FACTORS RELATED TO LYING WITHIN MEDICAL CONTEXTS

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ABSTRACT

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Lying is a nearly universal phenomenon, yet the characteristics, motivations, and reasoning behind deception are quite intricate. For instance, psychological factors such as shame, guilt, embarrassment, and social anxiety all influence one's likelihood to lie. Additionally, deception is a social occurrence, and it appears in many settings, such as medical environments. While multiple studies have investigated concepts around lying, few have specifically approached deception within medical care contexts. This includes topics such as doctor-patient relationships, medical care-providing relationships, medical questionnaires, and more. I hypothesize that factors such as social anxiety, embarrassment, shame, and guilt will positively correlate with deceptive reporting in medical contexts while self-esteem will negatively correlate with deceptive reporting. Measures of social anxiety, embarrassment, shame, guilt, self-esteem, and dishonesty in medical contexts were distributed through an online survey. Results indicated significant correlations between psychological factors and lying in clinical settings even when controlling for a person's general tendency to lie.

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CHAPTER I

INTRODUCTION

Human communication is an adaptive and efficient mechanism for sharing information. However, communication has the potential to be dishonest. The definition of lying is to deliberately choose to mislead a target (Wiley, 1998). It has two major types: lying by omission and lying by falsification (Wiley, 1998). Lying is fairly common, with people telling an average of one or two lies per day (Verigin et al., 2019). The accurate detection of lying, however, is quite challenging, with most people finding it extremely difficult to discern lies from truths (Bond & DePaulo, 2006). Psychologists have explored numerous aspects of lying including how often people lie, the different types of lies people tell, and their motivations for lying (Cantarero et al., 2018; Chance et al., 2008; Hart et al., 2019; Kashy & DePaulo, 1996a; Singh & Chakravarty, 2021; Verigin et al., 2019).

People are often motivated to lie by psychological factors such as social anxiety, shame, fear, and embarrassment (Turner et al., 1975). For example, people engage in social avoidance in order to avoid the shame of breaking social norms (Terrizzi & Shook, 2020), but they may also use deception to conceal their behavior (Levine et al., 2016). Moreover, people lie in order to help maintain existing relationships (Turner et al., 1975). Those who deceive selectively disregard deception as ethically questionable. Instead, they choose to think of it as a morally justified strategy for preventing feelings of embarrassment and maintaining social relationships (Turner et al., 1975).

Dishonesty can be found across most social and professional domains (Bok, 1978; Chance et al., 2008). One particular domain is the medical care and treatment context. In medical settings, doctors and patients both deceive and lie to each other (Abdullah et al., 2022; Blanchard

& Farber, 2016; Bullard, 2002; Mazor et al., 2006; Palmieri & Stern, 2009; Parker & Thomas, 2009; Wiley, 1998). Many issues can impede a transparent relationship between doctors and patients. For instance, patients may feel embarrassed by their own health or health-related behaviors, or they may feel judged by doctors who seem to be imposing their moral or social values upon patients (Palmieri & Stern, 2009; Wiley, 1998).

In medical settings, patients may minimize or exaggerate symptoms or avoid key clinical issues in order to avoid feeling ashamed (Palmieri & Stern, 2009). Shame and guilt represent negative and painful emotions that overlap with psychological symptoms such as depression (Bauch & Libing, 2018). This can become problematic when it involves feelings of personal responsibility over things that one has little or no control over (Candea & Szentagotai-Tatar, 2018). Guilt and shame are also parts of the theoretical model of anxiety disorders and they tend to be correlated (Clark & Wells, 1995). Emotional and psychological factors often influence motivations to deceive, thus it's important to study the relationships between these factors.

This study will examine how psychological variables are associated with a patient's level of honesty with their medical care providers. The hypotheses for this study are that social anxiety, embarrassment, shame, guilt, and self-esteem will correlate with patient deception in medical settings. This study could help medical practitioners identify conditions in which medical misreporting might occur and potentially offer suggestions for encouraging more accurate and honest reporting by patients. That increased accuracy in reporting could promote better treatments and recovery in patients. Furthermore, this study might suggest ways to establish a more open and honest relationship between doctors and their patients. Finally, it could offer insights into better procedures and guidelines for medical questionnaires and medical interviewing techniques that would minimize medical misreporting.

CHAPTER II

LITERATURE REVIEW

Lying

All human cultures admonish dishonesty to varying degrees, but it is nonetheless common (Bok, 1978; Chance et al., 2008; Levine et al., 2016). Lying and deceit are often used in everyday social interactions, but also in more serious interactions, such as police interviews (Gozna et al., 2001). One out of every five conversations people have with their community members includes lies (Kashy & DePaulo, 1998). But people do not lie randomly. They are more apt to be dishonest with people they are more relationally distant from. For instance, people tell more lies to strangers than to their close friends (Chance et al., 2008; Kashy & DePaulo, 1998). Furthermore, people tell more self-centered lies to strangers, yet tell more altruistic lies to close friends (Chance et al., 2008). Recently, researchers have developed valid and reliable studies showing that people, on average, tell about one or two lies every day (Serota et al., 2009). Furthermore, people lie to 30% of the people they interact with over the course of a week (Kashy & DePaulo, 1996a**;** Kashy & DePaulo, 1998).

People with certain traits or in certain contexts are more likely to lie. Kashy and DePaulo (1996b) suggested that manipulative people lie more often, as they often use deception to try to mold others to fit into their own agendas. They also noted that those who are highly self-conscious, insecure, or introverted were more likely to deceive (Kashy & DePaulo, 1996b). Age is also correlated with dishonesty. For example, Glatzle-Rutzler and Lergetporer (2015) found that lying significantly decreased with age. Men and women of both sexual orientations lie less as they grow older. Furthermore, romantic relationship status also correlates with lying. For instance, those who report being in a high-quality relationship are less likely to lie (Kashy &

DePaulo, 1996a). People are also less likely to lie to individuals they have known for longer periods (Kashy & DePaulo, 1998). There are also differences in lying across cultures (Levine et al., 2016).

People tell both self-centered and prosocial lies (Levine & Lupoli, 2022). While prosocial lies are told with the intention to mislead, it is usually done to benefit the target (Levine & Schweitzer, 2015). This includes omissions and paltering (i.e., to say something true but misleading; Levine & Lupoli, 2022). Yet, prosocial lies are still harmful as they damage integrity-based trust (Levine & Schweitzer, 2015). Prosocial lies can also be viewed as selfish since they are often motivated by a desire to avoid personal discomfort.

There are many different motivations for lying, but the core motivation is a recognition that the truth might be problematic (Levine, 2020). Researchers have investigated different types of lies and their motivations in order to better understand the foundations of lying. Some examples include protecting one's self or others, to increase self-esteem, to promote autonomy or individuality, or to promote personal power (Levine et al., 2016; Wiley, 1998). Other external motivations also impact the likelihood of dishonesty, like the fear of punishment or loss. As deception is usually motivated by self-interests, a sense of fear often spurs one to protect their self-worth, to avoid loss, or to gain a reward. And while honesty is still a major social norm, temptations often draw out deception (Mazar et al., 2008). Additionally, while dishonesty may occur due to motivations of self-preservation, those motivations are often coupled with psychological factors such as social anxiety, guilt, shame, low self-esteem, and embarrassment. Researchers have examined these emotions and their relations to lying.

Psychological Factors Related to Lying

A number of psychological factors have been previously associated with dishonest behaviors. Such factors include but are not limited to self-esteem, shame, guilt, social anxiety, and embarrassment (Aronson & Mettee, 1968; Candea & Szentagotai-Tatar, 2018; Cantarero et al., 2018; Hart et al., 2020; Lewis, 2003; Parker & Thomas, 2009; Sedighimornani, 2018; Teronni & Deonna, 2009). Either working independently or through interactions, each factor has been shown to influence lying in some shape or form. These psychological factors could be foundational to the lying seen in social and professional settings such as doctor-patient relationships.

Self-Esteem

Self-esteem is an assortment of complex mental states related to how one views themself (Bailey, 2003). People with high self-esteem regard themselves positively, while those with low self-esteem take a negative view of themselves. Self-esteem can be related to dishonesty. For example, self-esteem is negatively correlated with various types of lying, including self-serving and altruistic lies, but not vindictive lies (Hart et al., 2020). Moreover, those with low self-esteem are more likely to cheat or be dishonest (Hart et al., 2020). Lower self-esteem also promotes more prosocial lies (Cantarero et al., 2018; Kashy & DePaulo, 1996b; Levine & Lupoli, 2022). Additionally, those with low self-esteem are more likely to engage in immoral acts in order to gain immediate material needs (Aronson & Mettee, 1968). Analyzing self-esteem might be beneficial in understanding the lying that occurs in medical settings or in relationships between a patient and their doctor.

Shame

Shame is an overwhelming unpleasant feeling of negative self-evaluation one experiences when one deems themselves unworthy or otherwise has a negative evaluation of themself (Lewis, 2003). Current theories characterize shame as a so-called self-conscious emotion, as it mainly evaluates one's self (Lewis, 2003). Shame is said to be significant as it regards others' evaluations with a strong desire to make a nice impression but ultimately fails to do so (Clark & Wells, 1995). Shame often leads to social avoidance (Parker & Thomas, 2009). Shame can influence self-representations, lead to the internalization of external values, and cause people to evaluate and compare themselves to others (Ortony & Turner, 1990).

Sedighimornani (2018) noted that behavioral components of shame include defensive responses (i.e., desire to hide, submissive behavior, expressed anger, etc.), or a wish to engage in vengeful actions. Other behaviors include deception. For instance, patients lie in clinical encounters due to shame and embarrassment (Palmieri & Stern, 2009). These types of lies could include avoiding key clinical issues (Palmieri & Stern, 2009).

Guilt

Guilt is a sense of moral transgression (real or not) in which people believe their actions contributed to negative outcomes (Tilghman-Osborne et al., 2010). Avoiding guilt is often a motivation behind deception (Khan et al., 2009). Guilty people often omit information or details about their behavior (Tilghman-Osborne et al., 2010).

There are distinctive qualities of shame and guilt. While guilt is a sense that one has wronged someone else, shame is a sense that one's self is wrong or bad. With shame, the negative evaluation is focused on the self (e.g., I am a horrible person). With guilt, however, the focus of negative evaluations is on one's behavior (e.g., that thing I did was horrible;

Sedighimornani, 2018). Both shame and guilt interact with lies, but for different reasons. For example, one might lie out of guilt in order to repair a specific social relationship (Parker & Thomas, 2009). In contrast, shame involves avoiding or concealing information in order to avoid self-scrutinization (Parker & Thomas, 2009). Understanding both shame and guilt's relation to lying may help researchers correlate the interaction within clinical settings.

Social Anxiety

Social anxiety is a strong fear and anxiety about social settings, often associated with a fear of negative social evaluations (Clark & Wells, 1995). Individuals experience social anxiety during public interactions (Candea & Szentagotai-Tatar, 2018; Clark & Wells, 1995). Past experiences can influence assumptions about oneself and one's social interactions, creating a sense of fear in social settings. In return, people are afraid to behave in an unlikeable manner that might lead to rejection or loss of status. Such symptoms exacerbate perceived anxiety and lead to negative self-evaluations. In turn, anxious behaviors can elicit unfriendly behaviors and which lead to further fear sensations (Clark & Wells, 1995). These social anxiety feelings support self-evaluative thoughts. Researchers have noted associations between shame, guilt, and anxiety symptoms (Candea & Szentagotai-Tatar, 2018). For instance, a guilt-prone person could derive anxiety from an awareness of others and the possible harm done to them (Parker & Thomas, 2009). Additionally, anxious-avoidant individuals use deception to maintain a desired sense of autonomy (Chance et al., 2008). Some of the social interactions that bring up social anxiety may be in medical contexts.

Embarrassment

Embarrassment can be defined as an awkward and flustered state that increases the threat of unwanted evaluations from real or perceived audiences (Crozier, 1998). Embarrassment can

also be seen as an effect of negative self-evaluations or conceived social predicaments. This negative evaluation can produce low social self-esteem (Thomspson, 2014). This relates to lying as most people deceive to protect themselves from embarrassment (Kashy & DePaulo, 1996b).

Embarrassment might be another factor that influences reporting and misreporting in medical contexts. Previous research has observed that patients often feel embarrassed when discussing their health status and health-related behaviors with medical staff (Abdullah et al., 2022; Clark & Wells, 1995; Crozier, 1998). Additionally, embarrassment may be driven by fear of being lectured at or criticized by medical staff (Abdullah et al., 2022).

Lying to Medical Caregivers

Many patients lie or withhold medical information in clinical settings, often minimizing or exaggerating symptoms or other health-related factors (Palmieri & Stern, 2009). Furthermore, patients sometimes remain silent because they do not understand the treatments or do not want to disclose things about themselves such as an unhealthy diet or lack of exercise (Bullard, 2002). There is also evidence that patients often conceal health-related information such as feeling suicidal or having attempted suicide (Bullard, 2002). Some of the reasons may have to do with psychological factors such as social anxiety, guilt, self-esteem, and more (Hart et al., 2020; Palmieri & Stern, 2009; Wiley, 1998). It is crucial to analyze the psychological factors associated with deception in medical care settings.

The Prevalence of Dishonesty in Medical Contexts

Past studies have highlighted the prevalence of patients lying in medical contexts. Researchers found that patients are likely to hide information from their doctors such as prior treatments, overdosing of drugs, or use of illicit drugs (Abdullah et al., 2022). Other studies have shown that 93% of the participants admit to lying to their psychotherapists (Blanchard & Farber,

2016). They conceal that information to avoid stigmatization, to avoid punishment, and to maintain autonomy. Almost half of patients conceal the fact that they do not follow instructions when taking prescription medications. Lying in medical settings seems to be quite common.

Psychological Factors

Shame, guilt, embarrassment, self-esteem, and social anxiety can all influence lying, yet few studies have examined how those variables influence deception in medical contexts. There is a plausible link between psychological factors and the deception observed in clinical settings. For instance, feelings of vulnerability, shame, and anxiety about health-related behaviors and embarrassing symptoms may motivate patients to conceal or deceive medical staff about pertinent health-related information (Abdullah et al., 2022; Blanchard & Farber, 2016). Additionally, lying may take place in clinical settings, as individuals want to maintain their self-esteem or avoid social conflict with medical practitioners (Palmieri & Stern, 2009).

Negative Consequences of Medical Deception

There are multiple reasons why it is important to understand deception within medical contexts. For example, nondisclosures may produce a faulty doctor-patient relationship. One study showed that patient nondisclosure increased the chances of changing physicians and seeking legal advice. Nondisclosures were also found to reduce the satisfaction and trust of both patients and doctors (Mazor et al., 2006). Furthermore, when patients withhold important information from their doctors, accurate communication between doctor and patient is greatly affected (Abdullah et al., 2022). It also damages the overall trust within the doctor-patient relationship. The lack of communication can also result in major misunderstandings that influence safety and quality of care. One study examined the immediate and long-term consequences of dishonesty in a doctor-patient relationship (Palmieri & Stern, 2009). For

example, the doctor's trust is essentially violated when patients lie by withholding treatment, specifically when a patient lies to collect medication or other entitlements. Furthermore, incomplete disclosure between both parties jeopardizes clinical care as this can lead to treatment that is unnecessary or harmful (Palmieri & Stern, 2009). It also damages the intimacy of that relationship, as people who present themselves inauthentically do not typically define their interactions as meaningful (Kashy & DePaulo, 1996a). For all these reasons, it is important to understand why lying in medical contexts exists.

Purpose of the Present Study

The purpose of this study is to identify potential psychological factors related to dishonest responding in medical contexts. Specifically, this study aims to identify the relationship between self-esteem, shame, guilt, social anxiety, embarrassment, and dishonest reporting in medical settings.

Hypothesis 1: Shame, guilt, social anxiety, and embarrassment will positively correlate with deceptive reporting in medical contexts while self-esteem will negatively correlate with dishonest reporting.

Hypothesis 2: When controlling for a person's general tendency to lie, shame, guilt, social anxiety, and embarrassment will positively correlate with deceptive reporting in medical contexts while self-esteem will negatively correlate with deceptive reporting.

This study is important for a variety of reasons. First, clinicians may be able to understand the reasoning behind a patient's dishonesty. Secondly, understanding the reasoning behind a patient's dishonesty could promote better doctor-patient relationships. Finally, outcomes from this study could help with the development of future forms and interview strategies that are more likely to elicit honest responses from patients.

CHAPTER III

METHOD AND DESIGN

Participants

Participants were recruited through convenience sampling of the general population via social media, email, listservs, and word of mouth. Obtaining participants through a general population promoted age and gender inclusivity. A power analysis with expected correlations of .25 and a power of .80 yielded a recommendation of approximately 100 participants. Participants were adults aged 18 and older. Informed consent was obtained from all participants. The only restriction required the participants to be at least 18 years of age. Over half of the participants identified as female, showing 71.2%. Meanwhile, 26.3% of participants identified as male, and 2.5% as other. Additionally, 56% of the participants identified as White or European American (non-Latinx), 23.7% as Latinx or Hispanic, 6.1% as Black or African American, 3.0% as Native American or Indigenous American, 6.6% as Asian/Pacific Islanders, 3.5% as Multiracial, and 1.0% as other. For education, 2% of the participants completed less than a high school diploma, 23.7% held a high school diploma or equivalent, 6.1% completed some college but had no degree, 6.6% held an associate degree, 3.5% held a bachelor's degree, and 1% held a graduate degree. The average age of the participants was 34.66 years (*SD* = 17.15; see Table 1). No incentives were provided to participants.

Table 1

Demographics

	N	Mean	Std. Deviation
What is your gender?	198	1.86	.938
What is your race/ethnicity?	198	2.01	1.651
What is the highest level of school you have completed or the highest degree you have received?	198	3.79	1.292
What is your age?	198	34.66	17.148
Valid *N* (listwise)	198		

Materials

Self-Esteem

Participants completed the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) to examine their self-esteem. Instructions asked participants to appropriately rate the asked items with (1) *I strongly agree*, all the way to (4), *I strongly disagree*. Such items include 'I take a positive attitude towards myself,' 'at times I think I am no good at all,' and 'I certainly feel

useless at times.' Results from the RSES showed an internal consistency (Cronbach's alpha) of .90 (see Appendix A).

Shame and Guilt

The Personal Feelings Questionnaire-2 (PFQ-2; Harder & Lewis, 1987) was used to examine both shame and guilt (see Appendix A). The PFQ-2 lists 22 itemized feelings, and respondents are asked to rate the degree to which they experience each. Zero shows that there is no feeling experienced, 1 indicates a little experience with that feeling, 2 equals feeling the experience moderately, 3 means feeling the experience strongly, and 4 indicates that the experience is felt very strongly. Such feelings include enjoyment, mild happiness, intense guilt, feeling ridiculous, and more (Harder & Lewis, 1987). Cronbach's alpha reported guilt and shame separately. The Cronbach's alphas were .82 for guilt and .89 for shame.

Social Anxiety

Social anxiety was measured with the Severity Measure for Social Anxiety Disorder (Social Phobia; SM-SAD; Craske et al., 2013) The scale can be found in Appendix A. The SM-SAD asked the participants whether social situations, within the past 7 days, produced a range of anxiety-related feelings such as 'tense muscles, felt on edge or restless, or had trouble relaxing in social situations,' 'needed help to cope with social situations (e.g., alcohol or medications, superstitious objects),' and more (Craske et al., 2013). The SM-SAD is scored on a scale from 0-4, where 0 represents *never* and 4 equates to *all of the time*. This study showed the internal reliability of this scale to be high, with a Cronbach's alpha of .93.

Embarrassment

The Susceptibility to Embarrassment Scale (Kelly & Jones, 1997) was used to assess embarrassment (see Appendix A). The Susceptibility to Embarrassment Scale is a 25-item scale that assesses one's vulnerability to embarrassment through self-rating questions. For example, participants will be asked if they 'feel uncomfortable leaving the house..,' '...feel exposed," and more. The Cronbach's alpha coefficient was found to be .95, indicating high reliability.

Lying

The general tendency to lie was measured with the relational lying subscale of the Lying in Everyday Situations Scale (LiES; Hart et al., 2019) The relational lying subscale of the LiES scale includes seven items that assess the use of lying, including situations such as saving face, avoiding punishment, protecting others, and more. The LiES scale showed an alpha coefficient of .92. Further details can be located in Appendix A.

Dishonest Medical Reporting

Dishonest medical reporting was assessed with the Dishonest Medical Reporting Scale and the Topics of Medical Misreporting Scale (see Appendix A). The Dishonest Medical Reporting Scale (*SD* = 1.28) is an 8-item scale developed by the researcher. It assesses a person's general tendency to conceal, mislead, lie, or otherwise respond dishonestly when communicating with medical care professionals. All items are answered on a 1 to 7 rating scale, where 1 = *strongly disagree* and 7 = *strongly agree*. The alpha coefficient of the Topics of Medical Misreporting Scale was .83.

The Topics of Medical Misreporting Scale (*SD* = 1.07) is a 21-item scale developed by the researcher. It assesses a person's general tendency to conceal, mislead, lie, or otherwise respond dishonestly about many topics that would be pertinent to a medical care professional's

understanding of a patient. The topics covered include non-adherence to medication recommendations, exercise habits, drug and alcohol use, etc. All items are answered on a 1 to 7 rating scale, where 1 = *strongly disagree* and 7 = *strongly agree*. Results showed a Cronbach's alpha of .92.

Procedure

After participants consented and agreed to participate in the study, they completed the online survey hosted on Psychdata.com. The data from the surveys was analyzed using IBM SPSS Statistics, Version 28.

CHAPTER IV

RESULTS

Hypothesis 1 predicted that shame, guilt, social anxiety, and embarrassment would be positively correlated with deceptive reporting in medical contexts while self-esteem would be negatively correlated with dishonest reporting. The results of bivariate correlations supported that hypothesis, with all correlations being statistically significant (Bonferroni correction alpha = .01) and in the predicted directions (see Table 2).

Hypothesis 2 predicted that when controlling for a person's general tendency to lie, shame, guilt, social anxiety, and embarrassment would still positively correlate with deceptive reporting in medical contexts while self-esteem would negatively correlate with deceptive reporting. A partial correlation analysis using the LiES scale as the controlling variable provided partial support for hypothesis 2 (see Table 3). Though all correlations were in the expected directions, not all were statistically significant (Bonferroni correction alpha = .01). When controlling one's general tendency to lie about the relationship, dishonest medical reporting was significantly correlated with social anxiety, shame, and guilt, but not self-esteem or embarrassment. The topics of medical misreporting were significantly correlated with self-esteem, social anxiety, embarrassment, and shame, but not guilt.

Table 2

Correlations for Study Variables

	SelfEsteem	PFQShame	PFQGuilt	Embarras	SevSAD	LiES	DisHonMED	TopicsMED
SelfEsteem	—	-.615**	-.480**	-.562**	-.583**	.275**	-.218**	-.290**
PFQShame	-.615**	—	.763**	.739**	.678**	-.352**	.279**	.342**
PFQGuilt	-.480**	.763**	—	.541**	.513**	-.286**	.271**	.228**
Embarras	-.562**	.739**	.541**	—	.787**	-.399**	.238**	.326**
SevSAD	-.583**	.678**	.513**	.787**	—	-.304**	.274**	.316**
LiES	.275**	-.352**	-.286**	-.399**	-.304**	—	-.343**	-.368**
DisHonMED	-.218**	.279**	.271**	.238**	.274**	-.343**	—	.591**

	SelfEsteem	PFQShame	PFQGuilt	Embarras	SevSAD	LiES	DisHonMED	TopicsMED
TopicsMED	-.290**	.342**	.228**	.326**	.316**	-.368**	.591**	—-

**. Correlation is significant at the 0.01level (1-tailed)

Table 3

Correlations for Study Variables

	SelfEsteem	PFQShame	PFQGuilt	Embarras	SevSAD	DisHonMED	TopicsMED
Self-Esteem	—	-.576	-.436**	-.513**	-.545**	-.137	-.212**
PFQShame	-.576**	—	.738**	.697**	.640**	.180**	.244**
PFQGuilt	-.436**	.738**	—	.486**	.467**	.192**	.138
Embarras	-.513**	.697**	.486**	—	.762**	.117	.210**
SevSAD	-.545**	.640**	.467**	.762**	—	.190**	.231**
DisHonMED	-.137	.180**	.192**	.117	.190**	—	.532**
TopicsMED	-.212**	.244**	.138	.210**	.231**	.532**	—

**. Correlation is significant at the 0.01 level (1-tailed)
Note. LiES is marked as the control variable.

CHAPTER V

DISCUSSION

The study evaluated psychological factors potentially related to dishonest medical reporting. Specifically, these included self-esteem, shame, guilt, social anxiety, and embarrassment. Supporting hypothesis 1, I found that each of the psychological variables was significantly correlated with medical misreporting. Partially supporting hypothesis 2, I found that even when controlling for the general tendency to lie, the psychological variables largely correlated with medical misreporting. These results offer broad support for the notion that a patient's self-esteem, shame, guilt, social anxiety, and embarrassment levels are associated with how honest they tend to be with their medical care providers.

These results are consistent with those found in previous studies. First, I showed that those with low self-esteem are more likely to lie in medical settings. This is consistent with findings from previous studies that found lower self-esteem was associated with more dishonest behavior (Hart et al., 2020). Second, I found that those with more shame are also more likely to misreport medical information. This finding aligns with previous findings in which patients reported lying in clinical settings or avoiding discussing key medical issues due to shame (Palmieri & Stern, 2019). Third, I found that those with higher social anxiety also have a significantly higher likelihood of being dishonest in medical settings, as well as their general tendency to lie about medical information. This finding aligns with past reports that stated that those with high social anxiety tell more overall lies (Kashy & DePaulo, 1996b). Consistent with previous findings, embarrassment, and guilt were also associated with medical misreporting. For example, past research has noted patients often feel embarrassed or ashamed when discussing health-related information with their medical providers (Blanchard & Farber, 2016; Bullard,

2002). Together, the results from this study support the notion that self-reflective emotions are important in understanding dishonest medical reporting and encourage future research on this topic.

I also found broad support for hypothesis 2, suggesting that the tendency to lie in medical settings is somewhat independent of the general propensity to lie. When controlling for the general tendency to lie, social anxiety, shame, and guilt still significantly correlated with dishonesty responding in medical context, but self-esteem and embarrassment did not. Also, when controlling for the general tendency to lie, self-esteem, social anxiety, shame, and embarrassment still significantly correlated with the topics of medical misreporting, but guilt did not. Taken together, these results support the notion that the psychological variables of self-esteem, social anxiety, shame, embarrassment, and guilt are generally associated with dishonesty in medical contexts beyond being simply associated with a broader propensity to lie. These outcomes may indicate that medical contexts are social niches in which dishonesty is more heavily influenced by self-evaluative emotions.

The novel results highlighting the psychological process that contributes to dishonesty in medical contexts have multiple important implications. These findings can potentially help medical providers recognize when and why patients might withhold information or intentionally provide inaccurate information which is critical to providing effective medical interventions. With this new awareness, medical providers may be able to generate new protocols that help reduce misreporting in medical questionnaires. Medical interviews and questionnaire procedures can also be updated to address or reduce experiences of shame and embarrassment among patients, as these psychological experiences clearly are related to dishonest responses.

Understanding the factors that lead to medical misreporting can potentially help

practitioners cultivate approaches that strengthen the quality of doctor-patient relationships. By eliciting honest reports, doctors may be able to provide more appropriate treatment plans, as they have a better understanding of the patient's true medical issues. This may also help patients develop a deeper sense of trust with their medical providers.

Limitations and Future Directions

A couple of limitations within this study are worth noting. First, the sample was not completely representative of the general population. The descriptive demographics showed that over 71% of the participants identified as females. Additionally, though I do not have data to confirm this, the sampling procedure likely led to an overrepresentation of people from the southern United States. Because of this, the responses may not be representative of the general population of the United States. This study also did not examine any differences in medical misreporting across various subcultures. Second, this study examined a limited number of factors related to dishonesty in medical contexts. It is likely that many important variables were overlooked in this study, such as the closeness and quality of patients' relationships with their medical providers.

Collecting future information on the reasoning behind medical misreporting could help develop rapport in doctor-patient relationships and elicit future honest responses. It would be interesting for future researchers to report whether face-to-face or telemedicine might lead to different amounts of lying. Future reports might also want to assess the frequency of lies told by patients, depending on the type of medical professionals they are interacting with. When looking at the reasoning behind medical misreporting, the form of American medical systems may encourage more lying than other types of medical systems, such as universal healthcare. Lastly, future investigations could highlight potential gender differences in medical lying, depending on

the topic being discussed. Based on this study's results, most of the participants identified as females. Examining the specificity within female medical deception could help determine which specific topics each gender may use deception with, and why they are deceiving medical professionals. Moreover, doctors are able to become more aware of the reasonings and proactively work to elicit honest responses based on their doctor-patient relationships.

Conclusion

Despite the commonality of lying, few researchers have studied its social application to medical deception and the factors that influence deception within that context. This study aimed to examine the role that psychological factors such as embarrassment, shame, guilt, self-esteem, and social anxiety play in medical deception. Overall, the results suggest that psychological variables are related to a patient's level of honesty with their medical care providers. Understanding the roles of various psychological factors in medical misreporting could help improve doctor-patient relationships, increase the validity of medical responses on medical forms, help elicit honest responses in patients' interactions with medical care providers, and lead to an overall improvement in medical care. Increasing the honesty of patient reporting hinges on first understanding why patients are dishonest. This study offers some preliminary understanding of the tendency to respond dishonestly in medical contexts.

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APPENDIX A

ROSENBERG SELF-ESTEEM SCALE (RSES) (ROSENBERG, 1965)

The purpose of the 10-item RSE scale is to measure self-esteem. Originally the measure was designed to measure the self-esteem of high school students. However, since its development, the scale has been used with a variety of groups including adults, with norms available for many of those groups. The scale can also be scored by totaling the individual 4-point items after reverse-scoring
the negatively worded items.

Please record the appropriate answer for each item, depending on whether you:
Strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly agree

2 = Agree

3 = Disagree

4 = Strongly disagree

1. On the whole, I am satisfied with myself
2. At times I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.

6. I certainly feel useless at times.

7. I feel that I'm a person of worth.

8. I wish I could have more respect for myself.

9. All in all, I am inclined to think that I am a failure.

10. I take a positive attitude toward myself.

APPENDIX B

PERSONALITY FEELINGS QUESTIONNAIRE-2 (PFQ-2)

(HARDER & LEWIS, 2002)

(4 = I experience the feeling very strongly, 3 = I experience the feeling strongly, 2 = I experience the feeling moderately, 1 = I experience the feeling a little bit, 0 = I do not experience the feeling)

Shame items: 1, 3, 6, 7, 10, 12, 14, 16, 18, and 21

Guilt items: 2, 4, 8, 11, 17, and 22

1. Embarrassment
2. Mild guilt
3. Feeling ridiculous
4. Worry about hurting or injuring someone
5. Sadness
6. Self-consciousness
7. Feeling humiliated
8. Intense guilt
9. Euphoria
10. Feeling "stupid"
11. Regret
12. Feeling "childish"

13. Mild happiness

14. Feeling helpless, paralyzed

15. Depression

16. Feelings of blushing

17. Feeling you deserve criticism for what you did.

18. Feeling laughable

19. Rage

20. Enjoyment

21. Feeling disgusting to others

22. Remorse

APPENDIX C

SEVERITY MEASURE FOR SOCIAL ANXIETY DISORDER (SOCIAL PHOBIA) - ADULT (CRASKE ET AL., 2013)

Instructions: The following questions ask about thoughts, feelings, and behaviors that you may have had about social situations. Usual social situations include: public speaking, speaking in meetings, attending social events or parties, introducing yourself to others, having conversations, giving and receiving compliments, making requests of others, and eating and writing in public. Please respond to each item by marking one box per row.

(4= All of the time, 3= Most of the time, 2= Half of the time, 1= Occasionally, 0= Never)

1. Felt moments of sudden terror, fear, or fright in social situations
2. Felt anxious, worried, or nervous about social situations
3. Had thoughts of being rejected, humiliated, embarrassed, ridiculed, or offending others
4. Felt a racing heart, sweaty, trouble breathing, fainting, or shaky in social situations
5. Felt tense muscles, felt on edge or restless, or had trouble relaxing in social situations
6. Avoided, or did not approach or enter, social situations
7. Left social situations early or participated only minimally (e.g., said little, avoided eye contact)
8. Spent a lot of time preparing what to say or how to act in social situations
9. Distracted myself to avoid thinking about social situations
10. Needed help to cope with social situations (e.g., alcohol or medication, superstitious objects)

APPENDIX D

SUSCEPTIBILITY TO EMBARRASSMENT SCALE (KELLY & JONES, 1997)

7-point Likert-type scale (1 = Not at all like me; 7= very much like me)

(R) Reverse scored item

1. I feel unsure of myself.
2. I don't feel comfortable in public unless my clothing, hair, etc. are just right.
3. I feel uncomfortable in a group of people.
4. I don't mind being the center of attention. (R)
5. I probably care too much about how I come across to others.
6. I feel inadequate when I am talking to someone I just met.
7. I feel clumsy in social situations.
8. I feel uncomfortable leaving the house when I don't look my best.
9. Sometimes I just feel exposed.
10. I feel humiliated if I make a mistake in front of a group.
11. I get flustered when speaking in front of a group.
12. I often feel emotionally exposed in public and with groups of people.
13. It is unsettling to be the center of attention.
14. I get tense just thinking about making a presentation by myself.
15. I have felt mortified or humiliated over minor embarrassment.
16. I am very much afraid of making mistakes in public.
17. I don't like being in crowds.

18. I do not blush easily. (R)

19. I often worry about looking stupid.

20. I feel so vulnerable.

21. I am concerned about what others think of me.

22. I’m afraid that things I say will sound stupid.

23. I worry about making a fool out of myself.

24. What other people think of me is very important.

25. I am not easily embarrassed. (R)

APPENDIX E

LYING IN EVERYDAY SITUATIONS (LiES) SCALE (HART ET AL., 2019)

Instructions: Everyone tells lies from time to time about various things. We are interested in the lies that you tell. For each of the following statements, indicate the degree to which you agree or disagree that the statement accurately describes you.

(7= Strongly agree; 1= Strongly disagree)

Relational Lying subscale

1. I lie in order to escape conflicts or disagreements with other people.
2. I lie to hide the bad things I've done.
3. I tell lies so I will not have confrontations with people.
4. I lie in order to hide shameful things about myself.
5. I lie to stay out of arguments with people.
6. I lie in order to be friendly and cordial with others.
7. I tell lies in order to spare another's feelings.

Scoring: For the Relational Lying subscale score, sum items 1-7.

APPENDIX F

DISHONEST MEDICAL REPORTING SCALE

These items assess dishonest reporting in medical settings.

Please indicate the degree to which you agree or disagree with the following statements.

1 Strongly disagree……7 Strongly agree

1. I am completely honest with my doctor or medical care providers.
2. I sometimes withhold information from my doctor or medical care providers.
3. I sometimes exaggerate or minimize some of the information I give to my doctor or medical care providers.
4. I sometimes lie to my doctor or medical providers.
5. I try to avoid certain topics when talking with my doctor or medical care providers.
6. I try to conceal or hide some types of information from my doctor or medical care providers.
7. I feel comfortable sharing any information about myself with my doctor or medical care providers.
8. Being completely truthful with my doctor or medical care providers is difficult for me.

APPENDIX G

TOPICS OF MEDICAL MISREPORTING SCALE

Please indicate whether you have lied, misled, intentionally withheld information, or were otherwise dishonest with your doctor or medical provider about the following topics.

I was dishonest about…

1 Strongly disagree……7 Strongly agree

1. Whether I understood their instructions to me.
2. Whether I agreed with their diagnosis or recommendations.
3. Whether I was following their medical advice.
4. Whether I was taking the medicines they prescribed.
5. My exercise habits.
6. How I had been feeling.
7. The severity of my symptoms.
8. My diet or eating habits.
9. My sleep habits.
10. Over-the-counter or non-prescribed drugs that I took.
11. Alternative or holistic medicines or treatments I used.
12. How much alcohol I consumed.
13. Whether I smoked or used tobacco products.

14. Whether I used recreational or illegal drugs.
15. Whether I experienced mental health problems such as depression or anxiety.
16. Whether I had thought about or attempted suicide.
17. Any symptoms I found embarrassing.
18. My sexual habits.
19. My romantic relationship status.
20. Whether I had been physically abused.
21. Whether I had been sexually assaulted.