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## Magazine Exposure, Tanned Women Stereotypes, and Tanning Attitudes

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### Abstract

This study investigated whether magazine exposure is related to stereotypical beliefs about tanned women. A survey of White college women ( $n = 205$ ) assessed their exposure to beauty/fashion and health/fitness magazines. Outcome variables were the beliefs that tanned women are fashionable, fit, and shallow. Attention to the tanned women's images in health magazines positively predicted the belief that tanned women are fit and that tanned women are shallow; in contrast, attention to the images in beauty magazine negatively predicted the belief that tanned women are fit. Number of beauty magazines women read negatively predicted the belief that tanned women are shallow. The belief that tanned women are fit was unrelated, but the belief that tanned women are shallow was negatively related, with tanning attitudes.

### Keywords

body image; tan; media; women; stereotypes

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Exposure to ultraviolet rays from indoor tanning beds is related to a host of acute and chronic consequences on health (Ting, Schultz, Cac, Peterson, & Walling, 2007). Despite the consequences, indoor tanning is prevalent among youth, especially among young women (Robinson, Kim, Rosenbaum, & Ortiz, 2008).

One factor predicting indoor tanning may be positive beliefs about a tanned look (Cafri, Thompson, Jacobsen, & Hillhouse, 2009), and mass media may play a role in promoting positive beliefs about a tanned look. For example, the tripartite theory of body image suggests that the media are an important source of body image beliefs (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Cafri et al. (2006, 2008) have found that the desire to have a tan like people in the media is one of the appearance-based motives for tanning.

Of media, magazines are an important source of information on beauty, health, and lifestyle for women (see for a review Grabe, Ward, & Hyde, 2008). Content analyses have reported that women's magazines present information and images relevant to tanning (e.g., Cho, Hall, Kosmoski, Fox, & Mastin, 2010), but little research investigated whether exposure to magazines is related to beliefs about tanned women.

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## Cultivation Theory

Previous media effects research suggests that exposure to the media is related to beliefs about social groups (e.g., Tan & Suarchavarat, 1988). Such research has frequently been based on cultivation theory, which posits that consumption of the media is related to construction of social reality (Gerbner, 1990). According to the theory, cultivation occurs when portrayals on the media are transferred to beliefs about society, over a long period of time. The degree of correspondence between the media portrayals and social beliefs increases, as the level of media exposure increases.

## Genres

Whereas an assumption of cultivation research is that television content is homogeneous (Gerbner, 1990), a growing number of researchers note the importance of recognizing genres and their potentially differential association with outcomes of television exposure (e.g., Blandzik & Rössler, 2004). Genres are entities of the media, characterized by similarities in format or content, or a combination of these two factors. Therefore, the meta-narrative underlying different genres may present social groups or social issues in different angles (Blandzik & Rössler, 2004).

Generally, research on magazine effects on women's health focused on beauty magazines (Grabe et al., 2008). Different women's magazines may present topics or images on issues or groups differently, however. For example, Kim and Ward (2004) found that college women's exposure to different types of magazines was differentially associated with beliefs about sexuality. Beauty magazines present images of beauty and fashion while health magazines emphasize exercise, health, and wellbeing. Therefore, tanned women's images contained in beauty versus health magazines may differ. Therefore, research needs to differentiate genres of magazines and explore whether exposure to different genres differently predict beliefs about tanned women.

## Range and Focus of Exposure

Exposure to magazines has been measured in divergent ways, but one of the more frequently used approaches is to assess it in terms of range. The range of exposure to magazines has been assessed with the self-reported number of different magazines of a given genre that a person reads in a month (e.g., Harrison & Fredickson, 2003; Kim & Ward, 2004). On the other hand, a measure of focus of exposure may be the amount of attention that a reader allocates to a specific category of content, such as the images of tanned women.

There may be benefits to differentiating the focus of exposure from the range of media exposure. Attention is an important variable in the processing of media messages, and the measurement of attention can assist researchers in identifying the specific content that is accountable for the specific outcomes of exposure (Chaffee & Schleuder, 1986; Slater & Racinski, 2005). Chaffee and Schleuder's (1986) study indicated that self-reported attention to medium-specific news and general news topics was reliable over time and predicted increase in the knowledge of public affairs and politics.

## Tanned Women Stereotypes and Tanning Attitudes

An important pragmatic consideration of this study is whether beliefs about tanned women predict attitudes toward indoor tanning. Pechmann (2001) argued that negative stereotypes about individuals engaging in risk behavior can discourage the performance of the risk behavior. Evidence consistent with this contention has been found. For example, McCool, Cameron, and Petrie (2005) reported that positive stereotypes about smokers predicted positive attitudes toward smoking among adolescents.

On the basis of theory and research reviewed above, we expect that the range and focus of exposure to magazines will predict beliefs about tanned women (H1a, H1b), and that the beliefs about tanned women will predict attitudes toward tanning (H2). We will explore whether exposure to different magazine genres predicts different beliefs about tanned women (RQ1), and whether different beliefs about tanned women differently predict attitudes toward tanning (RQ2).

## Method

An online survey was conducted. Participants were a convenience sample of undergraduates at a large Midwestern university. Participants received extra credit. Of the total of 490 participants in the survey, the responses of White females were retained for this study ( $n = 205$ ; age  $M = 19.5$ ,  $SD = 1.60$ ). The literature indicates that differences exist between Whites' and other races' (e.g., Blacks') consumption and interpretations of media (e.g., Bissell & Zhou, 2004). Whites' and non-Whites' perceptions about a tan may also differ.

## Measures

**Range of exposure**—On a response scale ranging from 0 “none” to 11 “more than ten,” participants were asked to indicate how many different issues of beauty ( $M = 2.48$ ,  $SD = 2.04$ ) and health ( $M = 1.03$ ,  $SD = 1.64$ ) magazines they read in an average month. For beauty magazines, *Cosmopolitan* and *Glamour*, and for health magazines, *Self* and *Shape* were given as examples.

**Focus of exposure**—On a response scale ranging from 0 “none” to 7 “a lot,” participants were asked to indicate how much attention they paid to the pictures of tanned women when reading a beauty ( $M = 3.15$ ,  $SD = 1.93$ ) or health ( $M = 2.52$ ,  $SD = 2.09$ ) magazine.

**Tanned women's images**—Prior to the main survey, a free-response format, paper and pencil survey was conducted with a different sample of female undergraduate students ( $n = 34$ ). Participants were asked to provide the thoughts that come to their mind when they hear the term, “a tanned woman” in a thought-listing response format (Cacioppo & Petty, 1981). The free response adjectives related to tanned women elicited in the pilot study were incorporated into the main study.

In the main study, participants indicated their degree of agreement or disagreement in response to the stem describing tanned women's outward and inward qualities (i.e., “in general, tanned women ...”). The response scale ranged from 1 to 7. A factor analysis with principal axis factoring extraction and varimax rotation methods identified three factors: “fashionable,” “fit,” and “shallow.” The eigen values of these factors were 16.34, 5.78, and 2.10, respectively. Table 1 reports factor loadings, reliabilities, item-total correlations, and descriptive statistics.

**Tanning attitudes**—Items taken from Hillhouse, Adler, Drinnon, and Turrisi (1997) and Cho (2003) were used. In response to the stem, “tanning bed use is,” participants indicated their attitudes. Three sets of word pairs including “bad/good” “undesirable/desirable,” and “unfavorable/favorable” were given. The response scale ranged from 1 to 7 ( $M = 4.34$ ,  $SD = 1.93$ ,  $\alpha = .87$ ).

**Control variables**—Based on previous research (e.g., Geller et al., 2002), three control variables were included. Perceived tanning benefits were measured with Cokkinides et al.'s (2001) three-item scale. Perceived tanning norms were assessed with two items based on Aloise-Young and colleagues (2006) measure. Past tanning bed use behavior was used with a dichotomous scale (0 = no, 1 = yes).

## Results

### Magazine Exposure and Tanned Women Stereotypes

Intercorrelations between variables are reported in Table 2. To test H1a–b and RQ1, three multiple regression analyses were performed. The criterion variables of the three regression equations were the belief that tanned women are fashionable, fit, and shallow. The predictor variables of each equation were the range and focus of exposure to the two genres of magazines. The control variables of each equation were tanning benefits, tanning norm, and tanning behavior.

The tanned woman's image belief of "fashionable" showed no significant association with magazine exposure. Instead, perceived tan benefits showed significant positive association with the belief ( $\beta = .29, p < .001$ ).  $R^2$  for this equation was .11.

The tanned woman's image belief of "fit" showed a positive association with focus of fitness magazine exposure ( $\beta = .35, p = .001$ ). A negative association between "fit" and focus of beauty magazine exposure was also found ( $\beta = -.26, p = .011$ ). Perceived tan benefits was positively associated ( $\beta = .20, p = .007$ ) and perceived tanning norms was negatively associated with ( $\beta = -.16, p = .050$ ) the belief that tanned women are fit ( $R^2 = .12$ ).

The tanned woman's image belief of "shallow" showed a negative association with the range of beauty magazine exposure ( $\beta = -.19, p = .044$ ). The same belief of "shallow" was positively associated with focus of health magazine exposure ( $\beta = .19, p = .049$ ). Perceived prevalence of tanning among friends ( $\beta = -.26, p = .001$ ) and perceived tan benefits ( $\beta = -.15, p = .034$ ) was negatively associations with "shallow" ( $R^2 = .18$ ).

### Tanned Women Stereotypes and Tanning Attitudes

To test H2 and RQ2, a multiple regression analysis was performed. The criterion variable was attitudes toward tanning. The predictor variables were the beliefs that tanned women are fashionable, fit, and shallow. The control variables were tanning benefits, tanning norm, and tanning behavior.

The belief that tanned women are fashionable was positively associated with attitudes toward tanning ( $\beta = .15, p = .017$ ). The belief that tanned women are shallow was negatively associated with attitudes toward tanning ( $\beta = -.20, p = .001$ ). The belief that tanned women are fit was not associated with tanning attitudes ( $\beta = .001, p = ns$ ). Perceived tan benefits ( $\beta = .18, p = .002$ ), perceived tanning norms ( $\beta = .12, p = .029$ ), and previous tanning behavior ( $\beta = .43, p < .001$ ) were also positively associated with tanning attitudes ( $R^2 = .50$ ).

## Discussion

Overall, the findings are consistent with cultivation theory (Gerbner, 1990) which predicts that exposure to media is related to expectations about social groups. The findings also extend cultivation research, by illustrating the importance of differentiating genres and types of exposure to media in understanding their contributions to social beliefs. With respect to the body image literature, the findings are consistent with the tripartite theory (Thompson et al., 1999) which posits that the media are an important source of body image relevant beliefs.

Attention paid to health versus beauty magazines made different contributions toward the belief that tanned women are fit. On one hand, attention paid to the tanned women in health magazines positively predicted the belief that tanned women are fit. Health magazines may often present the images of tanned women who exercise or engage in outdoor sports or recreational activities, therefore conveying that tanned women are fit. On the other hand, attention paid to the tanned

women's pictures in beauty magazines negatively predicted the belief that tanned women are fit. Women in beauty magazines have frequently been characterized as being thin, and at times, as waif, looking emaciated, or starved (Sypeck, Gray, & Ahrens, 2004).

Similarly, the two genres' contributions to the belief that tanned women are shallow differed. The range of beauty magazine exposure was negatively associated with the belief that tanned women are shallow. Beauty magazines provide a wealth of beauty and fashion tips and information for young women. By reading these, young women might perceive that desire for beauty and fashion, including tanning, is an acceptable, rather than shallow or vain, endeavor. In contrast, attention to tanned women's images in health magazines was positively associated with the belief that tanned women are shallow. These images may frequently focus on women engaging in various physical activities, which produce improvement of outward shape. One might speculate whether the seeming focus on shape contributes to the association between attention to pictures in health magazines and the "shallow" belief. Collectively, the findings related to the "shallow" belief are intriguing, and require more research for a precise explanation.

The range and focus of magazine exposure were differentially associated with beliefs about tanned women. Generally, the focus rather than the range of exposure was a better predictor of beliefs concerning tanned women. For example, whereas the focus of exposure to the two magazine genres was associated with the belief that tanned women are fit, the range of exposure to neither of them was associated with the same belief. Similarly, whereas the focus of exposure to health magazines positively predicted the belief that tanned women are shallow, the range of exposure to the same magazine genre showed no relation with the belief.

Beliefs about tanned women predicted attitudes toward tanning. More important, different beliefs about tanned women differently predict attitudes toward tanning. The belief that tanned women are fashionable showed a positive association with attitudes toward tanning. This result suggests that addressing positive beliefs about tanned women can be one way of reducing positive dispositions toward tanning among young women.

The belief that tanned women are shallow was negatively associated with attitudes toward tanning. This result may suggest that emphasizing the existence of this "shallow" belief among young women can discourage tanning behavior among them. Such strategy, however, will need to be adopted only after careful examinations of its potential implications. On one hand, the strategy may work for young women who have not used tanning beds to stay away from the use. On the other hand, among the young women who already have a tan, the strategy may produce a potentially undesirable effect of alienating them.

The belief that tanned women are fit showed no association with attitudes toward tanning. This finding may be desirable news for those who seek to discourage tanning among young women. Research may still be needed, because the focus of this study was attitudes toward indoor tanning. Future research may need to examine whether the "fit" belief has any association with attitudes toward outdoor tanning.

Along with the beliefs about tanned women identified in this study, the construct of body image investment (Cash, Grasso, & Mitchell, 2005) may need to be examined by future research. Body image investment refers to the perceived importance of one's appearance to one's self-concept, and was found to be a significant predictor of indoor tanning behavior (Cash et al., 2005).

Limitations to this study should be noted. It used cross-sectional data obtained from a convenience sample of college women. Causality should not be assumed with the findings of

this study. Future studies would benefit by involving a representative sample and a longitudinal design.

## Summary

Overall, this study provides initial evidence of relationships between exposure to magazines and beliefs about tanned women, and between beliefs about tanned women and attitudes toward indoor tanning. Health education efforts for young women may need to be directed at addressing the beliefs about tanned women, in addition to the current emphasis on conveying the consequences of UV exposure (e.g., Cho, 2003). This study also suggests that differentiating genres and types of exposure may enhance the research on the relationship between exposure to magazines and beliefs about tanned women. .

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**Table 1**  
 Factor Loadings, Reliabilities, Item-Total Correlations, and Descriptive Statistics of Beliefs about Tanned Women's Images

Items	Fashionable	Fit	Shallow	$\alpha$	Item-total correlations	M	SD
Fashionable	.90	.23	.06	.97	.93	4.31	<b>1.36</b>
Stylish	.92	.30	.10		.92	4.23	<b>1.40</b>
Trendy	.89	.29	.14		.94	4.29	<b>1.35</b>
Fit	.25	.90	.06	.94	.90	3.78	<b>1.52</b>
Toned	.25	.91	.15		.91	3.84	<b>1.56</b>
Athletic	.30	.81	.11		.85	3.67	<b>1.50</b>
Fake	.03	.02	.72	.90	.68	4.43	<b>1.66</b>
Shallow	.01	.09	.91		.84	3.31	<b>1.72</b>
Spoiled	.17	.18	.87		.82	3.42	<b>1.85</b>
Vain	.10	.14	.80		.78	3.79	<b>1.77</b>



Table 2

Intercorrelations between Variables

	1	2	3	4	5	6	7	8	9	10
(1) range of exposure: beauty mag										
(2) range of exposure: health mag	.70**									
(3) focus of exposure: beauty mag	.23**	.13								
(4) focus of exposure: health mag	.32**	.33**	.69**							
(5) image: fashionable	-.06	-.01	.14*	.18**						
(6) image: fit	.06	.11	-.00	.19**	.55**					
(7) image: shallow	-.14*	-.01	-.07	.02	.21**	.25**				
(8) tanning bed use attitudes	.25**	.19**	.29**	.24**	.19**	.01	-.35**			
(9) perceived tanning benefits	.18*	.16*	.33**	.26**	.28**	.13	-.25**	.47**		
(10) perceived tanning norms	.30**	.28**	.37**	.34**	.00	-.09	-.31**	.41**	.35**	
(11) prior tanning behavior	.20**	.18*	.28**	.21**	.05	-.09	-.23**	.60**	.33**	.35**

\*  $p < .05$ ,

\*\*  $p < .01$