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# Gender and Ethnic Differences in Colorectal Cancer Screening Embarrassment and Physician Gender Preferences

Nathan S. Consedine, PhD, Maike K. Reddig, MSc, Inga Ladwig, MSc, and Elizabeth A. Broadbent, PhD

**D**espite the established efficacy of colorectal cancer (CRC) screening (Levin et al., 2008; Winawer et al., 2003), more than half of the people for whom guidelines are relevant have not been tested (American Cancer Society, 2009). Although CRC screening is predicted by several sociodemographic and structural factors, such factors are difficult to modify and appear better suited to identifying at-risk groups than to capacitating interventions (Magai, Consedine, Neugut, & Herschman, 2007). A focus on modifiable factors has been called for (Guessous et al., 2010), and changing attitudes may be one particularly cost-effective approach (Winawer et al., 2003).

Viewed in that light, the fact that so few studies of CRC embarrassment exist is surprising (Inadomi, 2008; Klabunde et al., 2005; McAlearney et al., 2008; Walsh et al., 2004). Greater embarrassment predicts a lower frequency of intimate examinations (Kinchen et al., 2003; Shaw, Williams, Assassa, & Jackson, 2000; Shinn et al., 2004), including cancer screenings (Bleiker et al., 2005; Consedine, Magai, & Neugut, 2004; Denberg et al., 2005; Harewood, Wiersema, & Melton, 2002). Several considerations limit the ability of prior research to inform understanding of CRC screening. First, researchers are unclear about what aspect(s) of CRC screening contexts are embarrassing and, therefore, deterring. Second, the literature regarding ethnic and gender differences in CRC screening embarrassment is scattered and inconsistent. Finally, although some studies have been conducted among women, the potential relevance of physician gender among samples of men and women remains unclear.

**Purpose/Objectives:** To examine colorectal cancer (CRC) screening embarrassment among men and women from three ethnic groups and the associated physician gender preference by patient gender and ethnicity.

**Design:** Cross-sectional, purposive sampling.

**Setting:** Urban community in Brooklyn, NY.

**Sample:** A purpose-derived, convenience sample of 245 European American, African American, and immigrant Jamaican men and women (aged 45–70 years) living in Brooklyn, NY.

**Methods:** Participants provided demographics and completed a comprehensive measure of CRC screening embarrassment.

**Main Research Variables:** Participant gender and ethnicity, physician gender, and CRC screening embarrassment regarding feces or the rectum and unwanted physical intimacy.

**Findings:** As predicted, men and women both reported reduced fecal and rectal embarrassment and intimacy concern regarding same-gender physicians. As expected, Jamaicans reported greater embarrassment regarding feces or the rectum compared to European Americans and African Americans; however, in contrast to expectations, women reported less embarrassment than men. Interactions indicated that rectal and fecal embarrassment was particularly high among Jamaican men.

**Conclusions:** Men and women have a preference for same-gender physicians, and embarrassment regarding feces and the rectum shows the most consistent ethnic and gender variation.

**Implications for Nursing:** Discussing embarrassment and its causes, as well as providing an opportunity to choose a same-gender physician, may be promising strategies to reduce or manage embarrassment and increase CRC screening attendance.

## Embarrassment: The Emotions Theory View

To address these issues, the current study was conducted within the conceptual framework offered by discrete emotions theories (Brown & Consedine, 2004; Consedine & Moskowitz, 2007). In that view, each emotion is an evolutionary adaptation that has evolved to promote fitness-enhancing responses to particular classes of situation (Consedine, Magai, & Bonanno, 2002). Each emotion has a core function that structures how it works in physiologic, cognitive, motivational, expressive, and behavioral systems (Consedine, Strongman, & Magai, 2003). Embarrassment, for example, is thought to have evolved as a mechanism that prevented the social ostracism that follows social norm violations (Consedine, Krivoshekova, & Harris, 2007). For each person, distinct emotional responses arise when a situation or event is appraised as impacting their goals in particular ways—the *meaning* they extract from events (Lazarus, 1991). Embarrassment, for example, arises in situations where people appraise themselves as being negatively evaluated by others (Higuchi & Fukada, 2002, 2008) because of so-called inappropriate behaviors that violate social norms (Keltner & Anderson, 2000), or in which a failure in privacy regulation or a loss of bodily control has occurred (Keltner & Anderson, 2000). Where behavior is seen as inconsistent with goals regarding the appropriateness of social conduct, embarrassment occurs and behavior is redirected toward these goals.

Several implications for understanding CRC screening embarrassment stem from this view. First, to understand links between emotions and health behaviors, healthcare professionals must understand exactly what is emotion-eliciting about screening (Consedine, Adjei, Ramirez, & McKiernan, 2008; Consedine, Krivoshekova, et al., 2007). The reason for that assertion is straightforward—the behaviors following an emotional response are designed to rectify the situation and bring events back in line with the individual's goals. For embarrassment, blushing signals an awareness that norms have been violated, and the anticipation of embarrassment motivates the avoidance of behaviors and situations likely to elicit it (Frijda, 1994). Therefore, because people avoid embarrassment's elicitors, identifying the specific elicitors is critical to understanding how embarrassment impacts behavior (Consedine et al., 2008; Consedine & Moskowitz, 2007) and to the development of interventions.

A small portion of the CRC screening literature suggests that embarrassment may stem from staff interactions (Von Wagner et al., 2009), privacy or nudity (Clavarino et al., 2004), and penetration and homophobic fears (Goldman, Diaz, & Kim, 2009; Holt et al., 2009; Winterich et al., 2009). However, most studies simply do not illuminate what is embarrassing about CRC screening. In addition to using relative metrics contrasting embarrassment

relative to other barriers (Denberg et al., 2005; Rajapaksa, Macari, & Bini, 2007), studies assess embarrassment with a single item (Nicholson & Korman, 2005) via qualitative interviews and focus group methods (Holt et al., 2009; Kelly et al., 2007; O'Malley, Beaton, Yabroff, Abramson, & Mandelblatt, 2004; Rawl, Menon, Champion, Foster, & Skinner, 2000), or with binary, yes- or no-type items (Walsh et al., 2004). Such ratings do not examine the specific elicitors of embarrassment, despite the importance of understanding whether individuals are embarrassed about being touched in intimate areas, having something inserted into their rectum, having someone in close proximity to feces, being naked in front of others, discussing intimate testing, or being evaluated by the physician. The current study assesses CRC screening embarrassment with a valid, reliable, and multidimensional tool that illuminates the specific aspects of CRC screening that patients find embarrassing.

Second, because the importance of goals and norms regarding self-presentation, medical behavior, nudity or physical exposure, and physical intimacy likely varies across ethnic and cultural groups, differences in degrees of embarrassment are to be expected when such goals are violated in screening contexts. Empirical guidance on the matter of ethnic differences is mixed. Some studies suggest embarrassment is a particular concern for black minorities (Consedine, Christie, & Neugut, 2009; Holt et al., 2009; Robb, Solarin, Power, Atkin, & Wardle, 2008), others that black minorities are less troubled by embarrassment (Consedine, Krivoshekova, et al., 2007; McAlearney et al., 2008), and still others that ethnic groups do not differ (Bosworth et al., 2006). Although inconsistencies may reflect the tendency to group people of African descent in overarching "black" categories (Consedine, Magai, & Conway, 2004; Consedine, Magai, Spiller, Neugut, & Conway, 2004; Consedine, Morgenstern, Kudadjie-Gyamfi, Magai, & Neugut, 2006), they also may arise because studies assess embarrassments regarding different aspects of CRC screening. A few studies suggest that CRC screening embarrassment is higher among Caribbean groups (Goldman et al., 2009; Robb et al., 2008). The current study assessed embarrassment in well-defined groups of U.S.-born African American, U.S.-born European American, and immigrant Jamaican samples and contrasted embarrassment stemming from two specific aspects of CRC cancer screening embarrassment.

Similarly, because the importance of goals and norms regarding self-presentation, medical behavior, nudity or physical exposure, and physical intimacy likely varies across genders, emotions research suggests gender differences might be expected in CRC embarrassment. In general, women appear to place greater value on such goals and are, therefore, more easily embarrassed (Miller, 1995). In CRC contexts, however, women are no more likely than men to report screening as being "too painful, unpleasant, or embarrassing" as the main reason

for not participating (Peterson, Murff, Ness, & Dittus, 2007). Because of the associated meaning, men may be more embarrassed with tests and examinations involving the rectum; preliminary data suggest that men from Caribbean regions may avoid CRC screenings because of associations with homosexuality and anal sex (Goldman et al., 2009; Winterich et al., 2009).

Finally, asserting that embarrassment arises when social norms are violated or a failure in privacy regulation has occurred (Keltner & Anderson, 2000) suggests that embarrassment should be greater regarding opposite-gender physicians. Data suggest that women have a preference for female physicians (Farraye et al., 2004; Fidler, Hartnett, Cheng Man, Derbyshire, & Sheil, 2000; Menees, Inadomi, Korsnes, & Elta, 2005; Schneider, Kanagarajan, Anjelly, Reynolds, & Ahmad, 2009; Varadarajulu, Petruff, & Ramsey, 2002), in part because having a female doctor makes procedures less embarrassing (Menees et al., 2005); preferences among men are less strongly evident (Fidler et al., 2000; Varadarajulu et al., 2002). In general, however, exposure of the body in the presence of an opposite-gender stranger is uncommon and restricted to sexual encounters, whereas normative instances exist of same-gender exposure that do not connote sexuality (e.g., public urination, saunas, steam rooms). In testing for such preferences, the current study assessed CRC screening embarrassments in relation to both male and female physicians.

Given the description of the current state of CRC screening embarrassment research described, the current study was developed to address three key areas. The authors specifically asked the following research questions: Are there differences in aspects of CRC screening embarrassment among men and women from different ethnic groups? And, is there a relationship between gender, ethnicity, and physician gender preference?

## Methods

### Participants

The study sample included 245 men and women aged 45–70 years who lived in Brooklyn, NY (see Table 1). Given differences in cancer screening embarrassment in subpopulations of African Americans (Consedine et al., 2009; Consedine, Magai, & Neugut, 2004), the authors recruited U.S.-born African Americans with U.S.-born parents, individuals of African descent born in Jamaica, and U.S.-born European Americans with U.S.-born parents.

### Procedures

Permission to conduct the study was obtained from the institutional review boards at two universities in New York, NY, written informed consent was given, and data were collected across 18 months from 2007–2008. People meeting age and ethnic inclusion criteria were recruited

**Table 1. Participant Demographics Stratified by Ethnic Group and Gender**

Variable	n	$\bar{X}$	SD	Ethnic F Value
<b>Age (years)</b>				10.19**
• European American				
– Male	42	55.4	6.77	
– Female	50	55.18	6.45	
• African American				
– Male	33	49.7	4.41	
– Female	51	52.31	5.72	
• Jamaican				
– Male	29	53.45	6.56	
– Female	40	53.6	6.88	
<b>Income (\$ in thousands)</b>				9.19**
• European American				
– Male	42	53.3	44.4	
– Female	50	50.9	40.7	
• African American				
– Male	33	32.4	35.4	
– Female	51	27.3	27.7	
• Jamaican				
– Male	29	43.3	18.2	
– Female	40	46.4	28	
<b>Education (years)</b>				19.24**
• European American				
– Male	42	15.36	3.27	
– Female	50	15.94	3.15	
• African American				
– Male	33	13.52	2.59	
– Female	51	13.75	2.99	
• Jamaican				
– Male	29	12.93	2.27	
– Female	40	13.28	1.78	

N = 245

\*\*p < 0.01

*Note.* Tukey honestly significant difference tests indicated that European American and Jamaican samples were older and reported greater income than African Americans and that European Americans were more educated than Jamaicans or African Americans.

purposefully for a study of “Emotions and Health Behavior” through databases, newspapers, community postings, contacts, and word-of-mouth. Participants gave informed consent and completed questionnaires in their home, the laboratory, or another location of their choice, such as a senior center or church. Participation lasted 60–90 minutes, measures were administered in a standard order for all participants, and participants received \$35 remuneration upon completion.

### Measures

A **demographic questionnaire** elicited information regarding self-reported ethnicity, age, education, and household income.

**Colorectal cancer screening-specific embarrassment:** Given the absence of measures suited to the current report’s foci, an instrument was developed specifically for the study. Combining theory with a careful review of the

literature describing CRC embarrassment, a preliminary list of about 40 items was developed; the likely elicitors of CRC embarrassment led the authors to include items assessing embarrassment regarding discussions of intimate testing, nakedness, touching, the insertion of objects or digits into the rectum, and feces (Consedine, Krivoshekova, et al., 2007). The items were examined for clarity and redundancy by an experienced team of clinicians, oncologists, and researchers, and a list of 20 items was agreed on. Given the authors' interest in possible differences between male and female physicians, participants made ratings on a Likert-type scale, from 1 (not at all or never) to 5 (very much or always), separately for male and female physicians.

An initial report identified two reliable and valid components (Consedine, Ladwig, Reddig, & Broadbent, 2011). The first was defined by six items (e.g., "I feel humiliated when a doctor or technician asks me about bowel function or stool color.") that assessed embarrassment regarding feces and rectal examinations ( $\alpha = 0.9$ ). The second component was comprised of four items reflecting embarrassment stemming from unwanted or conflicted physician-patient intimacy ( $\alpha = 0.87$ ) (e.g., "I feel very self-conscious about exposing my body during a colorectal cancer examination."). The parallel analysis in the male physician data revealed a factor defined by the same items ( $\alpha = 0.89$  and  $0.88$ ). For the current article, items in each subscale were averaged.

## Data Analytic Strategy

Data analysis proceeded in three stages. First, given the low income level within the sample, ethnic differences in scale use (Grimm & Church, 1999; Lee, Jones, Mineyama, & Zhang, 2002), and the fact that the examination of CRC screening embarrassment occurred in the context of a larger study, data were screened for systematic bias or invalid response issues. Two raters independently assessed responses and participants were excluded if 90% or more of their ratings used a single point on the Likert-type scales for all of the male or female physician or technician ratings. On that basis, 49 of the original 294 participants were excluded. Second, because ethnicity is conflated with demographics (Consedine, Magai, & Conway, 2004), the authors examined ethnic variation in demographics. Finally, the authors tested the primary questions by running repeated-measures analyses of covariance (ANCOVA) for the two embarrassment factors, where physician gender served as a within-subjects factor, gender and ethnicity were treated as between-subjects factors, and age, income, and education were covaried.

## Results

Analyses revealed significant ethnic differences in demographics (Wilks'  $\lambda = 0.77$ ,  $p < 0.01$ ), with specific

differences in age ( $F_{2, F_{245}} = 10.19$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.08$ ), income ( $F_{2, F_{245}} = 9.19$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.07$ ), and education ( $F_{2, F_{245}} = 19.24$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.14$ ). Post-hoc Tukey honestly significant difference tests showed that income and age were greater in the U.S.-born European American and Jamaican samples than in the U.S.-born African American group, and education was greater among U.S.-born European Americans than either of the other groups. Those variables were treated as covariates in the next stage of the analyses.

The initial model examining fecal or rectal embarrassment showed effects for ethnicity ( $F_{2, F_{245}} = 10.38$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.08$ ), participant gender ( $F_{1, F_{245}} = 4.47$ ,  $p < 0.05$ ,  $\eta_p^2 = 0.02$ ), age ( $F_{1, F_{245}} = 12.26$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.05$ ), and an interaction between gender and ethnicity ( $F_{2, F_{245}} = 3.98$ ,  $p < 0.05$ ,  $\eta_p^2 = 0.03$ ). To conserve power, the authors dropped nonsignificant covariates (i.e., income and education) and ran a repeated-measures ANCOVA with physician gender as a within-subjects factor, participant gender and ethnicity as between-subjects factors, and covarying age. Ethnicity was significant ( $F_{2, F_{245}} = 12.93$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.1$ ), as was participant gender ( $F_{1, F_{245}} = 4.99$ ,  $p < 0.05$ ,  $\eta_p^2 = 0.02$ ), age ( $F_{2, F_{245}} = 10.38$ ,  $p < 0.01$ ,  $\eta_p^2 = 0.08$ ), and the interaction between participant

**Table 2. Colorectal Cancer Embarrassment Components for Male and Female Physicians Stratified by Participant Ethnic Group and Gender**

Variable	n	Physician			
		Male		Female	
		$\bar{X}$	SD	$\bar{X}$	SD
<b>Rectal embarrassment<sup>a</sup></b>					
• European American					
– Male	42	1.86	0.88	2.08	1.08
– Female	50	2.17	1.07	2.01	1.03
• African American					
– Male	33	2.2	0.94	2.32	0.96
– Female	51	1.97	1.01	1.95	1.08
• Jamaican					
– Male	29	3.09	1.2	3.32	0.96
– Female	40	2.56	1.15	2.21	0.99
<b>Examination intimacy<sup>b</sup></b>					
• European American					
– Male	42	2.25	1.35	2.49	1.42
– Female	50	2.68	1.28	2.48	1.16
• African American					
– Male	33	2.42	1.07	2.67	1.28
– Female	51	2.36	1.18	2.21	1.14
• Jamaican					
– Male	29	3.04	1.13	2.93	1.04
– Female	40	2.68	1.03	2.4	1.02

N = 245

\* $p < 0.1$ ; \*\* $p < 0.01$

<sup>a</sup>F value for ethnicity was 12.93\*\*; F value for participant gender was 4.99\*\*.

<sup>b</sup>F value for ethnicity was 2.72.



gender and ethnicity ( $F_{2, F_{245}} = 3.9, p < 0.05, \eta_p^2 = 0.03$ ). Group means for the two embarrassment components are displayed in Table 2. Although embarrassment generally was higher among Jamaicans and men, the gender-by-ethnicity interaction suggested that rectal embarrassment was particularly high among Jamaican men. Finally, an interaction was observed between participant gender and the gender of the physician or technician (Wilks'  $\lambda = 0.928, p < 0.01, \eta_p^2 = 0.07$ ) (see Figure 1). The interaction showed that women reported lower fecal or rectal embarrassment with female physicians and men reported lower fecal or rectal embarrassment with male physicians.

Analysis of the second component, examination intimacy, was broadly similar. The initial ANCOVA revealed a marginal effect for ethnicity ( $F_{2, F_{245}} = 2.64, p = 0.07, \eta_p^2 = 0.02$ ), as well as effects for age ( $F_{1, F_{245}} = 6.91, p < 0.01, \eta_p^2 = 0.03$ ) and education ( $F_{1, F_{245}} = 6.57, p < 0.05, \eta_p^2 = 0.03$ ); Although gender was not significant in this specific model ( $F_{1, F_{245}} = 0.6$ ), the study's overarching focus on matters of gender led the authors to retain gender but to drop income, which was not significant and shared overlap with education.

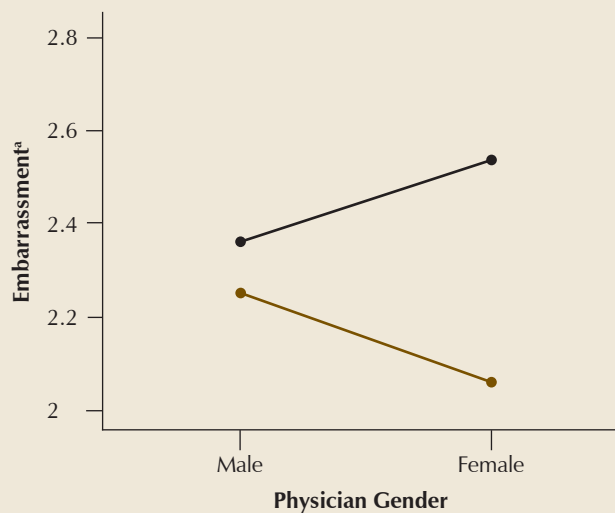
The authors then ran a repeated-measures ANCOVA with physician gender as a within-subjects factor, participant gender and ethnicity as between-subjects factors, and covarying education and age. Ethnic differences remained marginal ( $F_{2, F_{245}} = 2.72, p = 0.07, \eta_p^2 = 0.02$ ), with data suggesting marginally lower examination intimacy among African Americans relative to the other two groups; in addition, education ( $F_{1, F_{245}} = 9.07, p < 0.01, \eta_p^2 = 0.04$ ) and age ( $F_{1, F_{245}} = 7.19, p < 0.01, \eta_p^2 = 0.03$ ) effects were observed; again, participant gender was not significant ( $F_{1, F_{245}} = 0.6$ )

As in the fecal and rectal embarrassment model, an interaction was observed between participant gender and the gender of the physician or technician (Wilks'  $\lambda = 0.957, p < 0.01, \eta_p^2 = 0.04$ ), as well as a marginal two-way interaction between physician gender and ethnicity (Wilks'  $\lambda = 0.979, p = 0.082, \eta_p^2 = 0.02$ ). Inspection of the interaction plots suggested that men and women reported greater embarrassment regarding a physician of the opposite gender. The interaction between ethnicity and physician gender (see Figure 2) suggested that Jamaicans reported marginally greater embarrassment with respect to male physicians, whereas U.S.-born European Americans and U.S.-born African Americans did not differ regarding physician gender; the absence of a three-way interaction with gender suggests that these differences were present for male and female participants.

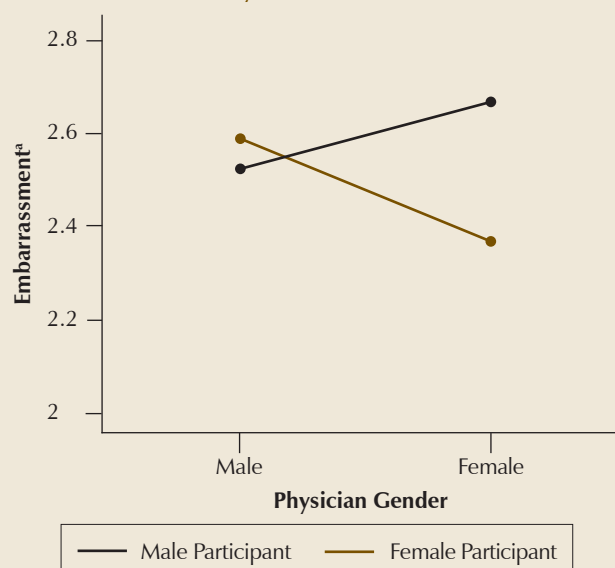
## Discussion

The current article offers data relevant to the consideration of ethnic and gender differences in two aspects of CRC screening embarrassment and patient preference for physician gender. CRC screening embarrassment

### A. Fecal or Rectal Embarrassment



### B. Examination Intimacy



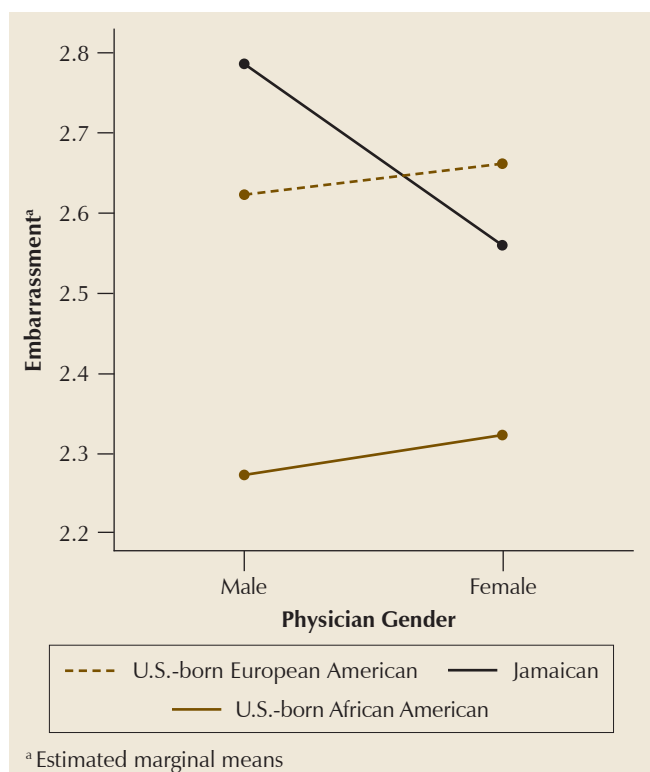
<sup>a</sup> Estimated marginal means

**Figure 1. Interaction Plot Showing Embarrassment Components as a Function of Patient and Physician Gender**

regarding fecal or rectal embarrassment varied by ethnicity and gender, with men and Jamaicans reporting greater embarrassment. As expected, men and women reported greater fecal or rectal embarrassment with a physician of the opposite gender. Conversely, no significant ethnic or gender differences existed in examination intimacy embarrassment, although, again, both men and women reported greater examination intimacy embarrassment regarding a physician of the opposite gender.

## Ethnic and Gender Differences in Colorectal Cancer Screening Embarrassment

Prior work examining ethnic differences in CRC screening embarrassment has been mixed, with some



**Figure 2. Interaction Plot Showing Examination Embarrassment Regarding Male and Female Physicians as a Function of One's Ethnic Group**

studies suggesting medical embarrassments are greater among minorities (Barber et al., 1998; Holt et al., 2009; Robb et al., 2008) and others suggesting fewer (Consedine, Krivoshekova, et al., 2007), relatively less (McAlearney et al., 2008), or no differences (Bosworth et al., 2006). Following the rationale offered within emotions theory, the current study assessed two distinct aspects of CRC screening-related embarrassment and found that ethnic differences were stronger regarding fecal or rectal embarrassment. The finding that Jamaicans reported greater fecal or rectal embarrassment is consistent with prior works among Caribbean groups indicating high CRC screening embarrassment (Goldman et al., 2009; Robb et al., 2008). In addition to replicating those findings for a sample of immigrant Jamaicans in the United States, the current article clarifies the particular aspect of CRC screening contexts that deters screening—an aversion to the fecal or rectal elements of CRC screenings was particularly high among Jamaicans.

Differences in fecal or rectal embarrassment also were strongly evident in the findings regarding gender, with Jamaican men, in particular, reporting high levels of such embarrassment. Within the lens offered by emotions theory, those results likely reflect underlying group differences in how CRC screening situations are evaluated. Specifically, although women generally may have more restrictive goals, norms, and standards regarding bodily exposure, privacy, and social norms

(Keltner & Anderson, 2000)—leading to greater embarrassment in general (Miller, 1995)—CRC screening contexts are a very specific event. In emotions theory, the emergence of a particular emotional response depends on how situations are evaluated or how meaning is extracted from events and situations. As a specific form of embarrassment, rectal or fecal embarrassment generally may be greater among men because of more restrictive rules and norms regarding the rectum.

Importantly, the interaction between ethnicity and gender suggested that greater fecal or rectal embarrassment among men was primarily the result of the anticipated elevation among Jamaican men. Again, ethnic differences in the meaning of situational components likely are responsible here. CRC examinations have known associations with homosexuality and anal sex among men, particularly Caribbean men (Winterich et al., 2009), and Jamaican men report high levels of masculinity-related concerns (Consedine, Horton et al., 2007). Other Caribbean groups, notably Dominicans and Puerto Ricans, view anal sex as a cause of CRC (Goldman et al., 2009). That pattern may suggest that fecal or rectal examinations are differentially embarrassment-eliciting and aversive in this group because they connote the activities of a sexual minority or because they carry the unpleasant risk of a positive diagnosis that could, in turn, be taken as evidence of homosexual proclivities or behaviors.

### The Importance of Physician Gender

Ratings of both fecal or rectal and examination intimacy embarrassment were greater regarding an opposite-gender physician, which is consistent with previous studies indicating a preference for female physicians among women (Farraye et al., 2004; Fidler et al., 2000; Menees et al., 2005; Schneider et al., 2009; Varadarajulu et al., 2002), although prior data regarding men have been mixed (Fidler et al., 2000; Varadarajulu et al., 2002). Finding greater embarrassment regarding opposite-gender physicians among both men and women is consistent with emotions theory insofar as it may reflect the fact that examinations represent a greater norm and privacy violation when they are conducted by an unknown member of the opposite gender (Keltner & Anderson, 2000). Embarrassment generally is conceptualized as a response that evolved to help prevent norm violations and social ostracism (Consedine, Krivoshekova, et al., 2007). Therefore, to the extent that exposure of the body in the presence of an opposite-gender stranger is uncommon and limited to sexual encounters, such an interpretation may help explain why both men and women report greater CRC screening embarrassment with opposite-gender physicians.

Alternately, finding that men and women report greater embarrassment regarding opposite-gender physicians may reflect methodologic differences between the

current study and prior articles. For example, men may be prone to socially desirable “I don’t care”-type responses when asked directly about preference, whereas assessing CRC embarrassment regarding male *and* female physicians may provide an indirect gauge of an underlying inclination. Given male anxiety regarding rectal examinations (Winterich et al., 2009), indicating any preference may have the implicit consequence of sexualizing the examination. Consequently, men may demur when asked for a preference, but preferences may nonetheless emerge when assessed less directly.

Finally, the current data provide some indication that preference for same-gender physicians may not be consistent across ethnic groups. The interaction between ethnicity and physician gender in the model examining intimacy examination concerns showed that Jamaicans reported greater examination intimacy embarrassment regarding male physicians. Although the authors cannot be sure, that finding may suggest that, in contrast to African American and European American cultures, Jamaican culture contains a more embarrassment-eliciting combination of norms regarding opposite-sex examination embarrassment among women and prescriptions against male-male examinations among men. For Jamaicans, examinations by men may elicit more examination intimacy embarrassment because they constitute a more profound violation of norms and rules.

## Limitations

Although the data reflect three ethnic groups, they stem from a nonrepresentative and purposively derived sample. Although advertising for a study of emotions and health, rather than explicitly describing content, should have helped avoid deterring participants, the most embarrassed people may have been differentially less likely to complete the study. Whether the study’s findings can be generalized is unclear and replication of the study’s findings in more rigorously sampled populations is needed. Second, because the report drew from a larger study examining psychosocial barriers to several cancer screenings, the design targeted people aged 45–70 years for whom CRC screening is relevant but not necessarily recommended; greater age was related to reduced CRC screening embarrassment when covaried in the study’s models, although power concerns precluded specific testing. Prior work showed that younger women have stronger physician gender preferences (Menees et al., 2005), and age likely is an important predictor of screening embarrassment. For example, participating in various intimate examinations across the lifespan may recursively reduce embarrassment—a habituation effect. Embarrassment tends to decrease after CRC screening (Von Wagner et al., 2009), and longitudinal studies are warranted.

## Implications for Nursing Practice

With these limitations noted, the current data contain several key implications for those interested in the processes underlying CRC screening decisions. Actual or anticipated embarrassment may be one of the most readily addressed or modifiable barriers to timely participation in cancer screening. As such, documenting ethnic and gender differences, together with variation in embarrassment as a function of physician gender and the particular component of embarrassment, contains several implications for additional work and intervention.

First, group differences generally were stronger regarding fecal or rectal embarrassment, and it may be that that specific aspect of CRC screening embarrassment should be targeted by practitioners when seeking to facilitate initial or repeat screening. Emotions theory suggests that because emotions arise with respect to particular aspects of screening contexts, those aspects are what is being avoided and, therefore, what should be addressed (Consedine et al., 2008; Consedine & Moskowitz, 2007). Rather than intervening with attempts to reduce embarrassment in general, it may be more effective to specifically target those aspects of CRC screening embarrassment.

Second, it may be that interventions to reduce actual or anticipated embarrassment represent a fertile avenue in attempts to elevate screening and/or repeat screening in certain populations. One way to potentially accomplish that is by communicating the fact that most people find CRC screenings embarrassing. Given the sensitivity of CRC examinations, such conversations are likely to be more effective when initiated by healthcare providers rather than patients. Initiating a dialogue about the commonality of embarrassment may help destigmatize patients’ experiences and help them to see embarrassment as normal. Discussion of the specific aspects of CRC screenings that research suggests are embarrassing may facilitate the patient experiencing the provider as being empathic and help to establish a working health partnership that shifts patient focus toward the management of embarrassment rather than the avoidance of it.

Third, studies suggest that embarrassment sometimes is worse in anticipation (Von Wagner et al., 2009) and benefits may arise from explaining that to potential screeners. Specifically, when healthcare providers are recommending CRC screenings, they should highlight the fact that embarrassment may be less than anticipated. Such knowledge may provide patients with a means of coping such that attendance is enhanced.

Finally, participants expressed a preference for physicians of the same gender, at least as indexed by embarrassment; being able to choose the gender of the examining physician appears to be a promising strategy. Prior work shows that physicians of the preferred gender are viewed as more empathic (Menees et al., 2005), easier to talk to, and providing more comfortable examinations



(Kerssens, Bensing, & Andela, 1997). The presence of an opposite-gender physician may activate gender and sex role characteristics that make it difficult to be a patient and more likely for aspects of masculinity or femininity to become active. Among men, masculinity motivations likely are inconsistent with the vulnerability necessary for CRC examinations. If men are more able to act as patients, rather than as "men," with a male doctor, being dependent, vulnerable, subordinate, or submissive may be less conflicting and anxiety-provoking.

Given the preponderance of male physicians in the relevant specialties, such an approach is likely to be more difficult for female patients. Estimates in the United States suggest that although women make up 55% of residents in family medicine and 45% of residents in internal medicine, they comprise only 32% of residents in colon and rectal surgery (Leadley, 2009) and only 4% of the members of the American Society for Gastrointestinal Endoscopy (Varadarajulu et al., 2002). To realize such a strategy, health-providing organizations may

need to employ female endoscopy technicians specifically to offset the preponderance of male specialists in the field.

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Nathan S. Consedine, PhD, is an associate professor in the Department of Psychological Medicine at the University of Auckland in New Zealand; Maike K. Reddig, MSc, was an exchange student at the University of Auckland from the Department of Psychology at the University of Marburg in Germany at the time of the study; Inga Ladwig, MSc, is a doctoral student in the Department of Psychological Medicine at the University of Auckland; and Elizabeth A. Broadbent, PhD, is a senior lecturer in the Department of Psychological Medicine at the University of Auckland. This research was supported by funding from the U54 Comprehensive Cancer Partnership between Long Island University and Columbia University (1 U54 CA101388). Consedine can be reached at [atn.consedine@auckland.ac.nz](mailto:atn.consedine@auckland.ac.nz), with copy to editor at [ONFEditor@ons.org](mailto:ONFEditor@ons.org). (Submitted September 2010. Accepted for publication November 12, 2010.)

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