Appearance-Based Tanning Motives, Sunbathing Intentions, and Sun Protection Intentions in Adolescents

Adolescents engage in behaviors, including intentional sunbathing, that result in increased UV exposure and therefore increased risk for skin cancer. A survey of approximately 10,000 adolescents (aged 12-18 years) from all 50 states found that the prevalence of routine sunscreen use was 34.4% and that 83% of those surveyed reported at least 1 sunburn during the previous summer. The recent work of our research group with adults has focused on a multidimensional model of appearance-based tanning motives, including appearance reasons to tan (eg, enhancing overall appearance or body shape, covering up acne), appearance reasons not to tan (eg, skin aging), and sociocultural influences to tan (ie, media, peer, and family influences). Appearance and sociocultural tanning influences are significantly related to sunbathing and sun protection intentions in samples of female college students, thus explaining variance beyond that attributable to skin type and perceived susceptibility to developing skin cancer.

The primary goal of the present investigation was to extend our group’s previous work on appearance-based tanning motives as attitudinal predictors of sunbathing and sun protection intentions to include an examination of middle school– and high school–aged adolescents. In particular, we wanted to determine if the factor structure of our new measure (the Physical Appearance Reasons for Tanning Scale, or PARTS) would replicate in a younger sample, and we also wanted to determine whether appearance motives would be related to sunbathing and sun protection intentions after controlling for more extensively researched factors such as skin type and perceived susceptibility to skin cancer.

Methods. Data were collected via a school-based administration of self-reported surveys to 202 adolescent students (115 girls and 87 boys), mean (SD) age, 14.79 (1.82) years (range, 11-19 years). Most subjects self-identified as white (85.1%), but 2.5% self-identified as black/African American; 1.5% as Asian/Pacific Islander; 1.5% as American Indian/Alaska Native; and 9.4% as other. In addition, 11.6% self-identified as Hispanic/Latino. The study was approved by the University of South Florida institutional review board, and parental assent was obtained. Students voluntarily participated during a health education class.

Participants completed measures of perceived susceptibility to developing skin cancer (eg, “If you don’t use sun protection, how susceptible do you feel you are to skin cancer?”), future sunbathing intentions, future sun protection intentions, and appearance-based reasons for tanning (PARTS). Our group’s previous work with these measures addressed the issues of validity (using confirmatory factor analysis) and reliability. For the susceptibility measure, test-retest reliability has been found to be 0.82. Sunbathing intentions had a test-retest reliability of 0.89, and sun protection intentions had a test-retest reliability of 0.87. The factor analysis of the PARTS yielded a replication of the 3 dimensions (appearance reasons for tanning, appearance reasons not to tan, and sociocultural influences to tan), after the deletion of only 6 of the original 50 items.

Results. The percentage of participants who reported current sunbathing (9.5%) is in line with the 9.0% reported by Geller and colleagues. Hierarchical multiple regres-
sion was used to examine which variables of interest would explain unique variance associated with sunbathing intentions and intentions to sun protect. For both analyses, age, sex, skin type, and perceived susceptibility were entered in step 1, followed by the 3 appearance-based tanning motives (appearance reasons to tan, appearance reasons not to tan, and sociocultural influences) entered in step 2. The overall $R^2$ for both analyses was significant and indicated that a high level of variance was accounted for by the predictors (sunbathing $R^2=.50$; sun protection $R^2=.62$). In both regressions, appearance subscales of the PARTS explained significant variance beyond that explained by age, sex, skin type, and perceived susceptibility (Table). Appearance reasons to tan were significantly associated with sunbathing intentions ($P<.01$) but not with sun protection intentions ($P=.07$): adolescents who positively endorsed appearance reasons to tan also reported more frequent intentions to sunbathe in the next 12 months and fewer intentions to sun protect. Appearance reasons not to tan were significantly associated with sunbathing intentions ($P=.03$) and with sun protection intentions ($P<.01$): participants scoring higher on appearance reasons not to tan also reported fewer intentions to sunbathe and higher intentions to sun protect.

Comment. This study suggests that adolescents’ sunbathing intentions are enhanced by the belief that tanning will positively impact appearance and are tempered by the belief it will negatively affect appearance. In addition, sun protection intentions are elevated by the belief that sun exposure will negatively affect looks, and reduced by the belief that exposure will improve appearance. These findings replicate our earlier work with adults, demonstrating that appearance factors explain unique variance beyond variables that have received more extensive evaluation, such as perceived susceptibility and skin type.

Limitations of the study include the cross-sectional design and the use of self-report as the method of measuring sunbathing and sun protection levels. Additionally, it will be important in future work to compare appearance motives with other factors such as perceived severity of skin cancer and behavioral willingness to engage in risky behaviors. In our group’s previous 6-month prospective investigation, we found that appearance motives predicted sunbathing behavior via the mediational role of intentions. Therefore, future work with adolescents might address the potentially important role of appearance motives and intentions to sunbathe or sun protect in the actual prediction of future sunbathing behavior. Overall, this study indicates the potential need for interventions to include strategies designed to challenge appearance motives for tanning.

Efficacy and Safety of Topical WBI-1001 in the Treatment of Atopic Dermatitis: Results From a Phase 2A, Randomized, Placebo-Controlled Clinical Trial

Most patients with mild to moderate atopic dermatitis (AD) are currently treated with topical therapy. However, there are safety concerns with long-term use of topical agents such as corticosteroids and calcineurin inhibitors. The novel synthetic compound WBI-1001 (2-isopropyl-5-[(E)-2-phenylethenyl] benzene-1, 3-diol) (hereinafter, “IPBD”) demonstrates nonsteroidal anti-inflammatory activities. Originally derived from metabolites of a unique group of bacterial symbionts of entomopathogenic nematodes, IPBD has been demonstrated to inhibit inflammatory cytokine secretion by activated T cells, including tumor necrosis factor $\alpha$ and interferon $\gamma$ in vitro (data on file at Welichem Biotech Inc, Burnaby, British Columbia, Canada). Furthermore, it has been demonstrated to inhibit allergic contact dermatitis in a mouse edema model (data on file at Welichem). The objective of the present trial was to study the safety and efficacy of topical IPBD creams for the treatment of adult patients with atopic dermatitis.

Methods. This was a single-center, parallel group, randomized, double-blinded, vehicle-controlled, phase 2A...