Visual and Text Mass Media Content about Skin Cancer and Tanning

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Background

- Skin cancer: significant public health problem globally; largely preventable, high likelihood of survival when caught early
- Mass media: important source of skin cancer/tanning information for the public
- Indoor tanning common among young women; skin cancer risk higher for men
- Landmark 2006 International Agency for Research on Cancer (IARC) Report linked indoor tanning and skin cancer

Methods

- Directed content analysis on U.S. women's & men's magazines* (n=20)
- Articles (n=615) and images (n=930) retrieved (2000-2012)
- Coding: American Academy of Dermatology & Canadian Cancer Society risk factors, prevention behaviors, and early detection information
- Inter-coder reliability (10%): kappa scores high (0.83 to 1.00)
- Chi-square (χ^2) (df=1) or Fisher's exact tests (SPSS v21)

Purpose

To evaluate the volume and nature of skin cancer and tanning coverage in 20 popular U.S. men's and women's magazines (2000-2012) with regards to: a) skin cancer risk factors; b) UV protection and avoidance behaviors; and c) early detection information.

The presence of these variables was compared according to: 1) **content type** (text vs images); 2) **time frame** (before vs after 2006 IARC report); 3) **target audience** (men's vs women's magazines).

Health communicators and journalists must consider ways to work together to increase and improve mass media reporting of skin cancer and tanning.

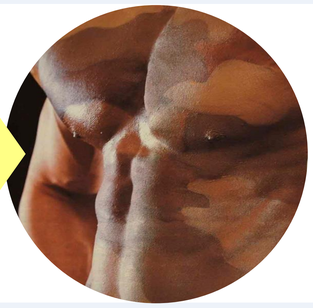
Summary & Conclusions

- 2006 IARC Report led to small increase in coverage, but content did not become consistently more informative (e.g., no change in percentage of articles discouraging indoor tanning)
- Women receiving more content about skin cancer than men, but also more often encouraged to have tanned appearance
- Discordant messages in images and text; images encouraged, while text discouraged, UV exposure
- Few risk factors reported, other than UV exposure
- Few UV protection/avoidance behaviors reported, other than sunscreen use
- Little focus on early detection and screening (e.g., few visual examples of skin cancer)

"90% of all skin cancers are caused by sun exposure."
Shape, 2008

"People who lie in a tanning bed increase their melanoma risk by 75%."
Self, 2011

"Banish the pasty tone of winter with your perfect match."
Muscle & Fitness, 2005



Results

Volume of Coverage

Question: *How does volume of coverage differ by target audience and time frame?*

Target Audience (Men vs Women)
More articles published in women's vs men's magazines (74% vs 26%, χ^2=143.4, p<.01)

2006 IARC Report (Pre vs Post)
More articles published after vs before 2006 IARC report (54% vs. 46%, χ^2=4.57, p<.05)

Most frequently reported variables:
Risk Factors: UV exposure (38%)
UV Behaviors: sunscreen use (60%)
Early Detection: physician skin exam (20%)

Skin Cancer Risk Factors

Variables: *UV exposure, light skin, moles (>50/abnormal), personal or family history of skin cancer, history of sunburns*

Target Audience (Men vs Women)
- Women's > men's magazines reported personal/family history risk factor (10% vs 4%, χ^2=5.2, p<.05)
- Men's > women's magazines depicted UV exposure risk factor (11% vs 2%, Fisher's p<.01)

Content Type (Image vs Text)
- Articles > images conveyed risk factors for skin cancer (except light skin) (e.g., UV exposure, 40% vs 4%, χ^2=477.3, p<.01)

2006 IARC Report (Pre vs Post)
- No significant differences for risk factors pre vs post IARC report (all p>.05)

UV Protection & Avoidance Behaviors

Variables: *promotes tanned look, avoid sun, avoid indoor tanning, seek shade, wear hat, wear protective clothing, use sunscreen*

Target Audience (Men vs Women)
- Women's > men's magazines reported tanned look to be attractive, discouraged indoor tanning (16% vs 10%, χ^2=3.8, p<.05), and depicted UV avoidance (avoid sun/seek shade)
- Men's > women's magazines depicted UV protection (sunscreen/protective clothes) (13% vs 7%, χ^2=6.1, p<.05)

Content Type (Image vs Text)
- Images > text promoted tanned look (42% vs 31%, χ^2=28.5, p<.01)
- Text > images discouraged indoor tanning, encouraged hats, protective clothing, and sunscreen use (e.g., avoid indoor tanning, 17% vs 1%, χ^2=201.7, p<.01)

2006 IARC Report (Pre vs Post)
- More content encouraging sunscreen use post-IARC report (57% vs 70%, χ^2=11.5, p<.01)
- Less content promoting tanned look and sun avoidance post-IARC report (e.g., tanned look, 45% vs 37%, χ^2=9.4, p<.01)

Early Detection and Screening

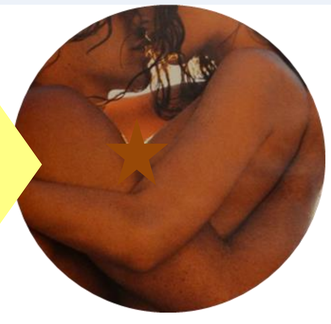
Variables: *skin self-exam, physician skin exam, ABCD criteria (asymmetry, border irregularity, color, diameter)*

Target Audience (Men vs Women)
- No significant differences for early detection information (all p>.05)

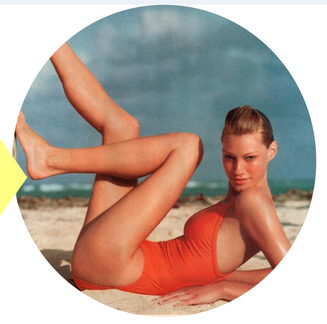
Content Type (Image vs Text)
- Text > images for all three types of early detection information (e.g., ABCD criteria, 7% vs 2%, χ^2=37.2, p<.01)

2006 IARC Report (Pre vs Post)
- No significant differences for early detection information pre vs post IARC report (all p>.05)

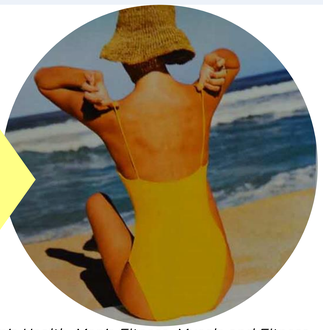
"The sun may be 93 million miles away, but it will kill 7,400 Americans this year."
Esquire, 2002



"The sun is the leading cause of cancer and wrinkles, so hopefully you're shielding yourself."
Shape, 2009



"If you have a mole that has irregular edges or changes color or size, see a dermatologist."
Self, 2000



*Women's magazines (n=10): *Good Housekeeping, Family Circle, Ladies' Home Journal Cosmopolitan, Glamour, Vogue, Elle, Women's Health, Shape, Self.*

*Men's magazines (n=10): *Esquire, Details, GQ, Sports Illustrated, Popular Science, Golf Digest, Field and Stream, Men's Health, Men's Fitness, Muscle and Fitness*