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Original article

A qualitative study of the decision to engage in tanning behaviors among female college students[☆]



L'utilisation des lampes UV chez les étudiantes : une étude qualitative des processus décisionnels

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ABSTRACT

Introduction. – Indoor tanning is associated with increased risk of melanoma and is particularly prevalent among female college students in the U.S.

Objectives. – The present study aimed to explore why female students decide to engage, and keep engaging in indoor tanning.

Methods. – We included eighteen female undergraduates who participated in group discussions. The group discussions were recorded and transcribed, then they were organized into themes.

Results. – Three main themes appeared: appearance reasons for tanning, tanning-related health risks, and tanning salon-marketing strategies. Students were overall informed regarding tanning-related health risks, and suggested that they justified their tanning behaviors by rationalizations. They also revealed that the marketing strategies employed by tanning salons made them more likely to tan frequently. Finally, students spoke about how the health risks, the affects on appearance, and leaving the college setting might lead them to stop tanning.

Conclusions. – These findings suggest that tanning among students could be reduced both by engaging students in programs addressing rationalizations about the risks associated with tanning, and policies targeting marketing techniques and tanning salon locations.

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R É S U M É

Introduction. – L'utilisation des lampes UV – particulièrement fréquente chez les étudiantes – est un important facteur de risques de développement de mélanomes.

Objectif. – Notre étude avait pour but d'explorer les raisons pour lesquelles les étudiantes décident d'initier et de poursuivre l'utilisation des lampes UV.

Méthode. – Nous avons recruté 18 étudiantes de licence qui ont participé à des entretiens en groupe ou individuels. Les entretiens ont été enregistrés, retranscrits, puis analysés pour en extraire les thèmes fréquents.

Résultats. – Trois thèmes ont émergé : les motivations liées à l'apparence, les risques de santé liés à l'utilisation des lampes UV, et les stratégies de marketing. Les étudiantes se montraient bien informées des risques de santé, et semblaient justifier leur utilisation des lampes UV à l'aide de rationalisations.

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Les participantes ont aussi évoqué comment les techniques de ventes et les promotions faites par l'industrie concernée les poussaient à utiliser les lampes UV plus fréquemment. Enfin, les participantes ont évoqué les risques de santé, le vieillissement de la peau, et la transition hors du contexte universitaire comme des facteurs pouvant les inciter à cesser leur utilisation des lampes UV.

Conclusions. – Ces résultats suggèrent qu'une prévention auprès des étudiantes ciblant les rationalisations, ainsi que la réglementation des techniques de vente et de l'emplacement des boutiques pourraient réduire l'utilisation des lampes UV au sein de cette population.

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Indoor ultraviolet light tanning is particularly widespread among female college students in the U.S., with over 50% of female students reporting previous tanning bed use, thus displaying higher rates than their male counterparts (Poorsattar & Hornung, 2007; Wehner et al., 2014). This is particularly troubling as it is associated with a number of health risks, including increased risk of melanoma, the most serious form of skin cancer (Boniol, Autier, Boyle, & Gandini, 2012; Day, Wilson, Hutchinson, & Roberts, 2014; Ting, Schultz, Cac, Peterson, & Walling, 2007). Young women under the age of 25 who engage in indoor tanning have been shown to be over 60% more likely to develop skin cancers such as basal or squamous cell carcinoma and melanoma compared to those who have never engaged in the behavior (Ting et al., 2007). While in some countries tanning has been shown to vary according to demographic factors such as socioeconomic status (Køster, Thorgaard, Clemmensen, & Philip, 2009), in the U.S. it is highly prevalent among women under the age of 30 in college or who have attained a college degree, and particularly in the North of the country (Heckman, Coups, & Manne, 2008).

Appearance considerations have been identified as the main motivation for students to engage in indoor tanning (Bagdasarov, Banerjee, Greene, & Campo, 2008; Cafri, Thompson, Jacobsen, & Hillhouse, 2009), and, somewhat surprisingly, it has been suggested that the health risks may be well known among this group (Day et al., 2014; Knight, Kirincich, Farmer, & Hood, 2002). The high prevalence of indoor tanning for appearance reasons has been documented in female college students, but it is less well understood why rates are particularly high among this population. The aim of the present study was therefore to explore the motivations and decision-making processes related to indoor tanning among female college students.

In Western societies, a heavy emphasis is placed on physical appearance, and sociocultural agents such as the media promote a largely unachievable physical ideal (lean, toned, and tanned for both men and women). During the last decades, this ideal has been increasingly tanned (Banerjee et al., 2008; Duncan, 1994), which may lead to young women engaging in indoor tanning in an attempt to bring their physical appearance closer to the socially defined ideal. More recently, social discourse has also focused on "healthism," that is, the disciplining of the body into a socially defined "healthy body," which is mainly constructed through its appearance rather than its functionality (Dworkin and Wachs, 2009). In line with this, tanned bodies have become a sign of a healthy appearance as well as attractiveness, providing additional incentive to tan (Shoveller, Lovato, Young, & Moffat, 2003). Furthermore, indoor tanning is frequently believed to protect from future sunburn or to help maintain adequate levels of vitamin D (Lazovich, Choi, Rolnick, Jackson, Forster, & Southwell, 2013).

In view of the strong association between indoor tanning and skin cancer risk (Green et al., 2007), much effort has been focused on usefulness of increasing health literacy to deter tanning behaviors. However, little evidence has supported the relationship between increased health literacy and tanning behaviors, suggesting that awareness of health risks may not be strongly associated with the decision to engage or not engage in tanning behaviors (Altsitsiadis

et al., 2012; Poorsattar & Hornung, 2007; Schneider, Zimmermann, Diehl, Breitbart, & Greinert, 2009). Faced with this impasse, some scholars have drawn parallels with the literature surrounding smoking behaviors in youth—a similar risk behavior that has a high incidence in college students—in order to understand the factors which maintain tanning behaviors (Banerjee et al., 2012; Gosis et al., 2013). Using an adaptation of a scale created for assessing cognitive rationalizations among smokers, Banerjee et al. (2012) identified cognitions associated with tanning that were related to skepticism regarding the dangers of indoor tanning, rationalizations that danger is ubiquitous in our society regardless of personal risk taking, and cognitions related to finding the risk-gain balance in favor of tanning despite the risk ("worth-it" cognitions). Similarly, qualitative work with adolescents has suggested that health risks are downplayed or purposefully ignored by youth engaging in indoor tanning so as to justify continued engagement in the behavior (Lake, Thomson, Twelves, & Davies, 2014).

Aspects related to college culture also may emerge as important decision factors. The college years and the transition into early adulthood constitute important developmental periods and a unique socialization experience as it is a time when peer influences may become increasingly important compared to parental influences (Murray & Turner, 2004). As peer influences have been shown to be important in indoor tanning (Bagdasarov et al., 2008; Cafri et al., 2009; Murray & Turner, 2004), this is likely to emerge as an important factor in the decision to engage in indoor tanning among college students. Finally, financial considerations associated with being a student might play a role in tanning behaviors. Price considerations have been suggested to be an important motivator (Beasley and Kittel, 1997) and tanning salons have been shown to respond to this by offering targeted financial incentives such as student discounts and promotions for school functions (Oliphant et al., 1994).

Gaining a better understanding of the factors students consider when deciding whether or not to indoor tan, and the role of factors specific to college environments, is important to the development of successful interventions to decrease the prevalence of tanning in this group. The present study explores the motivations and decision-making processes among female college students reporting to frequently engage in indoor tanning around a college campus. We chose to examine this question through group discussions in order to best understand and more fully explore the experience of these students.

1. Methods

1.1. Participants and procedure

The study design was approved by the Northeastern University institutional review board. Female undergraduates who engaged in indoor tanning in a salon around campus were recruited via advertisements placed around campus and contacted the researcher via email who, after verifying that they fulfilled the criteria for the study provided them with a link for the online survey. Participants were compensated with a \$10 gift card for their time. Potential

participants who reported engaging in indoor tanning more than once a month on the initial online survey were invited to participate in the group discussions and informed consent was obtained before the groups started. Data were collected during the months of February to April 2014.

Participants in this study were female undergraduates attending an urban university in the northeastern part of the United States, who had previously participated in an online survey exploring their tanning behavior and experiences and reported currently engaging in indoor tanning more than once a month. Participants were invited to participate in a one-time group discussion. A total of 18 students agreed to participate in the group discussions and received a \$20 gift card. In the overall sample, 29% were 2nd year students, 18% 3rd year students, 18% 4th year students, and 35% 5th year students in a 5-year undergraduate program. The age of participants ranged between 19–22 years old (Mean = 20.94). The majority of students (16) self-identified as Caucasian and one student self-identified as biracial (Hispanic and Caucasian). Forty-seven percent of the participants reported growing up in New England, 47% reported growing up in other parts of the U.S., and one participant reported growing up in Europe.

1.2. Group discussion protocol

A semi-structured group discussion was developed for this study to explore students' tanning experiences, knowledge of health risks, and reactions to the online survey. The participants were asked the following questions:

- Could you describe your first tanning experience?
- What are your main motivations for tanning?
- What would you say are the main health risks associated with tanning?
- Do you think there are any benefits from tanning?
- Can you tell me how you think about going tanning in view of the risks you have told me about?
- Tell me about your experience tanning at local salons near campus?

Prompts (e.g., “please elaborate”) were utilized to elicit more in-depth responses; however, the students often prompted each other with their shared experiences that then led to a fruitful discussion. A total of 8 group discussions were conducted individually or in small groups of 2–3 students (discussion 1: 1 participant; discussion 2: 3 participants; discussion 3: 2 participants; discussion 4: 3 participants; discussion 5: 2 participants; discussion 6: 3 participants; discussion 7: 2 participants; discussion 8: 2 participants). The group discussions lasted between 30 to 75 mins (mean = 40.96 mins) depending on the size of the group.

1.3. Research team

All group discussions were conducted by the same Ph.D. level faculty member (RR) while a second research team member observed (e.g., master's level or doctoral level graduate student in counseling psychology: ML, AI). The coding team consisted of two Ph.D. level faculty members, three counseling psychology doctoral students, three master's level counseling psychology students, and one undergraduate psychology student. This team included eight females and one male, 7 Caucasian coders and 2 Asian coders. Two team members had prior experience with a qualitative research method known as Consensual Qualitative Research (CQR; Hill et al., 2005) and provided didactic and experiential training to the other research team members.

One faculty member did not engage in coding and acted as an independent auditor of the coding procedure. This auditor helped

the team accurately capture the nuances of each response. When the research team compiled the original domain list, the auditor reviewed the data and offered suggestions, which were then incorporated into the finalized codebook consisting of domains, core ideas, and major themes (Hill et al., 2005).

1.4. Data analysis

The group discussions were audio recorded and transcribed by members of the research team. Team members who had participated in transcribing the group discussions did not code their own transcriptions. This was done to prevent those who transcribed the group discussions from including additional information resulting from having run the group in their coding decisions.

To analyze the data, we followed the three step process of CQR described by Hill et al. (2005):

- identifying domains/general themes derived from group discussion transcripts (overarching themes);
- constructing and classifying specific core ideas of each domain (subthemes);
- assessing the frequency of domains and core ideas across all group discussions once a finalized code book was established.

Initially, the research team selected a group discussion transcript to read and independently developed domains based on this transcript. The research team then met to discuss their domain ideas and collapse them into overarching categories. The team initially established 9 domains:

- tanning experience;
- attitudes toward tanning;
- knowledge of tanning health factors;
- motivation for tanning;
- mitigating health risks;
- cognitive processes sustaining behavior;
- commercial influence;
- tanning survey experiences;
- participant identity.

Next, the research team selected a second group discussion transcript and reviewed these domains. This led to the identification of three additional domains including: (1) attitudes toward tanning alternatives; (2) addiction; and (3) motivation for not tanning. After a consensus was reached regarding the domains, the team then worked to identify abstract core ideas. When the research team felt the data had been saturated and the codebook fully captured the data, the team then moved on to code the group discussion transcripts utilizing the coding taxonomy (available from authors).

All members of the team collaboratively coded one transcript to train independent coders using the finalized codebook. Team members were encouraged to ask questions and highlight examples of responses that fit the coding taxonomy. Once all coders reported they felt comfortable with the coding taxonomy, the remaining group discussion transcripts were then coded by two independent coders. The mean inter-rater reliability across coding pairs was 68%. Pairs of coders then reviewed their coding and discussed coding discrepancies until consensus was reached. If consensus could not be reached, the issue was discussed by the team. Saturation was defined as the point at which all codes had been identified at least once and it was estimated by summing the number of responses for each code for increasing numbers of group discussions (i.e. group discussion 1, then group discussion 1 + 2. . .). Saturation was assessed to further validate coding schemes.

2. Results

Three main themes emerged from our analysis:

- tanning for appearance reasons;
- tanning-related health issues;
- discounts and marketing.

Below, we describe the ways in which each of these three main themes was talked about by the participants, and related sub-themes. So as to provide a sense of the centrality of the subthemes, the number of participant responses that contained each subtheme is presented. Each participant could provide multiple responses that were coded as belonging to a same subtheme.

2.1. Tanning for appearance reasons

The most common theme that emerged throughout the group discussions was appearance-related reasons for tanning behavior ($n=318$).

2.1.1. Tanning to look attractive and healthy

Participant responses commonly indicated that tanning behavior was initiated by their desire to improve their appearance and attractiveness ($n=95$; group 1: $n=12$; group 2: $n=23$; group 3: $n=5$; group 4: $n=29$; group 5: $n=10$; group 6: $n=4$; group 7: $n=5$; and group 8: $n=7$). Tanned skin was described as helping to achieve the social slender ideal: “I tan because I think I look better” (Participant 8); “Like it makes your clothes look better” (Participant 2); “It just looks better on anyone. Like, I don’t know. You appear thinner” (Participant 14); “I feel like it masks cellulite better, or something” (Participant 15). In addition, participants equated tanned skin with healthiness: “When I am tanned, I look healthy” (Participant 6); “Your skin just looks healthier” (Participant 3).

Specifically, some participants suggested their motivations for continued tanning behavior were related to unhappiness with skin tone ($n=26$; group 1: $n=2$; group 2: $n=1$; group 3: $n=3$; group 4: $n=11$; group 5: $n=1$; group 6: $n=4$; group 7: $n=3$; and group 8: $n=1$), with lighter skin seen as less attractive: “Just feeling really white I guess” (Participant 14); “The thing about being tan is being seen as like so much more attractive than being pale” (Participant 4); “I think I look sick if I’m not tan. Like there’s something wrong with me” (Participant 9); “People who are... have tan have this glow on them... look healthier and happier... than sunken eyes and paleness makes me look sickly...” (Participant 11).

2.1.2. Social influences on tanning

Participants often suggested that they first engaged in tanning when preparing for a special event. Participant responses ($n=48$; group 1: $n=7$; group 2: $n=6$; group 3: $n=1$; group 4: $n=10$; group 5: $n=3$; group 6: $n=3$; group 7: $n=12$; and group 8: $n=6$) indicated that tanning was considered as part of the preparatory grooming for this event, most commonly prom or a vacation. “I started in high school at some point for like a winter dance when everyone obviously wants to look tan” (Participant 3).

A social aspect of tanning behavior was also prevalent in participant responses ($n=58$; group 1: $n=12$; group 2: $n=11$; group 3: $n=6$; group 4: $n=1$; group 5: $n=12$; group 6: $n=0$; group 7: $n=2$; and group 8: $n=14$). Many indicated they began or continued to tan because their friends and peers were tanning. Sometimes tanning was described as a group or as a social activity. Participants also mentioned a competitive aspect to tanning in relation to their peers. “You couldn’t be the only one not tan” (Participant 3); “Everybody wanted to go be tan” (Participant 4); “I would only go if [she] went. Yeah if [she] said do you want to go, I’d be so down” (Participant 17).

In addition to peer influences, family influences also stood out as being an important factor in the decision to engage in indoor tanning ($n=26$; group 1: $n=5$; group 2: $n=3$; group 3: $n=0$; group 4: $n=3$; group 5: $n=2$; group 6: $n=4$; group 7: $n=0$; and group 8: $n=9$). Participants described both parental modeling of tanning behaviors as well as ethnic and cultural influences. “I mean she’s [mom] been tanning all her life. Because she’s in that generation (Participant 17); “my mom is Italian and I tan like her” (Participant 10).

Interestingly, appearance concerns also emerged as one of the main reasons for not using tanning alternatives ($n=38$; group 1: $n=0$; group 2: $n=0$; group 3: $n=0$; group 4: $n=7$; group 5: $n=6$; group 6: $n=6$; group 7: $n=9$; and group 8: $n=10$), such as spray tanning: “So I don’t know if they were trying to get people to spray tan more. You get much better luck with the tanning beds” (Participant 17); “So if I wanted to use self tanner it’s kinda a hassle and you kinda look fake when you get orange hands or something” (Participant 13).

2.1.3. Appearance concerns as a reason to stop tanning

Finally, some participants mentioned appearance reasons as a factor in their decisions to stop their tanning behaviors ($n=27$; group 1: $n=0$; group 2: $n=3$; group 3: $n=4$; group 4: $n=7$; group 5: $n=1$; group 6: $n=2$; group 7: $n=1$; and group 8: $n=9$), noting the negative effects of tanning on appearance. Other responses indicated that the importance of appearance declines after reaching a certain age: “It ruins my hair... it strips the color, it does that with nails too, if you get a French manicure it turns them yellow-y” (Participant 9); “We’ll be able to influence younger generation and say like ‘look at us like do you want to look like this, like you’re all wrinkly’” (Participant 2).

2.2. Tanning-related health issues

A second theme to emerge from the focus groups concerned the physical and mental health associations to tanning ($n=489$).

2.2.1. Perceived risks and benefits

Throughout the group discussion, students displayed high levels of knowledge and awareness of the negative health consequences of tanning such as burning, scarring, skin cancer, and premature aging. Many more contributions focused on these health risks ($n=94$; group 1: $n=5$; group 2: $n=22$; group 3: $n=14$; group 4: $n=13$; group 5: $n=11$; group 6: $n=12$; group 7: $n=9$; and group 8: $n=8$) compared to the potential positive health consequences ($n=11$; group 1: $n=0$; group 2: $n=0$; group 3: $n=2$; group 4: $n=5$; group 5: $n=0$; group 6: $n=3$; group 7: $n=1$; and group 8: $n=0$), which mainly included skin conditions as well as protection from sun burn when going on holiday: “I want to get a little bit of a base tan, so I don’t get super burnt” (Participant 1). The lack of salience of health risks warnings within tanning salons was also commented on ($n=26$; group 1: $n=1$; group 2: $n=2$; group 3: $n=2$; group 4: $n=11$; group 5: $n=1$; group 6: $n=0$; group 7: $n=6$; and group 8: $n=3$). An extremely small number of responses ($n=8$), described how health risks might be a reason for ceasing tanning. Similarly a small number of responses ($n=12$) cited health risks as a reason for using tanning alternatives.

Family members and peers to a slightly lesser extent ($n=45$; group 1: $n=4$; group 2: $n=3$; group 3: $n=6$; group 4: $n=12$; group 5: $n=12$; group 6: $n=3$; group 7: $n=4$; and group 8: $n=1$) were identified as an important source of information regarding the health risks associated with tanning. Family members were quoted as frequently reminding participants of the health risks, and communicating their lack of endorsement of the behavior by refusing to pay for salon visits. Peers were also described as actively reminding participants of the associated health risks before tanning sessions.

Although the primary motivations for tanning were appearance-related, secondary motivations also included perceived physical and mental health benefits. Most contributions related to this topic ($n=36$; group 1: $n=2$; group 2: $n=5$; group 3: $n=7$; group 4: $n=3$; group 5: $n=6$; group 6: $n=5$; group 7: $n=4$; and group 8: $n=4$) focused on the psychological benefits of tanning, such as increased self-esteem and body confidence: “I think it’s definitely more of a psychological health benefit. . . just feeling more confident” (Participant 13); “People get more confident, more relaxed. I get into an amazing mood when I come out. All my anxieties are gone” (Participant 10). Tanning behaviors were associated with relaxation ($n=59$; group 1: $n=2$; group 2: $n=10$; group 3: $n=2$; group 4: $n=13$; group 5: $n=8$; group 6: $n=5$; group 7: $n=5$; group 8: $n=14$). Student responses highlighted the meditative aspect ($n=20$) of tanning, as well as the desire to seize the opportunity to escape from cold climates ($n=22$): “It’s so relaxing. . . rare to find that type of solitude I guess” (Participant 10); “It’s a nice 15-minute break from 0 degree weather” (Participant 4). In addition to the mental health perceived benefits, some participant responses ($n=17$) described using tanning as a means of improving skin concerns such as psoriasis and acne.

2.2.2. Health-risk mitigating behaviors and cognitions

Students reported using both cognitions and behaviors as a means of mitigating the health risks associated with indoor tanning and rationalizing their tanning behavior. Frequently, students reported taking what they perceived as precautions while tanning (e.g., wearing moisturizing or bronzing lotion, eye goggles), as well as seeking professional reassurance ($n=59$; group 1: $n=4$; group 2: $n=11$; group 3: $n=1$; group 4: $n=17$; group 5: $n=10$; group 6: $n=5$; group 7: $n=6$; and group 8: $n=5$): “I have a great dermatologist too. . . She knows I tan. . . She does not approve but she knows I do and so. . . she’ll do a head to toe sweep of making sure that everything looks good and if anything is even questionable, she’s like ‘before it turns into something worse’” (Participant 10).

Sometimes students revealed using rationalizations such as magical and unrealistic thinking as well as denial to decrease their perception of personal risk ($n=23$; group 1: $n=1$; group 2: $n=1$; group 3: $n=1$; group 4: $n=6$; group 5: $n=10$; group 6: $n=1$; group 7: $n=0$; and group 8: $n=3$). In these cases, students expressed feeling that they were in some way protected from skin cancer: “I know this sounds really bad but by the time. . . I hope by the time. . . if I do get diagnosed with skin cancer. . . they’ll have some sort of cure. . .” (Transcript 11).

Additional cognitive processes sustaining and enabling tanning behaviors despite health risk awareness also emerged. These included ambivalence ($n=20$), temporal discounting ($n=21$), cognitive dissonance ($n=25$), and rationalization ($n=26$). Together these themes were mentioned in group 1: $n=9$; group 2: $n=20$; group 3: $n=21$; group 4: $n=6$; group 5: $n=11$; group 6: $n=7$; group 7: $n=7$; group 8: $n=11$.

Examples for each of the cognitive processes appear below.

Ambivalence was indicated in the following representative quote: “Sometimes the positives outweigh the negatives” (Participant 14); “I mean when I go, it’s a conscious decision. I know that it’s bad for me, but I don’t make excuses. I just do it because I want to look tan for a certain thing” (Participant 15). Temporal discounting was exemplified by comments such as: “No, if I’m burnt it looks horrible, but not, not now. In the future, I can definitely see wrinkles for sure, but right now no, no adverse effects” (Transcript 1); “I think also the risks are like so. . . in the future. . . I want to be tan. Like, I’m not going to get skin cancer tomorrow, so I’m still gonna tan” (Participant 4).

Cognitive dissonance and rationalization were also common: “I know it’s horrible. When I’m not tanning, I always tell people not to go, but I don’t know.” (Participant 15); “So many people do it

so. . . that’s another kind of thing. . . that make me go. . . oh. . . it’s okay. . . like. . . they are all doing it. . . you know. . . so I am not the only one who is putting myself at risk so. . .” (Participant 6).

2.2.3. Addictive aspects of tanning

Furthermore, some participants spoke out about the addictive aspects of tanning ($n=24$; group 1: $n=1$; group 2: $n=6$; group 3: $n=0$; group 4: $n=3$; group 5: $n=3$; group 6: $n=3$; group 7: $n=4$; and group 8: $n=4$): “[Tanning] just keeps influencing you to go back. . . you have to go and it’s this whole psychological like circle that keeps going around and you keep feeling like ‘Oh I’m gonna be pale [if I don’t go]’” (Participant 2); “Or if you just like lying in the sun [and] if you don’t have that sun, you can be like sad or whatever. Have that kind of low after” (Participant 14); “But I was literally addicted I would go like twice a. . . like two or three. . . like three times a week I think. It was bad” (Participant 8).

2.3. Discounts and marketing

Another important theme to surface from the focus group discussions was the influence of the targeted marketing schemes employed by salons ($n=184$; group 1: $n=11$; group 2: $n=45$; group 3: $n=5$; group 4: $n=18$; group 5: $n=23$; group 6: $n=16$; group 7: $n=17$; and group 8: $n=49$). Student responses frequently highlighted how the high cost of tanning was a strong influence on their tanning behavior, and contributed to both the frequency of their tanning behaviors and their future tanning intentions ($n=45$): “Yeah I would definitely say I’ve picked it on the price factor” (Participant 2); “I haven’t been going a lot in the city because it’s just too expensive compared to at home” (Participant 16).

Often, participant responses described how the salons provided coupons or discounts in order to draw in new customers ($n=27$): “When I first went to Campus Tan it was like a ‘new members for free,’ like obviously I didn’t just go 1 time so. . . that’s how they get you” (Participant 3).

Some salons specifically target college students through college coupon books or campus-specific deals:

There’s a booklet that the bookstore gives out. . . and in your mailbox. . . that you receive at the beginning of the every semester. . . and there’s a tanning deals where new members get a free week of tanning. . . \$20 off lotion, 20% off of everything [. . .] you get free tan if you get manicure and pedicure. . . um. . . and if you buy two spray tan or something. . . you get free tan. . . they get you with all the deals. . . (Participant 11)

Students were also aware that salons often provide package or monthly deals to retain their existing clientele ($n=47$), as well as other incentives like bed upgrades or discounts on lotions ($n=40$): “Campus Tan normally has like \$40 or \$50 stuff you know. . . and they always have specials especially like for me. . . I’m on their special monthly thing. . . I get 10% off of all of their products” (Participant 11); “On your birthday. . . you get. . . you can have a either a week of like. . . bump you up to a really, really nice bed for free. . . or two spray tans. . . and they do it for Christmas too. . .” (Participant 11). However, several participants noted that the marketing schemes are not always genuine:

You get like 120 mins and then they throw on an extra 40 and then you can buy a lotion for like half off and they kinda just threw it all together. . . and at the time I was just like this seems like a deal but then I realized they are always having promotions. . . there are new promotions over and over again, it’s the same one over and over again. I feel like they tricked me into not getting a deal. (Participant 13).

Another participant commented on the promotional packages: “They always do have coupons or deals or whatever it is but it

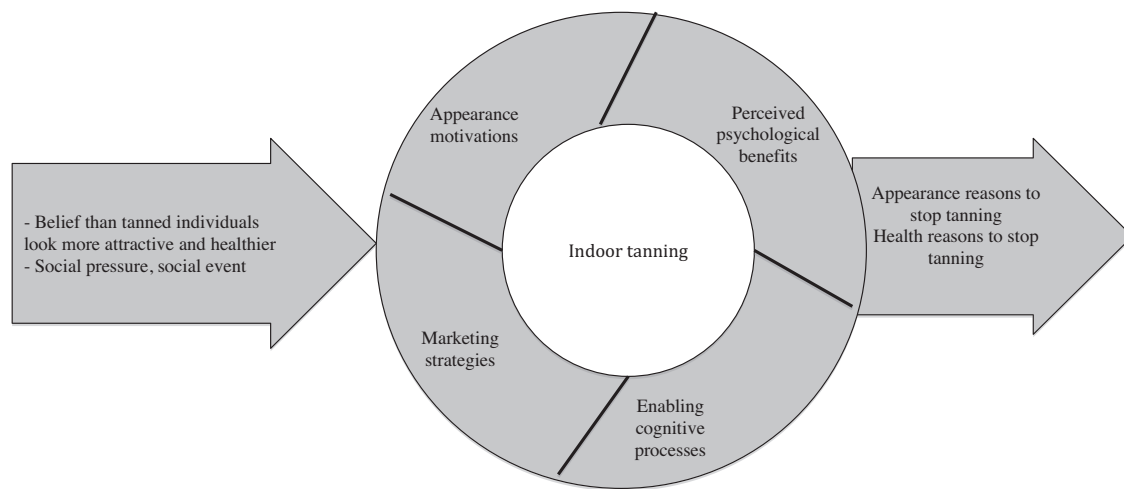


Fig. 1. Tanning cycle: factors affecting the decision to engage in indoor tanning and to stop tanning.

always ends up being a lot of money because then you keep going” (Participant 3); “The promotional packages are big because they sometimes can save you money um yeah I think that is another driving force. . . once you’re already in it, you buy a package, you buy minutes you kinda feel obligated. . . as with anything I feel with a package type deal encourages people to go more. . .” (Participant 12).

Finally, participants noted that the convenience of having tanning salons located near the university was a strong facilitator for tanning ($n = 25$). Participants described how easy it was to fit tanning into their schedule when walking past the salon and how the proximity of the salons made them more likely to use the sunbeds more frequently: “Basically location too is really important and I realized that there are 2 locations [. . .] and there’s one like right next to the dorms” (Participant 2); “It’s just so close. . . you can go right after class” (Participant 10).

3. Discussion

The present study sought to explore motivations for tanning and decisional processes leading to engaging in indoor tanning, and stopping tanning, among female college students through group discussions. Our findings revealed several key factors that play a critical role. The relationships between these various factors, as expressed by our participants, are illustrated in Fig. 1. It is, however, important to note that our study did not assess for directionality, however the hypothesized relationships may serve as directions for future research. Consistent with previous work (Cafri et al., 2009), appearance factors emerged as an important motivation. Furthermore, students displayed knowledge of the health risks associated with indoor tanning and described a number of cognitive processes that enabled the behavior despite awareness of the risks. Finally, the marketing strategies specifically targeting students emerged as important factors in the maintenance of tanning behaviors.

As described by others (Cafri et al., 2009), appearance factors emerged as the main motivation for tanning. Participants described how having tanned skin made them feel more attractive, thinner, and closer to their personal and the social standards of beauty. Furthermore, being tanned was described as looking healthy whereas pale skin was perceived as less attractive and sometimes equated with poor health. Participants mentioned that these concerns were particularly salient when preparing for social events such as prom, or when planning on wearing revealing clothing such as swim wear.

Peer influences also emerged as an important factor. Tanning was described by participants as a social event that girls

participated in together. Beautifying rituals have been identified as one of the ways in which women are socialized to conform to stereotypical femininity, and beauty parlors and salons are typically gendered settings in which femininity is co-constructed (Scanlon, 2007). Going to tanning salons with friends can therefore be viewed as participating in the social construction of femininity.

Participants also described peer influences in the context of social comparison. Appearance comparison has been identified as an important factor in the development and maintenance of body image concerns and unhealthy behaviors designed to alter appearance such as disordered eating (Paxton et al., 2006; Schutz et al., 2002). Our findings suggest that appearance comparison may also contribute to college students engaging in tanning.

Our group discussions also aimed to explore participants’ awareness of health risks. Overall, our participants revealed a high level of awareness of tanning-related health risks. This is consistent with findings from previous studies suggesting that awareness of health risks is not a powerful deterrent to indoor tanning (Poorsattar & Hornung, 2007). Interestingly, participants described identifying mental health as opposed to physical health benefits to tanning including self-esteem and self-confidence related to perceived increased attractiveness, but also relaxation and stress reduction benefits related to the tanning experience itself. Consistent with the existing literature (Banerjee et al., 2012), participants also revealed a number of cognitive processes enabling their tanning behavior such as magical and unrealistic thinking, as well as temporal discounting. Previous research has suggested that decision-making in adolescence is influenced by developmental factors that may facilitate the presence of temporal discounting in risk-decision making (Steinberg, 2008). Youth whose cognitive capacities are still developing may be particularly vulnerable and likely to make decisions based on immediate gains even when aware of the longer-term health risks of behaviors such as tanning. Furthermore, some participants expressed seeking medical advice from dermatologists as a means of mitigating the health risks, prevention programs in such settings might have a high potential for success.

While the stress relieving and relaxing aspect of tanning has been described in previous work (Danoff-Burg & Mosher, 2006; Day et al., 2014; Hillhouse & Turrissi, 2012), the number of participants endorsing the psychological benefits of indoor tanning in the present study was unexpected. These findings support the inclusion of perceived psychological benefits of tanning in models of tanning behavior, and of targeting these perceptions in interventions by helping participants develop healthy alternative behaviors

aimed to convey these benefits (Hillhouse, Turrissi, Stapleton, & Robinson, 2008). Targeting these perceptions in broader public health approaches could also be helpful.

Participants also spontaneously spoke to the addictive dimensions of tanning. Tanning has been increasingly described within an addiction framework and could be considered a behavioral addiction (Mosher & Danoff-Burg, 2010; Nolan & Feldman, 2009). Our participants clearly described the feelings of needing to continue tanning and of having difficulty decreasing their behavior despite their awareness of the associated health risks. Continuing to explore tanning within this framework is a worthwhile avenue as it may lead to opportunities for policy change.

Consistent with previous studies on density of tanning salons and the use of marketing strategies targeting college students (Pagoto et al., 2015; Rodgers et al., 2013), the participants all tanned in salons that were situated very close to campus, and they highlighted the convenience of the tanning salon location as an important factor in the frequency of their tanning. Our findings further revealed that the tanning salons that conglomerate around the university campus use a variety of marketing techniques that successfully increase student engagement in tanning. Tanning salons take steps to mitigate cost concerns to retain their existing customers and expand their client-base.

Participants clearly identified financial considerations as being a key influence on the intensity of their tanning behaviors. They described that in reaction to this, tanning salons offer initial free sessions, as well as a number of promotion packages designed to give students the perception of being mindful of their budget. In addition, tanning salons offer monthly subscriptions, which is another well described technique for increasing profit (Lambrecht & Skiera, 2006). Consistent with this, participants described feeling as if they were losing money if they did not go tanning frequently. Similarly, participants described feelings of being tricked or duped by some of the marketing techniques employed by the tanning salon, which generated some more negative attitudes. This suggests that prevention campaigns capitalizing on these feelings and exposing how corporations gain from tanning might have a potential for success. Similar to this, the tobacco “truth” campaigns were found to successfully decrease smoking behaviors (Zucker, Hopkins, Sly, Ulrich, Kershaw, & Solari, 2000).

Participants also described the marketing of tanning accessories such as lotion, and different types of tanning beds. These findings highlight the persuasiveness of the marketing techniques employed by tanning salons. Previous research has revealed the aggressive use of marketing techniques by tanning salons, and in particular the use of pricing incentives that promote frequent tanning sessions (Kwon et al., 2002). In addition, there has been a call for tighter legislation restricting the marketing of sunbed use to youth, as well as the locations of tanning salons (Pawlak et al., 2012). Furthermore, universities could discontinue participating in promoting these salons, whether through distributing coupons or permitting the use of campus debit cards. The implementation of such policy measures could contribute to decreasing rates of indoor tanning among students by targeting the convenience and financial incentives that promote tanning among this group. Moreover, in other areas such as smoking, interventions aiming to increase marketing/media literacy among youth have shown success in changing tobacco-related expectations and decision-making (Pinkleton, Wintraub Austin, Cohen, Miller, & Fitzgerald, 2007). Similar approaches could be successful in relation to indoor tanning.

Our paper presents a number of limitations. Firstly, we recruited students who engaged in tanning more than once a month; however this cutoff resulted in a group within which tanning frequency varied widely. It may be that the decision processes involved in engaging in tanning every day may be very different from those leading to less frequent tanning. Secondly, our sample is somewhat

limited in terms of size and its distribution across college years, diversity and geographic location. Thirdly, as our participants were all college students, it may be that their knowledge of tanning-related health risks was superior to that of the general population. In addition, the inter-rater reliability among coders was somewhat low. Furthermore, the cultural context may limit generalizability. Finally, group discussions may raise issues of social desirability leading participants to censure some of their opinions or behave in an overly-conforming manner. Future research should aim for a more equal ratio when mixing group and individual formats.

In conclusion, our findings highlight how social pressure to endorse the tanned-ideal, as well as social events grounded in a culture of tanning, may be related to indoor tanning among female college students despite their awareness of health risks. These behaviors are then facilitated by cognitive rationalizations, successful marketing strategies employed by tanning salons, and perceived benefits from tanning (Fig. 1). Our findings also suggested that concerns regarding the appearance consequences of tanning, as well as increasing health concerns due to the duration of the behavior are factors that may lead to tanning cessation. These findings suggest that prevention interventions targeting the cognitions and beliefs associated with tanning, rather than health knowledge, have a high potential for success. Our data also highlights the potential to further regulate tanning salons and their marketing strategies.

Disclosure of interest

The authors declare that they have no competing interest.

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