

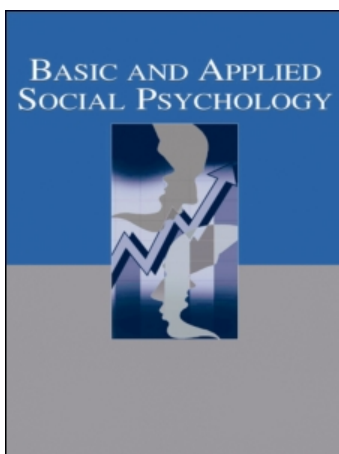
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Christine R. Harris ^a; Ryan S. Darby ^a

^a University of California, San Diego

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Shame in Physician–Patient Interactions: Patient Perspectives

Christine R. Harris and Ryan S. Darby
University of California, San Diego

This study estimated the extent to which shame is elicited in physician–patient interactions and examined the emotional and behavioral reactions of patients to such interactions. A large adult sample ($N=915$) reported on their shame-provoking experiences in interactions with physicians through an anonymous survey. Half of all respondents ($n=456$) recalled one or more interactions with a physician that left them feeling ashamed, with significantly more women (59%) than men (39%) reporting this. Forty-five percent of those reporting such experiences stated they terminated treatment with, avoided, or lied to their physician to avoid experiencing further shame. However, 33% believed the shame-provoking interaction provoked useful behavioral changes, and 46% were, on balance, grateful to the physician. Women, relative to men, reported that the interaction led to more negative emotional and behavioral consequences. The type of health issue involved in the interaction also was associated with differential outcomes. Thus, it appears that inducing shame in medical contexts is widespread and may well have both positive and negative effects.

A large proportion of mortality and morbidity in Western societies is attributable to unhealthful behaviors such as smoking, overeating, and failing to exercise (Cutler, Glaeser, & Rosen, 2007). Although this creates frustration among physicians working in many branches of medicine, there is little consensus about how the physician can be most effective in bringing about behavioral change (Orleans, George, Hout, & Brodie, 1985; Wechsler, Levine, Idelson, Rohman, & Taylor, 1983; Wechsler, Levine, Idelson, Schor, & Coakley, 1996).

One obvious approach is to directly confront and reproach patients about unhealthful behavior. How do participants react to such criticism? Common sense suggests that it may elicit feelings of shame in many patients. If shame is induced, then what consequences does it have for the patient's health and the patient–doctor relationship? Surprisingly, there appears to be virtually no research on this topic. The goal of the current work is to explore these issues.

SHAME AND MEDICAL CARE

The consequences of shame have been analyzed and debated in a variety of contexts. For example, Tangney and Dearing (2002) argued that provoking shame in the course of disciplining children has generally negative effects, whereas interactions that provoke guilt tend to promote socialization. In the realm of crime prevention (Braithwaite, 1989) and psychotherapy (Tangney & Dearing, 2002), important costs of shame provoking interventions also have been noted.

Although there is increasing interest in the role played by specific emotions in health behaviors (Consedine, Magai, Krivoshekova, Ryzewicz, & Neugut, 2004; Consedine & Pizarro, 2008; Dickerson, Gruenewald, & Kemeny, 2004; Harris, 2006), the incidence and effects of shame in medical contexts have rarely been discussed. One notable exception is found in the writings of Lazare (1997), who eloquently described many ways that health care interactions may produce shame for those suffering from infirmities. Other than Lazare's observations, there appears to be a lack of empirical data on whether any significant proportion of the general population reports shame experiences as a result of interactions with

Correspondence should be sent to Christine R. Harris, Department of Psychology – 0109, University of California San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0109. E-mail: charris@ucsd.edu

physicians. Another important question is whether shame-provoking interactions, should they occur, always represent regrettable disruptions of the patient–physician relationship, or, alternatively, may sometimes offer useful prompts to behavioral change.

SOCIAL CONTROL

Physicians are not the only ones faced with attempting to change others' health behaviors. The importance of social networks, particularly family and friends, in influencing health behaviors has been discussed by theorists from a variety of disciplines (Cohen, Underwood, & Gottlieb, 2000; House, Landis, & Umberson, 1988; Hughes & Gove, 1981). One aspect of interpersonal influence, often referred to as *social control*, may be particularly germane to the current investigation. Social control refers to interactions that involve influencing, constraining, or regulating another's behavior (Hughes & Gove, 1981; Lewis & Rook, 1999; Umberson, 1987). In the health domain, examples would be attempting to get a child to stop smoking or a spouse to eat healthier foods. Social control likely affects health behaviors via both indirect and direct mechanisms (Hughes & Gove, 1981; Umberson, 1987). Indirect mechanisms involve a sense of obligation and responsibility to significant others, which presumably motivates an individual to engage in more healthy and less risky behaviors to be able to fulfill his or her obligations. Direct social control includes explicitly attempting to make a significant other change behaviors through encouragement, reminders, persuasive appeals, and requests. Of importance, direct social control can also involve negative sanctions such as threats or punishment.

One interesting proposal to emerge from the social control literature is the dual-effects hypothesis. Although social control may have positive behavioral effects on health, it may also lead to increases in negative affect of the target (Hughes & Gove, 1981; Lewis & Rook, 1999). Negative feelings such as anger, resentment, guilt, or frustration may be elicited as one attempts to change or constrain one's behavior. Several studies have offered some support for the dual-effects hypothesis (Hughes & Gove, 1981; Krause, Goldenhar, Liang, Jay, & Maeda, 1993; Lewis & Rook, 1999). For example, Lewis and Rook found evidence that some social control tactics by a specific member of the social network (rather than the network at large) were associated with positive changes in health behavior as well as with greater feelings of sadness/guilt. However, not all studies have found beneficial effects of social control on health or support for the dual-effects hypothesis, and some have suggested that control attempts may backfire, resulting in negative psychological and physical

consequences (Helgeson, Novak, Lepore, & Eton, 2004; Rook, Thuras, & Lewis, 1990). Possible explanations for these disparate findings are explored further in the Discussion section.

Work on social control in the health domain has focused almost exclusively on relationships with family and friends. It remains an open question whether similar processes occur within physician–patient relationships. Social control theory, however, might offer some predictions on the dynamics of physician–patient interactions. If the dual-effects hypothesis generalizes to physician–patient relationships, then one would predict that shaming contexts might elicit negative affective reactions but would also facilitate positive behavioral change.

CURRENT RESEARCH

The current work had several objectives. One was to determine whether shame is commonly experienced in patient–physician interactions. Second was to explore reactions to shame—does it always lead to negative consequences or can it have positive consequences when it occurs in medical settings? Third, we explored potential factors such as gender and type of health issue that might be associated with differences in reactions to shame. Although a conclusive answer to these issues would require patients be randomly assigned to receive shame-provoking interactions, it seems doubtful that such a study would be judged either feasible or ethical. Therefore, to explore this issue in a provisional fashion, mindful of the well-known limitations of nonprospective research, the present study began by asking a broad and reasonably representative sample of the public about whether they had experienced shame in a physician interview. They were also queried about how they viewed this experience and its role in their ongoing health behaviors and physician–patient relationship. The results provide a striking answer to the question of whether shame is a common feature in physician–patient interactions, and some provocative, albeit less conclusive, suggestions about the possible costs and benefits of eliciting this emotion in a health care setting.

METHOD

Participants

Participants ($N=915$) were recruited from the Study Response.com Internet research panel, a demographically diverse panel composed of adults of all ages (Stanton & Weiss, 2002; see Table 1 for demographics). A Web-based questionnaire was completed in return for enrollment in a cash prize lottery. This method affords

TABLE 1
Demographic Characteristics of Sample

Characteristics	%	<i>n</i>
Gender		
Female	56.2	514
Male	43.8	401
Age ^a		
18–29	14.6	331
30–39	36.2	276
40–49	30.2	174
50 and older	19.0	134
Race ethnicity ^b		
White/Caucasian	84.3	608
African American	5.1	37
Asian American	4.7	34
Latino/Hispanic	3.5	25
Other	2.4	17
Marital status		
Never married	34.5	316
Married	52.8	483
Divorced/Widowed	12.7	116
Education		
Grade school	0.7	6
High school	21.9	200
Bachelor's	63.0	576
Advanced degree	14.5	133
Income in dollars ^b		
20 K or less	14.3	103
20–40 K	27.9	201
40–60 K	25.2	182
60–80 K	15.5	112
80 K or more	17.1	123
Current residence		
United States	79.5	724
Other	20.5	187

^aRange = 18–70 years.

^bUnited States only.

a high degree of anonymity and has repeatedly been found to elicit more candid responses to questions about socially undesirable behaviors and emotions than paper-and-pencil or interview methods (Levine, Ancill, & Roberts, 1989; Locke & Gilbert, 1995; Musch, Broder, & Klauer, 2001). For present purposes, where the questions of interest pertain to topics the participant finds shameful, this would appear to represent an important advantage. The validity of Internet testing has been well supported in recent reviews (Gosling, Vazire, Srivastava, & John, 2004), with close correspondence between results from internet samples and from the laboratory (e.g., Birnbaum, 1999; Krantz & Dalal, 2000; McGraw, Tew, & Williams, 2000).

Survey Design

The first page of the questionnaire provided informed consent as approved by the University of California, San Diego Human Research Protection Program. After

answering demographic questions, participants responded to questions relating to shame-provoking experiences in interactions with physicians. The anonymous nature of the survey and the need for completely frank answers were emphasized.

Participants were asked if they had ever had an experience where a physician said something that made them feel shame. They were then asked to think of the most recent experience of this sort and to answer several questions regarding this interaction. To ascertain the topic of the interaction, participants were given a checklist, which inquired whether the physicians shaming remark was related to each of the following: smoking, weight, alcohol or substance abuse, failure to take prescribed medication, failure to exercise, unsafe sexual practices, or other. If participants selected other, they were asked to specify the topic of the interaction. To assess the participant's emotional and behavioral reactions to the incident, participants were given a list of nine possible reactions and asked to mark all that applied. The possible reactions were admiring the doctor, stopping visits to that doctor completely, avoiding visits to some degree, lying to the doctor to avoid future embarrassment, experiencing anger at the doctor at the time of the incident, experiencing lingering anger currently as a result of the incident, being bothered by the incident for a long time, improving health-related behavior because of the incident, and in hindsight thinking that the doctor's remark was helpful. Participants also were given an open-ended question in which they were asked to describe the incident.

RESULTS

Four hundred fifty-six (50.1%) participants responded affirmatively to the question of whether they recalled an interaction with a physician that induced shame. There was a significant sex difference in responses, with 58.8% ($n = 301$) of women and 38.8% ($n = 155$) of men recalling a shame-provoking interaction: $\chi^2(1, N = 911) = 35.7$, $p < .0001$. There was no significant association between recalling a shame-provoking interaction and age, $r(911) = .021$, *ns*, or education, $r(911) = .005$, *ns*. There was a significant correlation between income and medical shame, with wealthier people being less likely to recall a shaming event, $r(719) = -.078$, $p < .05$.

Of those recalling an incident of physician-induced shame, 24.4% ($n = 111$) indicated they were referring to an event within the previous year; 17.1% ($n = 78$) indicated 1 to 2 years, 17.1% ($n = 78$) indicated 2 to 3 years, 7% ($n = 32$) indicated 3 to 4 years, and the remainder indicated that more than 4 years had elapsed. Table 2 shows the behavioral or medical issues involved in the shame-producing interactions. As expected, smoking

TABLE 2
Topic of Shame-Inducing Interaction

Topic	%	n
Smoking	24.3	111
Overweight	35.7	163
Alcohol or substance use	9.4	43
Failure to take prescribed medications	6.8	31
Failure to exercise sufficiently	14.9	68
Unsafe sexual practices	11.2	51
Other	31.8	145

Note. Categories were not mutually exclusive, hence entries sum to more than 100%.

and overweight were the most common topics. However, 31.8% did not fall into any of the categories listed. Participants were requested to characterize these other incidents, and many elected to do so (n = 145). The most common topics within the other responses were (a) put-downs or derogatory remarks made by the doctor (14.5%), (b) poor health behaviors during pregnancy (13.1%), (c) issues of dental hygiene (10.9%), and (d) questions about the veracity of the patient’s complaints or mental health (9.0%). Because of the small sample sizes, no further analyses were done on these other subcategories.

Negative Reactions

Participants who reported having experienced shame over a physician interaction were asked about effects on the relationship with this physician. Twenty percent (n = 91) indicated that in connection with the most recent incident they “stopped seeing the physician because of this incident,” 18% (n = 82) indicated that they “avoided seeing the physician to some degree because of this incident,” and 15.8% (n = 72) indicated they “lied to the physician about my health-related behaviors (e.g., smoking, drinking, exercising) to avoid being embarrassed

again.” Altogether, of those reporting experiencing shame due to an interaction with a physician, 45.4% (n = 207) reported that they stopped seeing the physician, avoided the physician, and/or lied to the physician.

Participants were also asked about immediate and lingering emotional reactions: 38.6% (n = 176) indicated they were “angry about what the physician said” at the time, 20.2% (n = 92) indicated they were “still angry about what the physician said,” and 32.9% (n = 150) reported that the incident “bothered me for a long time.”

Positive Reactions

Respondents were also asked about possible beneficial effects of the interaction. We found that 32.9% (n = 150) agreed with the statement, “I think the physician’s behavior caused me to improve my health-related behaviors,” 34.9% (n = 159) said, “I admire the physician for raising the issue and/or expressing his disapproval,” and 45.6% (n = 208) said, “In hindsight, I think it was helpful for the physician to say what he or she said.”

Relationship Between Positive and Negative Reactions

Table 3 displays correlations between dependent measures. Extrapolation of social control dual-effects hypothesis might predict that negative affective reactions would be associated with positive behavioral change. To examine this, composite scores were obtained separately for negative emotional reactions, positive health behaviors, and negative health behaviors by summing the individual items within each of these categories. Correlation analyses were conducted on these composite scores, which revealed that negative affect was positively correlated with negative health behaviors, $r(456) = .447, p < .001$, and negatively correlated with positive health behaviors, $r(456) = -.440, p < .001$. In sum, overall, greater negative affect was

TABLE 3
Intercorrelations of Shame Reactions

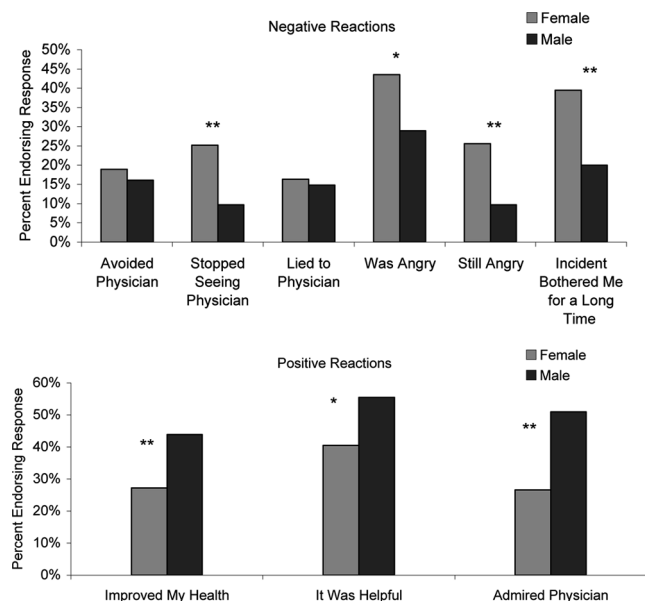
Variables	1. Lied	2. Avoided	3. Stopped	4. Was Angry	5. Still Angry	6. Still Bothered	7. Improved Health	8. Was Helpful	9. Admire Physician
1. Lied	—	.095*	-.111*	.040	-.023	.119*	.030	-.046	-.064
2. Avoided		—	-.034	.180**	.163**	.231**	-.121**	-.188**	-.247**
3. Stopped			—	.314**	.392**	.293**	-.303**	-.402**	-.331**
4. Was Angry				—	.443**	.327**	-.229**	-.292**	-.306**
5. Still Angry					—	.392**	-.305**	-.417**	-.345**
6. Still Bothered						—	-.202**	-.323**	-.307**
7. Improved							—	.493**	.457**
8. Was Helpful								—	.485**
9. Admire Physician									—

*p < .05. **p < .01.

associated with more negative health behaviors and fewer positive health behaviors. Thus, the present analyses failed to provide support for the social control dual-effects hypothesis in these patient-physician interactions. Similar patterns of correlations also were found across analyses of individual items with one striking exception—lying (see Table 3). Lying was positively correlated with being bothered by the incident for a long time and with avoiding the doctor. However, unlike other negative consequences, it was negatively correlated with stopping seeing the physician and showed no relationship with the other dependent measures.

Factors Associated with Positive Versus Negative Reactions

Gender. Among those reporting a shame-provoking interaction, significant gender effects emerged such that women reported more negative and men, more positive consequences (see Figure 1). Men were significantly more likely than women to improve their health, $\chi^2(1, N=456) = 12.82, p < .001$; find the shaming interaction helpful, $\chi^2(1, N=456) = 9.22, p < .003$; and admire the physician, $\chi^2(1, N=456) = 26.80, p < .001$. Women, on the other hand, were more likely to stop seeing the physician, $\chi^2(1, N=456) = 15.53, p < .001$; and to report higher levels of anger during the incident, $\chi^2(1, N=456) = 9.06, p < .003$; and at the present time, $\chi^2(1, N=456) = 16.07, p < .001$; as well as report being bothered by the incident for a long time, $\chi^2(1, N=456) = 17.69, p < .001$.



* $p < .003$. ** $p < .001$.

FIGURE 1 Reactions to shame-producing interaction by gender.

To test whether the gender difference in negative behavioral consequences was mediated by negative affect, we followed recommendations of Baron and Kenny (1986). Composite scores, as calculated in the previous section, were used for negative affect and negative behavior (excluding lying given its unsystematic relationship to other variables). Regression equations showed a significant relationship between gender and negative affect ($\beta = .499$), $t(454) = 4.957, p < .001$; and between gender and negative behavior ($\beta = .184$), $t(454) = 3.449, p < .001$. Next, both gender and negative affect were included as predictor variables. Negative affect was significant ($\beta = .25$), $t(453) = 11.44, p < .001$, whereas gender became nonsignificant ($\beta = .059$), $t(453) = 1.22, ns$, supporting the hypothesis that negative affect is a mediator of the gender difference in negative behavioral consequences. Similar mediational analyses were conducted for positive affect and positive behavioral consequences. Gender and positive affect were correlated ($\beta = -.244$), $t(454) = -5.32, p < .001$, as were gender and positive behavior ($\beta = -.316$), $t(454) = -3.88, p < .001$. When gender and positive affect both were included as predictor variables, positive affect was significant ($\beta = .937$), $t(453) = 13.17, p < .001$, but gender was not ($\beta = -.087$), $t(453) = -1.22, ns$, suggesting that affect mediated the gender difference in the positive domain.

Medical issue. The next set of analyses focused on whether particular medical issues were systematically associated with positive or negative reactions (see Table 4). A series of chi-square analyses were performed comparing reactions when the shaming interaction involved a particular type of issue versus not (e.g., substance abuse vs. other issues not involving substance abuse). As noted in Table 3, the dependent variables were significantly related, but not always strongly so, thus warranting examining the dependent variables separately.

Participants who cited smoking as the issue that caused them to feel shame tended to think the doctor was helpful, $\chi^2(1, N=456) = 3.36, p = .067$; were more likely to admire the doctor, $\chi^2(1, N=456) = 13.92, p < .001$; and less likely to be bothered currently by the incident, $\chi^2(1, N=456) = 14.71, p < .001$, than participants whose health issue was not smoking. However, those who reported shame over smoking, were more likely than other participants to lie to their doctor in the future, $\chi^2(1, N=456) = 8.03, p < .01$. Similar trends were found in those reporting that the issue involved alcohol or drug abuse. These participants were more likely to find the experience helpful, $\chi^2(1, N=456) = 4.22, p = .053$; tended to admire the doctor more, $\chi^2(1, N=456) = 2.83, p = .096$; tended to be less angry

TABLE 4
Reactions to Shame-Inducing Interaction by Topic of Health Issue

Issue Involved	% Reporting Positive Reactions					
	Improved Health		Was Helpful		Admire Doctor	
Smoking vs. Not Smoking	29.7 vs. 33.9		53.2 vs. 43.2 [†]		49.5 vs. 30.1*	
Substance vs. Not Substance	39.5 vs. 32.2		60.5 vs. 44.1*		46.5 vs. 33.7 [†]	
Medication vs. Not Medication	54.8 vs. 31.3*		64.5 vs. 44.2*		61.3 vs. 32.9*	
Exercise vs. Not Exercise	45.6 vs. 30.7*		58.8 vs. 43.3*		39.7 vs. 34.0	
Weight vs. Not Weight	35.6 vs. 31.4		49.7 vs. 43.3		37.4 vs. 33.4	
Sex vs. Not Sex	31.4 vs. 33.1		39.2 vs. 46.4		31.4 vs. 35.3	
Other vs. Not Other	26.2 vs. 36.0*		32.4 vs. 51.8*		18.6 vs. 42.4*	

Issue Involved	% Reporting Negative Reactions					
	Avoided	Stopped	Lied	Was Angry	Still Angry	Still Bothered
Smoking vs. Not Smoking	15.3 vs. 18.8	17.1 vs. 20.9	24.3 vs. 13.0*	33.3 vs. 40.3	16.2 vs. 21.4	18.0 vs. 37.7*
Substance vs. Not Substance	23.3 vs. 17.4	11.6 vs. 20.8	41.9 vs. 13.1*	34.9 vs. 39.0	9.3 vs. 21.3 [†]	25.6 vs. 33.7
Medication vs. Not Medication	19.4 vs. 17.9	19.4 vs. 20.0	19.4 vs. 15.5	35.5 vs. 38.8	3.2 vs. 21.4*	19.4 vs. 33.9
Exercise vs. Not Exercise	25.0 vs. 16.8	8.8 vs. 21.9*	26.5 vs. 13.9*	35.3 vs. 39.2	11.8 vs. 21.6 [†]	33.8 vs. 32.7
Weight vs. Not Weight	21.5 vs. 16.0	14.7 vs. 22.9*	19.6 vs. 13.7	38.7 vs. 38.6	16.0 vs. 22.5	34.4 vs. 32.1
Sex vs. Not Sex	11.8 vs. 18.8	19.6 vs. 20.0	15.7 vs. 15.8	29.4 vs. 39.8	31.4 vs. 18.8*	37.3 vs. 32.3
Other vs. Not Other	20.7 vs. 16.7	32.4 vs. 14.1*	11.7 vs. 17.7*	49.7 vs. 33.4*	30.3 vs. 15.4*	42.1 vs. 28.6*

Note. Chi-square analyses compare reactions from those who stated that the shaming event involved the listed topic to those who stated the event did not involve that topic for each type of positive and negative reaction. Within each topic, * $p < .05$, [†] $p < .10$.

about the incident now, $\chi^2(1, N = 456) = 3.49, p = .072$; but were also more likely to lie to their doctors in the future, $\chi^2(1, N = 456) = 24.27, p < .001$.

Participants who experienced a shameful event surrounding medication largely reported more positive reactions than other participants. They were more likely to improve their condition, $\chi^2(1, N = 456) = 7.26, p < .01$; and more likely to find the shaming experience helpful, $\chi^2(1, N = 456) = 4.79, p < .05$; more likely to admire the doctor, $\chi^2(1, N = 456) = 10.22, p < .01$; and were less likely to be angry now, $\chi^2(1, N = 456) = 5.93, p < .05$. Likewise, if the situation involved exercise, participants were more likely to improve their condition, $\chi^2(1, N = 456) = 5.83, p < .05$; were more likely to find the experience helpful, $\chi^2(1, N = 456) = 5.62, p < .05$; less likely to stop seeing the doctor, $\chi^2(1, N = 456) = 6.20, p < .05$; and tended to be less angry now, $\chi^2(1, N = 456) = 3.51, p = .071$. They were, however, more likely to lie to their physicians in the future (26.5% vs. 13.9%), $\chi^2(1, N = 456) = 6.86, p < .05$.

The topics of weight and sex were not systematically associated with positive or negative reactions with one exception: Participants who cited sex as the topic were significantly more likely to be angry still (31.4% vs. 18.8%), $\chi^2(1, N = 456) = 4.47, p < .05$.

An analysis of the 31.8% of participants that selected "other" as the topic option revealed that these participants reported primarily negative reactions to the event. These participants were less likely to improve, $\chi^2(1, N = 456) = 4.31, p < .05$; less likely to find the experience

helpful, $\chi^2(1, N = 456) = 14.93, p < .001$; less likely to admire the doctor, $\chi^2(1, N = 456) = 24.71, p < .001$; more likely to stop going to the doctor, $\chi^2(1, N = 456) = 20.66, p < .001$; more likely to be angry about the incident then, $\chi^2(1, N = 456) = 10.97, p < .001$; more likely to be angry about the incident now, $\chi^2(1, N = 456) = 13.65, p < .001$; and were more likely to still be bothered by the incident, $\chi^2(1, N = 456) = 8.11, p < .005$.¹

DISCUSSION

There has been a recent upsurge of interest in the role that affective states play in health related behaviors and decision making (e.g., see the special issue of the *Emotion Researcher*, 2008). A growing consensus is emerging that negative emotions do not necessarily have a unilateral negative effect on health outcomes (Diefenbach, Miller, & Daly, 1999; Mayne, 2001; Roberts et al., 1994). There

¹Given that the shaming incident could involve more than one issue, we performed a second set of analyses that excluded participants who had reported that the shaming interaction involved multiple issues. These analyses produced a similar pattern of results as those reported for the whole sample. However, some analyses did not reach significance due to substantially reduced sample sizes. Three results that previously were not statistically significant became significant when participants with multiple issues were excluded: Smoking was related to a decrease in the likelihood of being angry when the incident occurred and improving from the incident. Substance abuse was related to an increase in the likelihood of improving.

is also increasing recognition of the importance of differentiating among specific types of negative emotional states rather than focusing on negative affect in general (Consedine, Krivoshekova, & Harris, 2007; Consedine, Magai, Krivoshekova, Ryzewicz, & Neugut, 2004; Dickerson et al., 2004).

The current study appears to have been the first to examine patient reports of shame experiences in medical interactions. Although shame is scarcely mentioned in the medical and medical-education literatures (Lazare, 1997, being an exception), the results show that, whether recognized or not, physician interactions often induce shameful feelings in patients. Approximately half of all respondents reported that a physician had said something that led them to experience shame. The most common topics of these interactions were smoking and being overweight. A sizable proportion of individuals who reported experiences of shame in a medical context attributed highly undesirable consequences to the interaction, including persisting distress (32.9%), cessation of treatment (20%), and lying to the physician in future interactions to avoid embarrassment (15.8%). On the other hand, a similar proportion (45.6%) believed that their physicians' remarks were helpful.

What implications do the present results hold? Is shame an emotion that should ever be viewed as a useful ally in promoting healthy behavior, or is it an emotion to be avoided at all costs? The present results offer the tentative answer of "it depends." Our data suggest that shame in a medical situation is a more complex phenomenon than one might suppose. Although one can hardly fail to be impressed by the proportion of people attributing benefits to shame-provoking interactions, the proportions of individuals who ceased contact with or lied to a physician might reasonably be judged unacceptably high. The results suggest that a greater examination of emotions triggered in physician-patient interactions would be worthwhile. This seems particularly important given that a shame inducing incident led one of five patients in the present sample to stop seeing the physician, presumably preventing physicians from receiving feedback on how their interactions affected patients.

Factors Associated with Shame Reactions

One key issue is to identify the factors that are likely to lead individuals to respond differently to shaming interactions. The current work found that one individual difference variable that predicts type of reaction is gender. Men as a group reported shame as inducing more positive reactions and behavioral changes. The reactions of women were much less positive. For example, women felt more negative emotions and were more likely to stop seeing their doctor because of the shameful experience. Mediational analyses suggest that the effect of gender

on behavioral consequences was mediated by emotional reactions. However, given the correlational nature of the current work, causal claims must be interpreted with caution. Although other research reports that female individuals are more prone to moral emotions in some contexts (Tangney, 1994; Zahn-Waxler & Robinson, 1995), the current work suggests such emotions in the health domain may have unexpected and potentially serious negative consequences. This conclusion is also supported by findings that fear of embarrassment has greater impact on women than men in terms of delaying or failing to seek medical attention (Consedine et al., 2007; Harris, 2006).

There are several possible mechanisms that might give rise to gender differences in shame in medical interactions. One is that shame may be more likely to be elicited and have worse effects when a doctor is of the opposite gender. Other research in our lab suggests that a related emotion, embarrassment, is elicited more strongly in the presence of an opposite sex experimenter (Coffaro & Harris, 2009). Although 75% of practicing physicians are male, the two genders are now entering medical school at equal numbers (American Medical Association, 2008; Magrane, Lang, & Alexander, 2005). Thus, the gender differences in medical shame may change as more female physicians enter the field. The gender of the doctor was not assessed in the current work, but it may be worth doing so in future studies. Another possibility is that physicians may interact with women and men differently. There is some research that suggests that patient gender and race influence how doctors manage chest pains (Schulman et al. 1999). A final possibility is that, even if the genders are treated in the same manner in medical contexts, women may perceive the situation and interactions differently than men.

In addition to identifying individual difference variables, this research explored some of the circumstances that may influence reactions to shame. Shame-provoking interactions tied to certain domains were more likely than others to be viewed in a positive light by the patient. Medication use is one domain that was generally associated with positive emotional and behavioral reactions and was remarkable for its distinct lack of negative effects of shame. Taking medication as directed is a health-enhancing behavior that is probably relatively easy for people to change, which may contribute to these apparently positive effects. Reactions to shame relating to substance abuse, smoking, and exercise appear to be more mixed. Patients with these health issues reported positive emotional reactions to the interaction, including that they admired their doctor, found the interaction helpful, and were less likely to be angry. Behaviorally, however, there were some varied effects associated with these issues. Patients with these conditions reported that they were more likely to lie to their

doctor in the future because of the incident. Only the topic of exercise was associated with patients' reporting actual improvements in their condition. The topics of weight and sex were not systematically associated with either positive or negative experiences involving shame.

The only domain that was associated with almost uniformly negative reactions was the miscellaneous category of "other." Participants in this group responded more negatively than other groups across almost all of emotional and behavioral reactions examined. The types of issues covered were highly heterogeneous. However, examining participants responses in the other category suggest that many of them involved what the patient perceived as a disparaging remark made by the doctor (14.5%) or the doctor questioning the mental state of the patient or the veracity of the patient's medical complaints (9.0%). One possibility is that some of the most negative effects of shame may arise more from a doctor's bedside manner rather than from the "shamefulness" or "delicacy" of the medical topic being addressed, *per se*. We explore this possibility further next, along with other processes that may be involved in determining whether shame will have a negative impact.

Emotional and Social-Cognitive Processes Involved in Shame

Based on these results, one interesting avenue for further research would be to examine whether patients perceive that a physician is deliberately attempting to shame them. It may be that feelings of shame that are not associated with perceptions of being explicitly judged by the physician tend to be associated with a greater motivation to improve health behaviors, whereas shame that arises from the perception of being judged is associated with more maladaptive behaviors. This distinction is similar to that found in research evaluating guilt versus shame, in which guilt is associated with positive consequences while shame is associated with negative (Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). Such work also proposes that appraisals indicting the whole self as bad are more detrimental than appraisals that one's behavior was bad.

An additional factor that may contribute to differing reactions is the type of control strategy used by the physician. As mentioned in the introduction, research on social control behaviors within friendships and family has sometimes revealed positive associations with health, but such effects are not always consistent across the literature. Furthermore, even strategies that increase healthy behaviors may have the dual effect of also eliciting some forms of negative affect. In accounting for some of these disparate findings, researchers have proposed that the type of control strategy may be one important moderator of social control effects. Lewis

and Rook (1999) found that positive control strategies (e.g., rewards or pointing out other success stories) were positively related to health behavior change but also to feelings of guilt/sadness. In contrast, negative control strategies (e.g., attempting to make the target feel guilty) did not appear to affect behavior but were associated with feelings of hostility and irritation.

The current work found that negative affect was associated with more negative and fewer positive behaviors in contrast to the dual effects hypothesis. However, we did not directly assess type of control strategy, so it may be possible that patients who experienced negative reactions perceived their physicians as engaging in more negative control strategies. Examination of participants' open-ended descriptions of the event suggests that negative control strategies were sometimes employed by doctors (e.g., attempts to elicit guilt, describing behaviors as disgusting). Further work could assess control strategy as well as make finer distinctions between types of negative affect. It also might be helpful to assess reactions at different times as a better test of whether early negative affect predicts later positive behaviors.

Another factor that may play a role in patient reactions to shame is the nature of their pre-existing relationship with the doctor. Reis et al. (2008) found that patients' perceptions of physician responsiveness to their needs significantly predicted their satisfaction and subjective assessments of health status and, of importance, that these effects were based on perceived responsiveness in the therapeutic relationship generally, not just in reaction to one visit. Drawing from the trust literature, these researchers note that characteristics like trust and feelings of responsiveness are not simply features of relationships but are the consequence of interactions within those relationships. This line of work suggests that future studies might attempt to assess how patient perceptions of the relationship before the shaming incident affect their emotional and behavioral reactions to shame. Although not directly examining physician-patient relationships, work by Tucker (2002) also suggests that relationship quality maybe an important moderator of reactions to attempts to change health behaviors. For older adults who had low satisfaction in their social relationships, direct social control attempts were correlated with positive health behavior change but also were associated with greater negative affective reactions and with a tendency to hide unhealthy behaviors from others.

The phenomenon of hiding behaviors or "lying" is clearly important and understudied. The current work revealed that a fair number of people (more than 15%) reported lying to their doctors in reaction to shame. Although this finding may be slightly shocking, lying in this study was not uniformly associated with negative consequences. This highlights the importance of future

work taking into account not only positive and negative emotional behavioral reactions but also the use of deception by patients when interacting with their doctors.

Limitations and Concluding Remarks

The present study has several limitations that need to be acknowledged. First, it was necessary to create novel measures specifically for this work. Although some validated measures of dispositional tendencies to feel shame have been developed (see Tangney & Dearing, 2002), measurement of situation specific shame seems to have received little attention. We designed these measures to be rather brief, in part to minimize the potential biasing of patients to respond in any particular way. Our measures would appear to have face validity, but their psychometric properties have not been analyzed beyond what is previously described. However, other work on patient recall of the effects of embarrassment on medical-seeking behavior suggests that single-item measures can be correlated with more extensive and validated measures of medical embarrassment (Consedine et al., 2007). Second, the questions asked in the current research involved retrospective reports of respondents' past emotional reactions, and the validity of these reports has not been established. Doing so would probably require obtaining reports from the respondents that are contemporaneous to the events reports, or obtaining confirmation from other people whom the respondents have confided in—none of these things would be easy to do. Although memory bias cannot be ruled out, it has been argued that asking for recall of a specific past event—as was done in this study—is likely to minimize the degree to which responses are biased by individuals' more global attitudes and feelings (Reis et al., 2008). In short, although it is acknowledged that the current work has limitations, it does provide a starting point for future research in this understudied but evidently important area.

In summary, our research shows that shame occurs often in physician–patient interactions. We have offered several suggestions regarding the psychological and interpersonal processes that may be involved in shaming interactions as well as suggestions for possible directions for future research. As noted earlier, it seems doubtful that randomized prospective trials of shame elicitation would be judged ethical, and thus a definitive causal analysis of the effects of shame-provoking interactions may not be possible. However, given the size of the effects reported by the patients in the current sample, the topic appears to deserve a great deal more exploration than it has so far received. We hope that the current article inspires additional work on this topic.

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