THE ROLE OF IMPRESSION MANAGEMENT IN DIFFERENTIAL HEALTH REPORTING

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Dedication and Acknowledgements

Dedication: I would like to dedicate this work to my late grandfather, whose teachings will continue to permeate my life for the better even though I am still learning from them. I know he would be proud of what I have accomplished. This dedication also goes to my parents, who have sacrificed so much to help me through undergraduate and graduate aspirations.

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ABSTRACT

Over 40 years of research into the patient-physician interaction during medical interviews has yielded inconsistent results in explaining the differences in health reporting. While there have been numerous reasons for investigation, patient-centered care aspects of physician communication style and patient preference have been cited as the most significant in explaining treatment adherence by patients and patient outcome satisfaction. Emotional arousal during the medical interview has been suggested to be a major factor in these outcomes, which indicates that aspects of social desirability and other impression management scales may provide a new foundation for studying the medical interview. One hundred thirty-nine participants were recruited to complete an online survey in person that consisted of: watching a one minute video of a physician introducing the study, completing an abbreviated health history questionnaire, as well as a series of socially-themed surveys. Results indicated that self-monitoring did not play a role in health reporting. Future directions, such as the need for a more immersive environment, are discussed.
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CHAPTER I

INTRODUCTION

The medical interview has been examined in research for over 40 years, but there are still inconsistent conclusions regarding influences to this aspect of physician-patient interaction. One part of this equation has been the shift from physician-centered care to patient-centered care that began approximately 45 years ago. Mead and Bower (2000) discussed issues of power and control between physicians and patients that reached a peak during the 1970s socio-political movements. Specifically, the authors reported that feminist arguments against medical patriarchy ignited calls for patient-centered initiatives to close knowledge gaps between clinician and patient, as well as holding physicians accountable for patient non-compliance and dissatisfaction. Power sharing, patient involvement, and patient rights grew during the 1980s and 1990s Consumer Movement, promoting patient responsibility for their own health. The organic nature of this paradigm shift in medical care has suffered from difficulty focusing on one standard definition for patient-centered care in the field.

Factors Contributing to Patient-Centered Variability
One of the major factors responsible for this non-standardized definition for patient-centered care is linked to variability in medical consultation outcomes (Cegala, 2006; Ishikawa, Hashimoto, & Kiuchi, 2013; Street & Millay, 2001). While there are several possible explanations for this variability, including increased time demands on physicians (Dugdale, Epstein, & Pantilat, 1999), stress on physicians and patients (Gal-land, 2006), effectiveness of evidenced-based treatment (Bensing, 2000), physician non-verbal communication (Gorawara-Bhat, Dethmers, & Cook, 2013), physician-patient gender concordance (Bertakis & Azari, 2012), communication differences in clinic location (Desjarlais-deKlerk & Wallace, 2013), and implementation issues of patient-centered care (Benbassat & Baumal, 2009; Cegala, 2006), physician communication style and patient preference have been cited as the most significant aspect of this explanation (DiMat-teo, Haskard-Zolnierek, & Martin, 2012; Haskard-Zolnierek & DiMatteo, 2009; Margalit, Glick, Benbassat, & Cohen, 2004; Lee & Lin, 2010; Zandbelt, Smets, Oort, Godfried, de Haes, 2006; Zandbelt, Smets, Oort, Godfried, de Haes, 2007). Physician communication style and patient preference are key factors in the explanation of patient-centered efficiency in hospitals, as well as its livelihood in the future of healthcare. Since patient-centered care is currently being advocated as a crucial factor to high quality and satisfying care, it is important to discuss the indications from research investigating communication style and preferences.

In patient-centered care, the physician role is refocused from leading the conversation to collaboration with the patient on individualized treatment. A collaborative focus has been linked to increased patient satisfaction (Margalit et al., 2004), adherence to
treatment (Zolnierek & DiMatteo, 2009), and increased patient mental health over time (Lee & Lin, 2010). However, these findings were by no means all conclusive. Zandbelt and colleagues (2006) found that variability in physician facilitating or inhibiting behavior depended on patient characteristics, like age and condition, and physician gender. Specifically, physicians facilitated the conversation more when they considered a patient’s condition as more severe or the patient reported more symptoms. Zandbelt and colleagues (2007) found that physicians’ inhibiting behavior, or interruptions, redirections, cutting off patient narrative, etc. was actually positively related to active patient participation, indicating that physician inhibiting behavior may be a result of patient utterances, concerns, and questions.

Lee and Lin (2010) sought to examine the relationship between patients’ perceptions of autonomy support and autonomy preferences for their health outcomes in patient-centered consultations. Results revealed significant correlations between perceived autonomy support and patient trust, satisfaction, and mental health-related quality of life. Furthermore, the authors were able to discern that patients with a high decisional preference (desired more decision-making power in the consultation) experienced more trust and satisfaction in consultations and higher satisfaction over time than those with low decisional preference. Moreover, perceived autonomy support was only related to improvements in physical and mental health-related quality of life when the patient was high on information preference, or, desired more information in a consultation. These findings corroborated other patient-centered findings (Cousin, Mast, Roter, & Hall, 2012; Cousin & Mast, 2013; Schattner, Bronstein, & Jellin, 2006), suggesting that recognizing
and working with the individual differences of patients can "increase the efficiency" and "improve patient outcomes" of patient-centered care (Lee & Lin, 2010, p. 1811).

**Emotional Arousal and Anxiety Influences**

While there is little research on individual differences in patient-centered care, a review by Finset (2012) reported that emotional responses play a part in the medical interview via psychophysical activation and interaction of emotion and communication style. Investigation into communication styles between emotion and anxiety has been compelling. For example, Graugaard and Finset (2000) investigated physician- versus patient-centered communication styles with students who had high or low trait anxiety. They expected stronger emotional responses from those with high trait anxiety, as well as focused emotional activity in the patient-centered condition, but instead, they found that those with high anxiety experienced increased arousal during the patient-centered condition. This finding has been regularly replicated over the past ten years (Graugaard, Eide, & Finset, 2003; Finset, 2011; Finset, 2012; Verheul, Sanders, Bensing, 2010), suggesting that emotion and anxiety levels are more than mere coincidences when analyzing the effectiveness of medical consultation outcomes. These studies have generally found that a) higher number of emotional cues and facilitating behavior from physicians increased anxiety levels after the patient-centered consultation because this emotional state was not reduced in the patient, b) those with high anxiety preferred a physician-centered style while those with low anxiety reacted more positively towards patient-centered communication, and c) those with high anxiety tended to be more anxious and less satisfied after patient-
centered consultations while those with low anxiety tended to be more satisfied after their meeting.

While emotion and anxiety may help explain how to approach the patient interview effectively, operationalization of physician communication style and patient reporting style has been unstandardized, subjective, and varied. Efforts have been largely focused on speech since the medical interview is largely communication-oriented, but utterances, concerns, questions, assertiveness, etc. are quantified based on researcher definitions that may differ from expert to expert. Additionally, researchers have tried focusing on operationalizing aspects of the patient perspective, including measuring openness, judgmental-ness, patient satisfaction, and patient reports about their care, but these issues do not provide a holistic view of the patient’s preferences. There are also logistical concerns of these patient-centered studies — issues of time and resource allocation — that may not be practical for application assessment, such as re-training physicians who have been practicing in the field for years or standardizing patient health knowledge. Although there are many limitations to patient-centered methods, there has been one aspect, to this authors’ knowledge and research efforts, that has not been addressed in this field of research: impression management.

**Impression Management and Health Indications**

Leary and Kowalski (1990) defined impression management as “the process by which people control the impression others form of them” (p. 34). This type of internal process affects not only behavior and thoughts, but also interaction with others. They outlined two important levels on which impression management can operate: impression
motivation and impression construction. The motivation component (the one this paper will focus on) is considered the most active and goal-motivated of the two. The construction aspect of impression management is more concerned with reflective processes and intrapersonal identity, or self-concept. Within the medical interview paradigm, impression management could provide a framework for explaining how emotion and anxiety influence patient reporting during the medical interview and satisfaction after the interview. It could provide this by enabling investigation into socially motivated behavior through standardized instruments that address social desirability, self-presentation, social anxiety, and self-monitoring.

While the investigation of impression management within the health field is not well defined, there are a few studies that show how influential social expectations can be for some people. Leary, Tchividjian, and Kraxberger (1994) and Martin, Leary, and Rejeski (2000) addressed the likelihood of reporting physical symptoms and risky behavior. As both of the articles argued, other people’s perceptions and evaluations of a person can influence them to behave in a risky manner. “Risky behavior” can be understood as actions that cause danger to themselves or others, cause accident or injury, delaying medical care, or affecting the course of the illness. For example, Leary, Tchividjian, and Kraxberger published a 1994 review that discussed negative behaviors that affect health: a) young women were more embarrassed about getting condoms than any other type of contraceptive, and gay men were having unprotected sex because they feared a negative impression that their partner may have of them, and b) socially anxious women were less likely to discuss contraception with their partners because they were more concerned
about what others would think of them. Some of the everyday examples included: a) lack of exercise caused from thinking that people were not in good enough shape to be at the gym, and b) using makeup to hide acne, but this made the condition worse. In addition, they warned that this is not a population-specific phenomenon, finding that “older adults” are motivated to impression manage for issues such as physical appearance, physical deterioration, psychological functioning, self-reliance, and competence.

Impression management and health reporting has traditionally focused on the behavioral portion of impression management, sometimes referred to as “self-presentation” (Baumeister, 1982). If the motivation side of impression management is used for optimizing the cost-reward ratio of a person in social settings — such as increasing self-esteem or fostering desired self-images to others — (Leary & Kowalski, 1990), then emotional arousal during medical interviews would be caused by unmet goals and perceived unfavorable self stigma. This implies that it may be beneficial to explore the medical interview with impression management tools for assessment to better understand patients, as well as maximizing patient healthcare outcomes.

**Self-Monitoring**

Fortunately, impression management also has an emotional facet: self-monitoring. Snyder introduced this dimension of impression management in 1974, dealing with individual differences in intrapersonal consistency of self-control, and outlined two distinct types of people from his general overview: low self-monitors (LSM) and high self-monitors (HSM). LSMs are characterized by expressions depending on their current emotional state in a situation, while HSMs are characterized by their expressions depending on what
the current [social] situation demands as socially correct. This construct would fit the investigation of influences in medical consultations since they are social interactions, they could determine the amount of self-control being used in arousing interviews, and they may be able to determine the degree to which both patient and physician observably manage the roles they enact during the interview.

To review, patient-centered healthcare is becoming increasingly important to patient satisfaction in healthcare even though there is still no consensus for a definition. The most researched and likely explanation for this variability in defining patient-centered care has been suggested to be physician communication style and patient preference, specifically arousal level of the patient and the physician’s reaction to it. Although this answer seems to be narrowing in the research, the instruments used to operationalize patient-centered communication vary greatly from study to study. At the same time, impression management may be a substantial alternative to explaining physician-patient interaction, as it encapsulates many of the findings discussed.

Consequently, in the current study, I investigated the role that impression management plays in a patient-centered paradigm of health reporting by comparing scores of self-monitoring (SM), self-presentation, social desirability, positive affectivity-negative affectivity, and anxiety to what participants choose to report or not report on a standard health history questionnaire (HHQ) after watching a brief video of a physician introducing the study. Aside from SM, these other constructs were also measured to assess SM’s effectiveness in explaining the socio-emotional nature of the medical consult. Specifically, a number of research articles on personality in patient medical health reporting have
suggested that negative affectivity (NA) is linked more than any other trait, albeit only moderately, to the likelihood of reporting more physical and “mental” issues (Watson & Pennebaker, 1989; Ebert, Tucker, & Roth, 2002).

Past research has also investigated social desirability through measuring self-presentation, but several of these studies have used non-standardized inventories (Barrat, 2005; Marshall, Wortman, Vickers, Kusulas, & Hervig, 1994), rendering them inconclusive. Additionally, much of medical consultation research prior to 2010 seemed to be pursuing personality aspects of the interaction or using non-standardized instruments to measure possible explanations (Marshall, et al., 1994; Verlinde, De Laender, De Maesschalck, Deveugele, & Willems, 2012), which means it may be time to refresh the thinking on variance in outcomes from the medical interview between patient and physician. Subsequently, findings from Watson and Pennebaker (1989), Ebert, Tucker, and Roth (2002), and Verlinde and colleagues (2012) report that those with higher NA are more likely to be acutely aware of physical symptoms and would be more likely to report them in a medical setting. Higher NA scores reflect those who experience high levels of social anxiety, which has been found to be a main motivator in impression management tactics, or the lack of managing stress in those situations — meaning those who are LSM (Baumeister, 1982; Leary & Kowalski, 1990; Leary, Tchividjian, & Kraxberger, 1994; Martin, Leary, & Rejeski, 2000; Schlenker & Leary, 1982; Wysocki, Chemers, & Rhodewalt, 1987). LSM may experience higher levels of social anxiety and may be more likely to have higher NA scores, but that does not necessarily mean they would be more likely to report their symptoms. In fact, experiencing social anxiety may have the opposite effect on LSM
and cause them to report less since they are preoccupied with managing their emotions and not the current social situation.

**Hypotheses**

The main hypotheses regarding impression management were as follows: HSM were expected to answer a higher number of questions on the HHQ than were LSM (i.e., a main effect of SM), those in the individual condition were expected to answer a higher number of questions on the HHQ than in the group condition (i.e., a main effect of condition), and HSM were expected to answer a higher number of questions than the LSM in the group condition compared to the individual condition (i.e., interaction between condition and SM). An investigation was also performed for “differential reporting” on how a participant answered the HHQ. “How” meant the frequencies of “Yes”s and “No”s, and questions that needed a number answer were also explored. Differences between these answers was considered “differential reporting” for this study, and it was hypothesized that HSM would provide significantly different answers than LSM, that participants in the Individual condition would provide significantly different answers than those in the Group condition, and that HSM in the Group condition would provide significantly different answers than LSM in the Group condition than HSM or LSM in the Individual condition.

It was also anticipated that higher self-monitoring scores (read: HSM) would have a positive relationship to self-presentation, social desirability, and positive affectivity, but it would have a negative relationship to negative affectivity and social anxiety. Conversely, the opposite was expected for lower self-monitoring scores (read: LSM). It is impor-
tant to note that this study represents an important first step where there is a direct comparison between self-monitoring and environmental condition in regards to health reporting. To my knowledge there are no previous studies that have directly examined potential differences between group and individual condition based on SM type. Such comparisons are important to make because SM could provide a standardized indicator of communication style needed for use with the patient, increasing the likelihood of treatment adherence and patient satisfaction outcomes. Furthermore, this study provides a new way to investigate the physician-patient interaction by exploring the possible social aspects of the medical interview.
CHAPTER II
EXPERIMENT

METHOD

Participants

This study sought to obtain approximately 70 people per condition (total of 140) based on a power analysis conducted on G*Power with a desired analysis of Analysis of Variance (ANOVA). A total of 140 people participated, but one group participant’s data could not be used, due to one participant feeling uncomfortable and not completing the survey; this yielded a total of 139 participants. Participants were recruited from the undergraduate and graduate student body of Cleveland State University, a public university in the Midwestern United States. They were gathered from a variety of departments within the institution with a majority coming from psychology undergraduate students seeking partial credit toward a course research requirement or extra credit.

Participation was voluntary. Credit-seeking psychology students were rewarded with course credit upon completion of the study. Participation attempt (i.e., not agreeing to informed consent, attempting but deciding to leave any way through filling our ques-
tionnaires) still merited credit/reward. All participants were debriefed at completion of the study.

**Design**

A 2x2 between participants design was used. Data were collected via two conditions, individually or in a group, and for two groups of participants, those that were high or low on self-monitoring. The individual condition consisted of one participant completing the online survey on a laptop with the researcher in the room, while the group condition consisted of two participants separately completing the online survey on separate laptops with the researcher in the room.

**Procedure**

All participants read over (verbally when applicable) and signed informed consent about the study. The informed consent page was the only page that had a participants’s name on it, as the survey on SurveyMonkey did not collect identifying information such as name, school ID, email, etc. The online survey had another “informed consent,” a summary of main points from the concrete document to acknowledge with “agree” to move on to the next page. After watching a brief video from a physician, the documents to be filled out (in order) was a standard health history questionnaire, Self-Monitoring Scale, Social Interaction Anxiety Scale, International Positive Affect and Negative Affect Schedule Short Form, Marlowe-Crowne Social Desirability Scale, and the Self-Presentation Tactic Scale.

The individual setting began with signing informed consent, watching the physician video, and then filling out the inventories. The group setting was slightly modified:
there were two people in the room at separate computers completing the survey individually. Additionally, at the end of informed consent instruction, the experimenter told the group, “In some conditions of this study we talk about your experiences completing the survey after you’ve finished, so we ask that you wait until everyone is finished before leaving” to provoke a potentially mild socially anxious environment. At the end of the survey in the group condition, the experimenter stated, “we will not be discussing your experiences completing the survey in this condition,” as this was a misdirection to foster a specific environment. For both conditions, the experimenter instructed that if they had any questions filling out the survey to not hesitate to ask questions. Participants were debriefed upon completing the survey.

**Instruments**

Please see Appendix A for full video transcript. All other inventories were not included because of copyright issues.

*Physician Video.* A video approximately 50 seconds in length that introduced the survey to the participants. The physician covered the time to complete the survey (~30 minutes), that the health history covered questions the participants would see on a standard physical packet at an American hospital that was abbreviated, and that they would complete socially-themed questions. The physician gender and ethnicity was randomized and there was the potential to have a: White male, White female, Latino male, Latino female, Black male, and Black female physician. While physician gender and race were not

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1 Based on findings from Zandbelt and colleagues (2007) who found decreased contribution in patients who brought a third party with them. Social facilitation research influenced the chosen number of two for the condition.
the focus of this study, they were included in the data analysis to check for relationships between the other hypothesized variables. This is further discussed in the Results section.

*Health History Questionnaire (HHQ).* This was an abbreviated health history questionnaire that covered medication use, sexual activity, physical activity, occupation, family life, etc. This questionnaire had 80 items all together, but because it asked some sex-relevant questions it came out to 62 items per participant. For example, someone who identified as female was instructed not to answer male questions such as “age of first ejaculation.” A sample of questions were chosen as “highly sensitive” to use for the data analysis. These were questions that were most likely to be differentially reported on and the coding was as follows: “Yes” was used when participants answered the question and it applied to them, and “Not Answered” was used when participants did not answer questions that applied to them.

*Self-Monitoring Scale (SMS).* The 18 item scale was used as opposed to the original 25 item scale for several significant reasons: a) the internal consistency of the 18 item scale is +.70 (25 item = +.66) and “more factorially pure” than the original scale (Snyder & Gangestad, 1986, p. 137; Gangestad & Snyder, 1985, p. 339), b) the first unrotated factor from the principal factor analysis of the 18 item scale accounted for 62% of the common variance (with three factors), as opposed to the original’s 51%, c) the total scale scores for the 18 item scale were uncorrelated with an “estimate” of the second, “relatively minor” source of variation of r = +.03 compared to the 25 item scale’s r = +.15, and d) the correlation between the 18 item scale and the 25 item scale was .93 (Gangestad & Snyder, 1985).
Social Interaction Anxiety Scale (SIAS). A scale measuring “distress when meeting and talking with other people” (Mattick & Clarke, 1998, p. 457) having 20 items, and has been suggested to tap the same construct as the Social Phobia and Anxiety Inventory (SPAI) with significant correlation between the two of 0.86, p<.001 (Peters, 2000). Internal consistency for the SIAS was .94 for Mattick and Clarke’s total sample\(^2\) (1998).

International Positive Affect and Negative Affect Schedule Short Form (I-PANAS-SF).

The original 10 item PANAS’s internal consistency [regarding time instructions] of the positive affectivity (PA) subscale ranged from 0.86 to 0.90, and the negative affectivity (NA) scale ranged from 0.84 to 0.87, which was “clearly unaffected by the time instructions” (Watson, Clark, & Tellegen, 1988, p. 1065). Although the researchers were only able to derive “quasi-independence” of the measure (p. 1066), it has shown a wide array of research applications and considerable empirical support (Thompson, 2007).

It was recently found that some word usage in the PANAS were native only to English speakers (Thompson, 2007) during the flux of international validity studies, implying a need for an international version. Results from Thompson’s rather large fourth study in his 2007 paper showed cross-cultural validity’s factorial structure as “invariant” with a p-value of less than 0.05 (p. 237, referring to his difference in chi-square models); however, the differences between the correlations of standardized and unstandardized scores were similar, showing a low range between 0.07 and 0.09. Thompson asserts that this low range indicates that the I-PANAS-SF is not “peculiarly prone” to country-specific

\(^2\) Social phobia (0.93), Agoraphobia (0.91), Simple phobia (0.92), Undergraduates (0.88), Community (0.90)
ic effects [“compared to the two convergent criteria used”] (p. 239). Additionally, correlations between age and gender with standardized PA and NA subscales yielded similar results, with Thompson also noting that this pattern suggests that the inventory “captures individual-level affect” that is “largely” independent of country-specific effects.

*Marlowe-Crowne Social Desirability Scale (MC-SDS).* The original Marlowe-Crowne SDS contained 33 true-false items. It has been found in the 33-item version that there is some redundant item measurement to the social desirability construct (Strahan & Gerbasi, 1972). As most of the short forms have been found to be similar to the original, if not measure the construct more precisely, the 10-item version was used for practicality in this study. The 10-item version was developed by Strahan and Gerbasi in 1972, and was replicated to show a “significant improvement over all of the others [short forms], including the standard 33-item form” (Fischer & Fick, 1993, p. 423). Furthermore, it is also important to note that the MC-SDS is normally used to measure social desirability “non-pathological[ly]” (Crowne & Marlowe, 1960, p. 352). Crowne and Marlowe reported that their 33-item scale correlated .35 with the Edwards SDS, which was “significant at the .01 level” (p. 350). Most social desirability scales have been compared to the MMPI when Crowne and Marlowe developed theirs, and thus, the Edwards SDS is used for assessing the construct on a pathological level while the MC-SDS assesses social desirability at a non-pathological level. Additionally, higher scores on the MC-SDS indicate higher utilization of behavior to reflect socially desirable images of one’s self.

*Self-Presentation Tactic Scale (SPTS).* The first scale, the Self-Presentation Scale (SPS) did well in identifying the two-dimensional structure of self-presentation (i.e., min-
imize negative characteristics, and bolstering positive characteristics), however it had a couple of issues that Lee, Quigley, Nesler, Corbett, and Tedeschi (1999) uncovered. Namely, the SPS had confusing items such ones that refer to behavior while others referred to values and this posed issues for construct validity. The most important issue that Lee et al. indicated was that the SPS seemed to promote self-presentation in “all positive identity” motivations, where this is clearly not the case.

Lee et al. (1999) conducted four studies (including development [studies one and two], reliability [study three] and validity testing [study 4]) on the 63 item SPTS that yielded internal consistencies for the total scale on studies one and two at 0.94 and 0.93, respectively. As this study focuses on the two possible ways to engage in self-presentation, the SPTS was used not over the SPS.
CHAPTER III

RESULTS

All socially-themed inventories were scored and totaled consistent with respective journal articles: the SMS scoring based on Snyder (1974) specifications, the SIAS scoring is based on the Mattick and Clark (1998) analysis, the I-PANAS scoring is based on Thompson’s (2007) study, the MC-SDS is scored based on Strahan and Gerbasi (1972) article, and the SPTS scoring is based on Lee and colleagues’s (1999) specifications.

The HHQ coded questions were tallied based on the number of questions they did not answer, a variable labeled “Not Answered.” Initial two-tail correlations were computed to investigate the need for a Multiple Analysis of Variance for the dependent variables because several of the SPTS Subscales were correlated to the other dependent variables: the SIAS, I-PANAS-SF, MC-SDS, and other SPTS Subscales. The MANOVA performed on these dependent variables was not significant. Analysis of Variances were performed on Condition (individual, group) and on Self-Monitoring label (LSM, HSM) with the HHQ, SIAS, I-PANAS, MC-SDS, and SPTS subscale scores as dependent variables, which were also not significant. Physician race and gender was included in the analyses to check its relationship to other hypothesized variables. The ANOVA performed for
Condition (Individual, Group) by Physician (White male, White female, Latino male, Latino female, Black male, Black female) with “Not Answered” as the dependent variable was not significant: Condition, $F_{(1,138)} = 2.290$, $p = .133$, $\eta^2_p = .050$, Physician, $F_{(1,138)} = 1.129$, $p = .348$, $\eta^2_p = .043$, and interaction, $F_{(1,138)} = 1.205$, $p = .301$, $\eta^2_p = .046$.

The same ANOVA was analyzed with SMS score as the dependent variable, which still yielded non-significant results: Condition, $F_{(1,138)} = 0.008$, $p = .023$, $\eta^2_p = 0$, Physician, $F_{(1,138)} = 0.609$, $p = .693$, $\eta^2_p = .023$, and interaction, $F_{(1,138)} = 1.224$, $p = .302$, $\eta^2_p = .046$.

These results were not significant with very small to small effect sizes. Therefore further analysis on physicians’ race or gender was not performed, nor was it considered in alternate analyses as explanations for the null hypotheses.

For questions on the HHQ that asked for a number input — weight, number of sexual encounters, age at period onset/at first ejaculation — ANOVAs were performed for Condition by SM. For questions that asked for a “Yes” or “No” answer — recreational drug use, needle use for recreational drugs, current sexually active, birth control use, received HIV test, had or currently have an STD — were analyzed by Chi-Square. Additionally, sex was investigated separately on the number of sexual encounters and age of period onset/at first ejaculation questions because a sex effect has been found in differential reporting during medical interviews for sensitive types of questions (Kroenke, & Spitzer, 1998; Macintyre, Hunt, & Sweeting, 1996; MacLean, Sweeting, & Hunt, 2010).

**Self-Monitoring Hypotheses ANOVA Results**
It was hypothesized that participants in the individual condition would answer more questions than those in the group condition, that HSM would answer a greater number of questions on the HHQ compared to LSM, and that HSM would answer even more questions than LSM in the Group condition compared to the Individual condition. The results of the 2 (Condition: individual, group) x 2 (SMS Score: high, low) between participants ANOVA with the number of applicable questions not answered was not significant for the main effect of Condition, $F_{(1,138)} = 1.535, p = .218, \eta^2_p = .011$, the main effect of SM, $F_{(1,138)} = 0.000, p = .995, \eta^2_p = 0$, or the interaction effect, $F_{(1,138)} = 0.573, p = .450, \eta^2_p = .004$, failing to provide support for the hypotheses.

**Results for “Differential Reporting”**

“Differential Reporting” was defined in this study as any significant difference in reporting compared to another group. It was hypothesized that HSM would provide significantly different answers from LSM, participants in the Individual condition would provide significantly different answers than the Group condition, and that HSM in the Group condition would provide significantly different answers than LSM in the Group condition than HSM or LSM in the Individual condition. Interval questions (e.g., an answer for weight, such as 132 pounds) were analyzed with ANOVA and questions that received a “Yes” or “No” answer were analyzed with Chi-Square.

**ANOVA Results for Interval Questions**

Interval questions used as dependent variables for Condition by SM ANOVAs included weight, designated number of sexual encounters per month, and age at period on-
set/first ejaculation. Weight as a dependent variable yielded non-significant results for main effect of Condition, $F_{(1,134)} = 0.008, p = .929, \eta^2_p = 0$, main effect of SM, $F_{(1,134)} = 1.339, p = .249, \eta^2_p = .010$, and for the interaction effect, $F_{(1,134)} = 0.002, p = .962, \eta^2_p = 0$. Number of sexual encounters also produced non-significant results for main effect of Condition, $F_{(1,81)} = 0.123, p = .727, \eta^2_p = .002$, main effect of SM, $F_{(1,81)} = 0.004, p = .948, \eta^2_p = 0$, and for the interaction effect, $F_{(1,81)} = 0.513, p = .476, \eta^2_p = .007$. The age at period onset/first ejaculation also had the same results: no significant main effect for Condition, $F_{(1,125)} = 0.021, p = .886, \eta^2_p = 0$, no significant main effect of SM, $F_{(1,125)} = 0.121, p = .728, \eta^2_p = .001$, and no significant interaction, $F_{(1,125)} = 0.551, p = .459, \eta^2_p = .005$.

ANOVAAs were also performed by Sex on two questions: a) number of sexual encounters per month and b) age at period onset or age at first ejaculation for females or males, respectively. All of these were not significant. Specifically, for males in the number of sexual encounters question, the main effect of Condition was $F_{(1,22)} = 1.470, p = .241, \eta^2_p = .076$, the main effect of SM was $F_{(1,22)} = 0.798, p = .383, \eta^2_p = .043$, and the interaction effect was $F_{(1,125)} = 0.002, p = .967, \eta^2_p = .001$. Females for the same question produced similar findings for Condition, $F_{(1,59)} = 1.460, p = .232, \eta^2_p = .026$, SM, $F_{(1,59)} = 0.887, p = .350, \eta^2_p = .016$, and the interaction effect, $F_{(1,59)} = 1.154, p = .287, \eta^2_p = .021$. Analysis of variance results for males on the age at first ejaculation question were: Condition, $F_{(1,27)} = 0.953, p = .339, \eta^2_p = .040$, SM, $F_{(1,27)} = 0.019, p = .890, \eta^2_p = .001$, and
interaction, \( F_{(1,27)} = 0.019, p = .890, \eta^2 = .001 \). Results for females on their sex-specific question of age at period onset were: Condition, \( F_{(1,98)} = 1.107, p = .295, \eta^2 = .012 \), SM, \( F_{(1,98)} = 0.000, p = .992, \eta^2 = 0 \), and interaction, \( F_{(1,98)} = 1.567, p = .214, \eta^2 = .016 \).

**Chi-Square Analyses Conducted for Non-Interval Questions**

Non-interval, or frequency questions included: use of recreational drugs \( X^2 (1, n=139) = 0.414, p < .520, \phi = -.055 \), use of needle injection for recreational drugs, \( X^2 (1, n=139) = 0.414, p < .520, \phi = -.055 \), current sexual activity, \( X^2 (1, n=139) = 0.414, p < .520, \phi = -.055 \), use of birth control, \( X^2 (1, n=139) = 0.414, p < .520, \phi = -.055 \), having ever had an HIV test, and having ever had an STD, \( X^2 (1, n=139) = 0.414, p < .520, \phi = -.055 \). There was no difference in answering “Yes” or “No” when considering Condition and SM for each of these dependent variables.

**Two Tail Correlation Matrix and Chi-Square for Sex x SM**

The initial two-tail correlation matrix for all variables indicated that the only hypotheses-related variable, SM, was significantly negatively correlated with SIAS scores \( (r = -.227, p < .01) \), and significantly positively correlated with SPTS scores on the Excuse \( (r = .217, p < .05) \), Justification \( (r = .202, p < .05) \), and Ingratiation \( (r = .222, p < .01) \) subscales, suggesting that higher SM scores show less social anxiety and performed both Defensive and Assertive Tactics of self-presentational behaviors compared to lower SM scores. While SM has not been found to correlate well with other social construct-related instruments (Gangestad & Snyder, 2000), the anxiety and preferred self-presenta-
tion behavior correlations have been found in past research (Lee et al., 1999; Synder, 1974).

An unexpected point in the matrix was the significant correlation between Sex and Not Answered \((r = -0.352, p < .01)\). Nevertheless, there were more females \((n = 100)\) than males \((n = 39)\) in the sample, and that females were more likely to be LSM \((n = 67)\) than males \((n = 22)\). However, chi-square analyses of the Sex x SM distributions indicated that there was no contingency between the two variables in the number of “Not Answered” questions, \(X^2 (1, n=139) = 1.366, p < .242, \phi = -.055\).
CHAPTER IV

DISCUSSION

General Discussion

An aim of this study was to investigate the influence of impression management on differential reporting on a health history questionnaire (HHQ) after watching a one-minute video of a physician introducing the study from both an individual condition and a group condition. Impression management was measured through the SMS, the MC-SDS, and the SPTS, but focus was given to SM since this aspect has not been examined in the literature. It was hypothesized that HSM would report more on the HHQ than LSM and that the discrepancy would be the largest in the group condition. Additionally, it was expected that scores on the SMS would correlate negatively to the NA subscale of the I-PANAS-SF and the SIAS while correlating positively to the PA subscale of the I-PANAS-SF, the MC-SDS, and the SPTS. The second aim of the study was to assess the efficacy of the SMS to address the socio-emotional nature of health reporting through exploring the relationship of the SMS to past impression management inventories, the I-PANAS-SF, and social anxiety. Physician race and gender were also explored to consider alternate explanations for hypothesized relationships based on past research (Bertakis & Azari,
2012; Verlinde et al., 2012). Since there were no significant relationships found when considering both physician race and gender together, this variable was not pursued in further study analyses.

It was predicted that there would be a significant effect of Condition, SM, and interaction between the two, but the results did not support the hypotheses. Self-monitoring was not significantly related to condition in regards to differential reporting — either in number of answers given or how the questions were answered on the HHQ. These results were unexpected because a socially anxious situation would most likely inhibit LSM from reporting answers to sensitive questions because they would be busy keeping their internal emotional state under control (Baumeister, 1982; Leary & Kowlaski, 1990; Leary, Tchividjian, & Kraxberger, 1994; Martin, Leary, & Rejeski, 2000; Schlenker & Leary, 1982).

Some of the dependent variables in this study — the I-PANAS-SF and the SPTS — have been used in past health reporting research, which have been suggested to indicate that some parts of personality (NA) and impression management (SPTS) may play a role in differential health reporting. Since SM is a type of impression management, investigation into how well SM correlated with past scales and other possible instruments (SIAS, MC-SDS) allowed for analysis of how efficient SM would be in determining what causes differential reporting. Results of this exploration were unexpected since both correlations and MANOVA results showed no significance. Past research has indicated that LSM would be preoccupied managing their emotional state, suggesting a difference between how HSM and LSM would perform on these variables. Therefore, it is unexpected
that even the chi-square analyses did not significantly show differences in how HSM and LSM answered the questions. A possible explanation for the null hypothesis was the considerable amount of cognitive focus that was necessary to complete the study, inhibiting any impression management manipulation (such as the threat of discussing a participants answers after completion). Snyder (1974) also suggested that the degree to which a person is able to self-monitor in a given situation may have a cognitive threshold, meaning that any type of impression management may have taken a back seat in a passive environment like completing an online survey, even if it took place in the same room as another person.

Sex was a variable significantly correlated with “Not Answered,” an unexpected result from the presented hypotheses. Upon further investigation with chi-square analyses, there was no significant relationship found between Sex and “Not Answered” or for Sex and SM. The only study found that directly investigated sex differences in SM score was from Frazer and Fatis (1980), which found that males were more likely to be HSM and females were more likely to be LSM. This study may indicate similar findings, but this should be cautiously interpreted since there were more females in the study than males.

From the findings of the present study, it could be concluded that no relationship could be found between SM and health reporting. Additionally, the SMS’s low correlation with the other impression management scales in this study reflects past findings on the instrument — that it is a unique, unitary construct but that it does not correlate to anything else (Briggs & Cheek, 1988; Gangestad & Snyder, 1985; Gangestad & Snyder,

**Limitations**

There were several non-immersing elements of the study that did not support the feeling of a real medical interview. First, using a video of a physician instead of a currently training medical student or an actual physician was a drawback, but was cost- and time-effective. The video did not provide an actual experience of a medical interview, even with a researcher present in the room as an authority figure to answer questions. Secondly, completing the survey at a non-hospital or non-medical care provider site took away the feeling of a “consultation” setting. These factors may have also contributed to rendering the manipulation in the group condition inert because the participant did not take the survey as someone would in an actual medical setting. Thirdly, a medical interview is usually verbally communicated at some point, but this was not the case in the current study for sake of confidentiality of the participants. If this study were replicated, group manipulation may not be possible to use as an experimental manipulation because of physician-patient confidentiality. Future studies would most likely need to re-design this study to accommodate this limitation, perhaps focusing on titrated interaction with physicians.

Another non-immersive limitation was that most of the group participants knew each other, either from class or they brought a friend with them. This could have also diminished the strength of the group manipulation. If the group participants knew each other then they would feel less anxious about asking questions for clarification, or providing
answers to sensitive questions on the HHQ. The only research found on third party’s brought in with patients to medical interviews was from Zandbelt and colleagues (2007), who reported that patients reported less when a third party was present compared to when they came in individually. Since both Conditions (Individual, Group) in this study performed consistently in reporting, it would be interesting to see further investigation into this topic to see what patient behaviors with third parties constitute in different environments within the medical setting.

Finally, the researcher did not wear a white lab coat/stethoscope while the participants completed the study, nor did she have access to other “healthcare worker” confederates to create a medical setting in the study. This mostly likely weakened the manipulation for the group condition.

**Future Directions**

With the current limitations of the study evident, it is recommended that future studies address and control for these issues to provide a better test of the relationship of impression management to health reporting. Possible projects to address and control these issues could include: a) investigating the perception of a medical figure while completing the HHQ where the researcher is dressed like a physician, b) have a medical student be present in the room while the HHQ is completed, or c) have a licensed medical professional in the room while the HHQ is completed. Additional projects could address a) utilizing a verbal health history between participant and a medical authority figure, or b) investigating how participants report a verbal or written health history with different degrees of physician interaction with them — present in the room and no talking, present
and only answering questions while they fill out a paper health history, and comparing
physician- and patient-centered styles. Lastly, in regards to SM research, it would be in-
teresting to see projects investigate gender preferences for HSM or LSM styles, in addi-
tion to examining how those preferences determine health reporting.

The role of impression management has yet to be thoroughly explored in regards
to health reporting and the medical interview. The relationship between SM and health
reporting was investigated because it had not been explored before. Results did not sup-
port the hypotheses, and only some of the expected behaviors of SM to other scales corre-
lated to each other in expected ways, suggesting that SM may not measure the same as-
pect of the medical interview as other scales used in the past, or that SM may not be a
sufficient measure to identify differences in the medical interview between physician and
patient. While there were several limitations to the study, examining impression man-
agement’s role in medical interviews is still in its infancy and more work is needed. This
study yielded more questions than answers, which supports the need for continued work
to explore the role of impression management in health reporting.
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APPENDIX A

Physician Video Transcript

Hello! Thank you for your participation.
My name is Dr. ______  I will be taking your medical history.

Based on your responses to the questions that follow, I'll give you some medical advice. The questions will take about 30 minutes to answer. Please record your responses on the computer and answer all the questions to the best of your ability.

There is no risk to you and you may terminate your participation at any time. Your responses will be kept completely confidential; no identifying information will be linked to you or your responses. You must be 18 years or older to participate.

When you are ready please hit any key to begin.

Thank you for your time.

We are interested in the attributes of medical professionals and whether your impressions of them have an impact on your willingness to disclose personal health information.

Because of your help, we will be able to improve the training of medical professionals and patient care procedures.