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Abstract

Drawing from the objectification literature, three experiments tested the hypothesis that breastfeeding mothers are the victims of bias. In Study 1, participants rated a woman who had breastfed as incompetent. Study 2 replicated these effects and determined that the bias was specific to conditions that sexualized the breast. In Study 3, participants interacted with a confederate in which attention was drawn to her as a mother, as a mother who breastfeeds, as a woman with sexualized breasts, or in a neutral condition. Results showed the breastfeeding confederate was rated significantly less competent in general, in math and work specifically, and was less likely to be hired compared to all other conditions, except for the sexualized breast condition. Importantly, the breastfeeding mother emphasis and the sexualized breast emphasis resulted in equally negative evaluations. Results suggest that although breastfeeding may be economical and healthy, the social cost is potentially great.

Keywords

objectification, prejudice, breastfeeding, mothers, competence

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A woman's reproductive capacity is often devalued by Western cultures (Baumslag & Michael, 1995; Blum, 1999; Yalom, 1997). Indeed, menstruation, pregnancy, and lactation often serve as cues that women are inferior (Johnston-Robledo, Wares, Fricker, & Pasek, 2007; Roberts, Goldenberg, Power, & Pyszczynski, 2002; Roberts & Waters, 2004). For example, a woman who is (perceived as) menstruating is viewed as less competent and is liked less than a woman who is not thought to be menstruating (Roberts et al., 2002). Women who are (seemingly) pregnant also experience greater amounts of sexism compared to nonpregnant women (Goldenberg, Goplen, Cox, & Arndt, 2007; Hebl, King, Glick, Kazama, & Singletary, 2007). Research has well documented that menstruation, pregnancy, and motherhood are a source of bias in interpreting a woman's level of competence (e.g., Crosby, Williams, & Biernat, 2004; Fuegen, Biernat, Haines, & Deaux, 2004; Halpert, Wilson, & Hickman, 1993).

This decrease in a mother's perceived competence is usually coupled with an increase in perceptions of her level of kindness and warmth. Called *paternalistic prejudice* (Cuddy, Fiske, & Glick, 2004), this is a phenomenon rarely experienced by men. Instead, fathers are often given more leeway and held to more lenient standards than mothers, especially in the workplace (Fuegen et al., 2004; see also Bridges, Etaugh, & Barnes-Farrell, 2002). Brescoll and Uhlman (2005) found that mothers who work outside the home (especially those who

worked for financial necessity) were evaluated more negatively compared to mothers who stayed at home (see also Etaugh & Moss, 2001). Thus, different "types" of mothers may be differently prejudged. With regard to a breastfeeding mother, we contend that to the extent that she retains a high level of warmth but is judged as incompetent, this would provide evidence of paternalistic prejudice. Alternatively, to the extent that the sexualized nature of the maternal breast is comparable to an unfeeling "object" (e.g., Ward, Merriwether, & Caruthers, 2006; Young, 2005), it is possible that a breastfeeding mother would be judged as having low levels of both competence and warmth.

The Sexualized Maternal Breast

"Breasts are a scandal for patriarchy because they disrupt the border between motherhood and sexuality" (Young, 2005, p. 77). Within the historical underpinning of the Madonna-whore dichotomy, the implication is that the function of the breast is either for the pleasure of a lover or for the

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nourishment of a child (Yalom, 1997; see also Friedman, Weinberg, & Pines, 1998; McBride-Henry, White, & Benn, 2009). This dichotomy, however, assumes that the breast and breastmilk can be decontextualized (Johnston-Robledo & Fred, 2008). Yet, in Western society the breast is highly sexual, and feminist scholars contend that Western norms regard the breastfeeding breast as an “object” on public display (Blum, 1999; Hausman, 2003; Young, 2005). For example, in 2008, Facebook, a popular social-networking website, forbade photographs of breastfeeding mothers if any part of the areola was showing. Facebook declared such photos “obscene, pornographic, and offensive” and removed them from websites (Sweeney, 2008). Moreover, empirical evidence suggests that people feel offended by and less comfortable with a woman who nurses in public compared to one who nurses in private (Acker, 2009). As a cause or consequence of this sexualization of the maternal breast, mothers who breastfeed often go to great lengths to avoid the public “male gaze” and being “misread as sexual” (Stearns, 1999, p. 322; see also Scott & Mostyn, 2003).

The public sexual consumption of the human body is a main tenet of *objectification theory* (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996; Moradi & Huang, 2008). This theory posits that in Western society, individuals—particularly women—are subject to experiences that highlight body parts as “things” to be used or looked at by others (e.g., Fredrickson & Roberts, 1997; Strelan & Hargreaves, 2005). This compartmentalization of a woman’s body reduces her value to that of an object rather than a whole embodied person (Hausman, 2003; Heflick & Goldenberg, 2009; Nussbaum, 1995). For example, large-breasted women tend to have their bust size interpreted as a measure of both (low) worth and value when under a male gaze (e.g., Millsted & Frith, 2003).

Priming the objectification of women renders sexist thoughts more accessible (Rudman & Borgida, 1995) and “sexy” women (especially those in high-power positions) are targets of bias (Glick, Larsen, Johnson, & Branstiter, 2005; Wookey, Graves, & Butler, 2009). For example, people rated Sarah Palin as very low in competence and as less human when told to objectify her by focusing on her appearance (vs. focusing on her personhood; Heflick, & Goldenberg, 2009). Thus, assuming the sexualization of the maternal breast, objectification theory would predict that not only will women who are high in self-objectification feel more shame and embarrassment with public breastfeeding (as shown by Johnston-Robledo et al., 2007), but onlookers should prejudice women who breastfeed with the same negative bias they use to judge sexualized women (Friedman et al., 1998; Glick et al., 2005; Ward et al., 2006).

Biased Evaluations of Breastfeeding Mothers

Research on perceptions of breastfeeding mothers is sparse, and that which does exist is open to alternative explanations.

For example, Forbes, Adamns-Curtis, Hamm, and White (2003) asked university students to complete several surveys with the explicit instructions to compare two people: a woman who bottle-feeds and a woman who breastfeeds. Results of the survey showed that the woman who breastfeeds was rated relatively positively, including being viewed as a good mother and as highly feminine (e.g., warm and tender). It is difficult to know if these overall positive evaluations were reliable or due to the socially desirability of the response (Acker, 2009), especially considering that people (including university students and staff) are keenly aware that breastfeeding should be encouraged and valued (e.g., Forrester, Wheelock, & Warren, 1997; O’Keefe, Henly, & Anderson, 1998).

An experimental between-participants study (which was arguably less subject to social desirability) illustrated that when people rate breastfeeding mothers *or* bottle-feeding mothers, mean comparisons show breastfeeding mothers are viewed negatively in general, especially when the person doing the rating feels threatened (Cox, Goldenberg, Arndt, & Pyszczynski, 2007). Cox et al. (2007) suggest that breastfeeding women are seen as threatening because they remind people of the “animalistic nature of humanity” and this threat results in prejudice. These experimental results by Cox et al. are not necessarily inconsistent with the results of the Forbes et al. (2003) survey. When Forbes et al. examined the evaluations provided by participants highly uncomfortable with anything sexual (i.e., high in erotophobia), perceptions of the breastfeeding woman were significantly less favorable. Given that a woman’s breast is highly sexualized in Western cultures (Yalom, 1997), it follows that to the extent that sexualized women are devalued (Wookey et al., 2009) and mothers are devalued (Cuddy et al., 2004), the breastfeeding mother may be particularly prone to experiencing bias.

Bias can take different forms (for reviews, see Hewstone, Rubin, & Willis, 2002; Hilton & von Hippel, 1996). The nature of prejudice is important (e.g., benevolent vs. hostile) because different forms of prejudice are associated with distinct forms of affective and behavioral consequences (Cuddy, Fiske, & Glick, 2007). The Behaviors from Intergroup Affect and Stereotypes Map (BIAS map) highlights how intergroup behaviors may vary in both intensity (active–passive) and valence (facilitation–harm). Specifically, the BIAS map distinguishes between behaviors that bring about active harm in which the behavior is explicit and intended to cause harm to the group (e.g., sexual harassment, hate crimes) versus passive harm, which is more subtle and intended to belittle the group (e.g., exclusion, ignoring).

The BIAS map posits that stereotypes about competence and warmth specifically translate into distinct emotional and discriminatory behaviors associated with active versus passive harm. As noted above, research shows that women with large breasts are viewed as less competent and less warm than women with average-sized breasts (Kleinke & Staneski, 1980), suggesting large-breasted (and “sexy”) women would be the

victims of active harm (Glick et al., 2005). Similarly, in one study investigating warmth and competence ratings of abuse victims, a “career woman” was rated lower in warmth but higher in competence than a “housewife,” which was associated with the career woman being rated as more likely to have elicited abuse from her husband (Capezza & Arriaga, 2008). Research also shows that when pregnant, a woman is rated as less competent compared to when she is not pregnant (Goldenberg et al., 2007), and once she becomes a mother, she is viewed as warmer but less competent than nonmothers (Crosby et al., 2004; Cuddy et al., 2004; Halpert et al., 1993). This suggests that mothers may be victims of passive harm that comes about through behavior that “demeans or distances other groups by diminishing their social worth through excluding, ignoring, or neglecting.” (Cuddy et al., 2007, p. 633). The difficulty in making predictions related to warmth and competence for a subgroup of women who encompass both motherhood and sexuality is reflected in the footnote by Wade and Brewer (2006), who point out that “sexy” women might evoke either the stereotype of “a bimbo (warm, but not competent) or a femme fatale (competent, but not warm)” (p. 755). The current project is among the first to examine perceptions of warmth and competence as an index to biases against breastfeeding mothers.

Project Overview

In three studies, we tested the hypothesis that breastfeeding mothers may be especially prone to perceptions of low competence. In Study 1, we sought to replicate Cox et al. (2007) using a slightly different paradigm whereby participants read a resume of a woman who wrote a book about her experiences with breastfeeding versus bottle-feeding. Study 2 set out to replicate these effects and test whether the bias was specific to the sexualized breast by including both a sexualized and a nonsexualized breast condition. Finally, Study 3 set out to replicate and extend the findings to ratings of an actual woman (a confederate) and included two control conditions. In this final study, participants interacted with a confederate who received a phone call in which the message drew attention to her as a mother, as a mother who breastfeeds, as a woman with sexualized breasts, or a neutral message. Across the three studies, we hypothesized that breastfeeding would serve as a source of bias in interpreting a woman’s level of competence. Ratings of warmth were also assessed in all three studies to examine the scope of the prejudice.

Study 1

Hypotheses

In line with the paternalistic prejudice literature, it would be predicted that participants would rate a breastfeeding mother higher in warmth but lower in competence compared to the

same mother who bottle-feeds. Alternatively, in line with the objectification literature, it would be predicted that both ratings of warmth and competence would be lower for the breastfeeding mother because sexualized objects are “things” that do not have feeling (e.g., Young, 2005). We also explored the possibility that a breastfeeding mother would be perceived as experiencing more sexism in her career compared to a bottle-feeding mother. However, it was also possible that any working mother (because of the maternal wall; Crosby et al., 2004) would be perceived as experiencing sexism, resulting in no differences as a function of how the working mother feeds her child. Thus, Study 1 hypotheses were exploratory in nature.

Method

Participants and procedure. A total of 30 students (58% female; 83.3% Caucasian; M age = 19.36 years) enrolled in introductory psychology and communication classes participated in exchange for partial course credit. None of the participants had children of their own.

Participants were led to believe they were engaging in an “impression formation study that would examine how people form impressions with limited information” and that they had all been assigned to the “celebrity impression condition.” In reality, participants were randomly assigned to one of two conditions: a breastfeeding or bottle-feeding emphasis (described below). In small groups, each participant was given a resume and rating packet and worked at his or her own pace. Upon completion, participants were debriefed and probed for suspicion.

Manipulation of target person who breastfeeds versus bottle-feeds. The first page of each packet provided a resume with biographical information about the actress and model, Brooke Shields. We selected Brooke Shields with the assumption that she is an admired and liked role model, providing a strong test of our hypotheses given that exposure to liked role models has been shown to reduce or eliminate negative evaluations and prejudice (Dasgupta & Greenwald, 2001). The resume provided mundane information such as place of birth and career achievements. Participants in the breastfeeding condition read that Brooke Shields had written a book titled “‘Out came the sun’ set for release in paperback 2008 in which she writes about her new role as a mother including her experiences with breastfeeding, bathing and overall care of a newborn.” Participants in the bottle-feeding condition read identical information, except the book was about her “experiences with bottle-feeding . . .”

Measures of competence and warmth. We culled past research for items assessing warmth and competence. Participants were given a list of (randomly presented) traits with the instructions to rate the celebrity they had just read about. To assess biased perceptions, participants rated eight general competence traits (e.g., highly competent, intelligent; Cronbach’s $\alpha = .80$) and seven general warmth traits (e.g., warm hearted,

caring; Cronbach's $\alpha = .83$) as described in Roberts et al. (2002). To assess competence in a gender-stereotyped domain specifically, we included six items from Diekmann and Eagly's (2000) Gendered Attributes Survey that tapped into competence in math (e.g., quantitatively skilled, good with numbers; Cronbach's $\alpha = .63$). All items were rated on 1 (*strongly disagree*) to 7 (*strongly agree*) Likert scale.

Measure of sexist events. To assess participants' opinions on the frequency that the celebrity they were rating encountered "obstacles" in their career, we asked participants to rate their expectations of Brooke Shields using Matteson and Moradi's (2005) Sexist Events Survey. This survey contains 19 items (e.g., been called a sexist name, heard people making sexist jokes or degrading sexual jokes; Cronbach's $\alpha = .90$) rated on a 1 (*never happened*) to 6 (*happened all the time*) Likert scale.

Results and Discussion

Initial analyses showed no main effects or interaction with participants' gender. As such, separate independent sample *t* tests were conducted on the dependent measures to test for differences between the breastfeeding condition and the bottle-feeding condition. As seen in Table 1, results showed that the breastfeeding mother was viewed as significantly more warm and friendly compared to the bottle-feeding mother, $t(28) = 2.20, p < .05, R^2 = .15$, but significantly less competent in general, $t(28) = 2.59, p < .05, R^2 = .19$, and less competent in math specifically, $t(28) = 3.55, p < .05, R^2 = .31$. Moreover, participants in the breastfeeding condition expected that this mother would experience significantly more sexist events in her career compared to the bottle-feeding condition, $t(28) = 2.14, p < .05, R^2 = .14$.

Results provide evidence for paternalistic prejudice (high warmth ratings but low competence ratings) against a breastfeeding woman compared to the same woman who bottle-fed her child. These results did not differ by participant gender. Thus, Study 1 results replicate Cox et al. (2007) using an admired and liked role model (Brooke Shields) and suggest that sexism against breastfeeding mothers is a reliable finding and indicative of paternalistic prejudice. However, Study 1 did not provide any direct evidence of the bias associated with breastfeeding and the sexual objectification of the breast. The goal of Study 2 was to test how perceptions of a woman would be influenced by emphasizing that she was a breastfeeding woman compared to a woman with sexualized breasts or nonsexualized breasts. Furthermore, Study 2 included an additional measure of bias: perceptions of workplace capabilities. Finally, Study 2 examined the reach of the negative breastfeeding competence perception by including a stereotype assimilation measure.

Perspective taking (asking participants to write about the day in the life of someone) is a useful method to investigate the presence of stereotypes through stereotype assimilation.

Table 1. Mean Ratings of a Woman as a Function of Whether She Wrote a Book About Her Experiences With Breastfeeding Versus Bottle-Feeding

	Woman who breastfeeds		Woman who bottle-feeds	
	M	(SD)	M	(SD)
Warmth	5.84	(0.83)	5.19	(0.78)
General competence	3.59	(1.21)	4.27	(0.69)
Math competence	3.42	(0.81)	4.27	(0.39)
Sexist events	3.32	(0.84)	2.68	(0.75)

Note: All means within rows are significantly different at $p < .05$. Ratings of warmth, general competence, and math competence were made on a 1 (*strongly disagree*) to 7 (*strongly agree*) Likert scale, whereas the sexist event scale was rated on a 1 (*never happened*) to 6 (*happened all the time*) scale.

That is, after taking the perspective of a stereotyped individual, people rate those stereotypic traits as more descriptive of *themselves* (Galinsky, Wang, & Ku, 2008). For example, Galinsky et al. (2008) found that after taking the perspective of "cheerleader" participants rated themselves as more attractive, and after taking the perspective of "professor" participants rated themselves as more intelligent. Therefore, in Study 2, we investigated whether participants would rate themselves as less competent in math after taking the perspective of a breastfeeding woman, a woman with sexualized breasts, or a woman with nonsexualized breasts.

Study 2

Hypotheses

Given the results of Study 1, we predicted that participants would engage in paternalistic prejudice and rate a breastfeeding woman higher in warmth compared to the same woman with sexualized breasts or nonsexualized breasts. We further predicted that participants would rate a breastfeeding woman and a woman with sexualized breasts lower in general competence and in workplace competence specifically compared to the same woman in the nonsexualized breast condition. To examine stereotype assimilation, we assessed self-ratings of math competence specifically (we selected math to avoid repeating the general competence items and to replicate Study 1) and predicted that after participants took the "perspective" of the breastfeeding woman in the advertisement, they would rate themselves as less competent in math (Galinsky et al., 2008).

Method

Participants. A total of 65 students enrolled in introductory psychology classes participated in exchange for partial course credit. Four participants reported having children of their own and were dropped from analyses, resulting in 61 participants

Table 2. Mean Ratings of a Woman as a Function of Her Association With a Breastfeeding Product, a Sexualized Breast Product, or a Nonsexualized Breast Product

	Woman who breastfeeds		Woman with sexualized breasts		Woman with nonsexualized breasts	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Woman's general competence	2.38 _a	(0.98)	3.06 _b	(0.95)	3.14 _b	(0.78)
Woman's workplace capabilities	4.62 _a	(0.83)	5.07 _{ab}	(0.79)	5.18 _b	(0.60)
Self ratings of math competence (stereotype assimilation measure)	3.97 _a	(1.04)	4.58 _{ab}	(1.41)	4.92 _b	(1.27)

Note: All means within rows not sharing a subscript are significantly different at $p = .05$. Ratings were all made on a 1 (*strongly disagree*) to 7 (*strongly agree*) Likert scale.

(68% female; 91.9% Caucasian; M age = 20.20 years). Participants volunteered for a “marketing study” and were randomly assigned products and advertisements corresponding to one of three conditions (breastfeeding, sexualized breast, nonsexualized breast). Upon completion, participants were debriefed and probed for suspicion both written and orally.

Manipulation of target person and cream. To manipulate who participants thought they were rating, participants were shown an advertisement for a cream. In the breastfeeding condition, the tag line for the cream was for “nursing mothers to soothe chaffed nipples after nursing,” whereas in the nonsexualized breast condition the tag line for the cream was for “joggers to soothe chaffed nipples after exercise.” Finally, in the sexualized breast condition, the tag line for the cream was for “women to refresh nipples before intimacy.” The word *nipples* thus appeared in every description. The cream and the ad (which included a nonsexualized photo of a woman wearing a sweatshirt) were identical in all other respects.

Measures of competence and warmth. The same dependent variables for general competence, math competence, and warmth used in Study 1 were again used in Study 2. Additionally, we included a measure of workplace competence given that in Study 1 participants expected that a breastfeeding mother would face more sexist events at work. This new measure was modeled after Cuddy et al. (2004) and included four items that started with the stem “This person . . .” (a) is capable of surviving in the working world, (b) has good leadership qualities, (c) is task focused, and (d) is organized. All items were rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale with Cronbach's $\alpha = .75$.

Procedure. All participants entered the lab to participate in a “marketing study” and were told the researchers were interested in the utility of “noncelebrity” endorsements of products; thus, they would be asked to look at several products and rate the person advertising the product. All participants were presented with three filler products and ads (for oatmeal, earplugs, and chips) and the target cream. Each “product” was presented on a tray, and a computer randomly presented the mock magazine advertisements for each product. After rating all four products (to bolster the cover story), participants were ostensibly

“randomly assigned” by the computer to rate one of the four advertisements “in depth.” In reality, participants were all asked to rate the person advertising the cream. Participants were asked to rate the person in the advertisement using the measures of general competence, workplace competence, and warmth (all presented in a counterbalanced order and amid filler items).

After rating the person in the cream advertisement, participants were asked to write about the “day-in-the-life of the endorser of the product”—ostensibly to help “researchers identify the more salient features” of the person in the advertisement. Following this 8-min perspective-taking writing activity, all participants were given a brief “self-rating” packet that included basic demographic information as well as the items assessing their own feelings of competence in math (which was shown to be part of the stereotype in Study 1). Finally, participants were debriefed, thanked, and dismissed.

Results and Discussion

Initial analyses again showed no main effects or interaction with participants' gender. As such, separate one-way ANOVAs were conducted on the dependent measures to test for differences among the breastfeeding, sexualized breast, and nonsexualized breast conditions. Results did not detect any significant difference in warmth ($F < 1$) but did yield significant differences among conditions in ratings of general competence, $F(2, 59) = 4.50, p < .05, R^2 = .13$, and workplace competence, $F(2, 59) = 3.40, p < .05, R^2 = .10$. As seen in Table 2, follow-up Bonferroni comparisons showed when the woman endorsed the breastfeeding cream she was rated as significantly less competent in general and significantly less capable in work, compared to when the same woman endorsed the nonsexualized cream. General competence ratings of the woman endorsing the breastfeeding cream was marginally lower than ratings of the same woman endorsing the sexualized cream ($p = .053$). The breastfeeding woman was rated statistically equal in ratings of workplace competence to the woman endorsing the sexualized breast cream. The sexualized and nonsexualized conditions were equal. These results are

mostly in line with our predictions, such that the ratings of the breastfeeding woman were lower than or on par with the woman with sexualized breasts.

We next analyzed whether taking the perspective of the woman in the advertisement led to assimilation to the math incompetence gender stereotype shown in Study 1, and our hypothesis was confirmed, $F(2, 59) = 3.27, p < .05, R^2 = .10$. As shown in Table 2, participants who took the perspective of either the breastfeeding woman or woman with sexualized breasts rated themselves as (equally) less competent in math compared to those who took the perspective of the woman with nonsexualized breasts. Unfortunately, we did not assess a more “feminine” form of competence (e.g., verbal skills); thus, it is impossible to know whether all forms of competence would be rated similarly or whether there is something unique about stereotype-relevant domains.

Taken together, results suggest a competency bias is operating against women who are associated with breastfeeding and that this bias is similar to the one experienced by a woman for whom the breast is sexually objectified. However, because this study did not include a control condition, it is impossible to know whether the results were driven by low ratings of the breastfeeding woman or high ratings of the woman with nonsexualized breasts. Furthermore, the sexualized and nonsexualized breast conditions did not make it explicit that the woman they were rating was a mother, whereas in the breastfeeding condition the term *mother* was used. Thus, the low ratings could be simply more evidence for a motherhood bias and not a breastfeeding bias per se. Although results of Study 1 suggest that the bias was operating for a breastfeeding mother specifically (compared to a bottle-feeding mother), it is important to flush out this possibility. As such, one purpose of Study 3 was to include two comparison control groups: a neutral condition and a mother only condition.

Surprisingly, the results of Study 2 did not provide evidence for paternalistic prejudice given that warmth ratings were statistically equal across conditions. Another goal of Study 3, then, was to try and untangle the different results for warmth ratings between Study 1 and Study 2. Finally, no study that we are aware of has empirically demonstrated bias against a “real” breastfeeding mother, and very few studies have experimentally examined bias against real mothers or potential mothers. For example, Cox et al. (2007) told participants that a woman was “in the other room” breastfeeding, but participants never saw an actual woman (or confederate); thus, it is impossible to know what participants visualized. The only studies that we are aware of that have come close had women confederates posing as pregnant (by wearing a pregnancy suit; Hebl et al., 2007) or posing as menstruating (by dropping a tampon; Roberts et al., 2002). Thus, a third goal of Study 3 was to determine whether evidence for bias would emerge toward real women perceived as breastfeeding mothers and how this bias would compare to that of woman whose breasts were sexually objectified.

Study 3

Hypotheses

Given the conflicting warmth results of Study 1 and Study 2, we were uncertain of predictions for warmth. If perceived through a paternalistic lens, ratings of warmth should be relatively high for the breastfeeding mother. However, if she is viewed as an “object,” ratings of warmth should be lower. We again predicted that breastfeeding would act as source of bias in interpreting a breastfeeding woman’s level of competence. Specifically, we expected that participants would rate the breastfeeding confederate lower in all types of competence (general, math, and workplace) compared to the same confederate perceived as a mother only or in the neutral condition. We further expected the breastfeeding and sexualized breast emphasis would result in equally (negative) evaluations. Finally, we explored the possibility that the expected unfavorable impressions of the breastfeeding confederate and sexually objectified confederate would translate into discriminatory intentions, indexed by a low likelihood of hiring the breastfeeding confederate for a job compared to the neutral condition.

Method

Participants. A total of 57 students enrolled in introductory psychology classes participated in exchange for partial course credit. Two participants reported having children of their own and were dropped from analyses, resulting in 55 participants (68% female; 89.3% Caucasian; M age = 22.10 years). Similar to Study 1, participants were told that they were engaging in a study on how people “who never see each other” form impressions with limited information and that we were particularly interested in how these variables operate within “social networking websites such as myspace.com and monster.com.” Participants were run individually (in the presence of a confederate, described below) and randomly assigned to interact with a confederate who emphasized one of four self aspects (mother only, mother who breastfeeds, breast only, or a neutral condition). Upon completion, participants were debriefed and probed for suspicion both written and orally. No participant expressed suspicion about the manipulations and none knew that the confederate was part of the study.

Manipulation of confederate voicemail. To manipulate what people associated with the confederate (i.e., breastfeeding vs. sexual breast vs. mother only vs. no emphasis), participants overheard one of two female confederates check her telephone voicemail. The voicemail was prerecorded by the experimenter right before the study session so that the confederate was blind to condition up until that point (see Procedure below). The messages were prerecorded by a Caucasian male and all began with the following statement: “Hey! I got your text but I couldn’t make it out. I assume you were saying you wanted to meet

up at 7 instead of 6? Is that right?" At this point, the message diverged.

Breastfeeding emphasis: "I figured you would want to go home and breastfeed the baby before we left anyway. If I don't hear back I will assume that's the plan."

Mother only emphasis: "I figured you would want to go home and give the baby a bath before we left anyway. If I don't hear back I will assume that's the plan."

Sexual breast emphasis: "I figured you would want to go home and change into your strapless bra before we left anyway. If I don't hear back I will assume that's the plan."

No emphasis: "I figured you would want to go home before we left anyway. If I don't hear back I will assume that's the plan."

The message was played over the confederate's cell phone voicemail when the experimenter left the lab to "print supplies" in an adjoining room. Pilot testing confirmed that the volume on the cell phone was high enough for the participant to "overhear" the message in its entirety.

Impression task. Because of an ostensible "computer error," the participant (and confederate) was given a hardcopy of a blank "My Space" personal profile and asked to complete it. The profile was created from actual profile questions given on the social networking website. The profile included open-ended and multiple-choice demographic questions such as hometown, marital status, college major, and weekend activities. The profile also asked each individual to write about his or her feelings about art as well as various math and verbal questions (e.g., under the caption "see how good I am at math"). The confederate always completed the profile with the same predetermined answers (e.g., she was a transfer student, psychology major, and married).

Measures of competence and warmth. Participants were given the same items used in Study 1 and 2 to assess perceptions of the confederate's warmth, competence in general, competence in math specifically, and workplace capabilities.

Measure of hireability. We created an item that asked "If you were looking at the profile of the person you are rating on monster.com, how likely do you think you would be to hire them for a job?" on a 1 (*not at all*) to 7 (*very likely*) scale.

Procedure. A female experimenter left one of the four messages on the cell phone's voicemail. One of two female confederates then took the cell phone and proceeded to the waiting area and avoided contact with the waiting participant, ostensibly busy texting on her phone. The experimenter then retrieved the participant and confederate and seated them at individual computers divided by a partition. The participant and confederate were told that they would first engage in a get-to-know-you session in which they would create an online

"profile" for the other person to read. However, when told to access the Internet (which had been disabled on both computers), the confederate turned to the experimenter and said, "Nothing is coming up." The experimenter acknowledged the Internet error and exited into the next room to supposedly print hardcopies of the profiles.

Once the participant and confederate completed their profiles on paper, the experimenter "suddenly remembered" that the math and vocabulary questions were not graded because "usually the computer does that" so she exited to the adjoining room and waited for 3 min to "grade" the math and vocabulary questions. The confederate always received a score of 90% on both sections. During these 3 min, the confederate "checked" her voicemail message.

After the 3 min expired and the randomly assigned cell phone message was played, the experimenter returned and "exchanged" the profiles. After looking over the profile, the participant (and confederate) was told to "form a general impression" and to complete a packet of impression measures (described above). After the participant completed the dependent measure packet, he or she was asked to write down anything suspicious about the study and asked his or her opinion on what variables were under study. Then, the participant was introduced to the confederate and fully debriefed. At this point, participants were given another opportunity to have any questions answered before being thanked and dismissed.

Results and Discussion

Initial analyses again showed no main effects or interaction with participants' gender. As such, separate one-way ANOVAs were conducted on the dependent measures to test for differences between the breastfeeding, sexualized breast, mother only, and neutral conditions. Similar to Study 2, analyses did not yield any significant condition differences in warmth ($F < 1$) but did yield significant differences among conditions in ratings of general competence, $F(3, 51) = 2.86$, $p < .05$, $R^2 = .14$; math competence, $F(3, 51) = 3.73$, $p < .05$, $R^2 = .18$; and workplace competence $F(3, 51) = 3.04$, $p < .05$, $R^2 = .16$. Significant differences among the conditions also emerged for the likelihood to hire the confederate for a job, $F(3, 51) = 3.02$, $p < .05$, $R^2 = .15$.

As seen in Table 3, follow-up Bonferroni comparisons revealed that the confederate who played the breastfeeding voicemail was viewed significantly more negatively compared to the neutral voicemail on all measures of competence, and rated lower compared to the mother only condition on ratings of math competence and likelihood to hire. Importantly, the confederate playing either the breastfeeding voicemail or the sexualized breast voicemail resulted in equally (negative) evaluations of the confederate's competence.

These results confirm that knowledge that a woman is lactating serves as a source of bias in how observers perceive her level of competence. One unique aspect of Study 3 was the

Table 3. Mean Ratings of a Confederate Woman as a Function of Her Playing a Voicemail Emphasizing Her as a Breastfeeding Mother, Mother Only, Woman With Sexualized Breasts, or Neutral

	Woman who breastfeeds		Woman with sexualized breasts		Women who is a mother		Neutral	
	M	(SD)	M	(SD)	M	(SD)	M	(SD)
General competence	4.65 _a	(0.98)	5.11 _{ab}	(0.65)	5.43 _{ab}	(0.78)	5.57 _b	(0.81)
Workplace capabilities	4.54 _a	(1.56)	5.29 _{ab}	(1.32)	5.71 _{ab}	(1.06)	5.86 _b	(0.95)
Math competence	3.46 _a	(0.88)	3.93 _{ab}	(0.55)	4.43 _b	(0.82)	4.46 _b	(1.22)
Likelihood to hire	4.38 _a	(0.87)	4.71 _{ab}	(0.83)	5.38 _b	(1.19)	4.79 _{ab}	(0.43)

Note: All means within rows not sharing a subscript are significantly different at $p < .05$. Ratings were all made on 1 (strongly disagree/very unlikely) to 7 (strongly agree/very likely) Likert scale.

rating of a “real” person (a confederate). Most research that exists on perceptions of mothers relies on photographs (Acker, 2009; Goldenberg et al., 2007), written descriptions (Forbes et al., 2003; Friedman et al., 1998), or resumes that state a woman’s parenthood (e.g., Fuegen et al., 2004). Inspection of the raw data show that overall, ratings of this “real” person tended to be higher than ratings of the hypothetical people in Study 1 and Study 2, yet the pattern of results was the same. Study 3 provided further insight into this pattern, with the inclusion of two important comparison conditions to help determine the direction of the effects. Comparison to the neutral condition suggested that indeed the breastfeeding mother was the victim of sexism. Surprisingly, results did not find a motherhood “penalty”; the confederate in the mother only condition was rated just as positively as the confederate in the neutral condition. In thinking through a possible explanation for this null result, it occurred to us in retrospect that the cell phone manipulation might not have made it clear that the confederate was the mother of the child (e.g., she could have been going home to give someone else’s baby a bath).

Study 3 also included an additional item to examine potential discrimination toward a breastfeeding mother. Results of this (albeit one) item of likelihood to hire the confederate showed an unwillingness to hire the breastfeeding mother. This behavioral intention, coupled with the consistently low ratings of workplace capabilities found in both Study 2 and Study 3, suggests that the probability of workplace discrimination is high for nursing mothers (who often must return to work 6 weeks after birth). We return to this discussion below.

General Discussion

In three studies, results showed that mothers who breastfeed are subject to the opinion that breastfeeding mothers are incompetent. Evidence for paternalistic prejudice (high levels of warmth, low levels of competence) was only found in Study 1. Instead, data provide evidence for prejudice primarily in perceptions of (in)competence. From a BIAS map framework, our findings suggest breastfeeding mothers would be victims of “passive harm” whereby they are socially excluded

(Cuddy et al., 2007). Indeed, results from Study 3 showed that the breastfeeding mother was excluded from a potential job opportunity. This evidence for bias was obtained despite the fact that none of the women were visibly breastfeeding, and in fact, in Study 3 the confederate was “going home” to nurse in private. This is telling, because private (vs. public) nursing is generally viewed more positively (Acker, 2009). We can only speculate that the evidence for bias would be magnified if people were to rate an actual woman engaging in public nursing.

Although we must be cautious in interpreting the equally low ratings of the breastfeeding woman to the sexually objectified woman in Study 2 and Study 3, the objectification literature is useful for interpreting our results and guiding future research. Naussbaum (1995) argues that objectifiers (the observers) deny the objectified’s autonomy and subjectivity, assume she is lacking in agency (inert), and treat her as “interchangeable with other objects of the same type” (fungibility; p. 257), all assertions that are in line with our results. Unfortunately, we did not assess actual levels of objectification of our targets because of the difficulty in creating a sensitive measure to tap state measures of target-specific objectification. The measures that exist assess self-objectification (e.g., McKinley & Hyde, 1996; Noll & Fredrickson, 1998) or general trait levels of other objectification (Roberts et al., 2002; Strelan & Hargreaves, 2005). Perhaps it is the case that objectification of others either happens or not (is not a continuous measure). Assuming this, and to try to best answer our research question, we compared the breastfeeding breast with the sexualized breast (and the nonsexualized breast in Study 2) and found evidence that although the breastfeeding breast elicits more negative perceptions, these negative perceptions were often equal to the perceptions elicited by the sexualized breast. We speculate that this somewhat more negative view of the maternal breast is because a mother’s breasts are viewed as instruments (objects) meant to be handled by her lover *or* her infant (McBride-Henry et al., 2009) and that sexual conflation of the maternal breast resulted in the negative views of the breastfeeding mother. This link, however, remains for future research to determine.

Certainly, our results are limited to our college-aged participants. Yet, if anything, finding evidence for gender bias among educated youth suggests that mainstream gender bias might be greater (as argued in Smith, Paul, & Paul, 2007). As Huddy and Terkildsen (1993) note, “higher education teaches [students] not to endorse gender stereotypes or at least not to use them” (p. 507). Moreover, using a young sample is also important because they were all (on average) of childbearing age, rendering their own impressions about breastfeeding mothers important to the extent that such impressions influence personal decisions to breastfeed. Indeed, survey research shows public embarrassment is key in young people’s decision to breastfeed (e.g., Johnston-Robledo et al., 2007), despite that young people are keenly aware of the benefits of breastfeeding (e.g., Forrester et al., 1997)

Importantly, we did not find evidence that gender of the participant influenced perceptions of the breastfeeding mother. Although women are more likely than men to self-objectify (e.g., Roberts & Gettman, 2004), and those who self-objectify are more likely to objectify others in daily life (Strelan & Hargreaves, 2005), both men and women are equally (highly) likely to objectify other women, especially when feeling threatened (e.g., Grabe, Routledge, Cook, Andersen, & Arndt, 2005). Perhaps this is because women are low in social power, and research suggests that one way people can meet their power goals is by objectifying others (Gruenfeld, Inesi, Magee, & Galinsky, 2008). Yet women tend to objectify *both* men and other women, and men tend to just objectify women (Strelan & Hargreaves, 2005). This finding appears to be limited to men who identify as heterosexual, as research shows men who are gay are more likely to both objectify others and self-objectify, likely because of the heightened focus of men who are gay on their own physical appearance (Kozak, Frankenhauser, & Roberts, 2009; Martins, Tiggemann, & Kirkbride, 2007; Sergios & Cody, 1985). Thus, the objectification-of-others picture is clearly multifaceted and gender-role dependent.

Breastfeeding is healthy and cheap, but relatively few women do it. To address this disconnect, the U.S. Department of Health and Human Services initiated a “Healthy People Objective 2010” to increase breastfeeding rates and duration. Most research inspired by this Healthy People Objective has focused on the individual traits, characteristics, and attitudes that predict the “choice” to breastfeed (e.g., Giles, Connor, McClenahan, Mallett, Stewart-Knox, & Wright, 2007; see also Galtry, 1997). However, there are a number of social factors that are also important in predicting breastfeeding, including gender role attitudes, employment status, and anticipated embarrassment (Forrester et al., 1997; McKinley & Hyde, 2004). For example, women scoring high in measures of self-objectification felt that breastfeeding would negatively affect both their bodies and their sexuality, and they viewed public breastfeeding as potentially embarrassing and shameful (Johnston-Robledo, et al., 2007; Johnston-Robledo & Fred, 2008). Thus, a woman may not breastfeed because of worry

over how she will be evaluated by other people. Data from the current project suggest that this worry may be warranted, to the extent that breastfeeding is a devalued social category.

Finding ways to offset these negative impressions of women who breastfeed is an important area for future research. After all, breastfed infants have lower rates of hospital admissions, ear infections, diarrhea, rashes, allergies, and other medical problems than bottle-fed babies (Williams, 1995). Additionally, nursing is relatively inexpensive and makes it easier for the uterus to return to its original size, and it minimizes bleeding after birth (U.S. Department of Health and Human Services, 2005). The benefits of breastfeeding are thus substantial both for mother and child. In fact, according to the American Academy of Pediatrics, breastfeeding “ensures the best possible health as well as developmental and psychosocial outcomes for the infant” (American Academy of Pediatrics, 2005). Despite these benefits, however, mothers who breastfeed remain subject to passive harm, as can be witnessed in the results of the present studies.

One focal point of the current project was on perceptions of the breastfeeding mother in the workplace. Study 1 showed that people assume a breastfeeding woman would experience more sexist events in her career compared to a bottle-feeding woman. Study 2 and Study 3 showed that the breastfeeding mother’s workplace competence was specifically diminished. Given that mothers in the workplace earn only 60% of the wages that working fathers earn (Crosby et al., 2004), it is imperative to understand how bias against breastfeeding mothers might translate to treatment in the workplace. Hausman (2003) notes that (unfortunately) the burden is on the breastfeeding mother to work within the confines of the male-centered workplace to try and find ways to breastfeed her infant. A change to accommodate and celebrate nursing mothers in the workplace culture has not been championed by feminist policy makers, largely because of the trepidation that many second-wave feminists have for instituting any policy that highlights that men and women do in fact have some biological differences (McKinley & Hyde, 2004).

Finding ways to change society’s perception of the breastfeeding mother is a lofty—and ongoing—goal for future research. In the meantime, our data suggest possible interventions that can empower the mother who wants to breastfeed to deal with the bias or objectification experiences she might encounter. One possibility is to teach pregnant women about the sexism they might encounter and how this “stereotype threat” experience might affect them (Johns, Schmader, & Martens, 2005). An alternative approach would be to teach potential mothers how to “self-correct” for the influence that negative breastfeeding expectations (related to sexism, embarrassment, or otherwise) can have on actual breastfeeding experiences (Handley et al., 2009). The goal of either intervention would be to increase initiation of and duration of breastfeeding, without sacrificing people’s perception of the mother’s competence. The result of more mothers who breastfeed is the force

for social change; more visible breastfeeding mothers should prompt people to wrestle with and debate the issues. With time, greater numbers of women who breastfeed translates to less prejudice, because prejudice “dissipates only after large numbers of newcomers prove their success . . . and thereby change the stereotype through which they are perceived” (Eagly & Diekmann, 2005, p. 32). As McKinley and Hyde (2004) point out, to the extent that society “shares in the responsibility for the health and well-being of all its members” society “therefore has a responsibility to make breastfeeding possible” (p. 397). In this way, the importance of social psychological research on breastfeeding mothers cannot be overstated.

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