2019

CONSUMER EMBARRASSMENT – A META-ANALYTIC REVIEW AND EXPERIMENTAL EXAMINATION

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Digital Object Identifier: https://doi.org/10.13023/etd.2019.063

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CONSUMER EMBARRASSMENT – A META-ANALYTIC REVIEW AND EXPERIMENTAL EXAMINATION

DISSERTATION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Gatton College of Business and Economics at the University of Kentucky

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ABSTRACT OF DISSERTATION

CONSUMER EMBARRASSMENT – A META-ANALYTIC REVIEW AND EXPERIMENTAL EXAMINATION

This dissertation consists of two essays that discuss the influence of embarrassment on consumers. In the first essay, I examine consumers' coping responses to embarrassment in a meta-analytic review. In essay two, I utilize an experimental approach to investigate the impact of embarrassing encounters on unrelated consumers who merely observe the situation.

In the first essay, the meta-analysis is guided by findings in the literature that demonstrate embarrassment can both promote and detract from consumer well-being. However, despite being investigated for decades, little is known about how consumers cope with embarrassing situations, and when and why consumers respond in positive and negative ways. The meta-analysis draws on the transactional framework of appraisals and coping to analyze the extant literature, construing positive responses as problem-focused coping, and negative responses as emotion-focused coping. I examine both situational and trait factor moderators to explain variance in these divergent outcomes and to resolve competing findings. A meta-analysis of 93 independent samples (N = 24,051) revealed that embarrassment leads to both problem-focused coping (r = 0.21), which can promote consumer well-being, and emotion-focused coping (r = 0.23), which can detract from consumer well-being. The relationship between embarrassment and emotion-focused coping was particularly strong in emotionally intense situations that were out of a transgressor's control, for female consumers, and for consumers with an individualist orientation. The relationship between embarrassment and problem-focused coping was particularly strong in emotionally intense situations for male and young consumers.

The second essay investigates the influence of embarrassing situations on neutral observers of the situation. The extant literature suggests that a consumer who commits a social transgression will experience embarrassment if real or imagined others are present to witness the transgression. However, the parallel embarrassment experienced, in turn, by those observers lacks a theoretical account, since observers have committed no transgression and are not the subject of appraisal by others. I label this phenomenon *observer embarrassment*, and introduce perspective taking as the underlying process that leads to observer embarrassment. Across six studies, I use physiological, behavioral, and self-report measures to validate the presence of observer embarrassment, as well as the

underlying perspective-taking mechanism. Specifically, the results demonstrate that observers are more likely to experience embarrassment when they imagine themselves as the transgressor (versus experience empathy for the transgressor), something more likely to occur when the observer and actor share a common identity. Thus, observer embarrassment is not an empathetic response to witnessing a social transgression, but rather an experience parallel to personal embarrassment of others.

KEYWORDS: Consumer embarrassment, meta-analysis, observer, coping responses.

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ACKNOWLEDGEMENTS

The following dissertation would not have been possible without help and direction from several people. First and foremost, my Dissertation Chair, Dr. John Peloza, provided instructive feedback at any stage of the dissertation process. In addition, John provided an invaluable perspective on the research process and on life in an academic career. Next, I wish to thank the complete dissertation committee, and the outside reader, respectively: Dr. Adam W. Craig, Dr. Aaron M. Garvey, Dr. Richard H. Smith, and Dr. Felipe Benguria. In addition, I want to thank Dr. Alexis M. Allen, Dr. Leslie H. Vincent, Dr. J. Ian Norris and all members of the Department of Marketing and Supply Chain for their advice and support.

Besides all technical and instrumental assistance above, I wish to thank my friends and family for their encouragement in times of doubt. Each late-night phone call, early morning workout, doc student lunch or social outing provided perspective and distraction from my studies. A last, special thank you goes to my close family - your support throughout the dissertation process was vital: Danke Mama, Papa, Padi, Jugse und Jess!

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INTRODUCTION

Embarrassing situations are inevitable in everyday life and, thus, everyone has experienced the negative emotion. Embarrassment is an uncomfortable state of abashment and chagrin resulting from events that increase the threat of evaluations from a real or imagined audience (Dahl, Manchanda, and Argo 2001; Miller 1996). Prototypical experiences of embarrassment occur in public situations that involve both actors as well as observers (Tangney et al. 1996) but embarrassment can also be experienced in private when actors merely imagine an audience (Krishna, Herd, and Aydınoğlu 2015). Antecedents of embarrassment vary widely from failed self-presentation (Apsler 1975) or purchases of undesirable products (Blair and Roese 2013) to transgressions of other people (Stocks et al. 2011) and, collectively, we go to great lengths to counter the negative experience associated with embarrassment (Goffman 1967). Despite the apparent familiarity with embarrassment, our understanding of underlying processes and behavioral responses to this uncomfortable state of chagrin is limited.

Embarrassment is perhaps the most intriguing negative self-conscious emotion. A rather sudden onset time, short duration, and moderately intense experience define embarrassment compared to related emotions such as shame and guilt (Tangney et al. 1996). Shame and guilt do also lead to distinct coping patterns. As shown by De Hooge and colleagues (2007), shame leads to destructive, emotion-focused coping, whereas guilt leads to constructive, problem-focused coping. However, embarrassment leads to coping responses that span both emotion-focused as well as problem-focused responses.

Marketing and consumer researchers began to examine embarrassment in consumption and retail settings approximately 20 years ago (Dahl, Manchanda, and Argo 2001). The emotion is frequently experienced in social encounters that define many retail and service interactions. Furthermore, embarrassment is not only felt by transgressors but can spread to others and lead to emotional reactions in observers paralleling the experiences of transgressors. Research has begun to examine observer embarrassment (Krach et al. 2011), however, the processes driving observer embarrassment and subsequent behavioral responses are not well understood.

Beyond the apparent relevance of embarrassment to the academic research community, an understanding of consumer embarrassment has implications for managerial decisions and consumer well-being alike. The US market for embarrassing personal care products, such as condoms and tampons, amounted to $16 billion in 2016 (Euromonitor 2017). Furthermore, the global condom market is expected to reach $11 billion by 2023 with growth in industrialized regions as well as developing countries (Report Buyer 2017). However, regardless of increasing accessibility to contraception products, embarrassment remains a major psychological barrier inhibiting the purchase and use of condoms (Dahl et al. 2001; Moore et al. 2006). Therefore, marketers must understand consumers' affective reactions to their products as well as ensuing behavioral responses. The inhibiting influence of embarrassment in healthcare contexts is perhaps the truly dark side of embarrassment in that people put themselves at significant risk or harm themselves (as well as others) in order to avoid embarrassment (Miller 1996). Moreover, avoidance behaviors are not limited to product contexts but extend to

potentially life-saving cancer screenings (Egbert and Parrott 2001; Consedine et al. 2011).

On the other hand, research has provided evidence that embarrassment can act as a social force to motivate desirable behaviors. Embarrassment can motivate consumers to recycle (Grasmick, Bursik, and Kinsey 1991), to help others (Feinberg, Willer, and Keltner 2012), or to seek out medical professionals for advice (McCambridge and Consedine 2014). Unfortunately, an understanding of the processes that drive these constructive, problem-focused responses and destructive, emotion-focused responses is limited and previous research has provided often conflicting findings. Thus, it is essential for policy makers to understand consumer embarrassment in order to develop initiatives aimed at improving consumer well-being.

This dissertation aims to make the following theoretical and practical contributions. In essay one, I conduct a cumulative quantitative literature review of embarrassment and associated coping responses. I examine consumers' coping responses to embarrassment that manifest in both emotion-focused as well as problem-focused coping responses. Research has focused on examining context-level behaviors without considering construct-level (e.g., emotion-focused and problem-focused coping) functions of these behaviors. Furthermore, the multidisciplinary nature of the research area has contributed to this lack of clarity by introducing various situational and trait variables that can impact the embarrassment – coping relationships. The goals for this meta-analysis are as follows. I utilize the structure provided by the transactional model of appraisals and coping (Lazarus and Folkman 1984, 1987) to synthesize the extant literature on the embarrassment – coping response relationship. Specifically, I focus on

higher-level construct dimensions in the current research. This allows me to examine theoretically relevant moderators that explain the inconsistencies and conflicting findings across the literature. Furthermore, I offer guidance to researchers, marketing practice, and public policy.

Additionally, I examine one specific context of consumer embarrassment in the second essay of this dissertation. Specifically, I conduct an experimental examination of observer embarrassment - a research topic that has been mostly ignored in the consumer literature. The drivers of and responses to this phenomenon are not well understood despite the omnipresence of embarrassing situations in social, retail, and service interactions. The main objectives for the second essay are to establish observer embarrassment in a consumer context, to establish a unique perspective-taking account that explains the driving forces behind observer embarrassment, and to examine subsequent responses of observers.

ESSAY ONE: DYING OF EMBARRASSMENT: A META-ANALYTIC REVIEW OF RESPONSES TO EMBARRASSMENT

You might think that most people would be seasoned pros at deftly handling embarrassing predicaments, but of course that's not true. Collectively, we're rather clueless about what to do when embarrassment strikes (Miller 1996, p. 159).

Embarrassing situations are unavoidable in life, and everyone is susceptible to it. Responses to embarrassment vary widely, with research suggesting that consumers' responses lead to both negative and positive outcomes. For example, consumers may react emotionally by binge drinking to cope with embarrassment (O'Grady et al. 2011), forgo condom purchases that could prevent sexually transmitted diseases or unwanted pregnancies (Dahl, Gorn, and Weinberg 1998), or even avoid potentially life-saving cancer screenings or doctor visits (Consedine et al. 2011; Egbert and Parrott 2001; McCambridge and Consedine 2014). However, research also suggests that embarrassment can induce problem-solving behaviors and thus promote consumer well-being. For example, research demonstrates that embarrassment can lead to environmentally friendly consumption choices (Kaiser et al. 2008), recycling (Grasmick, Bursik, and Kinsey 1991), or helping others in need (Feinberg, Willer, and Keltner 2011). Despite decades of research and the meaningful consequences stemming from responses to embarrassment, consumers' response strategies to embarrassment are not well understood.

Mirroring these negative and positive outcomes, Lazarus and Folkman (1984) outline two primary responses categories—emotion-focused and problem-focused—that

consumers use to cope with emotions. In the context of embarrassment, these can correspond to positive consumer outcomes (e.g., rational thinking, designed to alter the cause of embarrassment) or negative outcomes (e.g., avoiding the embarrassing trigger, designed to alter and manage the emotional experience due to embarrassment). However, in line with Miller (1996) and the examples given here, the extant literature provides competing evidence on the link between embarrassment and either emotion-focused or problem-focused coping responses.

Further exacerbating this lack of generalization, the construct-level implications of contextual coping responses are seldom discussed. Depending on the study context, a response behavior can be considered either an emotion-focused response or a problem-focused response. For example, O'Grady et al. (2011) provide evidence that drinking alcohol acts as a means of reducing emotional discomfort. They conclude that embarrassment leads to overconsumption and thus view the response as an emotion-focused coping mechanism because it does not address the underlying cause of embarrassment but instead is intended to regulate the negative experience (Duhachek 2005; Lazarus and Folkman 1987). Conversely, Crawford and Novak (2013) find no relationship between embarrassment and alcohol consumption. However, they view alcohol consumption as a problem-focused coping mechanism because consumers use it to address the underlying cause of embarrassment (e.g., looking inept in front of others).

Finally, embarrassment has been examined across a broad range of academic and theoretical domains, each with its own research objectives, theoretical contexts, and coping behaviors. In addition to work in consumer behavior and marketing (Blair and Roese 2013; Puntoni, De Hooge, and Verbeke 2015) and the foundational disciplines of

psychology and sociology (Dong, Huang, and Wyer 2013; Tarr, Kim, and Sharkey 2005), researchers have studied embarrassment in health and medical settings (Consedine, Krivoshekova, and Harris 2007; Egbert and Parrott 2001), hospitality management (Wu and Mattila 2013), and environmental studies (Grasmick et al. 1991).

The objective of the current research, then, is to provide a structured synthesis of these disparate research streams, disciplines, and outcomes through meta-analysis. A greater understanding of consumers' coping strategies can help develop generalizations, mitigate harmful outcomes, promote positive outcomes, and provide further guidance for researchers working in the domain. The only prior synthesis of this literature is that of Miller (1996), which I extend in three ways. First, my review includes 93 effects, 81 of which were published after 1996. Second, I employ the mathematical rigor of meta-analysis to address the need for a comprehensive understanding of how consumers respond to embarrassment. Third, I employ the structure of the transactional model of appraisals and coping (Lazarus and Folkman 1987) to examine, reconcile, and explain the competing findings in the literature, the processes and moderators that mitigate these responses, and the implications of these responses for consumer well-being. This meta-analysis is guided by four main objectives: (1) to use the transactional model of appraisals and coping to integrate context-level response strategies to embarrassment into concept-level dimensions (emotion-focused and problem-focused coping), (2) to identify theoretically relevant moderators that explain the inconsistencies in the relationships between embarrassment and emotion-focused and problem-focused coping, (3) to test this model empirically with a quantitative meta-analysis of extant research, and (4) to offer guidance to researchers, marketing practice, and public policy.

RESPONDING TO EMBARRASSMENT

Embarrassment is an uncomfortable state of abashment and chagrin resulting from events that increase the threat of evaluations from a real or imagined audience (Dahl, Manchanda, and Argo 2001; Miller 1996). Thus, embarrassment can be experienced in response to an actual event in front of a real audience (Brown and Garland 1971) or in the form of an anticipated event in front of an imagined audience (Dahl et al. 2001; Kaiser et al. 2008). Note that I do not differentiate between anticipated and experienced embarrassment herein. Emotional reactions to anticipated embarrassment are inferred from past encounters with embarrassment. Thus, anticipated responses to imagined events resemble actual behaviors to experienced events (Tangney, Stuewig, and Mashek 2007).

Embarrassment is a self-conscious emotion closely related to but distinct from other self-conscious emotions such as shame and guilt. Consumers frequently encounter embarrassment in everyday life, in situations that generally revolve around trivial transgressions (Tangney et al. 1996); for example, embarrassment resulting from transgressions such as drinking from a finger bowl at an ethnic restaurant (Wu and Mattila 2013) results in a rather short-lived and suddenly occuring emotional experience. This differs from shame and guilt, which are related to more severe lapses of the transgressor, occur less frequently, and are more enduring (Tangney et al. 1996). However, though rather mundane and short-lived in nature, consumers' coping responses to embarrassment can lead to significant consequences for well-being.

The differences in coping behaviors in response to embarrassment, guilt, and shame are particularly germane to the current research. I define coping, as Duhachek

(2005, p. 42) proposes, as the "set of cognitive and behavioral processes initiated by consumers in response to emotionally arousing, stressful interactions with the environment aimed at bringing forth more desirable emotional states and reduced levels of stress." De Hooge, Zeelenberg, and Breugelmans (2007) argue that shame and guilt each have distinct coping patterns. Shame leads consumers to engage in destructive, emotion-focused coping that does not result in a resolution of the shame-inducing stressor (Tangney et al. 2007; for a notable exception, see De Hooge, Zeelenberg, and Breugelmans 2011). Conversely, guilt leads to coping responses in the form of constructive, problem-focused coping behaviors (Tangney et al. 2007). Unlike shame or guilt, embarrassed individuals engage in either emotion-focused or problem-focused coping. Emotion-focused coping tends to lead to a deterioration in consumer well-being (e.g., consumers avoid the dentist over embarrassment of their lack of dental hygiene; Moore, Brødsgaard, and Rosenberg 2004) and aversion to the underlying cause of embarrassment, while problem-focused coping tends to lead to an improvement in consumer well-being (e.g., consulting others to resolve interpersonal conflicts; Kochenderfer-Ladd 2004) through active attempts to address the underlying cause of embarrassment. However, research examining factors that prohibit emotion-focused and promote problem-focused coping remains scant.

I draw on the transactional framework of emotional appraisals and coping to aid the systematic analysis of coping with embarrassing situations (Duhachek 2008; Lazarus and Folkman 1987). The transactional framework recognizes the importance of both personality and situational influences on consumers' responses to embarrassment. Furthermore, the framework provides a rationale to structure the wide range of context-

level variables (e.g., forgoing the purchase of condoms or seeking out a medical professional for advice) into construct-level dimensions (e.g., problem-focused and emotion-focused coping, respectively).

Problem-Focused Coping

Problem-focused coping subsumes all attempts to alter the underlying problem that caused the embarrassing situation (Duhachek 2008; Folkman and Lazarus 1988). As such, it involves active attempts to manipulate the environment instead of regulating the resulting emotional experience (Duhachek 2005). Tactics such as rational thinking, help seeking, or enlisting social support resources belong in this construct-level dimension (Duhachek 2005, 2008). Accordingly, prior research provides evidence for the link between embarrassment and socially desirable behaviors (Goffman 1967; Scheff 1988). For example, the prescriptive power of embarrassment can motivate behaviors that fundamentally change a potentially embarrassing stressor. Grasmick et al. (1991) demonstrate that embarrassment leads consumers to act in accordance with generally accepted norms, such as recycling. Thus, problem-focused coping is generally beneficial because it helps enforce social norms.

Changing the underlying source of embarrassing situations eliminates the potential for embarrassment in the future. As such, problem-focused coping is a rather effortful coping response that may not result in the immediate alleviation of the emotional experience (e.g., consumers temporarily experience embarrassment when facing the embarrassing stressor; Lazarus and Folkman 1984). Instead, this form of

coping offers an enduring resolution of the stressor, limits future embarrassment, and results in long-term benefits for consumers.

Emotion-Focused Coping

Emotion-focused coping activities are directed at regulating one's emotional response to an embarrassing situation (Skinner et al. 2003) and help consumers reduce their distress (Folkman 1984). Consumers reappraise the embarrassing event to regulate their emotional reaction without changing the source of embarrassment directly (Duhachek 2005, 2008). The specific coping tactics that fall under this construct-level dimension range from venting emotions aloud, to physical or verbal aggression, to avoidance and disengagement (Duhachek 2008).

Avoidance coping is the most common response in the context of embarrassment (Miller 1996). Avoiding a stressor changes consumers' exposure to the stressful situation and allows them to reappraise the situation, resulting in a temporary reduction or elimination of embarrassment (Lazarus and Folkman 1984). For example, consumers escape an embarrassing sales interaction in a flight reaction (Verbeke and Bagozzi 2003). However, emotion-focused coping is not the most effective coping strategy in the long run. Although avoidance reactions are helpful for the transgressor in the short run because they reduce the immediate impact of embarrassment, audiences perceive transgressors using avoidance response strategies unfavorably (Levin and Arluke 1982). Thus, such responses are ineffective at restoring the desired self. Furthermore, emotion-focused coping can jeopardize consumers' well-being. For example, avoiding preventive cancer screenings (Egbert and Parrott 2001) or forgoing the use of condoms (Dahl et al.

1998) may result in severe consequences for consumers, such as cancer and sexual transmitted diseases.

MODERATOR HYPOTHESES

The coping and embarrassment literature streams acknowledge that coping processes are highly contingent on both trait and situational factors (Duhachek 2008; Lazarus and Folkman 1984). I use this framework to develop a series of hypotheses that examine the nature of the relationship between embarrassment and either emotion- or problem-focused coping responses. Doing so allows us to reconcile and account for the mixed findings from the extant literature and synthesize them through categorization. For example, because of the discomfort associated with highly intense emotional situations, the relationship between embarrassment and emotion-focused coping should increase with the relative intensity of the emotional experience (Brown and Garland 1971). Similarly, in the case of trait factors, consumers with an individualist orientation may be more likely to respond to embarrassment with emotion-focused coping, while consumers with a collectivist orientation may be more prone to engage in problem-focused coping (Sueda and Wiseman 1992). The remainder of this section outlines the moderator hypotheses guiding this meta-analysis, categorized as situational and trait factors.

Situational Factor Moderators

I first examine the situational factors that influence the strength of the embarrassment–coping response relationships under the transactional coping framework. I identify consumers' situational control and emotional intensity of the experience in turn.

Situational Control. Although embarrassment arises from personal transgressions, the embarrassing situation can be more or less controllable by consumers. In many cases, such as complying with societal norms, the consumer can control the situation and the potential or actual embarrassment (e.g., "Being seen littering is embarrassing; should I still do it?") associated with the respective situation. However, in other situations, such as a service failure (e.g., waiter misplaces dinner reservation; Wan 2013), the situation is controlled by a source external to the consumer. In his qualitative review, Miller (1996) suggests that some emotion-focused responses to embarrassment are linked to uncontrollable situations. However, this relationship is equivocal, in part because consumers' control over embarrassing situations is often not explicitly considered in the extant literature.

Under the transactional appraisal framework, control expectancies are an important factor predicting responses, and consumers' locus of control systematically affects their coping responses (Lazarus and Folkman 1984). An externally controlled situation leads to stronger emotion-focused coping because consumers have little control over such situations. For example, Wan (2013) examines consumers' responses to an embarrassing service failure caused by the service provider, and therefore out of their control, and finds that embarrassment leads consumers to engage in more negative word of mouth and to exhibit higher switching intentions. By contrast, an internally controlled situation will lead to more problem-focused responses because consumers are better able to exert control over such situations. Accordingly, in their study on embarrassment, Ntoumanis et al. (2014) find that consumers experience embarrassment after failing to achieve an initial goal. However, this embarrassment can lead to problem-focused coping

if an alternative goal seems attainable (e.g., goal attainment is in consumers' control). Thus, I offer the following hypotheses:

H1a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) if the situation is externally (internally) controlled.

H1b: The relationship between embarrassment and problem-focused coping is stronger (weaker) if the situation is internally (externally) controlled.

Emotional Intensity. Though generally less intense than guilt or shame, embarrassment can range in intensity. For example, while purchasing a shirt from an embarrassing brand (e.g., Ed Hardy; Walsh et al. 2016) may induce mild embarrassment, embarrassment will be more intense for products that are related to one's sex life (e.g., personal lubricant; Esmark Jones, Barney, and Farmer 2018). Folkman and Lazarus (1988) argue that the level of threat imposed by stressors influences coping responses. In particular, more intense emotional experiences lead to aversive reactions, implying stronger emotion-focused coping. The intensity of a stressor inhibits cognitive functions and limits information processing, debilitating consumers into reverting back to primitive coping responses (Lazarus and Folkman 1984). The embarrassment literature shows similar patterns. Relatively intense embarrassing situations lead to greater emotion-focused coping than less intense situations (Brown and Garland 1971). However, consumers should be more equipped to access deliberate, problem-focused coping responses when embarrassment is rather mild (Lazarus and Folkman 1984; Miller 1996). Drawing on the underlying appraisal framework, I predict the following hypotheses:

H2a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) if the emotional intensity of the situation is high (low).

H2b: The relationship between embarrassment and problem-focused coping is stronger (weaker) if the emotional intensity of the situation is low (high).

Trait Factor Moderators

In addition to the situational moderators discussed in the preceding section, I predict the moderating impact of several trait factors. Drawing on the transactional coping framework, I develop moderator hypotheses for gender, age, and individualism because of their relevance to the embarrassment–coping response relationship and ability to explain differences in emotion- and problem-focused coping.

Gender. Gender difference have historically been reported in embarrassment research. Men and women are equally embarrassable (Else-Quest et al. 2012; Miller 1996), but their preferences for response styles differ (Miller 1996; Petronio 1984). However, the relationship between gender and the specific form of coping employed by men and women is equivocal.

Petronio (1984) argues that men are more likely to select emotion-focused coping strategies in general. This effect is driven by their perception that avoidance is an effective response to embarrassment (Cupach, Metts, and Hazleton 1986). However, these findings specific to the embarrassment context are inconsistent with the transactional appraisal framework. Specifically, Folkman and Lazarus (1980) argue that men are more likely to select problem-focused coping strategies in general. These effects are driven by traditional gender roles that manifest in a gender socialization hypothesis,

in which men are expected to be more instrumental and problem-focused than women when facing stressors. Thus, I offer the following competing hypotheses:

H3a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for men (women).

H3b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for men (women).

The literature is similarly inconclusive on the relationship between embarrassment and coping for women. On the one hand, research finds that traditional gender roles lead women toward more passive and emotion-focused responses when facing stressors (Matud 2004; Ptacek, Smith, and Dodge 1994). On the other hand, research finds that women are more likely to restore their desired self by explaining their behavior verbally or nonverbally (Cupach et al. 1986; Miller 1996). This suggests a preference for problem-focused coping for women. These effects are driven by their desire to restitute the situation and their self-concept. Therefore, I offer the following competing hypotheses:

H3c: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for women (men).

H3d: The relationship between embarrassment and problem-focused coping is stronger (weaker) for women (men).

Age. Age can influence consumers' coping responses, as experience associated with age informs handling stressful situations. The predominant notion in embarrassment

research is that embarrassability decreases as consumers grow older (Miller 1996); thus, older consumers should be able to swiftly handle embarrassing situations with problem-focused coping responses. Recent research, especially on health- and medical-related embarrassment, paints a different picture however; older consumers can be severely affected by embarrassing situations and oftentimes opt for aversive, emotion-focused responses (Consedine et al. 2007, 2011).

The coping literature shows similar inconsistencies. Lazarus and Folkman (1984) argue that people engage in emotion-focused coping in adolescence and early adulthood and then progress to more resourceful, problem-focused coping in later adulthood. This suggests a positive, even linear relationship between age and problem-focused coping. However, Gutmann (1974) finds that this pattern reverts for the elderly, as this population becomes more passive in their responses to stressors. Furthermore, the situations that cause embarrassment change as consumers grow older. Embarrassing and stressful situations in early life stages revolve around social interactions at work or in one's family that may be more easily addressed using problem-focused coping approaches. Later in life, stressors can be more likely to be related to health issues that threaten consumers' self-concept. The helplessness experienced from these threats can lead to an increased use of emotion-focused responses (Folkman and Lazarus 1980). Accordingly, I offer the following hypotheses:

H4a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for young and old (middle-aged) consumers.

H4b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for middle-aged (young and old) consumers.

Hofstede's Cultural Dimensions

The relationship between embarrassment and coping responses may alter from differences in cultural values (Cupach and Imahori 1993; Sueda and Wiseman 1992). Although research has examined the impact of one cultural dimension, individualism, on this relationship, I integrate extant research on embarrassment and propose hypotheses that span across all cultural dimensions. To the best of my knowledge, this is the first examination of construct-level coping responses to embarrassment in a large, cross-cultural sample and across all six cultural dimensions (i.e., individualism, power distance, uncertainty avoidance, masculinity, long-term orientation, and indulgence).

I arranged all samples in the data set by their corresponding Hofstede (2001) country score from high to low for each dimension and used median splits to classify whether the country was either high or low on the respective dimension (for similar procedures, see Kirca, Jayachandran, and Bearden 2005). The sample included studies conducted in 15 countries across four continents. I did not include studies that were conducted across different regions spanning multiple countries in this analysis.

Next, I present the moderator hypotheses and results for the analysis of individualism, power distance, uncertainty avoidance, masculinity, long-term orientation, and indulgence. This analysis supplements the discussion of trait factor moderators in general and individualism in particular.

Individualism. Individualism refers to a cultural trait defined by the expectation to look out for oneself, whereas collectivism refers to the expectation that people integrate into strong, cohesive in-groups (Hofstede 2001). An individualist orientation motivates

consumers to address their own needs in stressful situations (Chun, Moos, and Cronkite 2006). Avoidance, in such cases, is an effective way to cope with the stressor, suggesting that individualism is related to emotion-focused coping responses. Conversely, an interdependent orientation triggers concerns about social relationships and how to maintain them. Thus, consumers with an interdependent orientation are more likely to use a problem-focused approach that addresses the underlying issues (Chun et al. 2006).

Accordingly, cross-cultural research on responses to embarrassment suggests that American (i.e., individualist) consumers are more likely to use emotion-focused coping in response to embarrassment than Japanese (i.e., collectivist) consumers (Sueda and Wiseman 1992). Sueda and Wiseman (1992) conclude that differences in the use of certain coping responses occur because of varying degrees of individualism or collectivism between countries. Individuals with an individualist orientation are more self-focused and therefore should prefer response strategies that reduce their personal discomfort, such as emotion-focused responses. Conversely, individuals with a collectivist orientation are other-oriented and will elect responses that restore their self-concept and thus engage in problem-focused coping responses (Hofstede 2001). Accordingly, I predict the following:

H5a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for individualist (collectivist) cultures.

H5b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for collectivist (individualist) cultures.

Power Distance. Hofstede (2001, p. 98) defines power distance as "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally." Although power distance has not been examined in the context of embarrassing situations, Gordon (1976) surveyed students in high- and low-power-distance societies to investigate their behavioral preferences in social interaction and finds that low power distance is related to independence and self-interest. In accordance with my theorizing, this implies a preference for emotion-focused coping in cultures low in power distance. Furthermore, students in high-power-distance societies prefer conformity and other-orientation, suggesting a preference for problem-focused coping.

H6a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for low (high) power distance cultures.

H6b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for high (low) power distance cultures.

Uncertainty Avoidance. Uncertainty avoidance captures "the extent to which members of a culture feel threatened by uncertainty or unknown situations" (Hofstede 2001, p. 161). Research has shown that uncertainty avoidance is correlated with anxiety and neuroticism in general (Lynn and Hampson 1977) and the duration and intensity of experienced embarrassment in particular (Edelmann et al. 1989). These finding suggest that high uncertainty avoidance is correlated with emotion-focused coping while low-uncertainty-avoidance cultures show a general preference for problem-solving and an

enduring resolution of underlying issues (Sagie, Elizur, and Yamauchi 1996). Thus, I offer the following hypotheses:

H7a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for high (low) uncertainty avoidance cultures.

H7b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for low (high) uncertainty avoidance cultures.

Masculinity. According to Hofstede (2001), masculinity refers to societies in which gender roles are clearly distinct: "Men are supposed to be assertive, tough, and focused on material success; women are supposed to be modest, tender, and concerned with quality of life. Femininity stands for societies in which gender roles overlap" (Hofstede 2001, p. 297). As a societal norm, high masculinity manifests in higher self-orientation (Hofstede 2001), suggesting a stronger relationship between embarrassment and emotion-focused coping. Furthermore, consumers from societies low in masculinity are other-oriented (Hofstede 2001), suggesting a stronger relationship between embarrassment and problem-focused coping.

H8a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for high (low) masculinity cultures.

H8b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for low (high) masculinity cultures.

Long-term Orientation. "Long term orientation stands for the fostering of virtues oriented towards future rewards, in particular, perseverance and thrift.… Short term

orientation stands for the fostering of virtues related to the past and present, in particular, respect for tradition, preservation of 'face' and fulfilling social obligations" (Hofstede 2001, p. 359). Research shows that long-term orientation is related to structured problem solving and a deferral of gratification (Hill and Romm 1996). Thus, the goal of a long-term, problem-focused resolution of an embarrassing situation should motivate consumers from long-term-oriented societies. By contrast, short-term-oriented societies are focused on immediate needs and, as such, should prefer coping responses that address the emotional experience in embarrassing situations (Hofstede 2001). Thus, I expect the following:

H9a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for short-term (long-term) orientation cultures.

H9b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for long-term (short-term) orientation cultures.

Indulgence vs. Restraint. "Indulgence stands for a society that allows relatively free gratification of basic and natural human desires related to enjoying life and having fun. Restraint stands for a society that controls gratification of needs and regulates it by means of strict social norms" (Hofstede 2011, p. 15). As such, I expect consumers from indulgent societies to prefer coping responses that are self-oriented and emotion-focused. Consumers from restrained societies who rely heavily on social norms will prefer problem-focused response to embarrassing situations.

H10a: The relationship between embarrassment and emotion-focused coping is stronger (weaker) for indulgent (restrained) cultures.

H10b: The relationship between embarrassment and problem-focused coping is stronger (weaker) for restrained (indulgent) cultures.

Control Variables

I predict that variables that are less theoretically grounded and/or not easily categorized will also account for variation in the relationship between embarrassment and coping responses, and I include these as control variables in the meta-analysis. First, studies employing student versus general population samples may vary in response selection following embarrassing situations (Peterson 2001). Second, the assessment of embarrassment (single- vs. multi-item measures, state vs. trait measures) could account for different findings (Szymanski and Henard 2001). Third, I include article journal quality, field of study, and year of publication in the analysis (Kirca, Jayachandran, and Bearden 2005). Fourth, I include data collection context (face-to-face vs. online) to control for audience effects that may influence coping responses to an embarrassing situation (Dahl et al. 2001; Krishna, Herd, and Aydınoğlu 2015). Fifth, I include type of embarrassment (anticipated vs. experienced) in the analysis to control for biases in predicting one's coping response to embarrassment. Finally, I include a variable that controls for the type of independent variable (measures vs. manipulated embarrassment).

METHOD

Search Process and Sampling Frame

I identified eligible studies for the meta-analysis through several approaches (Carlson et al. 2009; Rosario et al. 2016), conducting an initial search of *Journal of*

Consumer Research, *Journal of Marketing*, *Journal of Marketing Research*, *Journal of Consumer Psychology*, *Journal of Retailing*, and *Journal of Advertising*. The journal search spanned issues published between January 2000 and July 2018. I identified additional articles through backward citation analysis as well as the qualitative summary of embarrassment research published by Miller (1996). Then, I conducted forward citation searches of Tangney et al.'s (1996) and Dahl et al.'s (2001) widely cited articles. Subsequently, I searched dissertations. The next step of the search process involved keyword searches of the EBSCO databases Business Source Complete, Psychology and Behavioral Science Collection, PsychINFO, and Sociological Collection. Because embarrassment can be referred to in several different forms (e.g., embarrassed, embarrassing), I conducted the database search using the term "embarrass*." I included articles from September 1968 to July 2018 in the meta-analysis. Finally, I made requests to obtain unpublished manuscripts. These requests came in the form of directly contacting authors who had previously published in the area or as calls for unpublished studies via several listservs, including ELMAR, ACR-L, jdm-society mailing list, and SPSP Listserv.

In the next step, I evaluated whether each published and unpublished study identified in the search process was eligible for inclusion into the data set. I considered a study suitable for inclusion in the current meta-analysis if the following conditions were met: (1) embarrassment was measured or manipulated, (2) there was sufficient information to compute a contrast between an embarrassment and a nonembarrassment condition in the studies manipulating embarrassment, (3) studies discussed experienced or anticipated, not perceived, embarrassment of others or observer embarrassment, (4)

responses to embarrassment fell into one of the two construct-level dimensions (emotion- and problem-focused coping), and (5) the Pearson correlation between embarrassment and a coping correlate was reported along with the corresponding sample size or the authors provided enough statistical information to compute the correlation (Janiszewski, Noel, and Sawyer 2003). The effect size coded for in the analyses is the Pearson correlation in alignment with several recent meta-analyses (Carlson et al. 2009; Rosario et al. 2016; Van Laer et al. 2014). Correlations are comparable across studies if they can be interpreted independent of the specific measurement scale used. This is important when examining the effects of various measures of embarrassment on observed outcomes. Embarrassment as a construct can be assessed in multiple ways, ranging from state and trait self-report measures to physiological responses and succinct nonverbal behaviors. I include studies discussing the correlates of embarrassment to all these measures of embarrassment. However, I do not include effects between several embarrassment measures (i.e., the correlation between trait embarrassment and state embarrassment) in the data set.

Overall, I identified 93 effects from 76 independent samples published in 63 articles through the search process. This process uncovered one conference proceedings paper and one unpublished manuscript (which has since been published).

Procedures and Effect Size Computation

The data were coded independently by two coders (for illustrative examples of my coding, see table 1). Before coding the embarrassment effects, I developed a common coding scheme to ensure that I approached the coding of main effects and moderators in a

consistent manner. All questions about the coding were discussed among the coders until consensus was reached. The coders achieved acceptable agreement levels (proportional reduction in loss [PRL] reliability = .85; Rust and Cooli 1994) in line with previous meta-analyses (Roschk and Gelbrich 2014). Tables 2 and 3 contain the full data set. Furthermore, many studies reported multiple effects for the same construct. Following Hunter and Schmidt's (2004) recommendations, I averaged these multiple effects together to ensure that the study was not overly represented in the data set. In addition, I performed outlier analyses using both sample-adjusted meta-analytic deviancy (Huffcutt and Arthur 1995) and Wilcox's (1998) trimmed mean procedure. Outliers did not affect the pattern of results in the analysis; I provide further information about outlier analyses as part of the robustness check analyses. After the coding was finalized, I used the meta-analysis procedures outlined by Hunter and Schmidt (2004) and relied on MetaWin: Statistical Software for Meta-Analysis (Rosenberg, Adams, and Gurevitch 2000) for the overall analysis of the data set.

Meta-analytic data are susceptible to statistical artifacts and publication bias, which may influence the effect size coded. To correct for the impact of these statistical artifacts, I accounted for both measurement and sampling error in my calculation of the true overall effect for each embarrassment relationship. To address measurement error, I coded the reliabilities of the measures used for both embarrassment and its coping response, when this information was reported. I then corrected the observed correlations given the reliabilities of measures themselves. Table 4 provides an overview of all calculation used for analysis purposes. Another statistical artifact that needs to be considered is sampling error. Using the reliability corrected effects, I calculated an

overall effect for both embarrassment–coping response relationships by computing a sample-weighted, reliability-corrected correlation to estimate the true correlation, r_T , between embarrassment and its outcomes. I also report bootstrap confidence intervals (CIs) to test the significance of the correlation between embarrassment and behavioral responses. These nonparametric CIs are appropriate for meta-analytic data that may violate the assumption of normality (Rosenberg et al. 2000).

Furthermore, publication bias can threaten the validity of meta-analytic results. I followed the recommendations of Borenstein (2005) and conducted multiple qualitative and quantitative analyses to examine the validity of the observed effects and the potential impact of publication bias in my sample. First, I visually examined forest and funnel plots to assess the distribution of the data. Another way to assess the possibility of publication bias was to calculate the fail-safe sample size (N_{FS}) for each embarrassment relationship using Rosenthal's (1979) method. This figure estimates the number of unpublished studies with an effect size of zero required to reduce the observed effect to a nonsignificant effect (at $\alpha = .05$) (Janiszewski et al. 2003). Third, I conducted Egger's test (Egger et al. 1997), a regression-based analysis that examines the linear relationship between the observed effect and its standard error. Publication bias is apparent if the intercept in Egger's regression model is significantly different from zero (Sterne and Egger 2005). I also conducted a trim-and-fill method proposed by Duval and Tweedie (2000). This test is a sensitivity analysis of the potential effect that missing studies can have on my data. Last, I conducted Stanley and Doucouliagos' (2014) PET-PEESE test, a meta-regression test to examine the potential impact of publication bias.

I began my analyses with visual examinations of the forest and funnel plots for the entire data (see figures 1, 2, and 3). This quantitative inspection revealed that small sample selection bias is present in the data, which is one manifestation of publication bias. Thus, I conducted quantitative analyses to further examine the nature of the small sample selection bias in my data. The large N_{FS} of 2,374.1 and 16,610.3 for the embarrassment–problem-focused and embarrassment–emotion-focused coping relationship, respectively, indicate that publication bias has a small impact on the meta-analysis results (Hunter and Schmidt 2004; Rosenthal 1979; Van Lear et al. 2013). Furthermore, Egger's regression test revealed a nonsignificant beta coefficient for the intercept, indicating that publication bias does not affect the observed results. The trim-and-fill method yielded a similar result. Analysis revealed several outliers but analyses of the imputed data sets resulted in effects that are consistent with the results of the original data. Last, PET-PEESE analysis indicated that publication bias is not a problem in this sample. Both the PET and PEESE analyses revealed nonsignificant slopes indicating that publication bias plays a minor role in my data (Bell and DeWall 2018; Stanley and Doucouliagos 2014). Thus, I am confident that the observed effects approximate the true correlations between embarrassment and emotion-focused and embarrassment and problem-focused coping. Table 5 provides a summary of the publication bias analyses.

Given the range of correlations reported for each embarrassment–coping response relationship, I wanted to understand the extent of heterogeneity present within the reported correlations so as to justify the analysis of moderators that could explain the variation in observed effects. I calculated the mean variance and the Q-statistic to assess heterogeneity across studies after correcting for nonsystematic error (Lipsey and Wilson

2001). A significant Q-statistic indicates that random error or statistical artifacts cannot explain the inconsistent findings across independent studies. Thus, other factors (i.e., moderators) that can help explore the heterogeneity must be present (Hunter and Schmidt 2004).

Moderator Analysis Procedures

Overall, the results indicated that there was sufficient heterogeneity among the observed embarrassment correlations to justify the search for moderators. In other words, the variation in the correlations could not be explained by statistical artifacts alone. Consistent with recent meta-analytic research, I used a weighted generalized least squares (GLS) model to test the impact of the proposed moderators on the relationship between embarrassment and behavioral responses (Black, Childers, and Vincent 2014; Raudenbush, Becker, and Kalaian 1988). A weighted GLS allows us to model the interdependencies present in the data set, given that a study may have provided multiple effects between embarrassment and key outcomes. My sample includes works reporting multiple correlations in the same study, and these correlations cannot be treated as independent. Modeling these within-sample dependencies ensures that the studies are not biased toward the studies reporting multiple correlations.

RESULTS

Embarrassment and Emotion- and Problem-Focused Coping

Table 6 presents the results of the overall correlations between embarrassment and emotion- and problem-focused coping. I first examine the correlation between

embarrassment and emotion-focused coping. The correlation between these two variables is 0.23 (95% bootstrap CI: 0.17 to 0.30), indicating a positive and significant relationship between these variables. Next, I turn to the relationship between embarrassment and problem-focused coping. The overall correlation between these two variables is 0.21, and as such, the effect is small to moderate (Cohen 1988). The 95% bootstrapped CI for this correlation ranges from 0.12 to 0.28, providing evidence that embarrassment and problem-focused coping are positively and significantly related. Given the heterogeneity present in both emotion-focused (Q = 655.9) and problem-focused (Q = 307.9) coping, moderator analysis is warranted.

Moderator Results

The results of the GLS regression reveal that the moderator variables proposed significantly affect the correlations between embarrassment and emotion- and problem-focused coping. Table 7 presents the results of the overall moderator analysis that tests the moderators for the aggregate data set of the embarrassment–coping response relationships together. Table 8 provides insight into the impact of the hypothesized moderators on each individual embarrassment–coping response relationship through a univariate examination of each relationship. I discuss the results and implications of these analyses next.

Situational Moderators

Situational Control. The moderator analysis provides support for the significant moderating impact of situational control in the model ($\beta = 0.08$, $p < .05$). As hypothesis

1a predicts, the relationship between embarrassment and emotion-focused coping is significantly stronger for studies examining externally controlled issues than for those conducted in the context of internally controlled transgressions (r_{EXT} = 0.25 vs. r_{INT} = 0.18; z = 4.44, p < .001). However, the analysis provides no support for hypothesis 1b. The contrast testing the relationship between embarrassment and problem-focused coping is in the hypothesized direction but is not significant (r_{EXT} = 0.19 vs. r_{INT} = 0.23; z = –1.28, NS).

Emotional Intensity. The results of the moderator analysis also provide equivocal support for the role of emotional intensity. The results indicate that intensity is a significant moderator of the relationships between embarrassment and both emotion- and problem-focused coping (β = –0.47, p < .05). Namely, the relationship between embarrassment and emotion-focused coping is stronger in highly emotionally intense situations ($r_{HIGH\ INT}$ = 0.27 vs. $r_{LOW\ INT}$ = 0.12; z = 8.76, p < .001), in support of hypothesis 2a. Contrary to hypothesis 2b however, the impact of embarrassment on problem-focused coping is also stronger in highly emotionally intense situations (r_{HIGH} = 0.23 vs. r_{LOW} = 0.13; z = 3.09, p < .01).

Trait Factor Moderators

Gender. Gender is a significant moderator on the observed effects between embarrassment and response outcomes (β = –0.44, p < .05). The results provide no support for hypothesis 3a, though hypothesis 3b is supported. The relationship between embarrassment and problem-focused coping is stronger for men than for women (r_{FEMALE} = 0.10 vs. r_{MALE} = 0.30; z = –8.65, p < .001). The analysis also shows support for

hypothesis 3c, though the alternative hypothesis 3d is not supported. The relationship between embarrassment and emotion-focused coping is stronger for women than for men ($r_{FEMALE} = 0.27$ vs. $r_{MALE} = 0.19$; $z = 4.27$, $p < .001$). Thus, gender effects appear to be driven by traditional gender roles in accordance with appraisal theory.

Age. The next moderation analysis examines age (low vs. high: $\beta = –0.37$, $p < .05$; moderate vs. high: $\beta = –0.26$, $p < .05$). The results of this analysis provide no support for hypothesis 4a. The positive relationship between embarrassment and emotion-focused coping did not differ between old and middle-aged consumers ($r_{OLD} = 0.24$ vs. $r_{MIDDLE} = 0.20$; $z = –1.12$, NS), between old and young consumers ($r_{OLD} = 0.24$ vs. $r_{YOUNG} = 0.19$; $z = 1.61$, NS), or between young and middle-aged consumers ($r_{YOUNG} = 0.19$ vs. $r_{MIDDLE} = 0.20$; $z = –0.27$, NS).

Analysis revealed partial support for hypothesis 4b. I found that the relationship between embarrassment and problem-focused coping was stronger for middle-aged consumers than old consumers ($r_{MIDDLE} = 0.30$ vs. $r_{YOUNG} = 0.07$; $z = –6.77$, $p < .001$). However, the relationship between embarrassment and problem-focused coping did not differ between middle-aged consumers and young consumers ($r_{MIDDLE} = 0.30$ vs. $r_{YOUNG} = 0.24$; $z = 1.54$, NS). Surprisingly, the relationship between embarrassment and problem-focused coping was stronger for young than for old consumers ($r_{YOUNG} = 0.24$ vs. $r_{OLD} = 0.07$; $z = 3.67$, $p < .001$).

Individualism. The GLS results suggest that individualism moderates the embarrassment–coping response relationships ($\beta = –0.66$, $p < .05$). In support of hypothesis 5a, analysis reveals that the relationship between embarrassment and emotion-focused coping is stronger for individualist samples ($r_{IND} = 0.27$ vs. $r_{COLL} = 0.16$; $z =$

6.46, $p < .001$). However, contrary to hypothesis 5b, individualism does not affect the relationship between embarrassment and problem-focused coping ($r_{IND} = 0.16$ vs. $r_{COLL} = 0.15$; $z = 0.56$, NS).

Hofstede's Cultural Dimensions

Power Distance. Power distance was a significant moderator ($\beta = 1.42$, $p < .01$). I found support for hypothesis 6a. The relationship between embarrassment and emotion-focused coping was stronger in the low-power-distance samples than in the high-power-distance samples ($r_{LOW\ PD} = 0.27$ vs. $r_{HIGH\ PD} = 0.13$; $z = 7.15$, $p < .001$). Conversely, I found no support for hypothesis 6b. Power distance did not affect the relationship between embarrassment and problem-focused coping ($r_{LOW\ PD} = 0.15$ vs. $r_{HIGH\ PD} = 0.16$; $z = 0.91$, NS).

Uncertainty Avoidance. Uncertainty avoidance was also a significant moderator for the embarrassment–coping response relationships ($\beta = -0.72$, $p < .01$). In support of hypothesis 7a, I found that the relationship between embarrassment and emotion-focused coping was stronger in high-uncertainty-avoidance cultures than in low-uncertainty-avoidance cultures ($r_{HIGH\ UA} = 0.25$ vs. $r_{LOW\ UA} = 0.17$; $z = 3.28$, $p < .001$). Analysis also revealed that uncertainty avoidance affects the relationship between embarrassment and problem-focused coping. However, the effect was counter to hypothesis 7b. The relationship between embarrassment and problem-focused coping was also stronger in high-uncertainty-avoidance cultures than in low-uncertainty-avoidance cultures ($r_{HIGH\ UA} = 0.17$ vs. $r_{LOW\ UA} = 0.12$; $z = 2.02$, $p < .05$)

Masculinity. Next, I examined the moderating impact of masculinity ($\beta = -0.18$, $p < .01$). Analysis revealed support for hypothesis 8a and hypothesis 8b. The relationship between embarrassment and emotion-focused coping was stronger in high-masculinity cultures than in low-masculinity cultures ($r_{HIGH\ MAS} = 0.26$ vs. $r_{LOW\ MAS} = 0.17$; $z = 3.28$, $p < .001$). Furthermore, the relationship between embarrassment and problem-focused coping was stronger in low-masculinity cultures than in high-masculinity cultures ($r_{HIGH\ MAS} = 0.13$ vs. $r_{LOW\ MAS} = 0.20$; $z = -2.44$, $p < .05$).

Long-term Orientation. Long-term orientation is a significant moderator for the observed effects between embarrassment and coping responses ($\beta = -0.30$, $p < .01$). I found support for hypothesis 9a, as the relationship between embarrassment and emotion-focused coping was stronger in short-term-oriented cultures than in long-term-oriented cultures ($r_{ST\ ORIENT} = 0.27$ vs. $r_{LT\ ORIENT} = 0.18$; $z = 5.10$, $p < .001$). However, analysis did not provide support for hypothesis 9b. Counter to my expectations, the relationship between embarrassment and problem-focused coping was also stronger in short-term-oriented cultures than in long-term-oriented cultures ($r_{ST\ ORIENT} = 0.19$ vs. $r_{LT\ ORIENT} = 0.10$; $z = 3.27$, $p < .01$).

Indulgence. The last cultural examined in the moderator analysis, indulgence, was also a significant moderator ($\beta = 1.78$, $p < .01$) of the embarrassment–coping response relationships. In support of hypothesis 10a, I found that the relationship between embarrassment and emotion-focused coping was stronger in indulgent cultures than in restrained cultures ($r_{INDUL} = 0.27$ vs. $r_{REST} = 0.13$; $z = 7.15$, $p < .001$). Furthermore, the relationship between embarrassment and problem-focused coping was stronger in

restrained cultures than in indulgent cultures (r_{INDUL} = 0.10 vs. r_{REST} = 0.19; z = –1.83, p = .07).

Control Variables. Many of the control variables included in the model account for additional variance in the embarrassment–coping response relationship. Table 9 provides a summary of the univariate results for the control variables.

Robustness Checks

I conducted a series of checks to assess the robustness of my results. The main objective of these follow-up analyses was to confirm the validity of analytical decisions I made in this meta-analysis. I was able to replicate the overall pattern of results across six robustness checks (see table 10). Thus, the results are less likely to be affected by any analytical decisions with regard to study inclusion, data coding, and data analysis than by the actual effects.

First, I tested a model using unweighted, uncorrected correlations as the dependent variable. To test the relative strength of the theoretical variables, I tested two models excluding all control variables. Note that I estimated the theoretical moderator models with all six of Hofstede's (2001) dimensions (model 2) as well as with individualism only (model 3) to ensure that multicollinearity across the cultural dimensions did not affect the model coefficients. I also estimated two models that exclude potential outliers. I followed Wilcox's (1998) trimmed mean procedure in the fourth robustness check and excluded the most extreme 20% of the data (Scheibehenne, Greifeneder, and Todd 2010). Fifth, I performed SAMD outlier analysis using following the procedure set forth in Huffcutt and Arthur (1995). This analysis yielded five outliers

and I estimated a model excluding these cases. Last, I estimated a model on the subset of studies that reported only one dependent variable to ensure my decision to include aggregate effects does not bias the effects.

The GLS model with uncorrected, unweighted correlations as dependent variables revealed similar effects to the original model. The signs and significance of the coefficients for the main variables were consistent with the original model. Thus, I am confident that the observed effects were relatively robust to measurement and sample weight artifacts. Furthermore, the results of the two models examining only theoretical moderators are also consistent with my original model and provide support for this analytical decision. The coefficients for the main moderators in model 2 were consistent with the coefficients of the main model, except for the situational control variable, which was no longer significant, and the "Age: moderate vs. high" variable, which was now positive in sign and significant. Model 3 revealed a similar picture in that the coefficients for the main moderators were consistent with the original model, except for the two age variables. The coefficient for "Age: low vs. high" was still negative but no longer significant, and the coefficient of "Age: moderate vs. high" was positive and significant. Thus, the effects of the original model were robust to my decisions for moderators and control variables.

I controlled for potential outliers in models 4 and 5. Model 4 (N = 75) excluded outliers identified by Wilcox's (1998) procedure by omitting the most extreme 20% of the data (Scheibehenne, Greifeneder, and Todd 2010). Model 5 (N = 88) excluded outliers identified by a sample-adjusted meta-analytic deviancy analysis (Huffcutt and Arthur 1995). This analysis yielded five outliers and I estimated a model excluding these

cases. Models 4 and 5 revealed coefficients for the main moderators that were consistent with my original model with one exception. The coefficient of Individualism was no longer significant in model 4.

Multiple studies have reported more than one variable that could be categorized as emotion- or problem-focused and were aggregated for the analysis (Hunter and Schmidt 2004). Model 6 uses the subsample of studies that reported only one dependent variable (N = 62) to test the robustness of my data including the aggregate effects and my decisions to aggregate variables. The coefficients of model 6 were consistent with the original model. Thus, model 6 provides evidence for the robustness of my original model to analytical decisions to aggregate dependent variables when a study reported multiple variables that fell into the emotion- and problem-focused categories. Note that I was not able to estimate a model that uses the subset of studies that have aggregate dependent variables. The limited sample prevented model convergence even when dropping all control variables.

In summary, I find that my results are relatively consistent across all robustness checks. The coefficient for the dependent variable was fairly stable and significant across all six robustness checks. Furthermore, the situational moderators situational control and intensity were significant across five and six robustness checks, respectively. The trait factor moderators gender and individualism were significant across six and five of the six robustness checks, respectively. Notably, age was the least consistent focal moderator across models. The contrast between high and low age was significant across five robustness checks, and the contrast between moderate and high age was significant across four robustness checks. A possible explanation for this inconsistent variable could be

sample size limitations. Among the control variables, the type of sample (student vs. nonstudent), field of study (marketing vs. medicine/health care), and type of independent variable (manipulated vs. measured embarrassment) were significant across all robustness checks.

I also ran alternative models including only one of the cultural dimensions at a time to control for potential multicollinearity across dimensions. Multicollinearity was not a major issue in the main analysis, but Hofstede (2001) notes that several of the cultural dimensions are related to one another. Thus, I estimated six alternative models and found consistent results for individualism, power distance, uncertainty avoidance, and masculinity. The coefficients for long-term orientation and indulgence remained significant, but the direction of the effect changed (see table 11). Note that a sign change in the GLS does not affect the interpretation of the univariate effects.

DISCUSSION

Coping with stressful consumption episodes is a complex and nuanced process that is not generally well understood (Duhachek 2005). To the best of my knowledge, this research is the first to systematically and rigorously examine how consumers cope with a single discrete emotion using the transactional framework of appraisals and coping (Lazarus and Folkman 1984). Specifically, this study reconciles the disparate and often conflicting research examining how consumers cope with embarrassment. In doing so, I underscore the complexity of consumer responses to stressful consumption experiences and provide clarity and categorization for the constructs being studied, independent of

contextual variations. The current research reveals significant variance and moderation of the relationships between embarrassment and emotion- and problem-focused coping, which carries both theoretical and practical/public policy implications. Importantly, while my analysis supports the relationship between embarrassment and both forms of coping, the strength of these relationships is contingent on situational and trait factors.

Theoretical Implications and Future Research

This meta-analysis systematically synthesizes consumers' coping responses to embarrassment. Previous research has examined a wide range of coping responses and contexts without an overarching structure, resulting in often disparate and even competing observations that limit generalizability. Drawing on the structure of Lazarus and Folkman's (1984) transactional model of appraisals and coping, the current research achieves two objectives. First, I introduce construct-level coping dimensions to the previous contextually dependent coping responses, allowing for explanation and reconciliation of competing findings. Given that consumer coping responses (e.g., alcohol consumption) can be either emotion-focused or problem-focused depending on the research design and context, future research can adopt the framework presented here to gain structured interpretation and enhance generalizability. Using a structured approach to examine consumers' responses to embarrassment also allows for the introduction of additional situational and trait factors, contexts, and theoretical underpinnings that can further elucidate the embarrassment–coping response relationship. Second, examining research spanning four decades, this analysis reveals that several moderators account for significant variance in the embarrassment–coping response relationship. For example,

like any other emotion, embarrassment can range in intensity. A stronger relationship between more intense embarrassment and emotion-focused coping is somewhat intuitive; however, the significant relationship between embarrassment intensity and problem-focused coping is not readily observable from the extant literature and is counter to prior research (Miller 1996). This research reveals the presence of significant relationships between both emotion-focused and problem-focused coping for severely embarrassing situations. Furthermore, I provide support for Miller's (1996) prediction that embarrassment characterized by external situational control leads to greater emotion-focused coping responses.

The current research also resolves competing predictions about the role of gender and coping responses. One stream of literature suggests that male consumers use emotion-focused coping while women prefer problem-focused responses (Miller 1996). Appraisal theory, however, predicts the opposite effect, suggesting that women respond to embarrassment with emotion-focused coping while men employ problem-focused responses (Lazarus and Folkman 1984). This analysis supports the appraisal theory perspective, showing that embarrassment (vs. other emotions) may possess unique motivating qualities. For example, in their review of the relationship between gender and self-conscious emotions more broadly, Else-Quest et al. (2012) find no gender differences between how men and women experience embarrassment. Of note, that research finds that women and men experience other self-conscious emotions (e.g., shame and guilt) differently. Future research can build on the results presented herein by examining responses to other self-conscious emotions that are similarly experienced across genders, such as hubristic and authentic pride (Else-Quest et al. 2012).

I find similar contingent effects on the embarrassment–coping response relationship based on consumers' age. Embarrassment research proposes that younger consumers suffer more frequent and intense embarrassment (Miller 1996). This suggests that younger consumers will be more likely to employ emotion-focused coping while older consumers will prefer problem-focused coping strategies. However, the results indicate that use of emotion-focused coping is relatively consistent across age groups. Similarly, despite social resource support for younger consumers and greater identity of older consumers, which should support the use of problem-solving coping responses, I find only a weak relationship between embarrassment and problem-focused coping for these consumers. Validating and understanding the processes that drive this effect is another important area of future research, as studies to date have largely ignored embarrassment in older populations.

Although social influence is largely considered a foundational element of embarrassment, the role of culture in guiding consumers' responses to embarrassment remains largely unexplored. Although some limited research includes the role of individualism in consumers' coping responses, the coding based on geographic location of the studies (Kirca et al. 2005) allowed us to include Hofstede's (2001, 2011) six cultural dimensions. While this analysis confirms a positive relationship between embarrassment and emotion-focused coping in individualist cultures, individualist and collectivist samples exhibit no differences in the relationship between embarrassment and problem-focused coping. Because of the motivational differences and value propositions between the other five cultural dimensions, especially power distance, uncertainty avoidance, and masculinity, I predicted significant moderation from these factors. The

effect of masculinity is particularly noteworthy. High masculinity cultures, which value traditional gender roles, exhibit stronger emotion-focused responses than low masculinity cultures, which have less strict gender roles. This relationship reverses for problem-focused coping however. On the surface, these results appear to be in conflict with the results from gender moderation. However, gender and masculinity as a cultural dimension may guide coping behaviors in different ways because one is an individual difference and the other is a contextual moderator. These findings suggest that gender and associated gender roles are a fruitful area for further exploration.

Finally, the search process reveals several notable gaps in that analysis was not possible because of a paucity of research or limitations due to my analytical approach. First, the lack of data prevented us from examining consumers' responses to embarrassment experienced in public versus private contexts. Extending the traditional view of embarrassment, recent research demonstrates that embarrassment can be experienced in private (Krishna et al. 2015). Taking embarrassment into a private context can change the motivation to cope with an embarrassing situation. For example, impression management concerns in physical retail settings may become negligible when shopping online in private. Consumers may be more willing to engage in problem-focused behaviors, such as consulting online support resources about medical issues, when they can do so in private. Furthermore, the antecedent conditions for public and private embarrassment are fundamentally different. Higuchi and Fukada (2002) note that public embarrassment is governed by consumers' social evaluation concern and research has examined the moderating impact of others on experiences of embarrassment. Private embarrassment, on the other hand, is caused by consumers' loss of self-esteem (Higuchi

and Fukada 2002) suggesting that bolstering consumer's self-esteem could reduce embarrassment. Thus, examination of how self-esteem impacts private embarrassment represents a fruitful avenue for future research.

Second, I was not able to examine social identity similarities between transgressors and observers. Embarrassment research suggests that the intensity with which consumers experience embarrassment also depends on the presence of in- and out-group members (Eller, Koschate, and Gilson 2011). Therefore, coping responses should be contingent on the relationship between transgressors and observers as well. These results indicate that intense embarrassment leads to more emotion-focused coping. However, the comfort provided by the presence of in-group members could mitigate such effects and potentially explain one rather surprising findings. Such extremely embarrassing experiences in front of in-group members may lead to greater problem-focused coping.

Third, because I examine public embarrassment from the transgressor's perspective, I am unable to predict how these findings apply to other forms of embarrassment, such as vicarious embarrassment or empathic embarrassment (Krach et al. 2011). In these cases, observers can experience an emotional reaction to embarrassing situation that parallels transgressors' experiences. However, the coping responses in such cases may differ from the findings presented here. For example, because observers are not the center of attention in public embarrassing situations their responses may resemble responses to those experiencing private embarrassment.

Fourth, only a fraction of studies in this meta-analysis investigate embarrassment in older populations. Thus, future research should examine embarrassment in older

populations for theoretical as well as practical reasons. The small number of older samples provides a potential explanation for the null effect between embarrassment and emotion-focused coping across age groups. Future research can serve to validate this finding and examine underlying processes in older populations.

One final fruitful avenue for research is to examine boundary conditions for the observed effects. For example, the timing of the response could impact consumers' reaction to embarrassing situations. Embarrassment is defined as a rather short-lived (Tangney et al. 1996) emotion, and a cooling-off period may allow consumers to revert back to a normal state and to utilize problem-focused responses. Furthermore, I examined the moderating impact of gender on the embarrassment–coping response relationships and concluded that women are more likely to engage in emotion-focused coping while men are more prone to problem-focused coping. These results provide support for the dominant effects in the extant literature. However, future research should examine the conditions under which these effects do not occur. For example, construal processes and the effects of interdependence affect women and men differently (Melnyk, Van Osselaer, and Bijmolt 2009). Men are collective interdependent and care for group relationships, while women care more about individual relationships. Thus, women are motivated to preserve these individual relationships and may engage in problem-focused coping if embarrassment strikes in front of close friends or family members.

Practical and Public Policy Implications

The current research demonstrates that embarrassment can have significant impacts on consumer welfare. In many cases, emotion-focused coping responses carry

serious, negative health implications for consumers. In other cases, problem-focused responses have the potential to positively affect consumer welfare, such as norm compliance in sustainable behavior. Notably, the analysis shows that embarrassment leads to strong emotion-focused but limited problem-focused coping responses in older populations. Because of the increased incidence of health concerns among older consumers, these results threaten a particularly vulnerable segment of the population, one that can least afford to let the mundane experience of embarrassment carry such negative implications for personal health. Health care providers and public policy officials can use the power of norms to reduce the stigma attached to specific conditions or behaviors. For example, if a specific medical condition creates a threat to independence, public service announcements can discuss the prevalence of this condition among the population to reduce the negative impacts on the self. Medical providers can likewise create environments and processes that reduce the stigma associated with health care processes. In other cases, the same outcomes can be accomplished through promotion that, for example, portrays older consumers engaged in what may be considered embarrassing behaviors (e.g., buying condoms) to normalize the behavior and reduce the natural aversion tendencies of older consumers.

Another practical implication stems from the finding that gender moderates the use of emotion- and problem-focused coping behaviors. Male consumers are more likely than women to employ problem-focused coping responses that could lead to positive personal welfare. This analysis suggests that female consumers use more emotion-focused responses when coping with embarrassing situations. This difference has important implications for the use of embarrassment in promotional appeals. Marketers of

goods and services associated with embarrassment, for example, could design messages to female audiences in a way that encourages active, problem-focused coping strategies to overcome the tendency to avoid stressful, embarrassing situations. Conversely, and perhaps counterintuitively, messages targeting male audiences could benefit from actually highlighting embarrassing aspects of the good or service, given their tendency to engage in problem-focused coping responses. Given the prevalence of embarrassment in everyday situations and the potential for consumers' responses to this emotion to carry meaningful consumer welfare implications, this research provides a prescription for marketers and policy makers to use this emotion to create positive impacts. On the one hand, the potential for negative, emotion-focused coping dictates the need to recognize the power of embarrassment and mitigate these harmful outcomes. On the other hand, the potential for problem-focused coping, which carries both personal and societal benefits, highlights the potential for embarrassment to guide positive behaviors.

TABLE 1-1: Variable Descriptions

Variable	Description	Coding[a]	Representative articles
Coping responses			
Emotion-focused coping	Emotion-focused coping includes responses that attempt to regulate the emotional experience associated with an embarrassing situation. Reappraising the situation by blaming and attacking others or by avoiding/escaping the situation altogether is a common behavior included in this construct.	-	Esmark Jones et al. (2018); Krishna et al. (2015); Dahl et al. (1998); Consedine et al. (2007); Consedine et al. (2011)
Problem-focused coping	Problem-focused coping encompasses all attempts to alter and change the underlying source of embarrassment. Typical behaviors associated with this construct include rational thinking, help seeking, or enlisting social support resources, among others.	-	Grasmick et al. (1991); Apsler (1975); Feinberg et al. (2011); Cann and Blackwelder (1984); Zoccola et al. (2011)
Moderators			
Situational control	I categorized study stimuli and identified whether the embarrassing situation can be controlled by the consumer (e.g., norm violation, sex drive) or not (e.g., performance feedback, service failure).	Studies identified as externally controlled were coded as 0; studies identified as internally controlled were coded as 1.	Internal factor causes embarrassment: Wan 2013 External factor causes embarrassment: Wu and Mattila (2013)
Emotional intensity	Three independent coders categorized the study stimuli into either high intensity or low intensity. Interrater reliability was satisfactory (PRL = .81; Rust and Cooli 1994). Disagreement was resolved by majority decision.	Studies categorized as highly intense were coded 1; studies with low intensity stimuli were coded as 0.	High emotional intensity: Consedine et al. (2007) Low emotional intensity: Cann and Blackwelder (1984)
Gender	Gender of each sample in the data set was recorded and coded for whether the sample consists predominately of male or female participants. Samples with an even 50/50 split in terms of gender composition were excluded from this analysis.	Samples consisting of more than 50% males were coded as 0; samples consisting of more than 50% females were coded as 1.	Male: Sarkar and Sarkar (2017) Female: Walsh et al. (2017)
Age	Mean sample age was recorded for each study. I ordered the sample by age and split the sample into three groups. Young samples (20.5 years and younger) consisted of the studies ranked as the youngest 33% of studies, middle-	Young samples were coded as 1, middle-aged samples were coded as 2, and old samples were coded as 3.	Young: Allard and White (2015) Middle-aged samples: Fernández et al. (2015) Old: Consedine et al. 2011

	aged samples (between 20.5 and 33.5 years) consisted of the studies ranked between the 34th percentile and 67th percentile, and old samples (33.5 years and older) were the oldest 33% of studies.		
Individualism	I recorded the country in which the studies in this data set were recorded. Hofstede's (2001) individualism score for each country was recorded. I followed Kirca et al. (2005) and conducted a median split to group the sample into high and low individualism. The median value was 89.5.	High individualism scores were coded as 1; low individualism samples were coded as 0.	High individualism: Wu and Mattila (2013) Low individualism: Song et al. (2017)
Power distance	I recorded the country in which the studies in this data set were recorded. Hofstede's (2001) power distance score for each country was recorded. I followed Kirca et al. (2005) and conducted a median split to group the sample into high and low power distance. The median value was 40.	High power distance scores were coded as 1; effects from low power distance samples were coded as 0.	High power distance: Romani et al. (2012) Low power distance: Verbeke and Bagozzi (2003)
Uncertainty avoidance	I recorded the country in which the studies in this data set were recorded. Hofstede's (2001) uncertainty avoidance score for each country was recorded. I followed Kirca et al. (2005) and conducted a median split to group the sample into high and low uncertainty avoidance. The median value was 46.	High uncertainty avoidance scores were coded as 1; effects from low uncertainty avoidance samples were coded as 0.	High uncertainty avoidance: Puntoni et al. (2015) Low uncertainty avoidance: Dong et al. (2013)
Masculinity	I recorded the country in which the studies in this data set were recorded. Hofstede's (2001) masculinity score for each country was recorded. I followed Kirca et al. (2005) and conducted a median split to group the sample into high and low masculinity. The median value was 62.	High masculinity scores were coded as 1; effects from low masculinity samples were coded as 0.	High masculinity: Krishna et al. (2015) Low masculinity: Allard and White (2015)
Long-term orientation	I recorded the country in which the studies in this data set were recorded. Hofstede's (2001) long-term orientation score for each country was recorded. I followed Kirca et al. (2005) and conducted a median split to group the sample into long-term and short-term orientation. The median value was 27.	Long-term orientation scores were coded as 1; effects from short-term orientation samples were coded as 0.	High long-term orientation: Azar (2010) Low long-term orientation: Apsler (1975)
Indulgence	I recorded the country in which the studies in this data set were recorded. Hofstede's (2011) indulgence score for each country was recorded. I followed Kirca et al. (2005) and conducted a median split to group the sample into high and low indulgence. The median value was 68.	High indulgence scores were coded as 1; effects from low indulgence samples were coded as 0.	High indulgence: Helweg-Larsen and Collins (1994) Low indulgence: Fernández, Saguy, and Halperin (2015)

Control variables			
Student vs. nonstudent sample	I recorded whether studies relied on student samples in their data collection or on other samples.	Student samples were coded as 1; nonstudent samples were coded as 0.	Student sample: Allard and White (2015) Nonstudent sample: Brumbaugh and Rosa (2009)
Single- vs. multi-item	The type of measure used in each study was recorded. I grouped measures into single- and multi-item measures of state embarrassment.	Single-item measures were coded as 1; multi-item measures were coded as 0.	Single-item scale: Azar (2010); Dong et al. (2013) Multi-item scale: Apsler (1975)
Trait vs. state measure	I assessed whether studies measured trait or state embarrassment.	Trait measures were coded as 0; state measures were coded as 1.	Trait measure: Zoccola et al. (2011) State measure: Archibald and Cohen (1971)
Journal quality	Journal quality was assessed and recorded using journal impact factors as reported in SCImago Journal and Country Rank report. The sample was subsequently split into quartiles.	Studies ranked in Q1 were coded as 1, in Q2 as 2, in Q3 as 3, and in Q4 as 4.	Q1: Blair and Roese (2013) Q2: Wan (2013) Q3: Wang et al. (2017) Q4: Nichols et al. (2015)
Measured vs. manipulated IV	I recorded whether study measured or manipulated embarrassment.	Studies that manipulated embarrassment were coded as 0; studies measuring embarrassment were coded as 1.	Measured: Consedine et al. (2007) Manipulated: White (2004)
Publication year	I assessed publication year for each publication included in this meta-analysis. I split the sample into two groups: studies predating Miller's (1996) qualitative review and studies published after 1996.	Studies published after 1996 were coded as 1; studies published before 1996 were coded as 0.	Pre-1996: Edelmann et al. (1984) Post-1996: Blair and Roese (2013)
Face-to-face vs. online	I recorded whether studies were collected in a face-to-face setting (i.e., an experimenter was present and interacting with the participants at some point during the study) or remotely using some type of online panel (e.g., Qualtrics, MTurk). Mail surveys were not categorized on this dimension.	Face-to-face studies were coded as 1; online studies were coded as 0.	Face-to-face: White (2004); Verbeke and Bagozzi (2003) Online: Brumbaugh and Rosa (2009); Krishna et al. (2015) Other: Romani et al. (2012)
Anticipated vs. experienced	Embarrassment can be assessed as anticipatory as well as reactive emotion. I recorded the way studies assessed embarrassment as anticipated (i.e. 'How embarrassed would you feel?') or experienced (i.e. 'How did the singing task make you feel?')	Anticipated studies were coded as 1; experienced studies as 0.	Anticipated: Blair and Roese (2013) Experienced: Apsler 1975
Measured vs. manipulated IV	I recorded whether study measured or manipulated embarrassment.	Studies that manipulated embarrassment were coded as 0; studies measuring embarrassment were coded as 1.	Measured: Consedine et al. (2007) Manipulated: White (2004)

NOTE.—[a]I created dummy codes for each variable as input for the GLS model.

TABLE 1-2: Sample Study Information

ID#	Paper	Study	DV	N	r	Reliability-adjusted r	Variance	Weighted, reliability-adjusted r
1	Allard and White (2015)	3	Problem-focused	157	0.01	0.01	0.0065	0.01
2	Apsler (1975)	1	Problem-focused	48	0.30	0.30	0.0222	0.31
3	Apsler (1975)	2	Problem-focused	60	0.30	0.30	0.0175	0.31
4	Archibald and Cohen (1971)	1	Emotion-focused	96	0.21	0.21	0.0108	0.21
5	Azar (2010)	1	Problem-focused	241	0.09	0.09	0.0042	0.09
6	Blair and Roese (2013)	2	Problem-focused	54	0.01	0.01	0.0196	0.01
7	Brand and Waterink (2018)	1	Emotion-focused	362	0.23	0.28	0.0028	0.29
8	Brown and Garland (1971)	2	Emotion-focused	40	0.56	0.56	0.0270	0.63
9	Brumbaugh and Rosa (2009)	1	Emotion-focused	600	-0.04	-0.04	0.0017	-0.04
10	Cann and Blackwelder (1984)	1	Problem-focused	120	0.34	0.34	0.0085	0.36
11	Chen, Coccaro, and Jacobson (2012)	1	Emotion-focused	2749	0.19	0.21	0.0004	0.21
12	Consedine, Krivoshekova, and Harris (2007)	1	Emotion-focused	250	0.31	0.31	0.0040	0.32

13	Consedine et al. (2011)	1	Emotion-focused	245	0.20	0.22	0.0041	0.22
14	Crawford and Novak (2000)	1	Emotion-focused	431	0.73	0.79	0.0023	1.06
15	Crawford and Novak (2013)	1	Problem-focused	118	-0.04	-0.05	0.0087	-0.05
16	Crawford and Novak (2013)	2	Problem-focused	195	-0.17	-0.20	0.0052	-0.20
17	Dahl, Gorn, and Weinberg (1998)	1	Emotion-focused	130	0.34	0.34	0.0079	0.35
18	De Barnier and Valette-Florence (2006)	1	Emotion-focused	346	0.09	0.10	0.0029	0.10
19	Dong, Huang, and Wyer (2013)	1	Emotion-focused	51	0.25	0.25	0.0208	0.26
20	Dong, Huang, and Wyer (2013)	2	Emotion-focused	67	0.35	0.35	0.0156	0.37
21	Dong, Huang, and Wyer (2013)	2	Problem-focused	67	0.30	0.30	0.0156	0.31
22	Dong, Huang, and Wyer (2013)	3	Emotion-focused	99	0.21	0.21	0.0104	0.21
23	Edelmann et al. (1984)	1	Emotion-focused	40	0.40	0.40	0.0270	0.42
24	Egbert and Parrott (2001)	1	Emotion-focused	206	0.20	0.21	0.0049	0.21
25	Esmark Jones, Barney, and Farmer (2018)	2	Emotion-focused	120	0.21	0.22	0.0085	0.22
26	Esmark Jones, Barney, and Farmer (2018)	4	Emotion-focused	99	0.34	0.34	0.0104	0.36
27	Esmark Jones, Barney, and Farmer (2018)	5	Emotion-focused	127	0.33	0.34	0.0081	0.36

28	Feinberg, Willer, and Keltner (2011)	1b	Problem-focused	38	0.32	0.38	0.0286	0.40
29	Fernández, Saguy, and Halperin (2015)	1	Emotion-focused	543	0.25	0.25	0.0019	0.26
30	Foss and Crenshaw (1978)	1	Emotion-focused	64	0.28	0.28	0.0164	0.29
31	Grasmick, Bursik, and Kinsey (1991)	1	Problem-focused	670	0.09	0.09	0.0015	0.09
32	Halberstadt and Green (1993)	1	Emotion-focused	161	0.30	0.33	0.0063	0.34
33	Halberstadt and Green (1993)	1	Problem-focused	161	0.18	0.20	0.0063	0.20
34	Harris (2003	1	Problem-focused	720	0.10	0.10	0.0014	0.10
35	Harris (2003)	1	Emotion-focused	720	0.18	0.18	0.0014	0.18
36	Helweg-Larsen and Collins (1994)	1	Emotion-focused	239	0.16	0.17	0.0042	0.17
37	Herold (1981)	1	Emotion-focused	265	0.27	0.29	0.0038	0.30
38	Hershcovis et al. (2017)	1	Emotion-focused	300	0.39	0.43	0.0034	0.46
39	Hershcovis et al. (2017)	2	Emotion-focused	45	0.39	0.55	0.0238	0.61
40	Holding and Lew (2015)	1	Emotion-focused	92	0.31	0.31	0.0112	0.32
41	Kaiser et al. (2008)	1	Problem-focused	801	0.31	0.31	0.0013	0.32
42	Kavaliauskė and Simanavičiūtė (2015)	1	Emotion-focused	257	0.09	0.10	0.0039	0.10

43	Kiel and Buss (2013)	1	Problem-focused	92	0.29	0.29	0.0112	0.30
44	Kim, Phelps, and Lee (2013)	1	Emotion-focused	566	0.06	0.06	0.0018	0.06
45	Kochenderfer-Ladd (2004)	1	Problem-focused	145	0.25	0.25	0.0070	0.25
46	Kochenderfer-Ladd (2004)	1	Emotion-focused	145	0.18	0.18	0.0070	0.18
47	Krishna, Herd, and Aydınoğlu (2015)	3	Emotion-focused	237	0.34	0.35	0.0043	0.37
48	Londono, Davies, and Elms (2017)	1	Emotion-focused	186	0.13	0.14	0.0055	0.14
49	Maltby and Day (2000)	1	Problem-focused	203	-0.18	-0.18	0.0050	-0.18
50	Maltby and Day (2000)	1	Emotion-focused	203	0.21	0.21	0.0050	0.22
51	McCambridge and Consedine (2014)	1	Emotion-focused	58	0.05	0.06	0.0182	0.06
52	Moore, Brødsgaard, and Rosenberg (2004)	1	Emotion-focused	30	0.49	0.49	0.0370	0.54
53	Moore et al. (2006)	1	Emotion-focused	489	0.22	0.29	0.0021	0.30
54	Moore et al. (2006)	1	Problem-focused	489	0.39	0.41	0.0021	0.43
55	Moore et al. (2008)	1	Emotion-focused	607	0.21	0.21	0.0017	0.21
56	Moore et al. (2008)	1	Problem-focused	607	0.30	0.31	0.0017	0.32
57	Neto and Mullet (2004)	1	Problem-focused	192	0.31	0.31	0.0053	0.32

58	Neto and Mullet (2004)	1	Emotion-focused	192	-0.15	-0.15	0.0053	-0.15
59	Nichols (2015)	3	Emotion-focused	294	0.30	0.34	0.0034	0.35
60	Nichols, Raska, and Flint (2015)	2	Problem-focused	414	0.48	0.48	0.0024	0.52
61	Ntoumanis et al. (2014)	2	Emotion-focused	79	0.27	0.31	0.0132	0.32
62	Ntoumanis et al. (2014)	2	Problem-focused	79	0.18	0.21	0.0132	0.22
63	O'Grady et al. (2011)	1	Emotion-focused	476	0.13	0.13	0.0021	0.13
64	Parrish et al. (1990)	1	Emotion-focused	1583	0.16	0.16	0.0006	0.16
65	Puntoni, De Hooge, and Verbeke (2015)	4	Emotion-focused	73	0.24	0.24	0.0143	0.24
66	Reynolds, Bissett, and Consedine (2018)	1	Emotion-focused	306	0.06	0.06	0.0033	0.06
67	Reynolds et al. (2016)	1	Emotion-focused	68	-0.36	-0.37	0.0154	-0.39
68	Romani, Grappi, and Dalli (2012)	5	Emotion-focused	227	0.19	0.19	0.0045	0.19
69	Sadikaj et al. (2015)	1	Emotion-focused	80	0.23	0.23	0.0130	0.23
70	Sadikaj et al. (2015)	1	Problem-focused	80	-0.02	-0.02	0.0130	-0.02
71	Sarkar and Sarkar (2017)	3	Problem-focused	360	0.30	0.33	0.0028	0.35
72	Sarkar and Sarkar (2017)	4	Problem-focused	360	0.32	0.35	0.0028	0.37

73	Song, Huang, and Li (2017)	1a	Emotion-focused	134	0.00	0.00	0.0076	0.00
74	Song, Huang, and Li (2017)	1b	Emotion-focused	122	-0.02	-0.02	0.0084	-0.02
75	Song, Huang, and Li (2017)	2	Emotion-focused	143	0.21	0.24	0.0071	0.25
76	Song, Huang, and Li (2017)	2	Problem-focused	143	0.16	0.19	0.0071	0.19
77	Song, Huang, and Li (2017)	3	Emotion-focused	249	0.04	0.04	0.0041	0.04
78	Tarr, Kim, and Sharkey (2005)	1	Emotion-focused	180	0.06	0.06	0.0056	0.06
79	Tarr, Kim, and Sharkey (2005)	1	Problem-focused	180	0.21	0.30	0.0056	0.31
80	Verbeke and Bagozzi (2003)	2	Emotion-focused	96	0.21	0.16	0.0108	0.16
81	Verbeke and Bagozzi (2003)	2	Problem-focused	96	0.16	0.20	0.0108	0.20
82	Walsh et al. (2016)	3	Emotion-focused	271	0.56	0.56	0.0037	0.63
83	Wan (2013)	1	Emotion-focused	118	0.52	0.52	0.0087	0.58
84	Wan and Wyer Jr. (2015)	3	Problem-focused	153	-0.06	-0.06	0.0067	-0.06
85	Wan and Wyer Jr. (2015)	3	Emotion-focused	99	0.09	0.09	0.0104	0.09
86	Wan and Wyer Jr. (2015)	4	Problem-focused	132	-0.43	-0.43	0.0078	-0.46
87	Wan and Wyer Jr. (2015)	4	Emotion-focused	132	0.06	0.06	0.0078	0.06

88	Wan and Wyer Jr. (2015)	5	Problem-focused	112	-0.28	-0.28	0.0092	-0.29
89	Wan and Wyer Jr. (2015)	5	Emotion-focused	112	0.34	0.34	0.0092	0.35
90	Wang, Oppewal, and Thomas (2017)	3	Emotion-focused	76	0.21	0.22	0.0137	0.23
91	White (2004)	1	Emotion-focused	80	0.79	0.79	0.0130	1.07
92	Wu and Mattila (2013)	1	Emotion-focused	229	0.11	0.11	0.0044	0.11
93	Zoccola et al. (2011)	2	Problem-focused	70	0.24	0.26	0.0149	0.26

TABLE 1-3: Variable Coding

CODING FOR MODERATOR VARIABLES, CONTROL VARIABLES,AND ROBUSTNESS CHECKS: [moderators] a = locus of control (1 – internal 0 – external), b = emotional intensity (1 – high, 0 – low), c = gender (1 – female, 0 – male), d = age (1 – young, 2 – middle-aged, 3 – old), e = individualism (1 – high, 0 – low), f = power distance (1 – high, 0 – low), g = uncertainty avoidance (1 – high, 0 – low), h = masculinity (1 – high, 0 – low), i = long-term orientation (1 – high, 0 – low), j = indulgence (1 – high, 0 – low), [controls] k = measure (1 – single item, 0 – multi item), l = construct (1 – state, 0 – trait), m = data collection (1 – face-to-face, 0 – online), n = sample (1 – student, 0 – nonstudent), 0 = field of study (1 – marketing, 2 – psychology, 3 – sociology, 4 – medicine, 5 – other), p = impact factor (1 –quartile 1, 2 – quartile 2, 3 – quartile 3, 4 – quartile 4), q = publication date (1 – published after 1996, 0 – published before 1996), r = study design (1 – measured, 0 – manipulated), s = anticipated vs. experienced (1 – anticipated, 0 – experienced), t = dependent variable (1 – single dependent variable, 0 – aggregate of multiple dependent variables) [robustness checks] u = Wilcox trimmed sample (1 – central 80% of sample, 0 – outlier 20%), v = SAMD outlier adjusted sample (1 - no outlier, 0 – outlier).

ID#	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)
1	1	0	1	1	0	0	1	0	1	1	-	1	1	1	1	1	1	0	0	1	1	1
2	1	0	0	-	1	0	1	1	0	1	0	1	1	1	2	1	0	0	0	1	1	1
3	1	0	1	-	1	0	1	1	0	1	1	1	1	1	2	1	0	0	0	1	1	1
4	0	1	-	-	1	0	1	1	0	1	0	1	1	1	2	1	0	1	0	0	1	1
5	0	0	-	-	0	0	1	0	1	-	1	1	-	-	2	4	1	1	1	1	1	1
6	1	0	0	-	1	0	1	1	0	1	-	1	0	1	1	1	1	0	1	1	1	1
7	-	-	1	3	0	0	1	0	1	1	0	1	0	0	5	4	1	1	0	1	1	1
8	0	1	0	-	1	0	1	1	0	1	1	1	1	1	2	1	0	1	0	1	0	1
9	0	1	-	-	1	0	1	1	0	1	0	1	0	0	1	1	1	1	0	1	0	1

10	1	0	-	-	1	0	1	1	0	1	1	1	1	-	2	4	0	0	0	1	0	1
11	1	1	1	3	1	0	1	1	0	1	0	1	-	0	2	3	1	1	1	0	1	1
12	1	1	1	1	1	0	1	1	0	1	0	1	1	1	2	3	1	1	0	1	1	1
13	1	-	1	3	1	0	1	1	0	1	0	1	1	0	2	3	1	1	0	1	1	1
14	1	-	1	-	1	0	1	1	0	1	1	0	1	1	2	4	1	1	1	1	0	0
15	1	-	1	-	1	0	1	1	0	1	1	0	1	1	2	4	1	1	1	1	1	1
16	1	1	1	-	1	0	1	1	0	1	1	0	1	1	2	4	1	1	1	1	1	1
17	1	0	0	-	0	0	1	0	1	1	0	1	1	1	4	4	1	1	0	1	1	1
18	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	4	1	0	0	1	1	1
19	-	-	1	1	0	1	0	1	1	0	1	1	1	1	2	1	1	0	0	0	1	1
20	-	-	1	1	0	1	0	1	1	0	1	1	1	1	2	1	1	0	0	1	1	1
21	1	0	1	1	0	1	0	1	1	0	1	1	1	1	2	1	1	0	0	1	1	1
22	1	0	1	1	0	1	0	1	1	0	1	1	1	1	2	1	1	0	0	1	1	1
23	1	1	-	-	1	0	0	1	1	1	-	1	1	1	2	4	0	0	1	1	1	1
24	1	0	1	3	1	0	1	1	0	1	0	1	-	0	4	3	1	1	1	1	1	1
25	1	0	1	-	1	0	1	1	0	1	0	1	0	0	1	1	1	1	0	1	1	1
26	1	0	1	-	1	0	1	1	0	1	0	1	0	0	1	1	1	1	0	1	1	1
27	1	1	1	-	1	0	1	1	0	1	0	1	0	0	1	1	1	1	0	1	1	1
28	0	0	1	-	1	0	1	1	0	1	0	1	1	0	2	1	1	1	1	1	1	1

29	1	0	1	3	0	1	1	0	1	0	-	1	0	1	2	1	1	1	0	0	1	1
30	0	1	-	-	1	0	1	1	0	1	-	1	1	1	2	4	0	0	1	1	1	1
31	1	1	1	3	1	0	1	1	0	1	1	1	-	0	5	2	0	1	1	1	1	1
32	-	-	0	-	1	0	1	1	0	1	0	0	1	0	2	3	0	1	1	0	1	1
33	1	0	0	-	1	0	1	1	0	1	0	0	1	1	2	3	0	1	1	0	1	1
34	1	1	0	2	1	0	1	0	0	1	0	1	1	0	2	2	1	1	0	1	1	1
35	1	1	0	2	1	0	1	0	0	1	0	1	1	0	2	2	1	1	0	1	1	1
36	1	1	1	1	1	0	1	1	0	1	0	1	1	1	2	1	0	1	0	0	1	1
37	0	1	1	1	0	0	1	0	1	1	0	1	1	1	2	1	0	1	1	1	1	1
38	1	0	1	3	1	0	1	1	0	1	0	1	0	0	5	1	1	1	0	1	1	1
39	-	-	1	2	1	0	1	1	0	1	0	1	0	0	5	1	1	1	0	1	0	1
40	1	1	1	3	-	-	-	-	-	-	0	1	0	0	4	4	1	1	0	1	1	1
41	0	0	1	2	-	-	-	-	-	-	1	1	1	1	2	2	1	1	1	0	1	1
42	0	0	1	2	0	1	1	0	1	0	0	1	0	0	1	4	1	1	0	1	1	1
43	0	1	1	3	1	0	1	1	0	1	1	1	1	0	2	2	1	1	0	1	1	1
44	1	0	0	-	0	1	1	0	1	0	0	1	0	0	1	4	1	1	1	0	1	1
45	1	0	1	-	1	0	1	1	0	1	1	1	1	0	2	4	1	1	1	0	1	1
46	1	1	1	-	1	0	1	1	0	1	1	1	1	0	2	4	1	1	1	0	1	1
47	1	1	0	3	1	0	1	1	0	1	0	1	0	0	1	1	1	1	0	1	1	1

48	-	1	0	-	1	0	0	1	1	1	1	1	1	0	1	2	1	1	1	0	1	1
49	1	0	1	3	1	0	0	1	1	1	0	0	1	0	2	2	1	1	0	0	0	1
50	1	1	1	3	1	0	0	1	1	1	0	0	1	0	2	3	1	0	0	0	1	1
51	1	1	1	2	-	-	-	-	-	-	-	1	1	0	2	1	1	1	0	1	1	1
52	1	1	0	-	0	0	0	0	1	1	1	1	1	0	4	2	1	1	0	0	1	1
53	1	1	0	-	-	-	-	-	-	-	0	1	1	-	2	4	1	1	0	0	1	1
54	1	1	0	-	-	-	-	-	-	-	0	1	1	-	2	4	1	1	0	0	0	1
55	-	1	0	2	-	-	-	-	-	-	0	1	1	0	4	3	1	1	0	0	1	1
56	-	-	0	2	-	-	-	-	-	-	0	1	1	0	4	3	1	1	0	1	1	1
57	1	1	-	2	-	-	-	-	-	-	0	0	1	1	2	1	1	1	0	1	1	1
58	-	-	0	2	0	1	1	0	0	0	0	0	1	1	2	1	1	1	0	1	0	1
59	1	1	1	3	1	0	1	1	0	1	0	0	0	0	1	3	1	1	0	1	1	1
60	1	1	0	2	1	0	1	1	0	1	-	0	1	1	1	4	1	1	1	1	0	1
61	1	1	-	1	1	0	0	1	1	1	0	1	1	1	2	3	1	0	1	1	1	1
62	1	-	1	2	1	0	0	1	1	1	0	1	1	1	2	3	1	1	1	1	1	1
63	0	1	-	1	1	0	1	1	0	1	1	1	0	1	2	3	1	1	0	0	1	1
64	1	0	-	-	-	-	-	-	-	-	1	1	1	0	2	2	1	1	0	1	1	1
65	0	1	1	2	0	0	1	0	1	1	0	1	1	1	1	2	1	0	0	0	1	1
66	1	1	1	3	0	0	1	0	1	1	0	1	0	0	4	2	1	1	1	0	1	1

67	1	0	-	-	-	-	-	-	-	-	0	0	1	0	4	2	1	0	1	0	0	0
68	1	1	0	-	0	1	1	1	1	0	0	1	-	1	1	2	1	1	0	0	1	1
69	1	1	-	-	0	0	1	0	1	1	0	1	-	0	2	3	1	0	0	0	1	1
70	1	0	-	-	0	0	1	0	1	1	0	1	-	0	2	3	1	1	0	0	1	1
71	1	0	0	1	0	1	0	0	1	0	-	1	1	1	1	4	1	1	0	1	1	1
72	1	0	0	2	0	1	0	0	1	0	-	1	1	1	1	4	1	0	0	1	1	1
73	1	0	0	1	0	1	0	1	1	0	0	1	1	1	1	1	1	0	0	1	0	1
74	-	-	-	-	0	1	0	1	1	0	0	1	1	1	1	1	1	0	0	1	0	1
75	-	-	0	1	0	1	0	1	1	0	0	1	1	1	1	1	1	0	0	0	1	1
76	-	-	0	1	0	1	0	1	1	0	0	1	1	1	1	1	1	0	0	0	1	1
77	0	1	1	1	0	1	0	1	1	0	0	1	1	1	1	1	1	0	0	1	0	1
78	1	1	1	2	1	0	1	1	0	1	0	0	1	1	3	3	1	0	1	0	1	1
79	1	-	1	2	1	0	1	1	0	1	0	0	1	1	3	3	1	1	1	1	1	1
80	1	-	0	-	0	0	1	0	1	1	0	1	1	0	1	2	1	1	0	0	1	1
81	1	0	0	-	0	0	1	0	1	1	0	1	1	0	1	2	1	1	0	0	1	1
82	1	0	1	-	1	0	1	1	0	1	0	1	0	1	1	2	1	1	1	1	0	1
83	1	1	-	2	-	-	-	-	-	-	1	1	1	1	1	2	1	1	0	0	0	1
84	1	1	1	-	0	1	0	1	1	0	1	1	1	0	1	1	1	1	0	1	1	1
85	1	0	1	-	0	1	0	1	1	0	0	1	1	0	1	1	1	0	0	1	1	1

86	1	0	1	-	0	1	0	1	1	0	0	1	1	0	1	1	1	0	0	1	0	0
87	1	0	1	-	0	1	0	1	1	0	1	1	1	0	1	1	1	0	0	1	1	1
88	1	0	1	-	0	1	0	1	1	0	1	1	1	1	1	1	1	0	0	1	0	0
89	1	0	1	-	0	1	0	1	1	0	-	1	1	1	1	1	1	0	0	1	1	1
90	1	0	1	1	0	1	0	1	1	0	0	1	1	1	1	3	1	0	1	1	1	1
91	1	1	-	-	1	0	1	1	0	1	-	1	1	1	1	1	1	0	0	1	0	0
92	1	0	1	3	1	0	1	1	0	1	1	1	-	0	5	2	1	0	1	1	1	1
93	1	1	1	3	1	0	1	1	0	1	0	0	0	0	2	3	1	0	1	1	1	1

TABLE 1-4: Computation of Effect Size and Other Metrics

Procedure	Computation	Reference
Computation of reliability adjusted effect size	corrected r_{xy} = raw r_{xy} /√(reliability x * reliability y)	Hunter and Schmidt (2004)
Fischer-Z transformation	= ½ log [(1+r)/(1-r)]	Rosenthal 1991
Computation of Q-statistic	$Q = \Sigma w_i$ [IVar(e)]	Hunter and Schmidt (2004)
Computation of fail-safe N	$N = k(r_k/(r_c - 1))$	Rosenthal (1979), Hunter and Schmidt (2004)
Precision	$1/SE_i$	Sterne and Egger (2005), Stanley and Doucouliagos (2014)
Egger's test	$E(z_i) = \beta_0 + \beta_1 * SE_i$	Egger et al. (1997), Sterne and Egger (2005)
PET	$E(z_i) = \beta_0 + \beta_1 *$ precision$_i$	Stanley and Doucouliagos (2014)
PEESE	$E(z_i) = \beta_0 + \beta_1 *$ precison$_i^2$	Stanley and Doucouliagos (2014)
Computation of transformed effect size	$d = X\beta + e$	Raudenbush et al. (1988)
Computation of moderator parameters	$\beta^* = (X' \Sigma^{-1} X')^{-1} X' \Sigma^{-1} d$	Raudenbush et al. (1988)
Variance–covariance matrix of β^*	$V_{\beta^*} = (X' \Sigma^{-1} X')^{-1}$	Raudenbush et al. (1988)

TABLE 1-5: Results of Publication Bias Analysis

	Emotion-focused	Problem-focused
Fail-safe N	16,610.3	2,374.1
Egger's test	β = 0.81 t = 1.20 (NS)	β = -2.06 t = -1.69 (NS)
Trim-and-fill corrected effect[a]		
L_0 Estimator	r = 0.23 95% CI = (0.16, 0.29) k = 62	-
PET slope	β = 0.11 t = 0.88 (*NS*)	β = -0.21 t = -1.17 (*NS*)
PEESE slope	β = 0.11 t = 0.87 (*NS*)	β = -0.21 t = -1.16 (*NS*)

NOTE.—PET = precision-effect test. PEESE = precision-effect estimate with standard error

[a]I followed the analytical tool provided by Suurmond, van Rhee, and Hak 2017 to conduct trim-and-fill analyses on our data.

TABLE 1-6: Coping Responses to Embarrassment

	k	N	r_u	r_{adj}	r_T	LCI_r	UCI_r	Q
Outcomes								
Emotion-Focused	61	16,684	0.23	0.24	0.23	0.17	0.30	655.9*
Problem-Focused	32	7,367	0.15	0.16	0.21	0.12	0.28	307.9*

NOTE.—k = number of effect sizes; N = number of participants in original studies; r_u = unadjusted mean correlation; r_{adj} = reliability adjusted mean correlation; r_T = inverse variance-weighted mean correlation; LCI_r = lower limit of the 95% bootstrap CI around the inverse variance-weighted mean correlation; UCI_r = upper limit of the 95% bootstrap CI around the inverse variance-weighted mean correlation; Q,= weighted sum of squared differences between individual study effects and the pooled effect across studies.

*$p < .001$.

TABLE 1-7: GLS Moderator Results

Moderator	Unstandardized beta
Emotion- vs. Problem-focused	0.33*
Moderators	
External vs. internal control	0.11*
Not reported vs internal control	0.22*
High vs. low intensity	-0.40*
Not reported vs. low intensity	-0.15*
Male vs. female sample	-0.42*
Not reported vs. female sample	-0.07*
Age: Low vs. high	-0.34*
Age: Moderate vs. high	-0.19*
Age: Not reported vs. high	0.11*
Hofstede's Cultural Dimensions	
High individualism vs. low individualism	-0.51*
High power distance vs. low power distance	1.12*
High uncertainty avoidance vs. uncertainty avoidance	-0.60*
High masculinity vs. low masculinity	-0.21*
High LT orientation vs. low LT orientation	-0.23*
High indulgence vs. low indulgence	1.37*
Culture not reported	0.47*
Controls	
Nonstudent vs. student	-0.46*
Not reported vs. student	-0.06
Multi-item vs. single-item measure	-0.14*
Other measures vs. single-item measure	0.38*
State vs. trait measure	-0.22*
Journal quality: Tier 2 vs. Tier 1	0.00
Journal quality: Tier 3 vs. Tier 1	-0.01
Journal quality: Tier 4 vs. Tier 1	0.19*
Field of study: Psychology vs. Marketing	-0.06*
Field of study: Sociology vs. Marketing	-0.62*
Field of study: Medicine vs. Marketing	0.56*
Field of study: Other vs. Marketing	0.57*
Publication year	0.36*
Online vs. face-to-face	-0.43*
Not reported vs. face-to-face	-0.62*
Anticipated vs. experienced embarrassment	0.03
Manipulated vs. measured IV	0.21*
F-Value	11.01
Adjusted r^2	0.78

NOTE.— LT = long-term.

*p < .05

TABLE 1-8: Univariate Results for Moderator Variables

	Emotion-focused coping			Problem-focused coping		
	r (k)	N	95% bootstrap CI	r (k)	N	95% bootstrap CI
Situational Factor Moderators						
Internal Control	0.18_a (26)	8,345	(0.13, 0.24)	0.23_a (14)	4,795	(0.13, 0.33)
External Control	0.25_b (25)	6,374	(0.20, 0.35)	0.20_a (10)	1,433	(-0.04, 0.33)
Intensity – High	0.27_a (46)	11,833	(0.21, 0.37)	0.23_a (20)	4,650	(0.10, 0.32)
Intensity – Low	0.12_b (8)	3,889	(0.00, 0.18)	0.13_b (5)	1,177	(0.09, 0.30)
Trait Factor Moderators						
Female Sample	0.27_a (34)	9,450	(0.20, 0.39)	0.10a (16)	3,193	(-0.06, 0.22)
Male Sample	0.19_b (15)	3,958	(0.13, 0.26)	0.30_b (12)	3,644	(0.21, 0.40)
Age – Young	0.19_a (12)	2,738	(0.14, 0.27)	0.24_a (4)	727	(0.05, 0.34)
Age – Middle-aged	0.20_a (9)	1,540	(0.12, 0.30)	0.30_a (8)	3,353	(0.20, 0.41)
Age – Old	0.24_a (12)	2,270	(0.20, 0.31)	0.07_b (4)	1,035	(-0.12, 0.28)
Hofstede's Cultural Dimensions						
Individualism – High	0.27_a (29)	8,912	(0.19, 0.42)	0.16_a (17)	3,367	(0.06, 0.28)
Individualism – Low	0.16_b (24)	4,411	(0.10, 0.22)	0.15_a (12)	2,093	(-0.02, 0.27)
Power Distance – High	0.13_a (16)	3,069	(0.06, 0.20)	0.18_a (8)	1,519	(-0.09, 0.32)
Power Distance – Low	0.27_b (37)	10,254	(0.20, 0.39)	0.15_a (21)	3,941	(0.06, 0.26)
Uncertainty Avoidance – High	0.25_a (37)	11,501	(0.17, 0.34)	0.17_a (20)	3,851	(0.09, 0.28)
Uncertainty Avoidance – Low	0.17_b (16)	1,822	(0.11, 0.24)	0.12_b (9)	1,609	(-0.14, 0.28)
Masculinity – High	0.26_a (40)	9,703	(0.19, 0.37)	0.13_a (21)	3,254	(0.00, 0.25)
Masculinity – Low	0.17_b (13)	3,620	(0.09, 0.24)	0.20_b (8)	2,206	(0.09, 0.31)
Long Term Orientation – High	0.18_a (27)	4,727	(0.13, 0.23)	0.10_a (13)	2,183	(-0.08, 0.23)
Long Term Orientation – Low	0.27_b (26)	8,596	(0.18, 0.42)	0.19_b (16)	3,277	(0.10, 0.31)
Indulgence – High	0.27_a (37)	10,254	(0.20, 0.39)	0.15_a (20)	3,700	(0.05, 0.27)
Indulgence – Low	0.13_b (16)	3,069	(0.06, 0.20)	0.18_a (8)	1,519	(-0.09, 0.31)

NOTE.— Correlations that do not share a subscript differ at $p < .05$

TABLE 1-9: Univariate Results for Control Variables

	Emotion-focused coping			Problem-focused coping		
	r (k)	N	95% bootstrap CI	r (k)	N	95% bootstrap CI
Controls						
Student Sample	0.32_a (28)	4,847	(0.19, 0.48)	0.21_a (17)	3,871	(0.08, 0.32)
Nonstudent Sample	0.19_b (31)	11,002	(0.15, 0.23)	0.23_a (12)	2,922	(0.11, 0.33)
Single Item Measure	0.18_a (13)	3,502	(0.14, 0.26)	0.18_a (10)	2,461	(0.03, 0.29)
Multi Item Measure	0.21_a (34)	10,753	(0.15, 0.26)	0.28_b (9)	2,937	(0.14, 0.42)
State Measure	0.21_a (52)	15,001	(0.17, 0.25)	0.22_a (23)	5,595	(0.11, 0.31)
Trait Measure	0.38_b (9)	1,683	(0.03, 0.70)	0.18_a (9)	1,762	(-0.02, 0.29)
Journal Quality – Tier 1	0.20_a (25)	4,249	(0.11, 0.37)	0.19_a (11)	1,895	(-0.04, 0.30)
Journal Quality – Tier 2	0.20_a (11)	1,721	(0.13, 0.33)	0.19_a (5)	2,409	(0.10, 0.32)
Journal Quality – Tier 3	0.22_a (14)	5,792	(0.19, 0.26)	0.34_b (7)	1,452	(0.09, 0.45)
Journal Quality – Tier 4	0.31_b (11)	2,922	(0.22, 0.37)	0.12_c (9)	1,601	(-0.05, 0.27)
Field – Marketing	0.19_a (24)	4,764	(0.11, 0.30)	0.19_a (10)	1,764	(-0.01, 0.30)
Field – Psychology	0.25_b (25)	9,365	(0.19, 0.37)	0.19_a (19)	4,723	(0.08, 0.28)
Field – Medicine	0.06_a (1)	180	-	0.41_b (1)	489	-
Field - Sociology	0.18_a (7)	1,493	(0.07, 0.27)	0.19_a (1)	143	-
Field – Others	0.31_b (4)	936	(0.17, 0.47)	0.38_a (1)	38	-
Published pre 1996	0.28_a (7)	905	(0.22, 0.37)	0.33_a (5)	336	(0.28, 0.36)
Published post 1996	0.22_a (54)	15,779	(0.18, 0.30)	0.20_b (27)	7,021	(0.11, 0.28)
Face-to-face	0.25_a (39)	8,152	(0.17, 0.37)	0.22_a (26)	6,641	(0.12, 0.30)
Online	0.22_a (16)	4,695	(0.13, 0.34)	0.09_b (3)	358	(-0.29, 0.32)
Anticipated embarrassment	0.26_a (17)	6,022	(0.15, 0.47)	0.22_a (13)	3,166	(0.08, 0.34)
Experienced embarrassment	0.21_b (44)	10,662	(0.16, 0.26)	0.20_a (19)	4,191	(0.08, 0.30)
Manipulated IV	0.17_a (20)	3,984	(0.12, 0.25)	0.23_a (13)	2,180	(0.00, 0.37)
Measured IV	0.24_b (41)	12,700	(0.18, 0.33)	0.20_a (19)	5,177	(0.10, 0.28)

NOTE.— Correlations that do not share a subscript differ at $p < .05$

TABLE 1-10: Results Summary for Robustness Checks

Moderator	Unstandardized beta					
	Model 1[a]	Model 2[b]	Model 3[c]	Model 4[d]	Model 5[e]	Model 6[f]
Emotion- vs. Problem-focused	**0.36***	**0.10***	**0.35***	**0.08***	**0.07***	**0.64***
Moderators						
External vs. internal control	0.16*	0.03	0.27*	0.16*	0.19*	0.38*
Not reported vs internal control	0.34*	0.84*	1.01*	-0.08*	-0.02	0.50*
High vs. low intensity	-0.23*	-0.69*	-0.41*	-0.24*	-0.31*	-0.33*
Not reported vs. low intensity	-0.05	-0.64*	-0.54*	0.22*	0.24*	0.19*
Male vs. female sample	-0.33*	-0.41*	-0.24*	-0.10*	-0.16*	-0.45*
Not reported vs. female sample	0.12*	-0.15*	0.10*	0.12*	0.09*	-0.00
Age: Low vs. high	-0.29*	-0.18*	-0.02	-0.10*	-0.19*	-0.43*
Age: Moderate vs. high	-0.06*	0.13*	0.49*	-0.12*	-0.11*	-0.09*
Age: Not reported vs. high	0.27*	0.39*	0.58*	0.01	0.03	0.14*
Hofstede's Cultural Dimensions						
High individualism vs. low individualism	-0.44*	-0.61*	-0.17*	-0.04	-0.15*	-0.53*
High power distance vs. low power distance	-	1.16*	-	-	-	-
High uncertainty avoidance vs. uncertainty avoidance	-	-0.57*	-	-	-	-
High masculinity vs. low masculinity	-	-0.20*	-	-	-	-
High LT orientation vs. low LT orientation	-	-0.51*	-	-	-	-
High indulgence vs. low indulgence	-	1.60*	-	-	-	-
Culture not reported	-0.30*	0.63*	0.01	0.11*	0.05*	-0.52*
Controls						
Nonstudent vs. student	-0.51*	-	-	-0.22*	-0.28*	-0.17*
Not reported vs. student	0.04	-	-	-0.10*	0.12*	0.40*
Multi-item vs. single-item measure	-0.04*	-	-	0.08*	0.04	-0.38*
Other measures vs. single-item measure	0.54*	-	-	0.18*	0.26*	0.38*
State vs. trait measure	0.02	-	-	0.15*	0.30*	0.15*
Journal quality: Tier 2 vs. Tier 1	0.05*	-	-	0.09*	0.22*	-0.13*
Journal quality: Tier 3 vs. Tier 1	0.02	-	-	0.11*	0.23*	0.28*
Journal quality: Tier 4 vs. Tier 1	0.10*	-	-	0.06	0.14*	0.21*
Field of study: Psychology vs. Marketing	0.03	-	-	0.06*	0.03	-0.10*
Field of study: Sociology vs. Marketing	-0.35*	-	-	0.21*	0.27*	-0.16
Field of study: Medicine vs. Marketing	0.57*	-	-	0.03	0.05	0.40*
Field of study: Other vs. Marketing	0.70*	-	-	0.40*	0.35*	0.54*
Publication year	0.42*	-	-	0.11*	-0.03	0.14*
Online vs. face-to-face	-0.27*	-	-	-0.01	0.15*	-0.44*
Not reported vs. face-to-face	-0.23*	-	-	-0.25*	-0.32*	-0.88*
Anticipated vs. experienced embarrassment	0.09*	-	-	-0.01	0.00	0.32*
Manipulated vs. measured IV	0.28*	-	-	0.16*	0.20*	0.53*
F-Value	**11.70**	**11.28**	**14.38**	**7.59**	**7.40**	**11.46**
Adjusted r^2	**0.76**	**0.64**	**0.61**	**0.71**	**0.67**	**0.82**

NOTE.—*p < .05; a = raw correlation (unweighted, uncorrected); b = no control variables in model (all Hofstede dimensions); c = no control variables (individualism only); d = Wilcox trimmed mean sample (individualism nly); e = SAMD outlier adjusted sample (individualism only); f = studies that reported only one DV (no aggregating necessary)

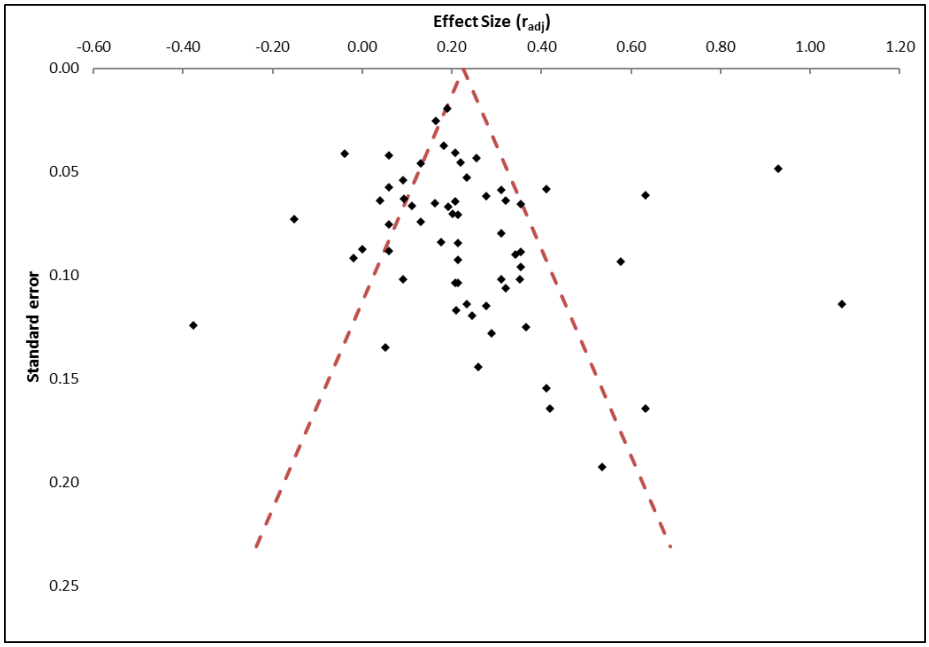
TABLE 1-11: Robustness Checks of Hofstede's (2001) Cultural Dimensions

Moderator	Unstandardized beta					
	Model 1[a]	Model 2[b]	Model 3[c]	Model 4[d]	Model 5[e]	Model 6[f]
Emotion- vs. Problem-focused	**0.41***	**0.38***	**0.40***	**0.42***	**0.39***	**0.42***
Moderators						
External vs. internal control	0.18*	0.20*	0.19*	0.15*	0.12*	0.22*
Not reported vs internal control	0.42*	0.34*	0.35*	0.35*	0.23*	0.36*
High vs. low intensity	-0.26*	-0.23*	-0.36*	-0.32*	-0.24*	-0.20*
Not reported vs. low intensity	-0.11*	-0.15*	-0.14*	-0.20*	-0.06	-0.09*
Male vs. female sample	-0.36*	-0.40*	-0.47*	-0.35*	-0.33*	-0.40*
Not reported vs. female sample	0.11*	-0.02*	-0.04	0.08*	0.06*	0.04*
Age: Low vs. high	-0.29*	-0.38*	-0.22*	-0.29*	-0.39*	-0.27*
Age: Moderate vs. high	-0.06*	-0.06*	0.03	0.10*	-0.14*	0.07*
Age: Not reported vs. high	0.28*	0.20*	0.37*	0.33*	0.19*	0.32*
Hofstede's Cultural Dimensions						
High individualism vs. low individualism	-0.45*	-	-	-	-	-
High power distance vs. low power distance	-	0.45*	-	-	-	-
High uncertainty avoidance vs. uncertainty avoidance	-	-	-0.33*	-	-	-
High masculinity vs. low masculinity	-	-	-	-0.40*	-	-
High LT orientation vs. low LT orientation	-	-	-	-	0.47*	-
High indulgence vs. low indulgence	-	-	-	-	-	-0.38*
Culture not reported	-0.33*	0.20*	-0.26*	-0.40*	0.07*	-0.36*
Controls						
Nonstudent vs. student	-0.52*	-0.52*	-0.43*	-0.50*	-0.56*	-0.51*
Not reported vs. student	0.07	0.06	0.29*	0.09*	0.06	0.25*
Multi-item vs. single-item measure	-0.06*	-0.14*	-0.14*	-0.00	-0.11*	-0.14*
Other measures vs. single-item measure	0.53*	0.39*	0.50*	0.60*	0.40*	0.46*
State vs. trait measure	-0.08*	-0.21*	-0.18*	-0.23*	-0.18*	-0.17*
Journal quality: Tier 2 vs. Tier 1	-0.01	-0.12*	-0.05*	0.18*	-0.03	-0.07*
Journal quality: Tier 3 vs. Tier 1	-0.01	0.02	0.17*	0.03	0.05*	0.06*
Journal quality: Tier 4 vs. Tier 1	0.14*	0.09*	0.04*	0.22*	0.14*	0.05*
Field of study: Psychology vs. Marketing	0.04*	-0.04	0.06*	0.14*	-0.02	0.03
Field of study: Sociology vs. Marketing	-0.34*	-0.61*	-0.53*	-0.36*	-0.67*	-0.56*
Field of study: Medicine vs. Marketing	0.62*	0.47*	0.55*	0.66*	0.52*	0.55*
Field of study: Other vs. Marketing	0.83*	0.63*	0.93*	0.79*	0.72*	0.82*
Publication year	0.49*	0.40*	0.50*	0.36*	0.46*	0.52*
Online vs. face-to-face	-0.34*	-0.34*	-0.34*	-0.25*	-0.39*	-0.35*
Not reported vs. face-to-face	-0.47*	-0.52*	-0.61*	-0.33*	-0.58*	-0.51*
Anticipated vs. experienced embarrassment	0.12*	0.11*	0.18*	0.00	0.12*	0.14*
Manipulated vs. measured IV	0.35*	0.32*	0.34*	0.43*	0.28*	0.39*
F-Value	**12.67**	**12.30**	**11.54**	**12.02**	**13.36**	**11.93**
Adjusted r^2	**0.78**	**0.77**	**0.76**	**0.77**	**0.79**	**0.77**

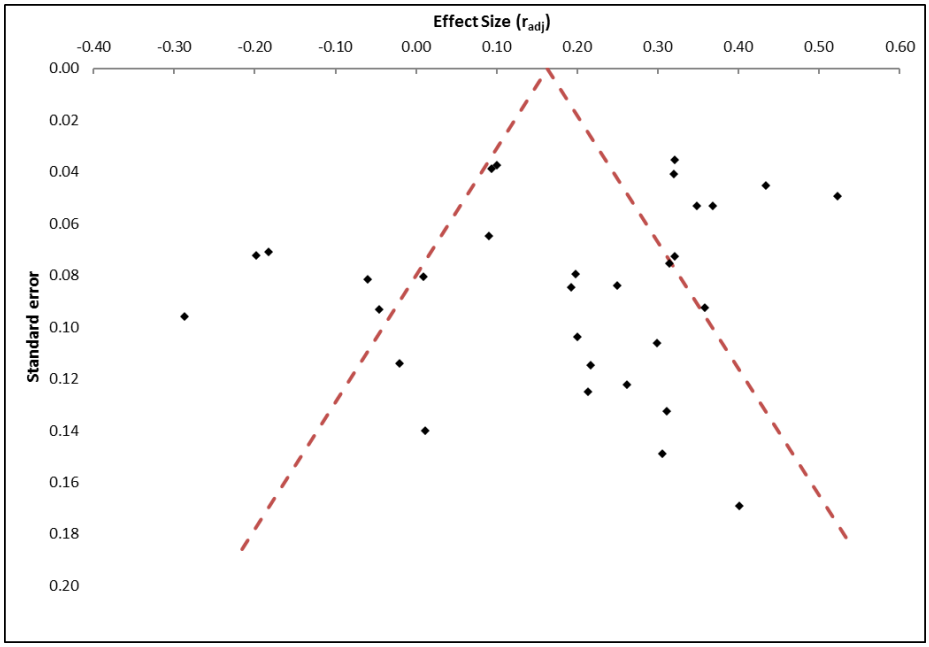
NOTE.—*p < .05; a = individualism only cultural dimension in model; b = power distance only cultural dimension in model; c = uncertainty avoidance only cultural dimension in model; d = masculinity only cultural dimension in model; e = LT orientation only cultural dimension in model; f = indulgence only cultural dimension in model

FIGURE 1-1: Funnel Plot of Embarrassment

A: EMOTION-FOCUSED COPING



B: PROBLEM-FOCUSED COPING



NOTE.—The dashed line indicates the 95% CI under the assumption that the data are normally distributed around the mean effect size.

FIGURE 1-2: Forest Plots for Embarrassment: Emotion-Focused Coping Effects

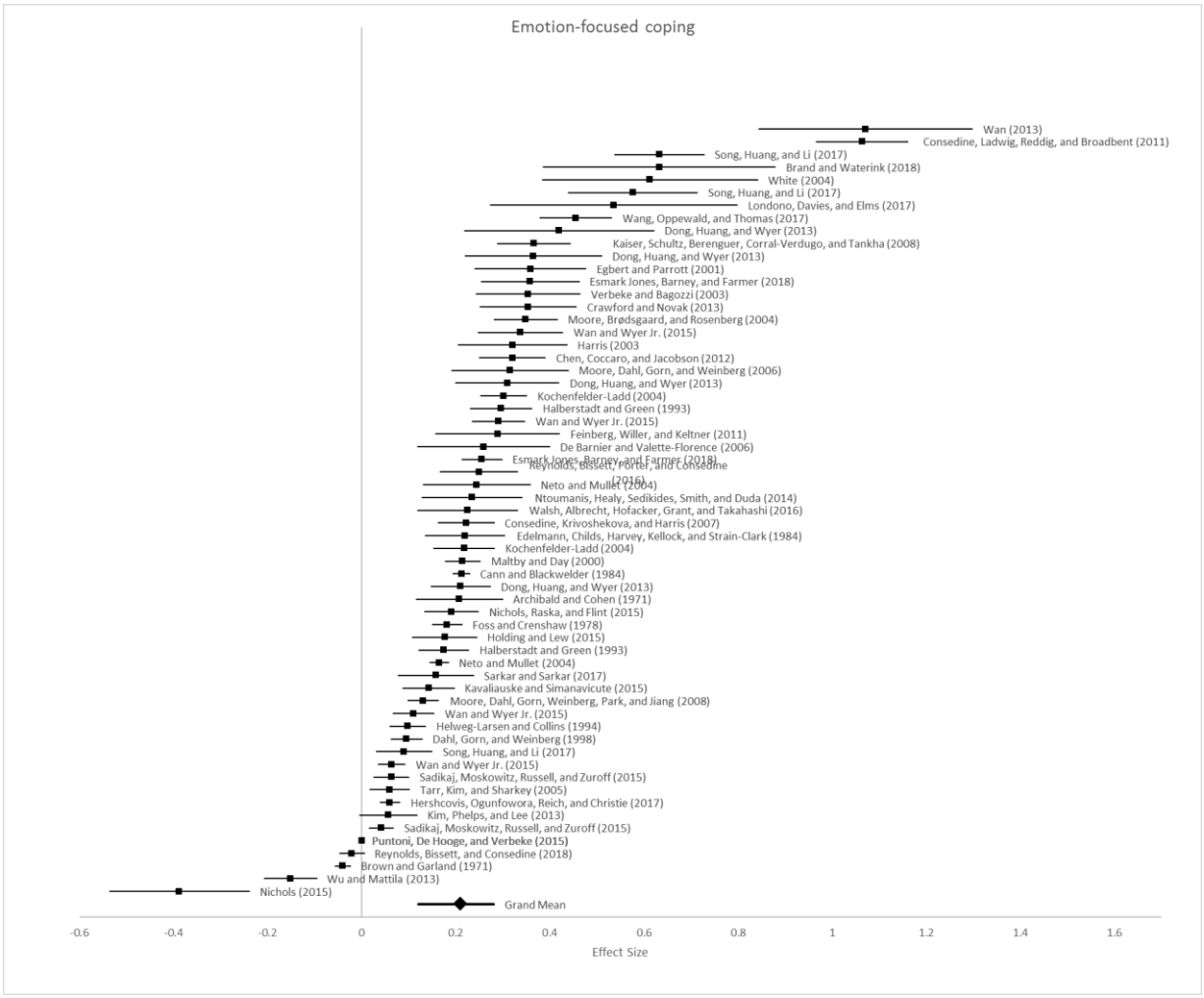
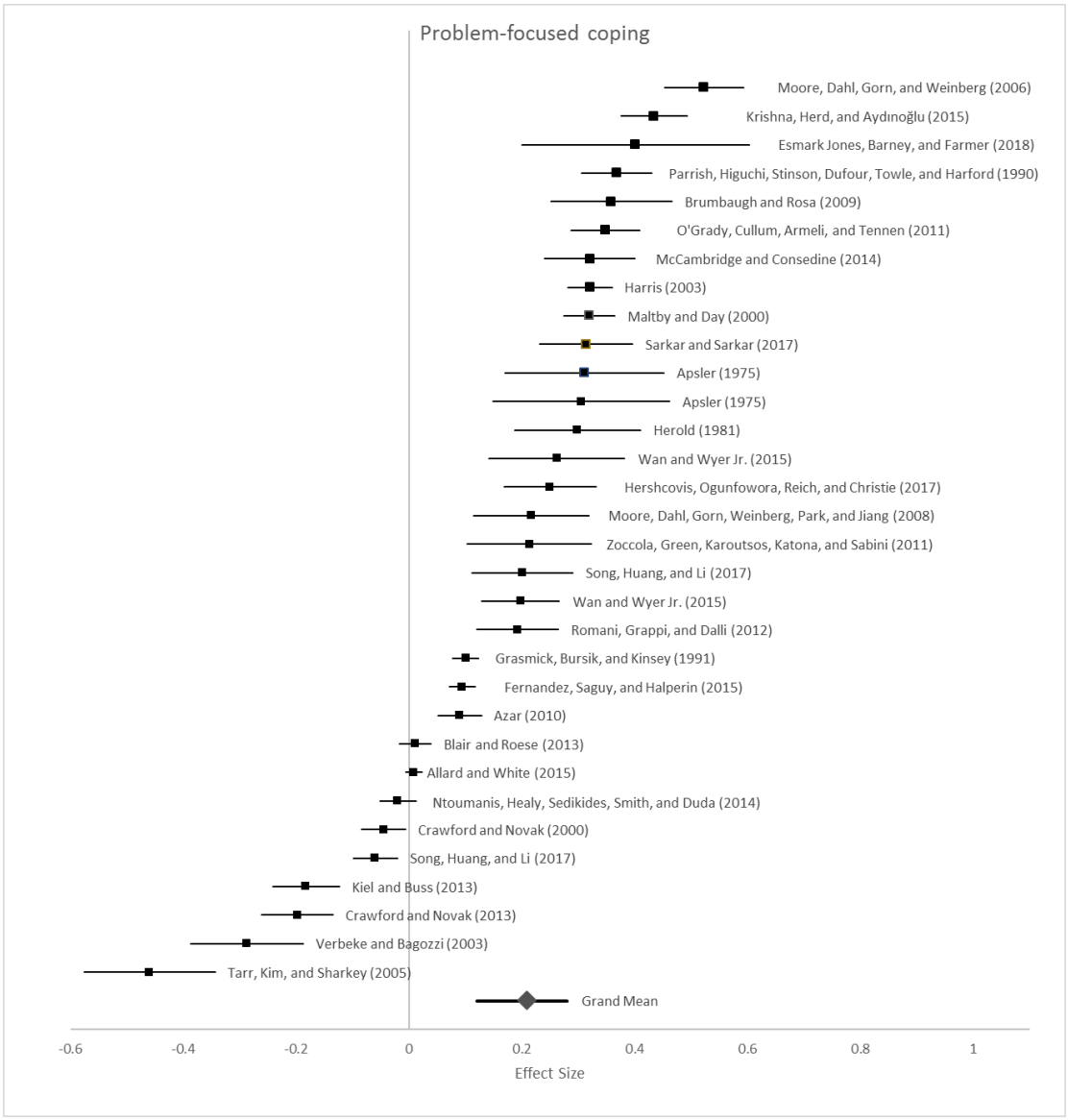


FIGURE 1-3: Forest Plots for Embarrassment: Problem-Focused Coping Effects



ESSAY TWO: THE NATURE OF OBSERVER EMBARRASSMENT

Consider two unacquainted customers in a store. Customer A is purchasing a box of condoms, and customer B, who is standing behind customer A in the checkout line, witnesses the purchase. Extant literature provides ample explanation for why customer A feels embarrassment, which requires both a social transgression of some kind (Goffman 1956b) and the appraisal of the transgression by observers (Dahl, Manchanda, and Argo 2001; Puntoni, De Hooge, and Verbeke 2015). And yet, although virtually everyone can relate to the embarrassment experienced by customer B in this scenario (e.g., Stocks et al. 2011), the literature is largely silent on why observers who witness social transgressions feel parallel embarrassment themselves. I label this phenomenon *observer embarrassment*.

Whereas actor embarrassment is caused by personally committing a social transgression in front of others (or imagined others; Krishna, Herd, and Aydinoğlu (2015)), observer embarrassment occurs within an observer who witnesses the social transgression. Because the observer committed no transgression, and is not therefore the subject of appraisal by others, this ubiquitous phenomenon lacks a theoretical account. In order to address this gap, I first identify observer embarrassment using validated measures (both attitudinal and physiological) to demonstrate that observers experience embarrassment parallel to that experienced by the actors they observe. I then provide process evidence, through mediation and moderation, of the role perspective taking plays in generating observer embarrassment. I also rule out the alternative explanations of negative affect, contagion, and the colloquial account of observer embarrassment as empathy for an embarrassed actor.

In introducing observer embarrassment to the consumer context, I make several contributions. First, to my knowledge, this is the first research to propose that observers are not merely a necessary condition for consumers who commit a social transgression (i.e., actor embarrassment) but also are negatively affected themselves through their own parallel embarrassment. Focusing on the appraisals of observers provides a complementary perspective to the extant literature examining how observers generate actor embarrassment.

Second, I identify the underlying process that generates observer embarrassment, using perspective taking as the mediating mechanism between witnessing a social transgression and experienced observer embarrassment. I find that observer embarrassment occurs only when an observer mentally simulates the embarrassing event, and that observer embarrassment is not generated by empathy for the actor who committed the transgression (Batson, Early and Salvarani 1997). Examining perspective taking also builds upon previous research examining private embarrassment (Krishna, Herd, and Aydinoğlu 2015) by explicitly examining the emotions experienced by observers versus actors.

Third, I extend services marketing literature that identifies the presence of other consumers as a critical factor in the service environment (Brady and Cronin 2001). Although previous research examining actor embarrassment (through service failures, for example) prescribes recovery strategies to mitigate embarrassment, it largely ignores the potential for observer embarrassment. The current research suggests the need for more holistic strategies to minimize the effects of embarrassment on all consumers present, not just the focal consumer who is the subject of a social transgression. The implications for

practice are considerable given that multiple observers often witness a social transgression by a single consumer (Grace 2007). Thus, observer embarrassment, and its negative impact on consumers and marketers, is likely exponentially more prevalent than actor embarrassment.

ACTOR AND OBSERVER EMBARRASSMENT

The literature on actor embarrassment dates back to the work of Goffman (1956b), who describes it as a deviation from a normal state during a social interaction. Such a deviation creates a situation in which the *actual* projected self is not congruent with the *desired* projection of the self. This imbalance is the root cause for actor embarrassment (Goffman 1956b; Modigliani 1968). The situations causing this deviation are diverse and can include incidents such as redeeming coupons in front of others (Ashworth, Darke, and Schaller 2005), tripping in front of a crowd (Bethell, Lin, and McFatter 2014), and purchasing an item that is socially awkward, such as condoms (Dahl, Manchanda, and Argo 2001; Lau-Gesk and Drolet 2008).

Although the concept of embarrassment is often used interchangeably with other affective experiences, such as shame and guilt, it is important to distinguish embarrassment from these other emotions. First, embarrassment is less intense than shame or guilt. Izard (1977) suggests that embarrassment is an element of shame, with shame resulting from serious failures and embarrassment from trivial transgressions (Lewis 1992). Embarrassment can also be distinguished from other emotions depending on the level of distress it causes. Whereas experiences resulting in shame and guilt can be more painful and with a greater sense of moral transgression, embarrassment is linked to

more inconsequential or even humorous events. Thus, embarrassment is the most frequently experienced emotion of the self-conscious emotions (Miller 1996; Tangney et al. 1996). Embarrassment also differs from shame as a result of the underlying attributions. While guilt and shame are emotions associated with self-blame (Kamins and Dweck 1999), embarrassing situations largely pertain to events that are unexpected or in which people feel less responsible. Finally, and of particular importance to the current research, unlike shame, embarrassment is almost exclusively experienced in social situations and appraised by other people present (Parrott and Smith 1991; for a notable exception see Krishna et al. [2015]).

Outside of observers' role in creating actor embarrassment, the extant literature is silent on how witnessing an embarrassing event impacts observers. As consumers who merely witness an event, observers should experience no personal embarrassment themselves. Observers have committed no transgression, and are not the focus of the appraisal of others. And yet, the embarrassment experienced by the observer in the opening example is familiar to nearly everyone.

Although prior research does not provide a theoretical account for observer embarrassment, its ubiquity is well documented. For example, prior research demonstrates that embarrassing situations act as stressors to observers witnessing the embarrassing episode involving an unrelated person (Krach et al. 2011; Puntoni, De Hooge, and Verbeke 2015). In fact, the potential for observer embarrassment dates back to Goffman (1956a, p. 265), who states: "When an individual finds himself in a situation that ought to make him blush, others present will usually blush with and for him." In the

next section, I introduce perspective taking as the underlying mechanism behind this phenomenon.

Perspective Taking

Batson and colleagues (1997) draw a distinction between two types of perspective taking relevant to observer embarrassment—imagine-other and imagine-self. When taking an imagine-other perspective, the observer imagines how the other is feeling, which increases empathy. With an imagine-self perspective, the observer imagines themselves as the actor. In the former, empathy can lead observers to act more altruistically (Hung and Wyer 2009). Under an imagine-self perspective, however, the observer also experiences personal distress, which can lead to antisocial or egoistic behaviors (Batson et al. 1997).

This difference in perspective-taking frames is attributed to the intensity of the perceived emotion of the individual being observed. When observing an individual experiencing an emotion that is relatively enduring in nature (e.g., loneliness), imagine-other perspective taking is triggered. However, when witnessing acute discomfort in an individual (such as embarrassment), observers are more likely to engage in imagine-self perspective taking and thus feel similar personal distress to the individual they observe. In the case of witnessed embarrassment, information on the source of the actor's transgression is clear, unlike more enduring emotions (e.g., loneliness) which have a less obvious causal role. This identifiable cause facilitates what Davis and colleagues (1996) conceptualize as a merger between the observers' self and the transgressor.

These different perspective-taking frames account for why observers, who have committed no social transgression and are not subject to appraisal by others, nonetheless experience embarrassment parallel to those who they observe. The experience of empathy, while perhaps uncomfortable, does not produce the same intensity of experienced emotions to trigger observer embarrassment. Thus, I predict the following:

H1: Witnessing a social transgression will lead to observer embarrassment.

H2: This effect is mediated by imagine-self perspective taking by observers.

To further examine the proposed mechanism, I examine situational factors that motivate imagine-self perspective taking. If the proposed mechanism is correct, and imagine-self perspective taking mediates observer embarrassment, I should see heightened levels of embarrassment in observers when they can more readily see themselves in the place of an actor. Identity congruence (i.e., the degree of similarity between an observer and actor) motivates the observer to engage in greater perspective taking while dissimilarity inhibits this process (Cialdini et al. 1997; Tu et al. 2016; Faraji-Rad et al. 2015). Thus, I argue that observers who share identities with an actor who commits a social transgression will experience heightened levels of observer embarrassment relative to witnessing an actor who commits a social transgression with whom they do not share an identity. A greater similarity with the transgressor will motivate imagine-self perspective taking, and will lead to greater observer embarrassment because of the distress related to imagine-self perspective taking (Batson et al. 1997; Bethell, Lin, and McFatter 2014).

H3: Social identity congruence moderates the relationship between observing a transgression and perspective taking, such that an (in) congruent identity between an actor and observer will lead to (lower) higher levels of imagine-self perspective taking.

Because I propose that the experience of observer embarrassment is the same as if they had themselves committed the social transgression, I also predict that the negative outcomes for actor embarrassment are also present when observers experience embarrassment through imagine-self perspective taking. These outcomes can lead consumers to negatively evaluate their experience and avoid the embarrassing context in an effort to alleviate the intensity of the emotion (Grace 2007; Miller 1979; Wan 2013).

H4: Observer embarrassment leads to negative evaluations of the consumption experience and greater aversive coping behaviors.

Overview of Studies

Next, I present the results of six studies that test the conceptual framework, as shown in figure 2-1. Studies 1A – 1C use physiological, behavioral, and self-report measures to provide robust evidence for observer embarrassment mirroring the more commonly studied actor embarrassment (H1). These studies demonstrate that appraising a social transgression by others leads to observer embarrassment. This triangulation of embarrassment measures suggests that observers do indeed experience embarrassment, versus other negative emotions, when exposed to social transgressions by others. I illustrate the role of perspective taking in the formation of observer embarrassment using

a social identity manipulation in studies 2, 3 and 4 (H2 and H3). In study 4, I also demonstrate that witnessing an embarrassing event leads to aversion to the situation, an effect mediated through observer embarrassment (H1 and H4), while ruling out empathy and negative affect as alternative explanations.

STUDY 1A

The objective of study 1A is to demonstrate, at a physiological level, the presence of observer embarrassment. Past research demonstrates that when consumers experience embarrassment, physiological changes include increased blood flow, cardiovascular activity, and associated increased hyperhidrosis (sweat) (Drummond and Su 2012; Harris 2001; Quinton 1983). Thus, I employ a skin conductance (SCR) measure of observer embarrassment. The SCR measure, which captures the time it takes for an electrical current to physically pass through participants, serves as a proxy for experienced embarrassment.

Participants and Procedure

Twenty-nine undergraduate students (55.2% female, M_{Age} = 20.43) at a large North American university participated in the study as part of a course requirement. Two participants were nonresponders (skin conductance level < 2μS [Dawson, Schell, and Filion 2007]) and excluded from subsequent analyses, which left 27 participants (51.9% female, M_{Age} = 20.45).

Participants were informed that they would view a series of grocery items. After providing written consent, participants washed their hands without soap, dried them off,

and entered the experimental room, where they were affixed with a Biopac MP150 and BioNomadix wireless physiology device for collecting SCRs. Disposable gel electrodes were attached to the index and middle fingers of participants' nondominant hand. Next, the lab assistant instructed participants to avoid any movement during the stimulus presentation and left the experimental room after initiating the experiment.

Participants were then asked to imagine that they were waiting in the checkout line at the grocery store behind *another customer* that is purchasing several items. They then viewed a series of product images on the computer screen, described as the items being purchased by the other customer. Each image appeared on the screen for 10 seconds and was preceded by a 30-second fixation period; the order of presentation was randomized. I recorded the SCRs with Biopac Systems' Acqknowledge 4.0 package. Following Acqknowledge SCR acquisition procedures, I sampled data at 2000 Hz and exported event-related SCRs for analysis. I then aggregated the SCR data across 200 ms epochs, screened for outliers, averaged across tenths of seconds, and then standardized to correct for individual differences in psychophysiological responses (Ben-Shakhar 1985). Next, I averaged the data across seconds to yield 13 seconds of data per stimulus per participant. I collected the first 3 seconds before the stimulus to provide a baseline score.

I pretested a series of grocery products to create three categories: Embarrassing (Vagisil, Tampax), control (eggs, Tide), and arousing (Gatorade, Chips Ahoy; see appendix A). The arousing product category was included to ensure the SCR measure could differentiate between embarrassment and other potential sources of elevated physiological measures, such as food (Vögele and Florin 1997). One hundred and eighty-five undergraduate participants (42.7% female, $M_{\text{Age}} = 20.64$) were randomly assigned to

rate one of the six products on a three-item observer embarrassment scale adapted by Dahl, Manchanda, and Argo (2001; $\alpha = .96$; see appendix B for a compilation of the measures used in all studies). To rule out mood or affect-based explanations, participants completed the positive and negative affect scale (Watson, Clark, and Tellegen 1988; $\alpha = .91$) as well as a five-item empathy scale (Omdahl 1995; $\alpha = .96$). As expected, the embarrassing products were rated as more embarrassing ($M = 2.82$, $SD = 2.02$) than the non-embarrassing arousing products ($M = 1.57$, $SD = 1.18$; $F(1, 182) = 19.30$, $p < .001$), and the control products ($M = 1.79$, $SD = 1.40$, $F(1, 182) = 13.29$, $p < .001$). The arousing and control products did not differ from each other ($F(1, 182) < 1$). General negative affect and empathy were not significant ($F(2, 182) < 1$).

Results and Discussion

Manipulation Check. Before leaving the lab, participants responded to a one-item measure to ensure they were aware that another customer was making the purchase ("Who bought the items in the previous scenario – you or another customer?"). All but one participant responded that another person in the store was buying the viewed items. Thus, the manipulation intended to induce an observer (versus actor) perspective was successful.

Hypothesis Testing. Following standard SCR analysis procedures, I conducted trough-to-peak analysis to estimate SCR onset and amplitude (Boucsein 2012). I calculated mean SCR magnitude for each category (Dawson, Schell, and Filion 2007), which enabled us to create simple pairwise comparisons of the images. I examined differences between product categories by computing a 3 (Product Category:

Embarrassing, Arousing, Control) × 2 (Product Replicate) within-subject analysis of variance (ANOVA). Mauchly's test indicated that the assumption of sphericity was violated for the main effect of product, $\chi^2(2) = 31.39$, $p < .01$. Therefore, I adjusted the degrees of freedom using the Greenhouse-Geisser estimates of sphericity ($\varepsilon = .58$). The analysis revealed a significant main effect of product category ($F(1{,}166, 30.32) = 9.547$, $p < .01$). As figure 2-2 shows, pairwise comparisons revealed that the SCR to embarrassing products was higher ($M = .14$) than the SCR to arousing ($M = .05$, $t(26) = 3.21$, $p < .02$) and control group products ($M = .04$, $t(26) = 3.19$, $p = .01$).

Using a physiological proxy for observer embarrassment, study 1A demonstrates that consumers experience embarrassment even when they have committed no social transgression (and therefore have no reason to feel embarrassment). These results support the prediction that observers of a social transgression experience observer embarrassment (H1). I base this conclusion on the theoretical and empirical relationship between SCR measures (e.g., sweat) and embarrassment (e.g., Harris 2001). However, one drawback of using a physiological measure to assess embarrassment is that is not possible to discern concrete emotions from other affective responses. In order to address this limitation, I included a commonly used self-report measure in study 1B to complement the SCR measure and to validate this findings.

STUDY 1B

Study 1B extends the first study in two ways. First, it replicates the SCR response using different stimuli intended to represent a more ecologically valid shopping situation (i.e., a video of a first-person shopper experience instead of the still images in study 1A).

Second, I complement the SCR dependent variable with a three-item self-report measure of observer embarrassment.

Participants and Procedure

Thirty-nine undergraduate students (35.9% female, $M_{Age} = 21.08$) at a large North American university participated in the study as part of a course requirement. Participants were randomly assigned to an embarrassing or nonembarrassing condition in a between-subjects design.

Procedures were the same as in study 1A. However, for this study I collected SCR data in response to a video of a first-person shopping experience. Participants saw a short video clip which recreated the experience of browsing a retail space. After 43 seconds, the video presents another shopper who is holding either an embarrassing (Vagisil) or a control (Quaker oatmeal) product (see appendix C). Thirteen seconds of data were recorded, including a baseline period defined as 3 seconds before stimulus onset (the appearance of the shopper), a 2-second latency epoch immediately following the stimulus onset (the 5-second encounter with the other shopper), and 8 seconds of stimulus response. I averaged the first 3 seconds to create a baseline score, which I then subtracted from each second of stimulus data to create baseline-corrected scores.

Because I am interested in capturing the embarrassment experienced by observers, participants completed the widely used self-report embarrassment measure adapted from Dahl, Manchanda, and Argo (2001; $\alpha = .88$). Participants completed this measure from the perspective of an observer of another customer purchasing an embarrassing item. Participants also reported their gender and the extent to which they

believed the simulation was realistic and humorous. These last items were critical for the psychophysiological data analysis, as humor produces arousal that can manifest in the SCR signal (Gross and Levenson 1997).

Results and Discussion

Skin conductance. To determine whether SCRs follow the expected pattern of observer embarrassment, I conducted a 2 (Product: Embarrassing, nonembarrassing × 8 (stimulus second) mixed-model analysis of covariance, controlling for gender, perceived realism, and humor. As predicted, the main effect of experimental condition was significant ($F(1, 34) = 3.90$, $p = .05$). As figure 2-3 shows, participants who observed the shopper with Vagisil showed a significantly greater SCR than participants in the control condition. None of the control variables included in the analysis were significant (humor: $F(1, 34) < 1$; realism: $F(1, 34) < 1$; gender: $F(1, 34) < 1$; all ps $> .05$).

Self-reported observer embarrassment. To validate the proposed three-item self-report measure of observer embarrassment, I conducted a similar analysis using the three-item scale as the dependent variable. Recall that this measure captured the embarrassment felt as the observer in the retail situation. In concert with the SCR measure, participants who witnessed the shopper with Vagisil reported significantly greater observer embarrassment ($M = 2.38$, $SD = 1.45$) than participants in the control condition ($M = 1.57$, $SD = 1.45$; $t(37) = 2.08$, $p < .05$). Because the SCR measures were collected instantaneously and the self-report measures were collected several minutes after participants were exposed to the stimuli, these results reflect a residual presence of

embarrassment long after the embarrassing stimuli is removed. This residual persists in spite of the illusion of courage, which suggests that consumers underestimate the extent to which they would experience embarrassment (Van Boven et al. 2012).

STUDY 1C

Further validating the identification of observer embarrassment, study 1C extends the previous studies in two ways. First, I further increase the ecological validity of observer embarrassment by moving from the lab into a simulated retail environment. Second, I complement SCR and self-report dependent variables by including a behavioral measure of observer embarrassment.

Participants and Procedure

Forty-five undergraduate students (44.4% female, $M_{Age} = 20.4$) at a large North American university participated in the study as part of a course requirement. Participants were randomly assigned to an embarrassing or nonembarrassing condition in a between-subjects design.

Participants were administered individually at a mock retail store in the behavioral lab on campus. When they arrived, they encountered an experimenter and a male confederate who served as the actor in this experiment. The experimenter instructed both the confederate and the participant to enter the retail space with a shopping basket, browse through all aisles, and select five products purchased during their last shopping trip. Upon selecting the five products, participants were further instructed to check out the five products on the self-checkout counter in the retail lab. In the embarrassing

condition the confederate selected a box of condoms, personal lubricant, and feminine itch cream along with ramen noodles and a Snickers bar. In the control condition the first three items were replaced with oatmeal, Gatorade, and Chips Ahoy cookies. I pretested these stimuli with a separate sample of undergraduate students (n = 56, 35.7% female, $M_{Age} = 21$) who indicated that that the basket in the embarrassment condition was more embarrassing ($M = 2.96$, $SD = 1.99$) compared to the control condition ($M = 2.05$, $SD = 1.16$; $t(54) = 2.13$, $p < .05$).

In order to ensure the participant was exposed to the items selected by the confederate, the confederate was instructed to complete his selections quickly and to wait at the checkout counter until the participant finished making his/her selections. Videos of participants waiting at the self-checkout counter were coded to capture nonverbal behaviors as a measure of participants' observer embarrassment. Two independent coders coded five distinct behaviors typical of embarrassment: downward movement of participants' gaze/head, gaze shift, shift of position or turning away while exposed to the confederate check out process ($\alpha = .66$; see appendix B; Keltner 1995; Keltner and Buswell 1997).

Results and Discussion

In order to validate the presence of observer embarrassment, a composite embarrassment score was calculated for each experimental condition. Observers' behavior in the embarrassment condition indicated higher levels of observer embarrassment ($M = 3.16$, $SD = 0.59$) compared to the control condition ($M = 2.31$, $SD = .41$; $t(43) = 5.62$, $p < .01$), further supporting H1.

Taken together, the first three studies validate—across multiple measures and contexts—the presence of observer embarrassment. Despite not personally committing a social transgression, observers in all three studies report and exhibit embarrassment parallel to embarrassment investigated in actor embarrassment studies. In the studies that follow, I explore the underlying mechanism, imagine-self perspective taking first by manipulating social identity congruence. I also examine the impact of observer embarrassment on other consumer behaviors, as well as further distinguish observer embarrassment from other potential causes of similar observer responses such as empathy or general negative affect.

STUDY 2

Study 2 extends the previous studies in two ways. First, I replicate the findings and explore imagine-self perspective taking as the causal link for this effects. I implement a moderation-of-process design (Spencer, Zanna, and Fong 2005) to test H2 and H3 by manipulating the degree to which an observer and actor share a social identity. If this prediction is correct, a shared identity with an actor who commits a social transgression will lead to greater observer embarrassment because a shared identity facilitates greater perspective taking. Second, I enhance generalizability by examining observer embarrassment in a different retail context and with a new embarrassing product—wart removal cream.

Participants and Procedure

I first conducted a pretest with a group of consumers from Amazon Mechanical Turk (n = 32, 34.4% female) to identify embarrassing products. Participants received a list of products (condoms, hemorrhoid cream, and wart removal cream), were asked to imagine they observed someone purchasing that item, and then asked to rate their level of embarrassment using the same three-item scale as previously used. I found that observing an actor who is purchasing condoms does not lead to observer embarrassment (M = 2.85, SD = 1.30). Given previous research using this product as actor embarrassment stimulus, the findings suggest that observer embarrassment is fundamentally different from actor embarrassment. Furthermore, participants perceived observing the purchase of a hemorrhoid cream (M = 3.64, SD = 1.60; $t(31) = 4.22$, $p < .01$) as more embarrassing then that of condoms and wart removal cream as the most embarrassing (M = 5.11, SD = 1.68; $t(31) = 6.23$, $p < .01$). Thus, I selected wart removal cream as the study 3 stimulus.

For the main study, one hundred and sixty-nine students at a large North American university (31% female, M_{Age} = 21.07, SD = 2.62) participated as part of a course requirement. The study consisted of a 2 (Actor Transgression: High, Low) × 2 (Identity: Congruent, Incongruent) between-subjects design. Participants imagined that they were standing in the self-checkout line at a pharmacy while another customer was purchasing wart removal cream. I manipulated consumer identity by asking participants to imagine the customer purchasing the cream was wearing clothing either from their university (congruent identity) or from a different university (incongruent). I manipulated actor transgression by having either the customer or a store employee inquire about the

price of the product (low and high embarrassment conditions, respectively; see appendix D).[1]

Next, participants completed a measure of observer embarrassment on the same three-item observer embarrassment measure used previously ($\alpha = .91$). I also collected a two-item manipulation check to assess the social identity congruence manipulation ($r = .74$), as well as demographic variables.

Results and Discussion

Manipulation check. An ANOVA showed that the identity manipulation was successful. Participants in the identity congruence condition indicated a stronger association with the identity congruent actor compared to the identity incongruent actor ($M_{CONG} = 5.50$ vs. $M_{INCONG} = 2.79$; $F(1, 165) = 131.70$, $p < .05$). There was no difference, however, between the transgression conditions ($F(1, 165) = .34$, $p > .05$) and no interaction effect ($F(1, 165) = .35$, $p > .05$).

Observer embarrassment. I predicted that the congruence between the identity of the observer and the actor would moderate the effect of witnessing the embarrassing situation on observer embarrassment. To test this proposed relationship, I conducted a 2 ×

[1] I conducted a second pretest with 59 undergraduate students (54.2% female, $M_{Age} = 20.22$, $SD = 1.38$) to ensure that the embarrassment manipulation is successful. Embarrassment should be greater when attention is drawn to an embarrassing circumstance involuntarily (i.e. caused by somebody else) than in situations in which a person draws attention to the circumstance themselves. As anticipated, I found that participants experienced more observer embarrassment when the employee inquires about the product price ($M = 5.60$, $SD = 1.61$) compared to when the customer asks about the price of the genital wart remover cream ($M = 4.28$, $SD = 1.36$; $F(1, 57) = 11.63$, $p < .01$). To rule out potential alternative explanations, I also collected the PANAS and empathy scale used in study 1a. Neither negative affect nor empathy were affected by the embarrassment manipulation ($F(1, 57) < 1$).

2 ANOVA with the observer embarrassment measure as the dependent variable. The ANOVA revealed no significant main effects (transgression: $F(1, 165) = 0.23$ $p > .05$; or social identity: $F(1, 165) = 3.42$, $p > .05$). The hypothesized interaction effect of transgression and social identity reached significance ($F(1, 165) = 3.87$, $p = .05$). In the high actor transgression condition, observer embarrassment was significantly higher when the observer and actor shared a common identity ($M_{CONG} = 5.02$ vs. $M_{INCONG} = 4.45$; $F(1, 165) = 7.45$, $p < .05$). Conversely, in the low actor transgression condition, no difference in identity was found ($M_{CONG} = 4.00$ vs. $M_{INCONG} = 4.49$; $F(1, 165) = .07$, $p > .05$; see figure 2-4).

These results demonstrate that identity congruence between an actor committing a transgression and the embarrassment of observers heightens observer embarrassment, in support of H2 and H3. Given the prediction that greater social congruence would enhance imagine-self perspective taking of observers, these results also support the proposed conceptual model, and the role of perspective taking in the effects.

STUDY 3

Study 3 sought to provide further evidence that imagine-self perspective taking helps to explain why observers feel observer embarrassment after merely witnessing a social transgression of an actor. Building on study 2, I directly measure perspective taking in study 3 to test H2 and H3.

Participants and Procedure

Ninety-seven members of the online panel Amazon Mechanical Turk (47.4% female, $M_{Age} = 34.3$) participated in the study in exchange for compensation. Participants were randomly assigned to one of two conditions. In the congruent (incongruent) condition, I asked participants to imagine a social group they belonged to (did not belong to) and to type the name of the group in a text field. This group would be referred to as group Z for the remainder of the study (Escalas and Bettman 2005; Berger and Heath 2007).

Next, participants received a hypothetical scenario and were asked to imagine being in a supermarket. They read that they observed an interaction between an unknown customer belonging to group Z and an employee at the store. The customer was asking the employee for the price of a socially undesirable item (genital wart remover cream), constituting the actor transgression (see appendix E).

I first measured observer embarrassment using the same scale as in the previous studies ($\alpha = .85$), as well as two items assessing imagine-self perspective taking ($r = .49$). I computed a composite index by aggregating the reverse coded imagine-other perspective taking item with the imagine-self perspective taking item (Batson et al. 1997). Last, I asked participants to respond to three items assessing the identity manipulation ($\alpha = .91$; Berger and Heath 2007), and demographic variables.

Results and Discussion

Manipulation checks. Participants in the identity congruence condition indicated a stronger association with the identity congruent actor compared to the identity

incongruent actor (M_{CONG} = 5.17 vs. M_{INCONG} = 2.23; $t(95) = 12.19$, $p < .05$). Thus, the social identity manipulation was successful.

Observer embarrassment. Following Spiller and colleagues (2013), we conducted a regression analysis with observer embarrassment as the dependent variable and social identity (congruent vs. incongruent), imagine-self perspective taking, and their interaction, as independent variables. The analysis revealed no significant main effect for social identity (β = -1.94, SE = 1.07, $t(93) = -1.81$, $p > .05$) and imagine-self perspective taking (β = .19, SE = .10, $t(93) = 1.88$, $p > .05$). However, the hypothesized interaction between social identity and imagine-self perspective taking (β = .34, SE = .17, $t(93)$ = 2.02, p = .05) was significant. To explore this interaction, I tested the slopes of imagine-self perspective taking at each social identity congruence condition. The slope of imagine-self perspective taking in the congruent identity condition was significant and positive (β = .52, SE = .13, $t(93) = 3.95$, $p < .001$), suggesting that observers high (vs. low) in imagine-self perspective taking are more embarrassed when the actor and observer share a common identity. For those in the identity incongruent condition, the slope of imagine-self perspective taking was not significant (β = .19, SE = .10, $t(93)$ = 1.88, $p > .05$), suggesting that imagine-self perspective does not significantly impact observer's embarrassment when the actor and observers' identity are incongruent. These results provide further support for the proposed mediator, imagine-self perspective taking.

STUDY 4

Building on the previous studies, study 4 seeks to test the conceptual model by examining imagine-self perspective taking as a mediating process between actor transgression and observer embarrassment. I also test for empathy (i.e., imagine-other) and negative affect as alternative explanations for the negative consumer outcomes after witnessing an embarrassing event.

Participants and Procedure

One hundred and thirty-nine undergraduate students (38.1% female, $M_{Age} = 20.8$) at a large North American university participated in the study as part of a course requirement. Study 4 employed a 2 (Actor Transgression: Yes, No) X 2 (Identity: Congruent, Incongruent) between-subject design. The procedures and stimuli in study 4 were identical to study 3 except for two changes. First, a condition without a social transgression was added. The actor was inquiring about the price of a box of cookies in this condition. Second, social identity congruence was manipulated as in study 2.

I first measured participants' intentions to avoid the interaction using a three-item scale ($\alpha = .86$). Next, I measured observer embarrassment using the same scale as in the previous studies ($\alpha = .89$), as well as imagine-self and imagine-other perspective taking items (Batson et al. 1997). To rule out potential alternative explanations, I also collected the negative affect scale of the PANAS ($\alpha = .92$) and empathy scale ($\alpha = .96$) used in study 1A. Last, I asked participants to respond to two items assessing the social identity manipulation ($r = .92$), three items assessing the actor's transgression manipulation ($\alpha = .95$), and demographic variables.

Results and Discussion

Manipulation checks. Participants in the identity congruence condition indicated a stronger association with the identity congruent actor compared to the identity incongruent actor (M_{CONG} = 5.68 vs. M_{INCONG} = 2.30; $F(1, 135) = 257.82$, $p < .05$). However, there was no difference between the transgression conditions (M_{TRANSG} = 3.95 vs. $M_{NO\text{-}TRANSG}$ = 4.03; $F(1, 135) = .12$, $p > .05$) and no interaction effect ($F(1, 135) = 1.90$, $p > .05$). For the social transgression condition, participants indicated that purchasing wart remover cream constitutes a stronger transgression compared to purchasing the cookies (M_{TRANS} = 5.09 vs. $M_{NO\text{-}TRANS}$ = 3.39; $F(1, 135) = 51.92$, $p < .05$). The manipulation check analysis revealed no difference between the identity congruence conditions (M_{CONG} = 4.17 vs. M_{INCONG} = 4.30; $F(1, 135) = .34$, $p > .05$) and no interaction effect ($F(1, 135) = .05$, $p > .05$). Thus, the identity and transgression manipulations were successful.

Imagine-self perspective taking. I predicted that identity congruence would moderate the effect of witnessing the actor's transgression on imagine-self perspective taking. To test this proposed relationship, I conducted a 2 × 2 ANOVA with imagine-self perspective taking as dependent variable. The ANOVA revealed a significant main effect of transgression ($F(1, 135) = 12.72$, $p < .05$) and social identity congruence ($F(1, 135) = 5.99$, $p < .05$). The hypothesized interaction effect of transgression and social identity approached significance ($F(1, 135) = 3.08$, $p = .08$). However, this marginal interaction was qualified by contrast analysis, as I found that imagine-self perspective taking was significantly higher for the transgression condition when actor and observer shared a

social identity (M_{CONG} = 5.70 vs. M_{INCONG} = 4.27; $F(1, 135) = 15.14$, $p < .05$, see figure 2-5). These results support H3.

Moderated mediation analysis. Hypotheses predict that imagine-self perspective taking mediates observing an embarrassing event and observer embarrassment. I further predicted that this effect is moderated by the identity congruence between the actor and observer. To examine this process and to rule out the possibility that imagine-other perspective taking would not mediate the proposed relationship, I conducted a parallel moderated mediation (Model 8) analysis with 5,000 bootstrapping samples to test for this effect (Hayes 2013; 2015).

Analysis revealed that the index of moderated mediation through imagine-self perspective taking was significant (index of moderated mediation = .26, *SE* = .16, 95% confidence interval = .0030 to .6603). The index for moderated mediation through imagine-other perspective taking was, as expected, not significant (index of moderated mediation = .01, *SE* = .06, 95% confidence interval = -.0879 to .1984). Furthermore, neither the conditional indirect effect for identity congruent condition nor the identity incongruent condition were significant (Conditional indirect $effect_{CONG}$ = .08, *SE* = .07, 95% confidence interval = -.0125 to .2792; Conditional indirect $effect_{INCONG}$ = .07, *SE* = .07, 95% confidence interval = -.0169 to .2572). Examining the conditional indirect effects indicates that observers who share a common social identity with the actor experience more observer embarrassment through imagine-self perspective taking (Conditional indirect $effect_{CONG}$ = .39, *SE* = .15, 95% confidence interval = .1646 to .7453). The conditional indirect effect for observers in the identity incongruent condition

was not significant (Conditional indirect effect$_{INCONG}$ = .13, *SE* = .12, 95% confidence interval = -.0606 to .4240). In other words, the mediation analysis indicates that imagine-self perspective taking acts as a mechanism between witnessing a social transgression and observer embarrassment and that this effect is enhanced if the observer and actor share a common social identity.

Lastly, I tested the complete conceptual model and ruled out alternative explanations. In order to test the moderated serial parallel mediation model, I ran a path model using AMOS (see figure 2-6). The path model provided good model fit ($\chi^2(16)$ = 24.47, $p > .05$; goodness-of-fit index = .97; RMSEA= .06). The interaction term between actor's transgression and identity was positively related to imagine-self perspective taking ($\beta = .25$, $p = .08$) and not related to imagine-other perspective taking. Furthermore, imagine-self perspective taking was positively related to observer embarrassment (β = .32, $p < .01$), confirming the proposed model. Imagine-self perspective taking was, however, unrelated to empathy and negative affect (βs < .10, $p > .05$). This result allows us to rule out these potential alternative explanations. Lastly, the path model revealed that observer embarrassment was positively related to avoidance ($\beta = .51$, $p < .01$). These results support H4, and the conceptual model depicted in figure 1.

DISCUSSION

Embarrassing situations are common in consumer settings, ranging from purchasing potentially embarrassing products (Dahl, Manchanda, and Argo 2001) to redeeming coupons (Brumbaugh and Rosa 2009). Because these embarrassing moments occur in public settings so too, then, is observer embarrassment a pervasive phenomenon

in consumer culture. The results presented here identify the process underlying observer embarrassment and the negative outcomes it causes. The studies demonstrate that observers (real or imagined) are not only a necessary condition for actor embarrassment to occur, but also are an audience that is personally affected through witnessing that social transgression. I validate the presence of observer embarrassment through both physiological responses and a self-report measure (Studies 1A-1C). Studies 2 and 3 use manipulated and measured moderators to examine the role of shared social identity on the perspective taking process of observers and the role of perspective taking on observer embarrassment. Finally, study 4 empirically illustrates the mediating role of imagine-self perspective taking on the formation of observer embarrassment, and its negative outcomes for consumers and marketers.

Theoretical Implications

Goffman (1956a, p. 267) was the first to highlight the dyadic relationship between actors who commit social transgressions and those who witness social transgressions: "Just as the flustered individual may fail to conceal his embarrassment, those who perceive his discomfort may fail in their attempt to hide their knowledge, whereupon they all realize that his embarrassment has been seen and that the seeing of it was something to conceal." Since Goffman's work on the subject, research examining actor embarrassment has demonstrated the necessary role of observers in the creation of actor embarrassment (Blair and Roese 2013; Dahl, Manchanda, and Argo 2001; Krishna, Herd, and Aydinoğlu 2015). I extend this work through my examination of how observers not only create but

are also, in turn, influenced by social transgressions. In doing so, I introduce the concept of observer embarrassment to the marketing literature.

Through my exploration of observer embarrassment, I also highlight the mechanisms that underpin its development, along with its consequences for consumer behavior. Extending work on social influence and outgroups (White and Dahl 2006), I show that a shared social identity between an actor who commits a social transgression and an observer who witnesses the transgression exacerbates observer embarrassment. Using an imagine-self perspective taking lens, I demonstrate that observer embarrassment is not an empathetic response to witnessing the plight of another consumer. Rather, it is a virtual experience of personal embarrassment that manifests through observers imaging themselves as the actor who commits a social transgression. Thus, when someone who witnesses an embarrassed actor says s/he was embarrassed *for them*, it misrepresents the underlying phenomenon. As my results indicate, this virtual experience mirrors the same physiological responses and outcomes as those experienced by actors who personally commit a social transgression. I extend work on perspective taking by Hung and Mukhopadhyay (2012) who note that little research has examined the situational antecedents that influence the appraisals and processes by which observers interpret events.

Using imagine-self perspective taking also complements work by Krishna and colleagues (2015) who demonstrate the presence of observers is not required for embarrassment to occur. Merely their imagined presence is sufficient to generate actor embarrassment. They also demonstrate that self-appraisal by the embarrassed actor is sufficient to generate actor embarrassment. However, unlike the research presented here,

their examination was focused on the phenomenon of actor embarrassment and the appraisals were done by the actor who imagined committing a social transgression. By introducing how perspective taking is used by observers—a component of embarrassment not included in their typology—I complement their use of self-appraisal by examining the appraisals of others.

Of course my results also highlight potential directions for future research. One fruitful area of inquiry concerns the role of proximity in the formation of observer embarrassment. A proximity account suggests an underlying contagion process, possibly parallel or even outside of the perspective taking account presented here. I should note that, in order to examine a contagion account, I conducted a supplementary study in which I randomly assigned members from Amazon Mechanical Turk (N = 128, 52.3% female, $M_{Age} = 35.1$) to one of two conditions. Participants read about a shopping scenario in which they stand at a self-checkout terminal next to (three terminals away from) another customer who is checking out an embarrassing product (Plan B and wart removal, replicates). Using the same three-item measure of embarrassment used in previous studies ($\alpha = .95$), analyses revealed no difference in observer embarrassment between the two conditions ($M_{CLOSE} = 3.09$ vs. $M_{FAR} = 2.71$,$t(126) = 1.16$, $p = .25$). Although these results do not support a contagion process, it stands to reason that proximity to an embarrassed actor does play a role in the formation of observer embarrassment, given the need for the observer to be in position to take an imagine-self perspective.

Future research could extend this model of observer embarrassment by examining additional situational variables that could influence observers. One such factor is the level

of crowding at the retail space. While actor embarrassment increases with the number of observers present (Miller 1996), this may not be the case for observer embarrassment. A crowd could provide the observer with input as to how others appraise the actor's transgression. In light of the perspective taking mechanism, a crowd that is very forgiving or overlooks an actor's transgression could lower observer embarrassment by signaling the observer that the actor's transgression is not appraised negatively. Thus, the observer would have no reason to feel threatened when taking the actor's perspective.

Finally, future research can examine how actors' display of embarrassment generates observer embarrassment. In the opening example, for instance, perhaps the observer assumes the person buying condoms is also embarrassed. In my studies I didn't explicitly manipulate the extent to which an actor appeared embarrassed, but this may influence the presence of parallel embarrassment in observers. For instance, if the actor shows signs of embarrassment, or makes a joke to alleviate tension, does this exacerbate or attenuate observer embarrassment? If an actor shows no signs of embarrassment, perhaps unaware that they are committing a social transgression (e.g., hostile treatment of a service employee), do observers still feel the same parallel embarrassment?

Practical Implications

The current research suggests that although actor embarrassment is a threat to marketers through negative impacts on customer satisfaction and word of mouth, the negative impacts of observer embarrassment can be exponentially greater. If actor embarrassment occurs primarily in the presence of observers, a single episode of actor embarrassment (e.g., through the purchase of an embarrassing product) can generate the

same negative emotions and outcomes in multiple consumers. Thus, in a typical episode of actor embarrassment, many other consumers may experience observer embarrassment, exposing marketers to a much greater threat than previously identified. Furthermore, incidences of observer embarrassment are much less predictable than previous examinations of passive embarrassment (Puntoni et al. 2015). In the case of observer embarrassment, marketers have limited control over the severity of the transgression and frequency of exposure to the transgression. An additional challenge for marketers and service providers poses the fact that observer embarrassment occurs even in situations in which the witnessed transgression is irrelevant to the consumer (e.g. male observer witnesses a female customer purchasing personal hygiene product).

Despite these challenges, there are opportunities for marketers to mitigate observer embarrassment. Of course, the primary means to mitigate observer behavior is to minimize the opportunity for actor embarrassment to occur. For example, Blair and Roese (2013) argue that managers should consider product bundling (i.e., combining embarrassing purchases with other, more neutral products) to help consumers reduce the potential for actor embarrassment. Similarly, Dahl, Manchanda, and Argo (2001) suggest that marketers should place potentially embarrassing items in locations that reduce the potential for social influence. Thus, many of the same managerial actions can mitigate the negative outcomes associated with observer embarrassment.

However, observer embarrassment carries additional implications for managers beyond the actor embarrassment context and should be applied not just to embarrassed actors but to others in the same consumer context. First, frontline service employee training must not only stress the need to recognize and mitigate actor embarrassment but

also encompass interventions that include observers. Ironically, attempts to mitigate actor embarrassment in front of observers can serve to further illuminate the embarrassment to observers, thus actually increasing the potential for observer embarrassment. A similar challenge exists for self-checkout facilities, which many marketers assume alleviate the potential for embarrassment (an assumption challenged by my supplemental analysis). Second, understanding ways to effectively mitigate observer embarrassment is also an interesting avenue for future research. Mitigation efforts should account for the processes of social identity, as I do herein. Considering the potential for shared identity to exacerbate observer embarrassment, frontline service employees should be trained to identify the relationship between customers in a group setting. Shared identity can take several forms in a retail setting, including outward clothing or appearance (as demonstrated herein) and gender-based or culturally based identity cues. Finally, my studies also demonstrate that actor embarrassment is not necessary for the creation of observer embarrassment. Thus, in attending to social transgressions, service providers should not simply be attuned to the presence of actor embarrassment; they should also be attuned to the presence of social transgressions and the potential for these transgressions to impact observers in close proximity.

FIGURE 2-1: Conceptual Model

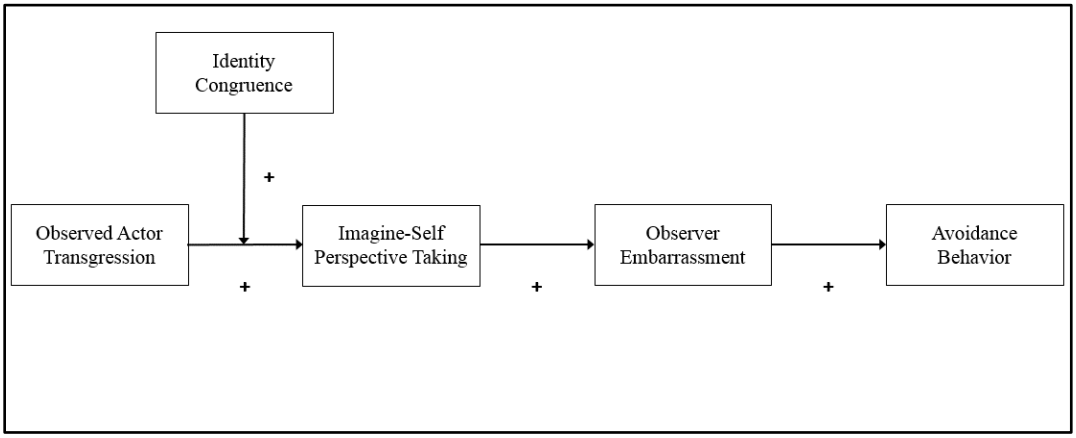


FIGURE 2-2: Study 1a: Skin Conductance Evidence for Observer Embarrassment

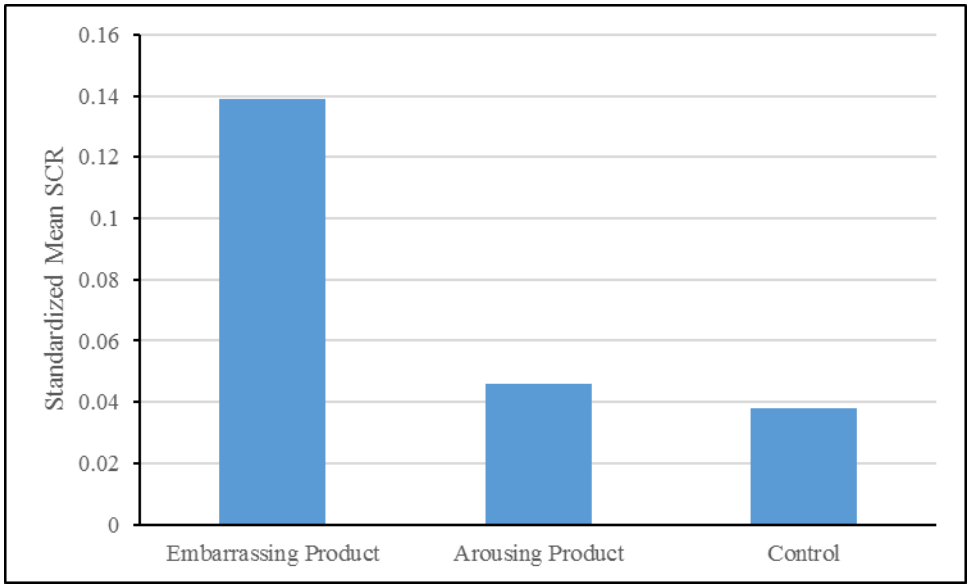


FIGURE 2-3: Study 1b: Replication of Skin Conductance for Observer Embarrassment

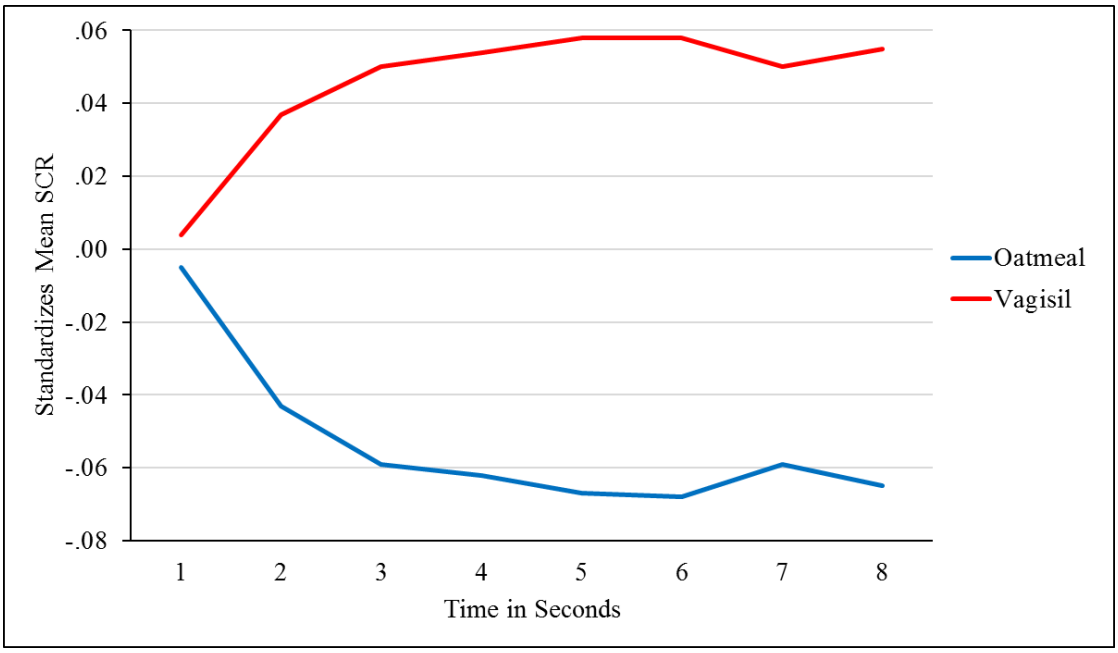


FIGURE 2-4: Study 2: Congruent Social Identity Heightens Observer Embarrassment

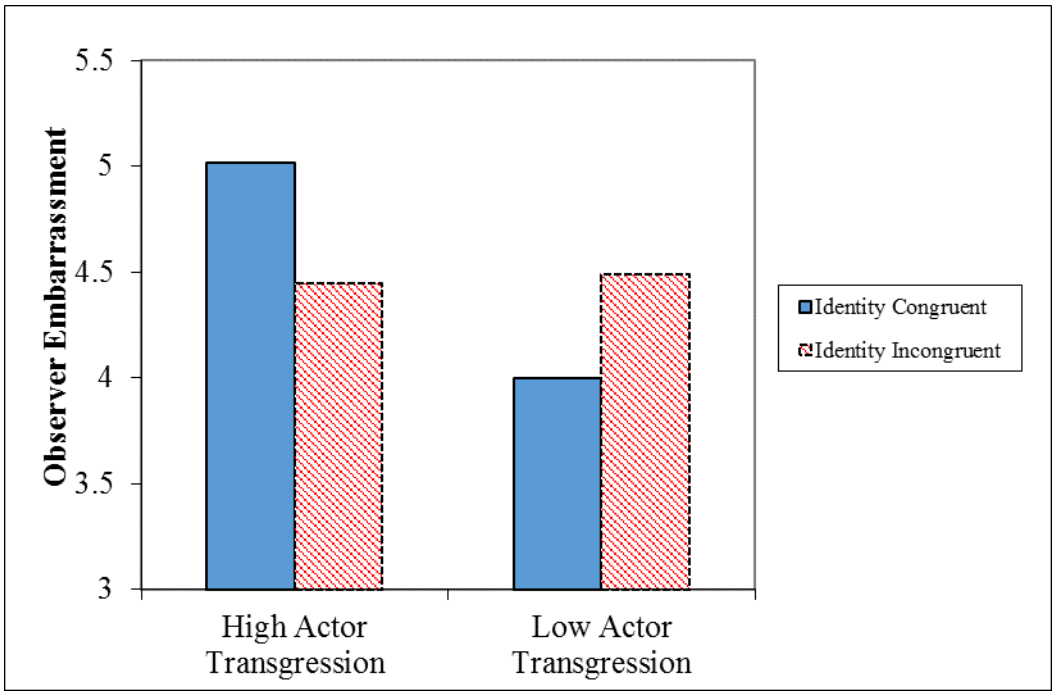


FIGURE 2-5: Study 4: Congruent Social Identity Heightens Imagine-Self Perspective Taking

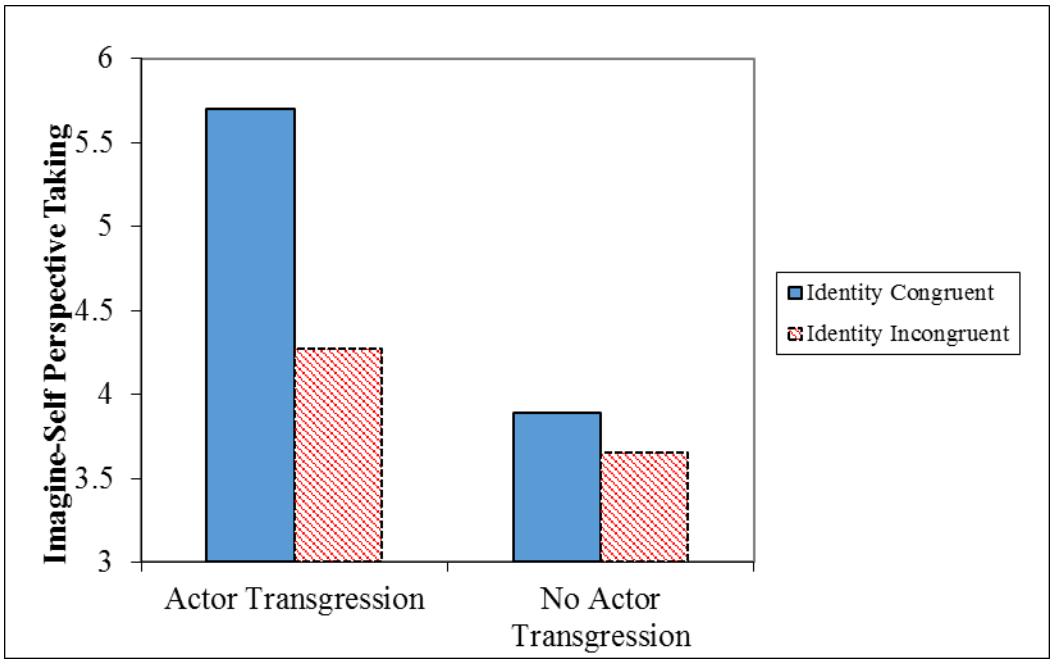
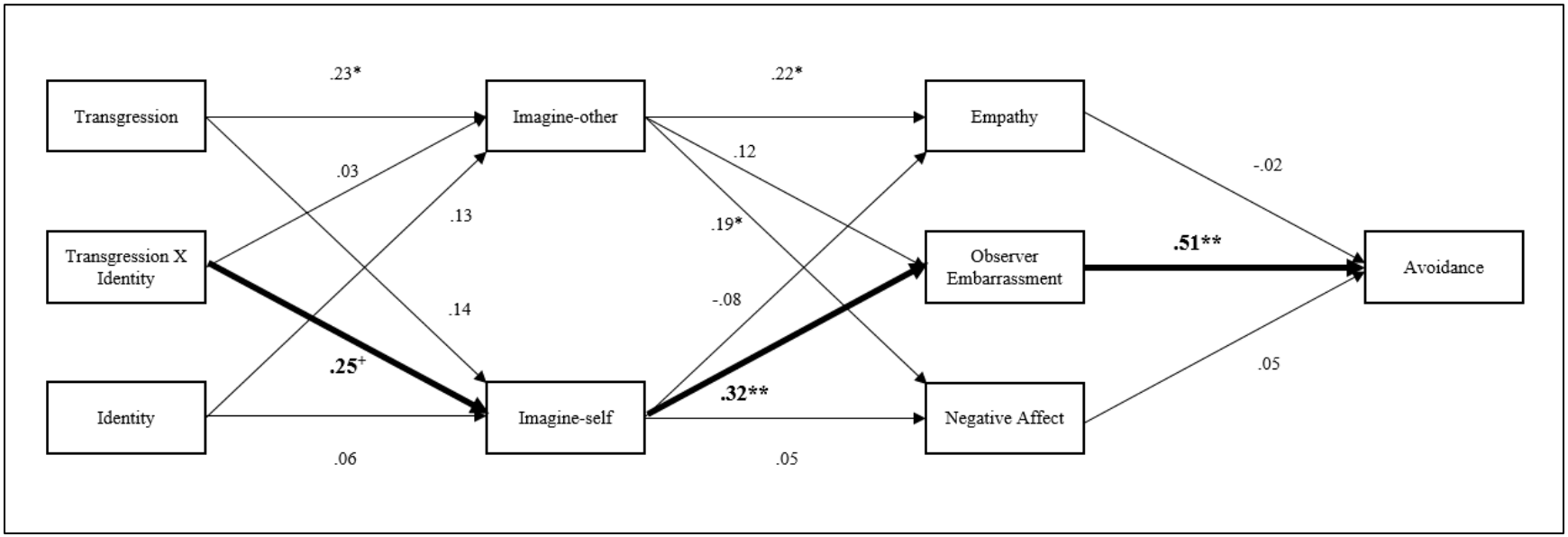


FIGURE 2-6: Study 4: Conditional Indirect Effect between Actor's Social Transgression and Avoidance through Imagine-Self Perspective Taking and Observer Embarrassment



$^{+}p < .1$.

$^{*}p < .05$.

$^{**}p < .01$.

APPENDIX

Appendix Essay 2

APPENDIX A
Study 1a Stimuli

Embarrassing Products

Arousing Products

Control Products

APPENDIX B:
Compilation of Key Measures

Study 1a and 4

I measured empathy with five 7-point items (1 = "not at all", 7 = "extremely"; Omdahl 1995).

Please indicate to what extend you feel this way right now:

- Compassionate
- Warm
- Softhearted
- Tender
- Moved

I measured positive and negative affect with the 20-item, 5-point PANAS (1 = "not at all", 5 = "extremely"; Watson, Clark, and Tellegen 1988).

You feel this moment right now, that is, at the present moment.

- Positive Affect (PA)
    - Enthusiastic
    - Interested
    - Determined
    - Excited
    - Inspired
    - Alert
    - Active
    - Strong
    - Proud
    - Attentive
- Negative Affect (NA)
    - Scared
    - Afraid
    - Upset
    - Distressed
    - Jittery
    - Nervous
    - Ashamed
    - Guilty
    - Irritable
    - Hostile

Studies 1b and 2

I measured self-reported observer embarrassment with a three-item, seven-point scale (1 = "not at all," 7 = "extremely"; adapted from Dahl, Manchanda, and Argo 2001):

- How embarrassed are you for the customer?
- How uncomfortable do you feel after witnessing the situation?
- How awkward do you feel after witnessing the situation?

Study 1c

Two independent coders rated five behaviors of observers on five-point scales (1 = "not at all present," 5 = "very much present"; adapted from Keltner 1995, Keltner and Buswell 1997)

- Downward movement of participants head
- Downward movement of participants gaze
- Gaze shift (vertical)
- Shifting body position
- Turning away from checkout counter

Studies 2 and 4

I measured the social identity congruence manipulation with two seven-point scales (1 = "strongly disagree," 7 = "strongly agree"):

- The person checking out is fan of *your university*.
- The person checking out is a fan of *the rival university*.

Study 3

I measured the social identity congruence manipulation with three, seven-point scales adapted by Berger and Heath (2007) (1 = "not at all," 7 = "extremely"):

- How much do you like the person belonging to Group Z?
- How similar are you to members of group Z?
- How much do you identify with group Z?

Studies 2, 3, and 4

I measured the manipulation check, perceived actor embarrassment with a three-item, seven-point scales (1 = "strongly disagree," 7 = "strongly agree"):

- The customer would be embarrassed.
- The customer would feel awkward.
- The customer would be uncomfortable.

Studies 3 and 4

I measured imagine-other and imagine-self perspective taking with a two-item, seven-point scales (1 = "not at all," 9 = "very much"; Batson et al. 1997).

- To what extent did you focus on the feelings of the other person?
- To what extent did you concentrate on how you yourself would feel if you were experiencing what happened to the other person?

Study 4

I measured the dependent variable with a three-item, seven-point scale (1 = "very unlikely," 7 = "very likely"):

- How likely would you be to avoid looking at the person checking in?
- How likely would you be to move away from the person checking in?
- How likely would you be to step away so you can come back after the customer left?

APPENDIX C
Study 1b Stimuli

Prestimulus

Embarrassing Product/Control

APPENDIX D:
Study 2 Stimuli

You and some friends are on a trip to the March Madness tournament. The city is abuzz with excitement at the high profile matchup. The day of the game, as you're getting ready in your hotel, you realize you need to pick up a few supplies. So you go across the street from the hotel to a drugstore. You proudly walk into the store wearing your school's sweatshirt.

You find what you need and head to the self-checkout kiosks. You notice the customer checking out at the kiosk next to you is also wearing a sweatshirt from your school (*wearing a sweatshirt from a rival school*). He has a basket of things he's buying and seems to be having a problem with scanning the code for one of the items in the basket.

Actor Embarrassment Condition

He motions for the person monitoring the self-checkout to come over and help. The employee sees that the problem item is a box of wart removal cream. To your surprise, the employee calls across the store to another employee: "Excuse me, Bill. This guy is having trouble checking out, can you check on the price of this box of wart remover cream for me?"

Actor Nonembarrassment Condition

He looks over at the person monitoring the self-checkout and asks for help. To your surprise, he calls over to the employee: "Excuse me. I'm having trouble checking out. Can you check on the price of this wart remover cream for me?"

APPENDIX E:
Study 3 Stimuli

Social Identity Manipulation

In the box below, we would like you to type in the name of a group that you belong to and feel a part of (do not belong to and do not feel part of). You should feel you really fit in with the people in the group. This group should be tightly knit, consisting of individuals who are very similar to one another, and to whom you are similar.

For the rest of the survey, the group you imagined will be referred to as Group Z.

Scenario

It's 11:30 at night and you are at the supermarket. You need to pick up some cereal for breakfast. Because it's late the aisles are mostly empty, with just a few other shoppers in the store. You notice one other shopper in particular because he was a group Z member.

You feel like trying something new so you spend a few minutes examining the options. You are crouched down low near the end of the aisle, when the other customer who belonged to group Z approaches an employee. The customer is holding a package of genital wart removal cream and asks about the price.

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Max Steckler Doctoral Fellowship (2015-16, 2018-19)
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