over compensatory respondents in the proscriptive warning condition (3.1%) was higher than that in the prescriptive warning (1.7%) and the control conditions (0%), the Chi-square test was not significant. I speculate that this null finding is attributed to small sample sizes in the current study. However, the current study did find that participants who received the proscriptive warning had a marginally higher level of test anxiety and a lower level of positive affect than participants in the control condition. This finding was consistent with previous research showing that negatively framed consequence warning enhanced subjects' test-taking anxiety and decreased test-taking ease (Converse et al., 2008). No significant results were observed relating

to test satisfaction and test fairness, consistent with findings reported by McFarland (2003),

Mitchell and Adair (2014), and Turcu (2011).

Do Moral Experiences Matter?

I assumed that the use of warnings could prime individuals' morality and thus arouse

moral experiences (e.g., shame, fear and guilt), and that the moral experiences should work as

moral regulators and thus could regulate individuals' moral behaviors. Unfortunately, I did not

find supporting evidence for the hypothesized effects of warnings on moral experiences. But I

found that fear of punishment was negatively related to faking. Together, the mediating role of

moral experiences in warning-faking link was not supported. There might be two factors that had

contributed to the null findings. First, I waited until participants had finished the entire

personality test and several other surveys to measure these moral experiences (a 20-minute

delay). I would have observed stronger effects had I measured these moral experiences

immediately after the warning messages. Second, my warning priming might not be strong

enough to arouse moral emotions. Note that in Sheikh and Janoff-Bulman's (2010a) study,

participants were required to write down what they should do or should not do to be moral or not

immoral. By contrast, in my study, participants were not explicitly told that warning information

was related to morality; also, participants were only required to read this information rather than

writing down their moral thoughts. In other words, my warnings might be too weak to generate

hypothesized moral experiences.

The negative relationship between fear of punishment and faking revealed the important

role of fear in regulating applicants' behaviors. This result supports the argument that fear

inhibits moral transgressions (Nabi, 2003), and fear increases risk-aversive behaviors (Lerner &

Keltner, 2000). That is, applicants who are afraid of punishment tend to be more cautious while completing the personality test, and responded in a less favorable way.

Contributions

The present study makes several contributions to our understanding of various warnings' utility within personnel selection contexts. First, the present study represented the most comprehensive examination of various pre-warnings thus far by including almost all the new pre-warnings created by researchers (except the educational warning). Second, the present studies found some side effects of the proscriptive warning (i.e., detection and consequence warning) on test perceptions. This finding reminds practitioners and researchers some potential negative effects when using the proscriptive warning to deter faking. There is a trade-off between (a) the benefit of the proscriptive warnings' effectiveness in reducing faking and (b) the cost of their side effects. Therefore, caution should be exercised when choosing specific warnings to reduce faking. Third, I am the first scholar who introduces moral theories into pre-warning research to explain the mechanisms of various pre-warnings. Consistent with the morality assumption, the present study found one of the moral experiences (fear of punishment) reduced faking.

Limitations and Future Research

The present study has several limitations. The first limitation was small sample size. The present experimental design involved five conditions with the cell sizes ranging from 30 to 40 participants. Because of the small sample sizes, the power of the ANOVA tests focusing on the effect of warning on faking was quite small (power = .21 and .51 for IPIPfaking and SSCfaking, respectively). In order to make the effectiveness of the detection and consequence warning to reach significance, sample sizes of 136 (for IPIP-100 measure) and 178 (for school-specific

63

conscientiousness measure) for detection and consequence warning condition are suggested by G*POWER. Because of the small sample size, regression analyses and path analyses could not run to test the moderating roles of warnings on personality-GPA link and the mediating roles of emotional experiences in warnings- faking link. In addition, the total number of over-compensatory respondents was quite small ($n = 3$). I am currently collecting more data to address this limitation.

The second limitation concerns the sample of participants and the motivating technique used. This study recruited undergraduate students as participants. These students were told a cover story that an attractive summer internship position was offered by a company named InSat Corporation (Ellingson et al., 2012). Despite more than half of the participants indicated their interests in this position and wrote down their email addresses for future contact, this motivation technique still raised several concerns. First, the position provided was a short-term internship, which did not mimic real-world permanent jobs. Second, the fact that almost a half of participants did not intend to apply for this position implies that participants might be not motivated to fake during the test. Future research conducted in real-world selection contexts are needed to address this limitation.

The third limitation was the measurement of emotional arousal. Considering that the state of emotions could easily change over time, it was crucial to include a timely measurement of these emotions. For instance, the typical emotion-related studies measure emotions immediately after emotional stimuli (e.g., Sheikh & Janoff-Bulman, 2010a). In the present study, however, I could not measure applicants' emotions immediately after they received the warning message. This is because I was concerned that motivated applicants were likely to fake on both personality measures and emotions measures. As a result, the large time lag between the use of pre-warnings

and the measurement of shame, fear and guilt in the present study might be the major reason why pre-warnings were not related to these emotions. Future researchers should considering using some real-time measurement of evoked emotions such as physiological responses (e.g., cardiovascular activity, electrodermal responding, and somatic activity) (Ax, 1953) and facial expression evaluations (e.g., Bailenson et al., 2008).

Previous studies have consistently demonstrated that the proscriptive warning was an effective way to reduce faking (Dwight & Donovan, 2003; Kuroyama et al., 2010; Vasilopoulos et al., 2005). The present study further showed that one proscriptive warning, subjective norm, was also effective in lowering faking. It might be interesting to examine whether combining the detection and consequence warning and the subjective norm warning might lead to stronger faking reduction effects as well as smaller side effects. In the similar vein, future researchers may explore different combinations of both proscriptive and prescriptive warnings, and explore the best combinations in controlling faking.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179 - 211.

Arkin, R. M. (1981). Self-presentational styles. In J. T. Tedeschi (Ed.*), Impression management theory and social psychological research.* San Diego, CA: Academic.

Ax, A. F. (1953). The physiological differentiation between fear and anger in humans. *Psychosomatic Medicine, 15*, 433 - 442.

Bailenson, J. N., Pontikakis, E. D., Mauss, I. B., Gross, J. J., Jabon, M. E., Hutcherson, C. A. C., Nass, C., & John, O. (2008). Real-time classification of evoked emotions using facial feature tracking and physiological responses. *International Journal of Human-Computer Studies, 66*, 303 - 317.

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1 - 26.

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*, 323 - 370.

Braun, J. R., & Constantini, A. (1970). Faking and faking detection on the Personality Research Form, AA. *Journal of Clinical Psychology, 26*, 516 - 518.

Braun, J. R., & Gomez, B. J. (1966). Effects of faking instructions on the Eysenck Personality Inventory. *Psychological Reports, 19*, 388 - 390.

Braun, J. R., & LaFaro, D. (1968). Fakability of the Sixteen Personality Factor Questionnaire, Form C. *Journal of Psychology, 68*, 3- 7.

Carver, C. S., & Scheier, M. F. (1990). Principles of self-regulation: Action and emotion. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol.2). New York: Guilford Press.

Carver, C. S., & Scheier, M. F. (2008). Feedback processes in the simultaneous regulation of affect and action. In J. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science* (pp. 308-324). New York: Guilford Press.

Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BIA Scales. *Journal of Personality and Social Psychology, 67*, 319 - 333.

Christiansen, N. D., Burns, G., & Montgomery, G. E. (2005). Reconsidering the use of forced-choice formats for applicant personality assessment. *Human Performance, 18*, 267 - 307.

Christiansen, N. D., Goffin, R. D., Johnston, N. G., & Rothstein, M. G. (1994). Correcting the 16PF for faking: Effects on criterion-related validity and individual hiring decisions. *Personnel Psychology, 47*, 847 - 860.

Colby, A., Kohlberg, L., Gibbs, J., Lieberman, M., Fischer, K., & Saltzstein, H. D. (1983). A longitudinal study of moral judgment. *Monographs of the Society for Research in Child Development*, 48, 1 - 124.

Converse, P. D., Oswald, F. L., Imus, A., Hedricks, C., Roy, R., & Butera, H. (2008). Comparing personality test formats and warnings: Effects on criterion-related validity and test-taker reactions. *International Journal of Selection and Assessment, 16*, 155 - 169.

Dienstbier, R. A. (1984). The role of emotion in moral socialization. In C. Izard, J. Kagan, & R. B. Zajonc (Eds.), *Emotions, cognitions, and behaviors* (pp. 484- 513). New York: Cambridge University Press.

Doll, R. E., (1971). Item susceptibility to attempted faking as related to item characteristics and adopted fake set. *Journal of Psychology, 77*, 9 - 16.

Donovan, J. J., Dwight, S. A., & Schneider, D. (2014). The impact of applicant faking on selection measures, hiring decisions, and employee performance. *Journal of Business Psychology, 29*, 479 - 493.

Dullaghan, T.R. (2010). The effect of a reasoning warning on faking in personality testing for selection and the perception of procedural justice. Unpublished master thesis, University of South Florida.

Duvernet, A., Whelan, T. J., Seiler, S. N., & Hess, C. E. (2014). Warning against faking: Investigating the measurement equivalence of personality scales. Paper presented at the 29th Annual Conference of the Society for Industrial and Organizational Psychology, Honolulu, HI.

Dwight, S. A., & Donovan, J. J. (2003). Do warning not the fake reduce faking? *Human Performance, 16*, 1 - 23.

Ellingson, J. E., Heggestad, E. D., & Makarius, E. E. (2012). Personality retesting for managing intentional distortion. *Journal of Personality and Social Psychology, 102 (5),* 1063 - 1076.

Ellingson, J. E., Sackett, P. R., & Connelly, B. S. (2007). Personality assessment across selection and development contexts: Insights into response distortion. *Journal of Applied Psychology, 92 (2)*, 386 - 395.

Ellingson, J. E., Sackett, P. R., & Hough, L. M. (1999). Social desirability corrections in personality measurement: Issues of applicant comparison and construct validity. *Journal of Applied Psychology, 84*, 155 - 166.

Fan, J., Gao, D., Carroll, S. A., Lopez, F. J., Tian, T. S., & Meng, H. (2012). Testing the efficacy of a new procedure for reducing faking on personality tests within selection contexts. *Journal of Applied Psychology, 97(4)*, 866 - 880.

Fox, S., & Dinur, Y. (1988). Validity of Self-Assessment: A Field Evaluation. *Personnel Psychology, 41(3)*, 581 - 592.

Griffith, R. L., Chmielowski, T. & Yoshita, Y. (2007). Do applicants fake? An examination of the frequency of applicant faking behavior. *Personnel Review, 36*, 341 - 355.

Griffith, R. L., Yoshita, Y., Gujar, A., Malm, T., & Socin, R. (2005). The impact of warnings on applicant faking behavior, unpublished manuscript.

Goffin, R. D., & Christiansen, N. D. (2003). Correcting personality tests for faking: A review of popular personality tests and an initial survey of researchers. *International Journal of Selection and Assessment, 11*, 340 - 344.

Goffin, R. D. & Woods, D. M. (1995). Using personality testing for personnel selection: faking and test-taking inductions. *International Journal of Selection and Assessment, 3(4)*, 227 - 237.

Goldberg. L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4*, 26 - 42.

Gomez, B. J. & Braun, J. R. (1967). Effects of 'Salesman Candidate' sets on the Eysenck Personality Inventory. *Psychological Report, 20*, 192.

Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review, 25*, 161 - 178.

Gwinn, G. T. (1949). The effects of punishment on acts motivated by fear. *Journal of Experimental Psychology, 39*, 260 - 269.

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52*, 1280 - 1300.

Higgins, E. T., Roney, C. J. R., Crowe, E., & Hymes, C. (1994). Ideal versus ought predilections for approach and avoidance: Distinct self-regulatory systems. *Journal of Personality and Social Psychology, 66 (2)*, 276 - 286.

Hogan, J., Barrett, P., & Hogan, R. (2007). Personality measurement, faking, and employment selection. *Journal of Applied Psychology, 92*, 1270 - 1285.

Holden, R. R., & Jackson, D. N. (1979). Item subtlety and face validity in personality assessment. *Journal of Consulting and Clinical Psychology, 47*, 459 - 468.

Holden, R. R., & Jackson, D. N. (1981). Subtlety, information, and faking effects in personality assessment. *Journal of Clinical Psychology, 37*, 379 - 386.

Honkaniemi, L., & Feldt, T. (2008). Egoistic and moralistic bias in real-life inventory responses. *Personality and Individual Differences, 45*, 307 - 311.

Hough, L. M. (1998). Effects of Intentional Distortion in personality measurement and evaluation of suggested palliatives. *Human Performance, 11(2/3)*, 209 - 244.

Hough, L. M., Eaton, N. K., Dunnette, M. D., Kamp, J. D., & McCloy, R. A. (1990). Criterion-related validities of personality constructs and the effects of response distortion on those validities. *Journal of Applied Psychology, 75*, 581 - 595.

Hough, L. M., & Oswald, F. L. (2008). Personality testing and I-O psychology: Reflecting, progress and prospects. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 1*, 272 - 290.

Huddy, L., Feldman, S., Taber, C., & Lahav, G. (2005). Threat, anxiety, and support of antiterrorism polices. *American Journal of Political Science, 49*, 593 - 608.

Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The big five revisited. *Journal of Applied Psychology, 85*, 869 - 879.

Illingworth, A. J. (2004). The effect of warnings and individual differences on the criterion-related validity of selection tests. Unpublished doctorate dissertation, The University of Akron.

Jackson, D. N., Wroblewski, V. R., and Ashton, M. C. (2000). The impact of faking on employment tests: Does forced choice offer a solution? *Human Performance, 13*, 371 - 388.

Janoff-Bulman, R., Sheikh, S., & Hepp, S. (2009). Proscriptive versus prescriptive morality: Two faces of moral regulation. *Journal of Personality and Social Psychology, 96*, 521 - 537.

Kahneman, D. & Tversky, A. (1979). Prospect Theory: An analysis of decision under risk. *Econometrica, 47*, 263 - 291.

Khorramdel, L., & Kubinger, K. D. (2006). The effect of speediness on personality questionnaires: An experiment on applicants within a job recruiting procedure. *Psychology Science, 48 (3)*, 378 - 397.

Kligyte, V., Connelly, S., Thiel, C., & Devenport, L. (2013). The influence of anger, fear, and emotion regulation on ethical decision making. *Human Performance, 26*, 297 - 326.

Kluger, A. N., & Colella, A. (1993). Beyond the mean bias: The effect of warning against faking on biodata item variance. *Personnel Psychology, 46*, 763 - 780.

Kluger, A.N., Reilly, R.R., & Russell, C.J. (1991). Faking biodata tests: Are option-keyed instruments more resistant? *Journal of Applied Psychology, 76*, 889 - 896.

Kochanska, G., Coy, K. C., & Murray, K. T. (2001). The development of self-regulation in the first four years of life. *Child Development, 72*, 1091 - 1111.

Kohlberg, L. (1963). The development of children's orientations toward a moral order. *Vita Humana, 6*, 11 - 33.

Kohlberg, L. (1971). *From is to ought: How to commit the naturalistic fallacy and get Away with it in the study of moral development*. New York: Academic Press.

Komar, S, Komar, J. A., Robie, C., & Taggar, S. (2008). Speeding personality measures to reduce faking. *Journal of Personnel Psychology, 9(3)*, 126 - 137.

Kuncel, N. R., & Borneman, M. J. (2007). Toward a new method of detecting deliberately faked personality tests: The use of idiosyncratic item responses. *International Journal of Selection and Assessment, 15*, 220 - 231.

Kuroyama, J., Wright, C. W., Manson, T. M., & Sablynski, C. J. (2010). The effect of warning against faking on biodata test outcomes: A field study of bus operator applicants. *Applied Human Resource Management Research, 12*, 59 - 74.

Kuschnereit, F. (2000). Improving the accuracy of biodata questionnaires. Unpublished Master Thesis, The University of New Brunswick.

Lammers, V. M., Macan, T., Hirtz, R. J. & Kim, B. H. (2014). To scare or to care: Different warnings against applicant faking. Paper presented at the 29th Annual Conference of the Society for Industrial and Organizational Psychology, Honolulu, HI.

Landers, R. N., Sackett, P. R., & Tuzinski, K. A. (2011). Retesting after Initial Failure, Coaching Rumors, and Warnings against Faking in online Personality Measures for Selection. *Journal of Applied Psychology, 96(1),* 202 - 210.

Lanyon, R. I., Goodstein, L. D., & Wershba, R. (2014). 'Good Impression' as a moderator in employment-related assessment. *International Journal of Selection and Assessment, 22*, 52 - 61.

Lazarus, R. (1991). *Emotion and adaptation*. New York, NY Oxford University Press.

Leary, M. R., & Kowalski, R. M. (1993). The Interaction Anxiousness Scale: Construct and criterion-related validity. *Journal of Personality Assessment, 61*, 136-146.

Lee, N., O' Neill, T. A., Radan, J., Law, S. J., Lewis, R. J., & Carswell, J. J. (2014). The faking warning in conventional and forced-choice personality measures. Paper presented at the 29th Annual Conference of the Society for Industrial and Organizational Psychology, Honolulu, HI.

Leen-Feldner, E. W., Zvolensky, M. J., & Feldner, M. T. (2004). Behavioral inhibition sensitivity and emotional response suppression: A laboratory test among adolescents in a fear-relevant paradigm. *Journal of Clinical Child and Adolescent Psychology, 33*, 783 - 791.

Lerner, J. S., Dahl, R. E., Hariri, A. R., & Taylor, S. E. (2007). Facial expressions of emotion reveal neuroendocrine and cardiovascular stress responses. *Biological Psychiatry, 61*, 253 - 260.

Lerner, J. S., & Keltner, D. (2000). Beyond valence: Toward a model of emotion-specific influences on judgment and choice. *Cognition and Emotion, 14*, 473 - 493.

Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of Personality and Social Psychology, 81*, 146 - 159.

Lewis, H. B. (1971). *Shame and guilt in neurosis*. New York: International Universities Press.

Marschall, D., Sanftner, J., & Tangney, J. P. (1994*).The State Shame and Guilt Scale*. George Mason University, Fairfax VA.

McFarland, L.A. (2003). Warning against Faking on a Personality Test: Effects on applicant reactions and personality test scores. *International Journal of Selection and Assessment, 11*, 265 - 276.

McFarland, L. A., & Ryan, A. M. (2000). Variance in faking across non-cognitive measures. *Journal of Applied Psychology, 85*, 812 - 821.

McFarland, L. A., & Ryan, A. M. (2006). Toward an integrated model of applicant faking behavior. *Journal of Applied Social Psychology, 36*, 979 - 1016.

Mitchell, T. & Adair, C. (2014). An examination of warning type on personality faking. Paper presented at the 29th Annual Conference of the Society for Industrial and Organizational Psychology, Honolulu, HI.

Mueller-Hanson, R. A., Heggestad, E. D., & Thornton, G. C. (2003). Individual differences in impression management: an exploration of the psychological processes underlying faking. *Psychology Science, 48*, 288 - 312.

Nabi, R. L. (2003). Exploring the framing of emotions: Do discrete emotions differentially influence information accessibility, information seeking, and policy preference? *Communication Research, 30*, 224 - 247.

Nias, D.K.B. (1972). The effects of providing a warning about the lie scale in a personality inventory. *British Journal of Educational Psychology, 42*, 308 - 312

Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: the red herring. *Journal of Applied Psychology, 81*, 660 - 670.

Pace, V. L. & Borman, W. C. (2006). The use of warnings to discourage faking on noncognitive inventories. In R. L., Griffith & M. H., Peterson (Eds.), *A Closer Examination of Applicant Faking Behavior* (pp. 283- 304). Greenwich, CT: Information Age Publishing.

Pace, V. L., Xu, X., Penny, L. M., Borman, W. C., & Bearden, R. M. (2005). Using warnings to discourage personality test faking: An empirical study. In J. P. Bott & C. C. Rosen (Chairs), *Moving from laboratory to field: Investigating situation in faking research.* Symposium conducted at the annual meeting of the Society for Industrial and Organizational Psychology, Los Angeles.

Parker, M. T., & Isbell, L. M. (2010). How I vote depends on how I feel: The differential impact of anger and fear on political information processing. *Psychological Science*, *4,* 548 - 550.

Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology, 46*, 598 - 609.

Paulhus, D. L., Bruce, M. N., & Trapnell, P. D. (1995). Effects of self-presentational strategies on personality profiles and their structure. *Personality and Social Psychology Bulletin, 21*, 100 - 108.

Peterson, M. H., & Griffith, R. L. (2006). Faking and job performance: A multifaceted issue. In R. L. Griffith & M. H. Peterson (Eds.), *A closer examination of applicant faking behavior* (pp. 233 - 261). Greenwich, CT: Information Age.

Peterson, M. H., Griffith, R. L., Isaacson, J. A., O'Connell, M. S., & Mangos, P. M. (2011). Applicant faking, social desirability, and the prediction of counterproductive work behaviors. *Human Performance, 24(3)*, 270-290.

Power, R. P. (1968). Simulation of stable and neurotic personalities by subjects warned of the presence of lie scales in inventories. *British Journal of Psychology, 59*, 105-109.

Power, R. P., and O' Donovan, D. (1969). Detection of simulation on the MPI by subjects given the rational of the lie scales. *British Journal of Psychology, 60*, 535-541

Quinones, M. A. (1995). Pretraining context effects: Training assignment as feedback. *Journal of Applied Psychology, 80*, 226-238.

Raghunathan, R., & Pham, M. T. (1999). All negative moods are not equal: Motivational influences of anxiety and sadness on decision-making. *Organizational Behavior and Human Decision Processes, 79*, 56-77.

Regan, J. W., Gosselink, H., Hubsch, J., & Ulsh, E. (1975). Do people have inflated views of their own ability? *Journal of personality and social psychology, 31 (2)*, 295-301.

Robie, C., Taggar, S., & Brown, D. J. (2009). The effects of warnings and speeding on scale scores and convergent validity of conscientiousness. *Human Performance, 22*, 340-354.

Robinson, S. M., Jones, A., & Abraham, J. (2008). Personality, Faking, and Convergent Validity: A Warning Concerning Warning Statements. *Human Performance, 21*, 89-106.

Rothstein, M. G., & Goffin, R. D. (2006). The use of personality measures in personnel selection: what does current research support? *Human Resource Management Review, 16*, 155-180.

Sackett, P. R., Schmit, N., Ellingson, J. E., & Kabin, M. B. (2001). High-stakes testing in employment, credentialing, and higher education. *American Psychologist, 56*, 302-318.

Sanchez, R. J., Truxillo, D. M., & Bauer, T. N. (2000). Development and examination of an expectancy-based measure of test-taking motivation. *Journal of Applied Psychology, 85*, 739-750.

Schmit, M. J., Ryan, A. M., Stierwalt, S. L., & Powell, A. B. (1995). Frame-of-reference effects on personality scale scores and criterion-related validity. *Journal of Applied Psychology*, *80*, 607-620.

Schrader, A. D., & Osburn, H. G. (1977). Biodata Faking: Effects of Induced Subtlety and Position Specificity. *Personnel Psychology, 30*, 395-404

Sheikh, S., & Janoff-Bulman, R. (2010a). The "shoulds" and "should nots" of moral emotions: A self-regulatory perspective on shame and guilt. *Personality and Social Psychology Bulletin, 36*, 213-224.

Sheikh, S., & Janoff-Bulman, R. (2010b). Tracing the self-regulatory bases of moral emotions. *Emotion Review, 2 (4),* 386-396.

Sheikh, S., & Janoff-Bulman, R. (2013). Paradoxical consequences of prohibitions. *Journal of Personality and Social Psychology, 105*, 301-315.

Smith, D. B., & Ellingson, J. E. (2002). Substance versus style: A new look at social desirability in motivating contexts. *Journal of Applied Psychology, 87*, 211-219.

Snell, A. F., Sydell, E. J., & Lueke, S. B. (1999). Towards a theory of applicant faking: integrating studies of deception. *Human Resource Management Review, 9*, 219-242.

Tangney, J. P., & Dearing, R. L. (2002). Shame and guilt. *New York: Guilford*.

Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt, and embarrassment distinct emotions? *Journal of Personality and Social Psychology, 70*, 1256-1269.

Tangney, J. P., Wagner, P., Fletcher, C., & Gramzow, R. (1992). Shame into anger? The relation of shame and guilt to anger and self-reported aggression. *Journal of Personality and Social Psychology, 62*, 669-675.

Tiedens, L.Z., & Linton, S. (2001). Judgment under emotional certainty and uncertainty: The effects of specific emotions on information processing. *Journal of Personality and Social Psychology, 81*, 973-988.

Tonidandel, S., Quiñones, M.A., & Adams, A.A. (2002). Computer adaptive testing: The impact test characteristics on perceived performance and test takers' reactions. *Journal of Applied Psychology, 87,* 320-332.

Turcu, R. (2011). The effects of warnings on applicant faking behavior. Unpublished Master Thesis, California State University, Sacramento.

Twenge, J. M., & Im, C. (2007). Changes in the need for social approval, 1958-2001. *Journal of Research in Personality*, 41, 171-189.

Yuan, Y. (2015). A lab study comparing several faking measures under a simulated selection context. Unpublished Master thesis, Auburn University.

Valentino, N. A., Hutchings, V. L., Banks, A. J., & Davis, A. K. (2008). Is a worried citizen a good citizen? Emotions, political information seeking, and learning via the Internet. *Political Psychology, 29*, 247-273.

Vasilopoulos, N. L., Cucina, J. M., & McElreath, J. M., (2005). Do warnings of response verification moderate the relationship between personality and cognitive ability? *Journal of Applied Psychology, 90*, 306-322.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

Wikström, P. H., Tseloni, A., & Karlis, D. (2011). Do people comply with the law because they fear getting caught? *European Journal of Criminology, 8*, 401-420.

Witte, K. (1998). Fear as motivator, fear as inhibitor: Using the extended parallel process model to explain fear appeal successes and failures. . In P. A. Andersen & L.K. Guerrero (Eds.), *The handbook of communication and emotion* (pp. 423-450). New York: Academic Press.

Zickar, M. J., & Robie, C. (1999). Modeling faking good on personality items: An item-level analysis. *Journal of Applied Psychology, 84*, 551-563.

Zimring, F. E., and Hawkins, G. J. (1973). *Deterrence: The legal threat in crime control*. Chicago: University of Chicago Press.

Appendix 1: Deception Script

Dr. Fan:

  Hello, I am Dr. Fan. Thanks for coming to my lab and completing the first part of the study, which is my research. For the second part, you are going to do something completely different, and that is not even my research, as I am helping a friend of mine, who is a CEO for a company called InSat Corporation. They are developing a pre-screening assessment for recruiting and selecting college students into their paid summer internship program.

  InSat needs a collection of college students to answer the questions to help with development. We have agreed to help them gather the data needed. This pre-screening assessment consists of a personality inventory, a basic skills survey, a general knowledge survey and several other surveys. It takes about 40 minutes to complete. Based on this pilot test, InSat will revise and finalize the pre-screening assessment. They plan to start a large-scale campus recruitment campaign in the spring semester (middle April) of 2015 at several major universities in the Southeast U.S. This of course includes Auburn University.

  When the CEO of InSat approached me for help, I told him that we have this wonderful SONA system through which we will be able to get enough college students to tryout their pre-screening assessment. However, I also asked him if they could offer something additional? They came up with two additional benefits. First, InSat has agreed to sponsor the drawing for ten $50 cash rewards. We will do the drawing at the end of the semester, and there will be 10 lucky participants who will each receive $50 cash reward from InSat.

  Second, as the CEO was talking to me, he was like, "You know what? Our campus recruitment campaign will cover Auburn University. Maybe some of the participants will be interested in our paid summer internship program. If they indicate that they are interested in the summer internship program by checking the "Yes" box at the end of the assessment, we will review their answers more carefully, and if they perform well on the assessment, we will be happy to give them the earlier consideration for the paid summer internship program." However, no need to feel pressured. That is, taking the test does not necessarily mean that you are required to attend the summer internship program.

  In case you want to know a little bit more about this paid summer internship program, you will be paid at the rate of $15/hour, and may earn up to $8,000 for the whole summer. In the program, majority (about 70%) of the work you will do are basic clerical, for example, working with Microsoft office software, sending and receiving emails, organizing files, setting up meetings, and taking memos for meetings. However, you will also get a chance to work in the higher ends, such as selling ideas to potential clients, working in a team to come up business plans, and conducting basic level data analysis. InSat has written up an introduction to their paid summer internship program and you can find more details about it on the first page of the survey.

  So, now I'm going to have you complete the pre-screening assessment that InSat is developing (password: InsatTest2). Please take your time and respond carefully. Now you may open the survey link on the computer, login, and start the assessment.

Appendix 2: The Warning vs. Control Messages Shown on the Screen

Detection and consequence warning

IMPORTANT NOTICE!!

Thank you for participating in this portion of the selection process.

The pre-employment assessment you will complete has several embedded social desirability items. This means that contained within the inventory, there are items in place to identify individuals who attempt to falsify their responses. These applicants who have been identified as distorting their responses on this pre-employment assessment will be removed from the selection process. In other words, if you are discovered providing dishonest responses, you will be disqualified for the position provided by InSat Corporation.

Therefore, when you complete the pre-employment assessment, be honest and answer each question as it best describes you.

Reasoning warning

IMPORTANT NOTICE! !

Thank you for participating in this portion of the selection process.

Research has convincingly demonstrated that accurate information through honest responses to pre-employment assessment, if used as the basis for selection, may promote person-job fit and/or person-organization fit. These best-fit placements will most likely result in the interns feeling adequate, satisfied in their job, and motivated to apply themselves wholly, yielding higher job performance/commitment and possible promotion by the organization. Therefore, it is in your best interest to answer the questions in the pre-employment assessment honestly.

So, be yourself and answer each question as it best describes you.

Subjective norm warning

Moral conviction warning

Control message

Appendix 3: The Debriefing Script

Dr. Fan:

      Thank you very much for your participation in this study. But I have to disappoint you—we are actually not working with InSat Corporation. InSat Corporation does not actually exist. I apologize for the deception and the disappointment you might have.

You may feel pissed off right now, because no one wants to be deceived. But let me explain—the deception condition was created for research purposes. I will make this debriefing session as educational as possible. I will explain why it is necessary for us to use the deception technique, and toward the end of the debriefing session, you will have the option of withdrawing your data from further analysis.

      I am an industrial and organizational psychologist. The aim of this study is to examine applicant faking within selection contexts. Nowadays, more and more organizations ask job applicants to complete some sort of online personality tests and/or bio-data tests as part of the application processes. Recall the items you have just completed. They are all self-report, and the content is very transparent. Think about the job applicants, who really want to get the job, what will they do? They will fake good, or so called "putting the best foot forward." Research has shown that faking damages the validities of the selection system. This is exactly the phenomenon that I am studying. In order to study this phenomenon, I need to simulate a situation under which research participants are motivated to fake. Historically, there have been two strategies to do this, but both met with limited success. The first strategy was to study real job applicants directly. But the problem is that if we piss off real job applicants, they will sue the company. That is why very few companies would allow researchers like me to study real job applicants. The second strategy was to study faking in the lab setting. Typically, the researcher will say something like, "Imagine that you are applying for your dream job and you really want to the job, and then please complete this personality test." The problem with this strategy is that the kind of faking behaviors generated this way might not be comparable to the kind of faking behaviors that will occur naturally in the real-world selection contexts. You see, I am stuck. This is why I have decided to be more creative and innovative in this study. So, I pretended to offer a real job opportunity and hopefully at least some participants will be motivated to fake. I am not the first researcher who uses this deception technique. In fact, several other scholars have successfully used it in their research.

      The research is supported by my research fund and the drawing for ten 50$ cash rewards is real. We will do the drawing at the end of this semester. Each participant will get an equal chance to win the cash reward. Also, as mentioned in the informed consent, in order to validate the questionnaire, we need to obtain your GPA, ACT and/or SAT scores from the University Registrar, and will need your permission to get the access to that information.

Given that this study involves a deception, you have the choice of not allowing us to use your data in further analysis. If you choose this option, please notify the experimenter as soon as I leave the room. In this case, you will still receive 1.5 hour of SONA credit and be entered into the cash drawing.

Appendix 4: Fear of Punishment Measure

Based on: This is a self-developed measure

Instructions: Before starting the pre-employment assessment, the computer screen presents the following message to you.

[Insert the message the participant received…]

The following statements describe possible feelings you may have experienced related to the above message. Read each item and indicate the extent to which you felt any of these when you read the message, using the 5-point scale below.

Not feeling this way at all		Feeling this way somewhat		Feeling this way very strongly
1----------------------------2--------------------------3----------------------------4------------------------5				

1. The message changed my responding behaviors on the pre-employment assessment.
2. The message made me very concerned about possibly of failing the pre-employment assessment.
3. The message did not worry me much.