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For appearance's sake : gender attitudes and risky health behavior

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FOR APPEARANCE'S SAKE: GENDER ATTITUDES AND RISKY HEALTH BEHAVIOR

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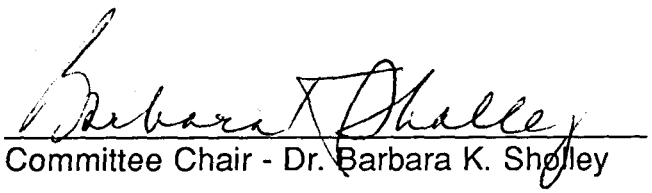
I certify that I have read this thesis and find that, in scope and quality, it satisfies the requirements for the Master of Arts degree.



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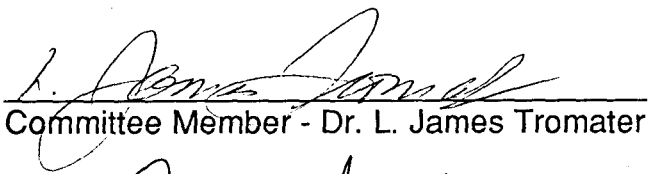

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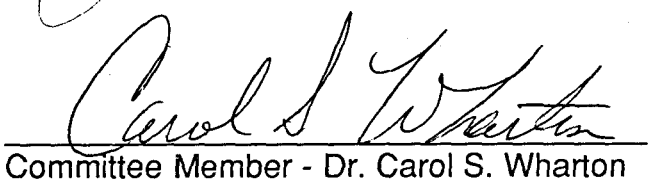

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For Appearance's Sake: Gender Attitudes and Risky Health Behavior

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Running Head: FOR APPEARANCE'S SAKE

Abstract

One hundred and forty male and female students were given questionnaires which assessed their gender attitudes, their tanning and smoking behavior, their knowledge about and perceived personal risk of lung and skin cancer, and their beliefs that tanning and slenderness are attractive. A multivariate analysis of variance (MANOVA) revealed significant gender differences in tanning and in gender attitudes; women tanned more than men ($F(1,138) = 5.734$, $p = .018$) and women had more egalitarian attitudes toward gender than did men ($F(1, 138) = 23.486$, $p < .001$). However, there were no differences between men and women in amount of weight-control smoking. A standard multiple regression revealed that the belief that tanning is attractive was the strongest predictor of tanning in both men and women, but for women, score on the Women in Society Questionnaire (WSQ) was also a significant predictor. The more traditional a woman's gender attitudes were, the more likely she was to tan. A discriminant analysis, however, showed that the only significant predictor of smoking in men and women was level of perceived personal risk. These results suggest that gender attitudes and drive for attractiveness played a role in tanning for women, but not in smoking. In men, gender attitudes affected neither tanning nor smoking.

For Appearance's Sake: Gender Attitudes and Risky Health Behavior

It is probable that many illnesses affecting Americans today could have been prevented had the individuals not engaged in risky behavior, such as tanning and smoking. According to the American Academy of Dermatology (1990), approximately 1 in 7 Americans will develop a skin cancer during his or her lifetime, and almost all of these cancers are sun-related. People with a light complexion or who have a tendency to burn, blister, or freckle in the sun have an increased risk of developing skin cancer (Graham, Marshall, Haughey, Stoll, Zielezny, Brasure, & West, 1985), and it has been estimated that 50% of lifetime sun damage to the skin occurs by age 20 (Rossi, 1989). The incidence of malignant melanoma (the most likely to be fatal) has quadrupled since 1960 (Fears & Scotto, 1982). In addition, there is an unmistakable link between cigarette smoking and lung cancer, as well as heart disease and respiratory disorders. In fact, it has been estimated that 30% of all deaths are smoking related (American Cancer Society, 1995).

Skin and lung cancer are both highly preventable diseases, yet people routinely engage in the very behavior which puts them at risk: sunbathing and smoking. There are startling gender differences in new cases of these cancers; although lung cancer rates in men remain high, lung cancer among women is increasing much faster than lung cancer in men. According to the American Cancer Society (1995), since 1987, more women have died of lung cancer than breast cancer, which, for over 40 years was the major cause of cancer death in women. Equally sobering is the fact that malignant melanoma is currently the

second fastest growing incidence of cancer in women, directly behind lung cancer (American Cancer Society, 1995).

Men get sunburned and suntanned, but often as an indirect result of being outside, either working or playing sports. One study showed that 50% of male college students avoid sunbathing for tanning purposes, compared with only 29% of female college students (Engelmann, Krupka, & Vener, 1993). Women are much more likely to bask in the sun specifically to get a tan; a recent study showed that men were significantly less likely than women to engage in behavior that placed them at risk for skin cancer - gender accounted for 24% of the variance in sun-related behavior (Leary & Jones, 1993). Interestingly enough, the women in that study scored significantly higher than the men on a test of knowledge about skin cancer, and they estimated their risk of skin cancer significantly higher than men did. Consequently, the researchers concluded that excessive tanning was more strongly linked to a concern for being attractive than to a lack of knowledge about skin cancer. This fact is profoundly disturbing; the women knew about the high risk of skin cancer, but they sunbathed anyway.

So why do women sunbathe? There is increasing evidence that women perceive sunbathing and smoking as essential to maintain their attractiveness; sunbathing helps them to develop a "healthy looking" tan and smoking helps them to control their weight. Leary and Jones (1993) found that the strongest predictors of risky sun behavior were concern for appearance and the belief that being tanned is attractive. In addition, the researchers found that the women in

their study scored significantly higher than men on body self-consciousness and physique anxiety, suggesting a link between concern for appearance and tanning behavior. Another study showed that both male and female college students formed more favorable impressions of a target described as having a suntan compared to a target without a suntan (Miller, Ashton, McHoskey, & Gimbel, 1990). Information regarding the presence of a suntan generally increased the perceived social attractiveness of the target; persons with a tan were judged to be more attractive, popular, and sexy than persons without a suntan.

Jones and Leary (1994) found that young adults tended to respond more to appearance-based warnings about suntanning; subjects who read an essay about the negative effects of tanning on appearance were more apt to state that they would change their tanning behavior than subjects who read an essay about the health risks associated with tanning. In other words, subjects were more disturbed at the prospect of being ugly than the possibility of dying. Similarly, in a study of osteoporosis prevention, researchers found that stressing the visibility and possible disfiguring aspects of osteoporosis was most effective at convincing women to take steps to prevent it (Klohn & Rogers, 1992). These studies show that people often react most strongly when their appearance is at stake, not their health.

Besides tanning, another distinctly female phenomenon which reflects concern for appearance is preoccupation with body weight and intense fear of becoming overweight; these worries often result in disordered eating patterns

and "weight-control" smoking. Chronic dieters, or what some researchers call "restrained eaters", are particularly susceptible to "weight-control" smoking - using cigarettes to control their appetite and their weight (Camp, Klesges, & Relyea, 1993). Various studies have shown that, as a group, smokers weigh less than nonsmokers and gain weight when they stop smoking (Klesges, Meyers, Klesges, & La Vasque, 1989), and the researchers found that this information is well-known among the general public. One study found that smokers were 10 times more likely than non-smokers to believe that losing weight was an important quality of life issue (Klesges, Somes, Pascale, Klesges, Murphy, Brown, & Williams, 1988). Smoking has indeed been shown to delay gastric emptying, promoting a feeling of fullness (Gritz, Ippoliti, Jarvik, Rose, Shiffman, Harrison, & Van Vunakis, 1988) and effectively suppressing appetite.

Engelmann, et al. (1993) found in a survey of 650 college students that three out of four of the women were trying to control their weight, and three out of five women wished to lose ten pounds or more. Although the deleterious effects of smoking have been well documented, women's desire to control their weight is often stronger than concern for their health. Smoking for weight control, while rare in males, accounts for about 40% of female smokers (Camp, Klesges, & Relyea, 1993). In addition, there are gender differences in smoking cessation and initiation rates; women stop smoking at a slower rate than men (Fiore, Novotny, Pierce, Hatziandrev, Patel, & Davis, 1989). In one study, female smokers were significantly more worried than male smokers about

gaining weight after quitting smoking (Sorensen & Pechacek, 1987). Weekley, Klesges, and Relyea (1992) found that gender interacted with self-reported weight gain in previous smoking cessation attempts; those at greatest risk for smoking for weight control were women who reported weight gains when they tried to quit smoking in the past. One study found that women are indeed more likely than men to gain weight after quitting smoking - and they are more likely to gain lots of weight - more than 20 pounds (Williamson, Madans, Anda, Kleinman, Giovine, & Byers, 1991). Women also have higher expectations of smoking's utility in controlling weight (Brandon & Baker, 1991) - whether this is because cigarette smoking and cessation do indeed affect women's metabolisms differently is unclear.

Nevertheless, it is clear that many women trade a potential beauty liability, being overweight, for a known health risk, cigarette smoking. Obesity is in itself a health risk, yet most women are not obese; although studies have shown that 75% of women believe that they are overweight, only 25% actually are (Brumberg, 1990). Thus, the damage that smoking does to the health of weight-control smokers far outweighs the potential health benefits of weight loss.

There are historical and sociological reasons why Western society views slenderness and tanned skin as attractive (for reviews, see Veblen, 1967; Keesling & Friedman, 1987). But these factors do not answer more puzzling questions: why do women feel such intense pressure to conform to societal norms of beauty? Why is it that women sunbathe, attend tanning booths, and

smoke to control their weight, so much more than men do? Even with overwhelming scientific evidence that their behavior is harmful to their health, women continue to engage in it anyway.

From an early age, females are rewarded for being attractive and often punished if they are unattractive; in a study of preschoolers, Gregory Smith (1985) showed that the cutest little girls were most likely to be helped and praised, while the less attractive girls were more likely to be mistreated by the other children, either verbally or physically. However, no such relationship was found between physical attractiveness and treatment by peers for boys.

This effect continues in adolescence; in one study, perceived physical attractiveness was the most important contributor to females' general self-concept, while physical effectiveness (e.g. athletics) was most important for males (Lerner, Orlos, & Knapp, 1976). In an analysis of the 1985 issues of Seventeen magazine, popular among adolescent girls, it was found that only 7 percent of the articles concerned career planning and independence, while 46 percent involved appearance (Peirce, 1990). Girls learn both from their peers and from the media that "looks count".

Recent research on attitudes toward masculinity, or "masculine ideology" (Pleck, Sonenstein, & Ku, 1993) reveals that society's expected male role norms include status, toughness, and "anti-femininity" (rejection of attributes perceived as "feminine", such as sensitivity or emotionality). In other words, society values men who are wealthy, smart, and tough, but the researchers did not find that attractiveness factored into these judgments. This would explain

why other researchers have found that men generally do not worry as much about their weight or their tan level.

Traditional gender role attitudes emphasize that women, however, should focus their energy on attracting, pleasing, and maintaining relationships with men (Spence & Helmreich, 1972). Are women with traditional gender attitudes more susceptible to society's pressure to be beautiful? Would it not follow that these women would be more motivated to achieve a certain level of beauty - even at the expense of their own health?

Women with more egalitarian gender attitudes, on the other hand, might be more likely to value their own achievements and abilities - and less likely to invest time and energy into attaining beauty in order to attract men. This is not to say that these women do not want to be attractive, but they may not risk their health to achieve beauty. Similarly, men may be concerned about their looks, but, due to differential societal pressures, may not go to extreme lengths to achieve attractiveness.

Based on prior research, the first hypothesis for this study was that women would engage in more suntanning and weight-control smoking than men. Differences between men and women's perceptions of the attractiveness of a tan or a slender body were not expected.

The second hypothesis was that the belief in the attractiveness of a tan or slenderness would be the strongest predictor of risky behavior among subjects, male and female, who engaged in suntanning or weight-control smoking. For women, however, it was hypothesized that the effects of perceived

attractiveness would be mediated by gender attitudes; the more traditional the attitudes, the more likely perceived attractiveness would translate into behavior. No such relationship was expected for the men.

Method

Subjects

Subjects included 121 introductory psychology students, both male and female, who participated to fulfill a course requirement. Because the pool of introductory psychology subjects did not yield many smokers, 19 student smokers were recruited from the university community to volunteer their time to the project. The students completed a demographic sheet, in which they were asked their gender. To counteract any order effects, the order of the questionnaires was counterbalanced.

Instruments

Lewis and Grieve (1988) developed the WSQ to measure gender attitudes - one's beliefs about what women's role in society should be. Should women be intellectual and career-oriented, or should they focus more on becoming good wives and mothers? the survey asks. Lewis and Grieve designed the WSQ as an update to Spence and Helmreich's widely used but somewhat dated Attitudes Toward Women Scale (1972); the correlation between the two scales is .80. The internal consistency reliability of the WSQ is .85. Each item is scored on a 5-point Likert-type scale, with response choices Agree Strongly, Agree Mildly, Neither Agree Nor Disagree, Disagree Mildly, Disagree Strongly. The highest possible score on the WSQ is 110 and the

lowest possible score is 22. High scores indicate more traditional gender attitudes and low scores reflect more egalitarian attitudes.

The MSS, developed by Swim, Aikin, Hall and Hunter (1995), measures the extent to which the subject believes that sexism in society is a continuing problem. Swim, et al. designed the MSS to predict more covert forms of sexism; they feel that its subtlety makes it a better predictor of sexist attitudes than older measures. The internal reliability for the MSS was .83. Each item is scored on a 5-point Likert-type scale, with response choices Agree Strongly, Agree Mildly, Neither Agree Nor Disagree, Disagree Mildly, Disagree Strongly. The highest possible score on the MSS is 40 and the lowest possible score is 8. High scores indicate the belief that sexism is no longer a problem in society and low scores reflect the belief that sexism is a continuing problem.

In their research on tanning, Miller, et al. (1990) used a survey that measures knowledge about skin cancer, perceived personal risk of skin cancer and beliefs about the attractiveness of a tan. I also used the Miller questionnaire to assess subjects' tanning behavior - which included trips to tanning salons, amount of time spent sunbathing, and tan level compared to friends - and to see if there were correlations among behavior, knowledge, personal risk, and perceived attractiveness of a tan. Based on the Miller, et al. research, I expected that there would be a much stronger relationship between behavior and perceived attractiveness of a tan than between behavior and the other variables.

Brandon and Baker's Smoking Consequences Questionnaire (SCQ)

(1991) assesses subjects' motivations for smoking. Do they smoke to relieve tension, to cope with depression, or to control their appetite and weight? In examining these questionnaires, it was determined whether or not the person smoked, and if they did, whether or not they cited weight control as a motivation for smoking. Each subject was classified as either a smoker or a non-smoker, and, if the subject was a smoker, he or she was classified as either a "weight-control" or "non-weight-control" smoker. Again, it was expected that there would be no relationship between men's gender attitudes and their smoking and weight-control status, whereas for women, a correlation was expected.

Several questions were adapted from the Miller, et al. tanning survey to measure subjects' knowledge about lung cancer, perceived personal risk of lung cancer, and beliefs about the attractiveness of being thin.

Procedure

The introductory psychology student subjects were tested in groups and were given a consent form to sign. Their rights as subjects were defined, and they were told that they could withdraw from the study at any time without penalty. After completing the questionnaires, the subjects were given course credit.

The 19 subjects who were not introductory psychology students were all friends or acquaintances of various psychology majors who volunteered to help recruit subjects who smoked. The subjects were not paid or given any kind of course credit, but many expressed interest in learning the results of the study when it was completed. These subjects, however, were not told anything about

the purpose of the study before they completed the questionnaires.

Results

Gender Differences in Behavior

First, a multivariate analysis of variance (MANOVA) was performed to determine the effect of gender on scores on the WSQ as well as on tanning behavior. Table 1 lists the means and standard deviations for each group. The effect of gender on both variables was significant; the multivariate effect was $F(1, 138) = 19.623$, $p < .001$. As predicted, women engaged in significantly more tanning than did men; the effect of gender was $F(1, 138) = 5.734$, $p = .018$. Not surprisingly, the men scored significantly higher than the women on the WSQ, indicating more traditional gender attitudes; the effect of gender on WSQ scores was $F(1, 138) = 23.486$, $p < .001$.

Equal numbers of men and women listed weight-control as an advantage to their smoking; five of the twenty male smokers and five of the twenty female smokers listed weight-control as a motivation for smoking. No statistics were performed.

Tanning

Two separate standard multiple regressions were performed to determine which variables best predict tanning in men and in women. In each, the possible predictors were perceived personal risk of skin cancer, knowledge about skin cancer, perceived attractiveness of a tan, score on the MSS and score on the WSQ. The criterion variable was actual tanning.

Men. Table 2 displays the predictor variables and their standardized

regression coefficients, the means and standard deviations for the scales, and the correlation matrix. Altogether, 35% of the variance in tanning in men was explained in this analysis. Only one of the predictor variables contributed significantly to predicting amount of tanning in men: perceived attractiveness of a tan. The more attractive the men perceived a tan to be, the more likely they were to seek a tan. The other predictors - knowledge about skin cancer, perceived personal risk of skin cancer, score on the MSS, and score on the WSQ - did not contribute significantly to predicting tanning in men.

Women. Table 3 shows the correlations among the predictor variables and their standardized regression coefficients, the means and standard deviations for the scales, and the correlation matrix. Overall, 32% of the variance in tanning in women was explained in this analysis. As with men, the strongest predictor of tanning in women was the belief that tanning is attractive. Again, if women perceived a tan as attractive, they were more likely to tan. However, a second variable contributed to predicting tanning in women: score on the WSQ. The more traditional women's attitudes toward gender as measured by the WSQ, the more likely they were to tan. Women with more egalitarian attitudes toward gender were less likely to tan. The other predictor variables - perceived personal risk of skin cancer, knowledge about skin cancer, and score on the MSS did not contribute significantly to predicting tanning in women.

Smoking

Because subjects were classified into discrete groups based on their

smoking status, smoking data were analyzed using two separate direct discriminant function analyses - one for men and one for women. In each analysis, five variables were used as predictors of smoking vs. non-smoking status: knowledge about lung cancer, perceived personal risk of lung cancer, attitudes toward the attractiveness of being thin, score on the WSQ, and score on the MSS.

Men. Pooled within-group correlations between the discriminating variables and the discriminant function are shown in Table 4. Of the five predictors of smoking vs. non-smoking status in men, the only significant variable was perceived personal risk; the effect was $F(1,46) = 9.049$, $p = .0043$. If men perceived high personal risk for lung cancer, they were more likely to be smokers than men who did not. The other variables - knowledge about lung cancer, perceived attractiveness of being thin, score on the MSS, and score on the WSQ - did not contribute significantly to the discriminant function.

Women. Pooled within-group correlations between the discriminating variables and the discriminant function are shown in Table 5. As with men, the only significant variable was perceived personal risk of lung cancer; the effect was $F(1, 90) = 12.65$, $p = .0006$. Again, women who perceived high personal risk of lung cancer were more likely to smoke than women who did not. The other variables - knowledge about lung cancer, perceived attractiveness of being thin, score on the MSS, and score on the WSQ - did not contribute significantly to the discriminant function.

Discussion

As projected, women engaged in significantly more tanning than men. For both men and women, the strongest predictor of tanning was the belief that tanned skin is attractive, which is consistent with prior research. With men, the relationship was relatively straightforward; if they thought tanning was attractive, they tanned. With women, however, gender attitudes as measured by the WSQ mediated this effect. A woman might believe that a tan is attractive, but whether or not she risks skin cancer and spends time and money in pursuit of a tan might depend on her priorities. A woman who believes her looks and attracting a mate are of paramount importance may be more likely to tan than another woman who focuses more on her intellectual ability or career.

One way to counteract this effect might be, as the Jones and Leary (1994) research suggested, to emphasize the negative effects of tanning on appearance; by convincing people that tanning will one day result in wrinkling and prematurely aged skin, doctors may be able to lessen or prevent excessive tanning. This approach, however, offers only a very superficial solution to a more disturbing problem: our society's obsession with appearance and beauty. If women valued themselves more for their intelligence and abilities and less for their looks, they would likely tan less.

Scores on the MSS did not significantly predict tanning in men or women. The MSS operates on a more abstract level; it asks if sexism is a continuing problem in society. The WSQ, by contrast, asks more specific questions about what women's roles should or should not entail. Therefore, the WSQ may have elicited more detailed information about gender attitudes which

consequently helped to predict tanning.

Interestingly enough, knowledge about and perceived personal risk of skin cancer did not predict tanning in men or women. Some people who tanned worried about getting skin cancer while others did not. Similarly, some people who didn't tan worried about getting skin cancer while other non-tanners did not.

It is difficult here to differentiate cause and effect. Perhaps some non-tanners avoid tanning because they worry about skin cancer. Other non-tanners, however, don't worry about skin cancer simply because they don't tan; their nonchalance is a result rather than a cause of not tanning. Similarly, some people who tan don't worry about skin cancer; others who tan do worry about it, yet they consider their tans worth the risk.

Unlike tanning, the only significant predictor of smoking in both men and women was perceived personal risk of lung cancer. Generally, smokers worried about getting lung cancer while non-smokers did not; there was a clear relationship between perceived risk and behavior. Obviously, this is a correlational and not a causal relationship; people do not start to smoke because they feel they are at risk of lung cancer. If anything, smoking itself leads to increased perceptions of risk.

None of the other variables - MSS score, WSQ score, perceived attractiveness of being thin, or knowledge about lung cancer - correlated significantly with smoking. The fact that neither the gender attitudes scales nor perceived attractiveness of being thin correlated with smoking suggests that the

smokers in this study did not commence or continue smoking in order to control weight or look attractive. Most of the subjects who smoked, male and female, cited other effects of smoking as important motivators, such as relief of stress or depression. Contrary to what other studies have reported, a gender difference in weight-control smoking was not found. To investigate weight-control smoking more thoroughly, however, researchers would need a larger subject pool.

Knowledge about lung cancer did not significantly predict smoking either; there were no significant differences between smokers and non-smokers in lung cancer knowledge. This may explain why the smokers were not "in denial" of their risk - they were worried about their health. Perhaps the people who smoke would like to stop due to their fears of lung cancer and other diseases. Most likely, they started smoking due to peer pressure or to look older, and became addicted. In contrast, people who become worried about skin cancer can easily stop tanning because it is not addictive - at least not physiologically.

Although tanning and smoking are both widely known to cause cancer, there is much more of a stigma to smoking - perhaps because it is addictive. Many people see smoking as a "weakness", and look smugly upon those who go outside to smoke or those who avoid long airline flights because they cannot smoke onboard anymore. Smokers also have to deal with guilt feelings as well; tanners don't have to worry about "secondhand sun" affecting non-tanners, but smokers know that their habit can harm others. Smoking is definitely viewed by many as unhealthy and unattractive - much more so now than in the past. Consequently, gender attitudes and drive for attractiveness do not predict

smoking effectively.

Even with dire warnings from dermatologists, however, tanning is still viewed as healthy, desirable, and attractive. Therefore, gender attitudes and drive for attractiveness help predict tanning. However, belief in the attractiveness of a tan and gender attitudes together only accounted for 32% of the variance in tanning among the women in this study. The subjects in the study were college women attending an expensive private school; perhaps more of the variance could be explained by the extra time and money that these women have to devote to tanning. Lying out in the sun requires free time, and attending tanning booths necessitates having not only time but extra money to invest. It would be extremely interesting to compare these women to working-class women of the same age who are not attending college, but are working full-time and/or raising children. Working-class women may not have extra time and money, but they may also have more traditional gender attitudes; the mean on the WSQ for UR women was on the egalitarian side of the scale. Comparing college and working-class women on tanning and the effect of gender attitudes on it would make exciting future research.

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Appendix A

Smoking Consequences Questionnaire, (Brandon and Baker, 1991)

1. When I'm angry a cigarette can calm me down.
2. Cigarettes help me deal with anger.
3. Smoking helps me control my weight.
4. Cigarettes help me deal with anxiety or worry.
5. Smoking reduces my anger.
6. Smoking calms me down when I feel nervous.
7. Smoking keeps my weight down.
8. If I'm tense, a cigarette helps me to relax.
9. Smoking helps me deal with depression.
10. Cigarettes keep me from overeating.
11. Cigarettes help me reduce or handle tension.
12. Cigarettes help me concentrate.
13. Cigarettes keep me from eating more than I should.
14. When I'm upset with someone, a cigarette helps me cope.
15. If I'm disappointed in myself, a good smoke can help.
16. Smoking controls my appetite.
17. When I am sad, smoking makes me feel better.

Appendix B

Tanning - Miller et al., 1990

1. What was your maximum suntan level this past summer?
2. Do you ever attend tanning booths?
3. Will you go to a tanning booth this school year?
4. To what degree did you intentionally work on a tan this past summer?
5. Do you intentionally stay out of the sun to avoid suntanning?
6. Since arriving in August, have you laid out in the sun to keep or increase your tan?
7. How would you compare your suntan level with that of your friends this past summer?
8. Have you ever had a clear case of sunburn?
9. When someone gets a well developed suntan (or loses weight), it improves their appearance.
10. Take a typical UR female student: If she had a well-developed tan, how much would it improve her attractiveness?
11. Take a typical UR male student: If he had a well-developed tan, how much would it improve his attractiveness?
12. If you had a well-developed tan (or were thinner), it would make you feel more confident in social situations.
13. How much more attractive do you feel with a tan as compared to not having a tan?
14. On average, people with well-developed tans (or thin people) look more

healthy (or attractive) than people without tans (or heavier people).

15. In general, the more suntanned (or thinner) I am, the more attractive I would be to others.

16. How would you rate your typical sun-screen (sunblocking) use this summer?

17. Have you encountered information (media, TV) regarding possible risks associated with sun exposure (or smoking)?

18. How worried do you feel about developing premature skin wrinkling/drying because of too much sun exposure?

19. How worried do you feel about developing skin (or lung) cancer because of too much sun exposure?

20. Consider this statement: "The pleasure and advantages of a well-developed suntan are worth the possible risks." How much do you agree?

21. How much do you agree with the idea that developing skin (or lung) cancer is a direct result of too much exposure to the sun (or smoking)?

22. Compared to other UR students of your sex and age, what do you think the chances are that you will develop skin (or lung) cancer?

23. Consider this statement: "Too much value is placed on attractiveness. Qualities of intelligence, motivation, and personality are more important." How much do you agree?

Appendix C

Modern Sexism, Swim, 1995

*1. Discrimination against women is no longer a problem in the United States.

2. Women often miss out on good jobs due to sexual discrimination.

*3. It is rare to see women treated in a sexist manner on television.

*4. On average, people in our society treat husbands and wives equally.

*5. Society has reached the point where women and men have equal opportunities for achievement.

6. It is easy to understand the anger of women's groups in America.

7. It is easy to understand why women's groups are still concerned about societal limitations of women's opportunities.

*8. Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences.

* reverse-scored item

Appendix D

Women in Society Questionnaire, Lewis & Grieve, 1988

1. A career is as important to a woman's self-esteem as it is to a man's.

*2. Women are more suited than men to detailed jobs.

3. A woman's sexual urges are as strong as a man's.

*4. Women are more suited than men to be nurses.

*5. It is more important to consider the marital status of a woman than a man when an appointment is to be made.

*6. Men are more financially astute than women.

*7. The possibility of pregnancy makes women less suitable than men as employees.

8. It is as important for a man to help advance his wife's career as it is for a woman to advance her husband's.

9. When housework is allocated men are as suited to jobs inside the house as women.

10. Part-time work suits men as much as women.

11. A man is as entitled to expect doors to be opened for him as a woman is.

*12. It is preferable to have more men than women in government.

*13. It is more difficult to accept a woman than a man as an authority figure.

14. Men are as suited as women to the supportive roles in church and community committees.

15. These days women are as suited as men to most jobs.

*16. Women are less effective in arguments than men.

*17. If there is a sick child in a family where both parents work full-time, the school should call the mother before calling the father.

*18. In a single-parent family it is more important for a child's well-being to have a mother than a father.

*19. By nature women do not have as many abilities for job success as men have.

*20. A woman should be less willing than a man to accept a career promotion that requires a family to move interstate.

21. Men are as capable of caring for babies as women are.

22. The way society is set up is better for men than for women.

*reverse-scored item

Table 1

Means and Standard Deviations of Scores on Scales that Yielded Significant Results

Differences Between Men and Women on the Miller, et al. Tanning Survey.

High score indicates higher level of tanning.

	Mean	Standard Deviation	
Males	19.875	4.734	F = 5.734
Females	22.130	5.555	p = .018

Differences Between Men and Women on the Women in Society Questionnaire (WSQ)

High score indicates more traditional gender attitudes.

	Mean	Standard Deviation	
Males	51.375	12.625	F = 23.486
Females	42.109	9.621	p < .001

Table 2

Predictors and Standardized Regression Coefficients for Tanning in Men

Predictors	Beta	Sig. T
TATT	.417970	.0110
TKNOW	-.181913	.1892
WSQ	.157544	.3168
TPR	.126341	.3338
MSS	-.058775	.6805

Means and Standard Deviations on Scales for Men

Scale	Mean	Standard Deviation
MSS	20.958	4.929
WSQ	51.375	12.625
TATT	24.271	6.430
TKNOW	6.292	.824
TPR	6.063	2.128
TAN	19.875	4.734

TATT = perceived attractiveness of tanned skin

TKNOW = knowledge about skin cancer

TPR = perceived personal risk of skin cancer

TAN = amount of tanning behavior

(table continues)

Correlation Matrix for Tanning Scales in Men

Scale	MSS	WSQ	TKNOW	TATT	TPR	TAN
MSS	1.000	.458	.019	.279	-.123	.111
WSQ	.458	1.000	.012	.465	-.074	.313
TKNOW	.019	.012	1.000	-.332	.062	-.312
TATT	.279	.465	-.332	1.000	.126	.551
TPR	-.123	-.074	.062	.126	1.000	.163
TAN	.111	.313	-.312	.551	.163	1.000

Table 3

Predictors and Standardized Regression Coefficients for Tanning in Women

Predictors	Beta	Sig. T
TATT	.479256	.0000
WSQ	.201948	.0437
TPR	-.088300	.3477
TKNOW	-.049295	.6010
MSS	-.026106	.7970

Means and Standard Deviations on Scales for Women

Scale	Mean	Standard Deviation
MSS	16.489	4.982
WSQ	42.109	9.621
TATT	25.207	4.864
TKNOW	6.424	.730
TPR	7.967	2.260
TAN	22.130	5.555

TATT = perceived attractiveness of tanned skin

TKNOW = knowledge about skin cancer

TPR = perceived personal risk of skin cancer

TAN = amount of tanning behavior

(table continues)

Correlation Matrix for Tanning Scales in Women

Scale	MSS	WSQ	TKNOW	TATT	TPR	TAN
MSS	1.000	.390	-.151	.051	-.284	.110
WSQ	.390	1.000	-.151	.198	-.012	.295
TKNOW	-.151	-.151	1.000	-.285	.115	-.222
TATT	.051	.198	-.285	1.000	.050	.528
TPR	-.284	-.012	.115	.050	1.000	-.065
TAN	.110	.295	-.222	.528	-.065	1.000

Table 4

Results of Discriminant Function Analysis for Men

Predictor Variable	Correlations of predictor variables with discriminant function	Univariate F (1,46)
*SPR	.667	9.049
SATT	.390	3.09
WSQ	.386	3.031
SKNOW	-.378	2.902
MSS	-.002	.959

* predictor is significant

Pooled Within-Groups Correlation Matrix

Scale	MSS	WSQ	SKNOW	SPR	SATT
MSS	1.000				
WSQ	.474	1.000			
SKNOW	-.221	-.275	1.000		
SPR	-.137	-.077	.197	1.000	
SATT	.075	.004	.244	.175	1.000

SPR = perceived personal risk of lung cancer

SATT = perceived attractiveness of being thin

SKNOW = knowledge about lung cancer

Table 5

Results of Discriminant Function Analysis for Women

Predictor Variable	Correlations of predictor variables with discriminant function	Univariate F (1,90)
*SPR	.847	12.65
MSS	.306	1.648
SKNOW	-.283	1.411
SATT	-.194	.665
WSQ	-.051	.456

* predictor is significant

Pooled Within-Groups Correlation Matrix

Scale	MSS	WSQ	SKNOW	SPR	SATT
MSS	1.000				
WSQ	.396	1.000			
SKNOW	-.066	-.033	1.000		
SPR	.015	-.025	.100	1.000	
SATT	.001	-.054	.164	.078	1.000

SPR = perceived personal risk of lung cancer

SATT = perceived attractiveness of being thin

SKNOW = knowledge about lung cancer

About the Author

Jennifer Douglas, a native of Baltimore, Maryland, graduated from Duke University in 1992 with an A.B. degree in history and psychology. She has completed her M.A. in psychology at the University of Richmond, and will start a doctoral program in social psychology at the University of Minnesota in the fall.