

Older Women and Cosmetic Tattooing Experiences

MYRNA L. ARMSTRONG

*Texas Tech University Health Sciences Center School of Nursing,
TTU-Highland Lakes, Marble Falls, TX*

JANA C. SAUNDERS

Texas Tech University Health Sciences Center School of Nursing, Lubbock, TX

ALDEN E. ROBERTS

*Department of Sociology, Anthropology, and Social Work,
Texas Tech University, Lubbock, TX*

Aging for the older women in the 21st century is more than medical issues. In this study, 62 women (ages 51–81+) obtained a total of 97 permanent makeup procedures. Procurement cues included self-improvement and friend's appearance, consistent with internal, external, and appearance perspectives of body image. Poor eyesight was also of concern (14/23%). Actual benefits included saving makeup time and money (external), while achieving personal goals (internal). This study seems to confirm that for these older women, body image remains important, especially qualities of the face. They did not shed their internal, external, nor appearance concerns associated with body image, as they aged.

KEYWORDS *cosmetic tattooing, permanent makeup, body image, aging, appearance, women 50 years old and older*

INTRODUCTION

"Older women . . . tend to have shed their self-consciousness with age . . . like caterpillars having spent their fair share of time working away

Address correspondence to Myrna L. Armstrong, EdD, RN, FAAN, Professor, Texas Tech University Health Sciences Center School of Nursing, TTU-Highland Lakes, 806 Steven Hawkins Parkway, Marble Falls, TX 78654. E-mail: myrna.armstrong@ttuhsc.edu

in the cocoon of life, going through so many experiences and transitions, these mature women have finally emerged." (Goldman, 2006)

The proportion of Americans 50 years of age and older continues to grow, and right now this group is increasing at a faster rate than the total population (Moore et al., 2004). In 1900 their numbers were around 3 million, now it is over 35 million, and by 2035 the estimates are 71 million, or 20% of the U.S. population. Currently these women represent over 60% of that population; those 85 years of age and older represent almost 70% (U.S. Census Bureau, 2004). Today's life expectancy estimation for the older women, 50 years of age and older is at least 19 years longer (CDC, 2005; Moore et al., 2004).

The aging process is usually a normal, gradual part of the developmental continuum and not necessarily pathological. Yet, most studies for this group and gender still concentrate on older women's medical needs and looming chronic conditions. They seem to focus on such things as the one third over 65 who have heart disease and the two thirds who have low bone density (CDC, 2005), but it is also known that "fewer than 25% experience any disability and fewer than 5% are in nursing homes" (Williams, 2005, p. 10). Moore et al. (2004) suggest "aging for the older women in the 21st century is more than just a matter of numbers" (p. 2).

"To understand the real individual," Benner (2004) believes we should "look beyond the diseases" (p. 20). Many women don't feel their age—the old 65 could be the new 50 or 55 (Bensing, 2006; Chrisler & Ghiz, 1993; Schneider-Levy, 2005). One CDC publication defines this older women group as "older, wiser, and still having fun" (2005, p. 11). Perhaps "chronological age [could be losing] its meaning as a useful index of individual capacity" (Williams, 2005, p. 10). Older women could be flourishing, tossing out old expectations, rather than taking on the normative assumptions about their aging (Sheehy, 2006). Thus, our research with and for older women should be more holistic, including the exploration of some of the innovative ways they are incorporating to live life to their fullest.

The purpose of this study was to broaden the quantitative evidence about positive forces used by older women 50 and older; this article discusses their procurement of cosmetic tattooing. Cosmetic tattooing is defined as "permanent makeup used to enhance facial appearances such as the eyebrows, eyelids, and/or lips by injecting ink intradermally that contains various pigments and suspending agents" (Straeteman, Katz, & Belson, 2007, p. 2753). Medical terms for these procedures include *intra-dermal pigmentation*, *micropigmentation*, *dermagraphics* (Saunders & Armstrong, 2005), and *blepharopigmentation* (Vagefi et al., 2006). While cosmetic tattooing in older women could be considered "strange, weird, and even senile," previous research with other age groups documents the procedure as an empowering

experience (Saunders & Armstrong, 2005). The terms *cosmetic tattooing* and *permanent makeup* will be used interchangeably in this article.

REVIEW OF LITERATURE

Body Image and Aging

Body image, the effects of aging with body image on the older woman, as well as the scope of today's cosmetic tattooing were the major foci in this review of literature. A considerable amount of research since 1985 has been conducted on the multidimensional, dynamic concept of body image, as it is thought to be an important, direct link to our identity and self-concept; it seems to have internal, external, and appearance perspectives (Cash & Henry, 1995; Chrisler & Ghiz, 1993). Janelli (1986) supports this multidimensional perspective as "both conscious and unconscious, dependent on external and internal promptings, and reality bound, and fantasy dictated" (p. 23). This concept of body image remains an individual evaluation of appearance and bodily experience, both physically and psychologically, and is used often when comparing themselves to other people (Cornwell & Schmitt, 1990; Pruzinsky & Cash, 1990; Stokes & Frederick-Recascino, 2003).

Few studies have examined the effects of aging, body image, and older women. Cross (2002) and Bensing (2006) both believe an older women's body image attitude is closely aligned to how they have accepted their body throughout their life. Tiggeman (2004), Tiggeman and Lynch (2001), and Webster and Tiggeman (2003) have found that while older women's importance of appearance seems to decrease with age and move further from the ideal standards, they "begin to adopt cognitive strategies [such as lowering their acceptance of their aging bodies], which in turn increases their acceptance of their aging bodies, and more importantly maintains their self-concept and self-esteem" (Webster & Tiggeman, p. 249). Thus, it seems that not even older women shed their internal, external, nor appearance concerns associated with their body image as they age, they just modify their expectations (Bensing, 2006).

The older women in Janelli's study (1986) said "everything is important when you reach our age" (p. 27), but the qualities of the face seemed to be one of the main areas that determined attractiveness and one of the first factors to be bothersome to them (Chrisler & Ghiz, 1993). In Cash and Henry's (1995) national study and in Janelli's study (1986), the eyes were specifically mentioned as important. Historically, ancient Egyptians, Romans, and Persians applied heavy metal antimony on the conjunctiva to create what they thought were sparkling eyes (Donahoe, 2006). Today, it is estimated that the average woman daily "spends 19 minutes applying makeup, using at least 9 personal care products, with 126 unique chemical ingredients" (Donahoe, 2006, p. 3). Additionally, experiencing age-related visual changes such as cataracts, glaucoma, and macular degeneration can

occur to produce appearance-management problems. These problems not only decrease the field of vision, but also produce concerns about maintaining their personal appearance (Chrisler & Ghiz, 1993; Holman, Roberts, & Nicol, 2005; Tiggeman, 2004).

Cosmetic Tattooing (Permanent Makeup)

The amount of decisions women make to create bodily changes is increasing. During 2007, over 11 million cosmetic surgery procedures were performed on women in the U.S., an increase from 1 million in 1998 (Bensing, 2006; Healy & Salazar, 2008). Ethnically, 9% were Hispanic and 80% were Caucasian. Yet, these numbers do not include the cosmetic tattooing procedures that are being examined in this article.

While cosmetic tattooing started out in 1984 as a medical procedure (De, Marshak, Uzzategui, & Change, 2008; Saunders & Armstrong, 2005), and Vagefi et al. (2006, p. 48) still calls it "cosmetic periocular surgery," permanent makeup is most often considered a form of tattooing, rather than a surgical intervention. Today, it is commonly performed nationally and internationally by cosmetologists and some tattoo artists. Actual prevalence is not known, yet a review of telephone advertising pages provides a glimpse of the widespread presence of this booming business, especially in large urban centers (Saunders & Armstrong, 2005). Permanent eyeliner is the most common procedure of cosmetic tattooing consisting of "a deposition of pigment along the eyelid cilia in a linear fashion performed to enhance the appearance of the lash line" (Vagefi et al., 2006, p. 48). De et al. (2008) speak of cosmetic tattooists using round tip needles for the permanent makeup, but that is not the norm (Saunders & Armstrong, 2005).

In 2005, 10 women were interviewed in a qualitative study about cosmetic tattooing procurement. They had obtained permanent makeup for their lips (three procedures), eyebrows (seven procedures), and eyeliner (eight procedures) and cited "enormous benefits of confidence regarding their physical appearance" (Saunders & Armstrong, 2005, p. 27). Other procedural benefits included saving time and money with makeup, overcoming physical difficulties when applying makeup, and masking eyebrow loss (FDA, 2006; Saunders & Armstrong, 2005). Procedural pain was discussed frequently, yet it seemed individualized across the continuum, and most thought it was "worth it."

The cosmetic tattooing procedure is usually considered to be safe, judging from the prevalence and the few problems cited in the medical literature, yet permanent makeup is not without complications. Cosmetic tattoo pigments, similar to tattooing pigments used for general body designs, are not FDA-approved nor are the ingredients standardized (FDA, 2006); some tattoo pigments have been found to be suitable for printer's ink or automobile paint. From 1998 to 2002, only 5 FDA adverse incidents

against cosmetic pigments were reported, whereas in 2003, they had more than 150 reports of adverse pigment reactions, leading to a national product recall of one specific brand of pigment (FDA, 2006; Straetemen et al., 2007).

Granulomatous dermatitis reactions to the pigment are the most common and immediate complications (Vagefi et al., 2006), although two recent reports of a 4- and 5-year delayed response have been cited (Calzado et al., 2008; Jones, Oh, & Egan, 2008). Other complications include improperly placed pigment and pigment migration, cilia loss, eyelid scarring, keloid formation, and infections (De et al., 2008; FDA, 2006). Hygiene and "good infection-control practices [as in] any invasive procedure are essential to ensure prevention of blood-borne virus transmission" (Garland, Ung, Vujovic & Said, 2006, p. 458). One rare case of HIV transmission was diagnosed in Australia from a Vietnamese home cosmetic tattoo procedure (Garland et al., 2006). To remove cosmetic tattooing, lasers are a common modality, but Bernstein (2006) reports the pigment often darkens dramatically after treatments, and requires more treatments than body tattoos, before adequate removal results are achieved.

THE STUDY

Methodology

A cross-sectional, descriptive study was used to provide quantitative data about the decision making and experiences of cosmetic tattooing procurement in the older woman. Completed questionnaires represented the subject's consent to participate. The affiliating university's Institutional Review Board provided study approval.

INSTRUMENT

Thirty-six questions were included in a survey asking about the presence of permanent makeup, as part of a larger study about older women (Armstrong, Saunders, Owen, Roberts, & Koch, 2009). These questions specifically gathered information on procedural procurement cues, decision-making, pain, benefits, and complications. Several comment boxes were available if participants wanted to add further clarification remarks. This researcher-developed survey was based on previous phenomenological research (Saunders & Armstrong, 2005), limited medical literature, field study, and the authors' program of body-art research. The survey was written at a 10th-grade level and included large font (14) and margins to ensure readability for the older women (Armstrong et al., 2009).

Twelve items were part of the Procurement Cue scale (Cronbach's alpha 0.59). These items ranged from questions about friends, tension of how they looked and felt, improvement of appearance, and a life-altering

event. When asked "What has your permanent makeup done for you?" nine items about benefits were available as choices, ranging from personal and social benefits, commemorating an occasion, and saving time and money (Cronbach's alpha 0.80). Participants could respond to as many cues and benefits that applied. Additional demographic questions inquired about ethnicity, education, age, marital status, income, religious/spiritual faith, risk taking, and overall health self-assessment (Table 1).

SURVEY DISTRIBUTION

Two data-collection methodologies were chosen as it was believed that this study population would be hard to reach. Additionally, while it was not part of the criteria, it was hoped that the participants had lived experiences with their permanent makeup to be able to better describe the benefits or barriers of their cosmetic tattooing procedures. One method that was used involved five cosmetic tattooists, known by the researchers and located in two sites of one predominately politically and religious conservative southwestern state and one site of a western coastal state, to assist with data collection. The cosmetic tattooists reviewed their customer list from the past 5 years and sent surveys ($n = 95$) to their older women clientele. These surveys had been supplied by the researchers, with a stamped, self-addressed

TABLE 1 Demographic Characteristics of Those Who Reported Cosmetic Tattooing

General variables	($n = 62$)	$n/\%$
Education	Caucasian	56/90%
	High school	21/34%
	Attend college or undergraduate degree	32/52%
Age	Grad degree/more	4/6%
	60 years or under	10/16%
	61-70 years	33/53%
	71-80 years	14/23%
Marital status	81 or older	4/7%
	Married	35/57%
	Divorced	9/15%
Income	Widowed	11/18%
	\$30,000 or less	14/23%
	\$30-60,000	21/34%
Religious/spiritual faith	\$60,000 or more	16/26%
	Mod-very strong	55/89%
Seek new and exciting experiences, even if unconventional	Unlikely	16/26%
	Somewhat likely	29/47%
	Very likely	16/26%
Risk taker	Disagree	20/32%
	Uncertain	14/23%
	Agree	25/40%
Self assessment of overall health	Excellent-good	52/83%
	Fair-poor	9/14%

envelope. The envelope was addressed back to the statistician of the study to preserve subject anonymity. Participants were told the survey would take approximately 20 minutes to complete. Forty-nine surveys were completed and returned to the statistician for a 55% return rate.

The second method of data collection was seeking active, older women ($N = 161$) to participate from a variety of settings, including a Senior Center, two golf courses, and Red Hat Society members in four locations of one southwestern state. All who were invited completed the survey. The lead researcher introduced the study, invited participation, and distributed the surveys. Participants were told they could stop at any point during the completion of the questionnaire if they were uncomfortable with a question(s). Thirteen women (8%) declared cosmetic tattooing procedures from this second collection methodology.

DATA ANALYSIS

Anonymity was ensured by coding each survey with a number to increase the candidness of the respondents and to decrease possible bias. SPSS (15th edition) was used to obtain the descriptive statistics for analyzing the individual characteristics of this sample; frequencies, cross-tabulation, and chi-square analysis were performed. Any subjective comments about their experiences with permanent makeup were categorized into general remarks, medical concerns, and procedural complications.

Findings

SAMPLE

From the total group who completed surveys ($N = 210$), 62 women (30%) had obtained cosmetic tattooing between the ages of 51–81+ years of age. This article will focus on this subsample, as there were no significant differences noted between the demographic characteristics of the total group and those who declared cosmetic tattooing procurement. The average participant in the subsample was married, Caucasian, between the ages of 51–70, attended undergraduate education or graduated, reported a strong religious/spiritual faith, and had an income range of \$40,000 to over \$60,000 (Table 1). Most (52/84%) reported they were in good to excellent health. Over a quarter (16/26%) sought new experiences, and a sizeable group (25/40%) agreed they were risk takers.

COSMETIC TATTOOING EXPERIENCES

These 62 women had a total of 97 permanent makeup procedures; specific sites were not queried. Half of the sample (31/50%) took only a few

minutes for their decision and their major force behind this decision was "their own idea" (24/39%) and friends (19/31%). Many had 1-2 friends (26/42%) with cosmetic tattooing and received support (47/76%) for their procurement. Most had told their family or significant other (56/91%). Over half (35/57%) said they were prepared for the pain and identified the most painful procedures as eyeliner (46/75%) and eyebrows (14/23%). Over half felt cosmetic tattooing helped them (32/52%) with their healthy perspective toward aging and life satisfaction. Varied responses were obtained about future cosmetic procedures; 24/39% said yes, 19/31% said no, and 18/29% were uncertain.

Table 2 provides the most frequently listed procurement cues for cosmetic tattooing. Internal, external, and appearance factors of body image were present. Almost a quarter of the group (14/23%) sought the permanent makeup because of poor eyesight. Subjective comments accompanying their medical concerns included poor or blinded eyesight (3), surgery complications (1), old age (2), and various diseases (6) preventing them from maintaining their appearances such as intentional tremors, multiple sclerosis, cataracts, and chronic serous retinitis.

Saving makeup time and money were the two external benefits coupled with two internal benefits of achieving a personal goal for themselves (Table 3). General subjective remarks about the major benefits centered around they "can get and go" ($n = 19$), "love it" ($n = 10$), and "feel better about myself" ($n = 9$).

Most (54/87%) cited no procedural complications. Only a few subjective remarks were provided; the comments ranged from small amount of

TABLE 2 Procurement Cues of Older Women Obtaining Their Cosmetic Tattooing

Factor	Cues	Agreed/Strongly agreed
Internal	I wanted it for myself.	69/94%
Internal	I wanted to take care of me and my inner self.	55/74%
Appearance	I wanted it to improve my appearance.	64/86%
External	Friends who have it looked so good.	48/71%

$N = 62$.

TABLE 3 Internal and External Benefits from the Cosmetic Tattooing

Factor	Statement	Agreed/Strongly agreed
External	Saved time in applying makeup.	68/92%
External	Saved money with makeup products.	33/45%
Internal	Helped you do something for yourself.	44/59%
Internal	Helped achieve a personal goal.	35/47%

$N = 62$.

scarring (1), itchy eyebrows (1), and red marks at site for 2 weeks (1). Additional comments in this section included "disappointed they still had to add more makeup to the site" and "regrets because it fades so fast."

DISCUSSION

This study gathered information from older women ages 51–81+ on procedural procurement cues, decision making, pain, benefits, and complications of cosmetic tattooing. Since this was a small sample examining women in just five sites in two states of the U.S., the study has limited general application. Additionally, this subsample completed some new questions within the cosmetic tattooing portion of the survey and because the instrument has not been used extensively, the results should not be generalized to other populations. Those who volunteered may be a specific sample wanting to discuss their experiences with cosmetic tattooing. Also, self-reporting can be subject to bias due to inaccurate recall and a desire to relate things as they should be. However, these methodologies were thought to be the best methods to obtain further, exploratory information about cosmetic tattooing from older women.

Sheehy (2006) suggests that successful aging is more like "sageing" (p. 420). Instead of being content with their functional changes as they age, this sample sought out cosmetic tattooing to assist and/or improve their facial appearances, just as they would if they needed to obtain other "legitimate" age-related items such as stronger glasses, a cane, or a hearing aid (Tiggeman, 2004, p. 35). They wanted the cosmetic tattooing to take care of themselves internally and externally, while improving their appearance. The internal and external benefits they reported as a result of their procurement of cosmetic tattooing procedures included saving makeup time and money, as well as helping themselves, just as in Saunders and Armstrong's earlier study (2005).

These older women were like many women in general: Appearances do make a big difference, and they do not shed their internal, external, nor appearance concerns associated with their body image as they age (Bensing, 2006; Gibbs, 2005). Their self-esteem would build confidence for their continuing years, regardless of age. Schneider-Levy (2005) states "their biological clocks may be ticking, [yet] more and more women are fooling Father Time by continuing to look as good as they feel" (p. 1). Bensing (2006) continues this thought with "Why shouldn't they take advantage of what's available to enhance their appearance and make them feel healthy?" (p. 27). "Grooming is what all living creatures, animals as well as men and women do as a natural part of living; caring for ourselves and our appearance to look and feel as good as possible" (American Cancer Society, 1999, p. 1).

These women in the subsample were used to making decisions. They had "higher incomes, better education, and long experiences at juggling multiple roles" (Gibbs, 2005, p. 53) so they were better able to seize the solutions to life's problems, which gave them a "mastery of life" (p. 57). These older women took a chance on permanent makeup as it involved reduction in time and/or money with a specific payback. This product would contribute to their body image, which would be important to their self-identity and self-esteem (Cash & Henry, 1995; Chrisler & Ghiz, 1993). Their actions were also consistent with Tiggeman's (2004, p. 37) studies that the older women were responding to externally imposing appearance standards. Thus, they became more responsive to their own internal actions of helping themselves, achieving a personal goal, feeling independent, and raising their self-esteem. Their friends' favorable appearance with the various cosmetic tattooing procedures was also a strong external factor for their decisions.

According to the CDC (2005), the mature woman of the 21st century is dedicated to maintaining the active, invigorating life she has pursued thus far. As time changes, the health issues that are important to women will continue to evolve; in this study, these older women used cosmetic tattooing. It is our responsibility to continually document these further characteristics that empower older women. Discovery of these innovative factors may further influence their quality and promotion of positive changes as they live out their lives.

"For my next act . . . of scripting life after fifty, women should have no established rites of passage to mark [their] journey, instead stand poised . . . to reclaim or reinvent [their] best and truest selves" Baar (as cited in Sheehy, 1995, p. 3).

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REFERENCES

- American Cancer Society. (1999). Coping with physical & emotional changes: Grooming & Appearance. Retrieved March 18, 2008, from http://www.cancer.org/docroot/mbc/content/mbc_1_1x_grooming_and_appearance.

- Armstrong, M. L., Saunders, J. D., Owen, D. C., Roberts, A. E., & Koch, J. R. (in press). Need for uniqueness in older women: An exploratory look. *International Journal of Older People Nursing*.
- Benner, P. (2004). Seeing the person beyond the disease. *American Journal of Critical Care, 13*(1), 75-78.
- Bensing, K. (2006, September 11). Facelifts & spandex at 60? *ADVANCE for nurses* (Texas/Louisiana edition). Available at www.advanceweb.com.
- Bernstein, E. F. (2006). Laser treatment of tattoos. *Clinics in Dermatology, 24*, 43-55.
- Calzado, L., Gamo, R., Pinedo, F., Vicente, F. J., Naz, E., Gomez de la Fuente, E., et al. (2008). Granulomatous dermatitis due to blepharopigmentation. *Journal of European Academy of Dermatology and Venereology, 22*, 235-236.
- Cash, T. F., & Henry, P. E. (1995). Women's body images: The results of a national survey in the U.S.A. *Sex Roles, 33*(1/2), 19-28.
- Centers of Disease Control (CDC). (2005). All the stages of our lives: Highlights of the CDC/ATSDR's approach to women's health. Office of Women's Health: Women's Health Prevention Works for Women. Retrieved November 29, 2005, from <http://www.cdc.gov/od/spotlight/nwhw/allstages.htm>
- Chrisler, J. C., & Ghiz, L. (1993). Body image issues of older women. *Women and Therapy, 14*, 67-75.
- Cornwell, C. J., & Schmitt, M. H. (1990). Perceived health status, self-esteem, and body image in women with rheumatoid arthritis or systemic lupus erythematosus. *Research in Nursing and Health, 13*, 99-107.
- Cross, R. G. (2002). A women's aging body: Friend or foe? In T. Trotman and A. Brody (Eds.), *Psychotherapy and counseling with older women* (Chapter 2, pp. 17-40). New York: Springer.
- De, M., Marshak, H., Uzategui, N., & Change, E. (2008). Full-thickness eyelid penetration during cosmetic blepharopigmentation causing eye injury. *Journal of Cosmetic Dermatology, 7*, 35-38.
- Donahoe, M. (2006). Beauty and body modification. *Medscape Ob/Gyn & Women's Health, 11*(1) Retrieved December 20, 2006, from http://www.medscape.com/viewarticle/529442_print
- FDA (U.S. Food and Drug Administration) (2006, July 14). Tattoos and permanent makeup. CFSAN/Office of Cosmetics and Colors. Retrieved June 19, 2007, from <http://www.cfsan.fda.gov/~dms/cos-204.html>
- Garland, S. M., Ung, L., Vujovic, O. V., & Said, J. M. (2006). Cosmetic tattooing: A potential transmission route for HIV? *The Royal Australian and New Zealand Journal of Obstetrical and Gynecology, 46*(5), 458-459.
- Gibbs, N. (2005, May 16). Midlife crisis? Bring it on! How women of this generation are seizing that stressful, pivotal moment in their lives to reinvent themselves. *Time Magazine, 53-60*, 63.
- Goldman, L. (2006). *Locker room diaries: The naked truth about women, body image, and re-imagining the "perfect" body*, p. 169. New York: De Capo Press.
- Healy, M., & Salazar, V. (2008, April 29). Top cosmetic surgeries for men. *USA Today*, Snapshots, Life Section. 1D.
- Holman, C., Roberts, S., & Nicol, M. (2005). Promoting healthy sight and eye care. *Nursing Older People, 17*(1), 37-38.

- Janelli, L. M. (1986). The realities of body image. *Journal of Gerontological Nursing*, 12(10), 23-27.
- Jones, B., Oh, C., & Egan, C. A. (2008). Spontaneous resolution of a delayed granulomatous reaction to cosmetic tattoo. *International Journal of Dermatology*, 47, 59-60.
- Moore, M. J., Moir, P., Patrick, M. M., Alongi, J., Beattie, B. L., Branch, L. G., et al. (2004). The state of aging and health in America, 2004. Centers for Disease Control and Prevention and Merck Institute of Aging & Health. Retrieved December 6, 2005, from http://www.cdc.gov/aging/pdf/State_of_Aging_and_Health_in_America_2004.pdf
- Pruzinsky, T., & Cash, T. F. (1990). Integrative themes in body image development, deviance, and change. In T. F. Cash & T. Pruzinsky (Eds.), *Body images: Development, deviance, and change* (pp. 337-349). New York: Guilford Press.
- Saunders, J. C., & Armstrong, M. L. (2005). Experiences and influences of women with cosmetic tattooing. *Dermatology Nursing*, 17(1), 23-31.
- Schneider-Levy, B. (2005). Today's female baby boomers—thinking young and spending. Retrieved November 26, 2005, from <http://www.imagocreative.com/about/imago-news-pr.php?NewsID=000022>
- Sheehy, G. (1995). Presentation at the Women's Health Care in the New Millennium: 5th Annual Meeting of the National Association of Nurse Practitioners in Women's Health, September 25-28, 2002, Scottsdale, AZ.
- Sheehy, G. (2006). *Passages: Predictable crises of adult life*. New York: Ballantine Books.
- Stokes, R., & Frederick-Recascino, C. (2003). Women's perceived body image: Relations with personal happiness. *Journal of Women & Aging*, 15(1), 17-29.
- Straeteman, M., Katz, L. M., & Belson, M. (2007). Adverse reactions after permanent-makeup procedures. *New England Journal of Medicine*, 356(26), 2753.
- Tiggemann, M. (2004). Body image across the adult life span: Stability and change. *Body Image*, 1(1), 29-41.
- Tiggemann, M., & Lynch, J. E. (2001). Body image across the life span in adult women: The role of self-objectification. *Developmental Psychology*, 37(2), 243-253.
- U.S. Census Bureau (2004). Population division: Annual estimates of the population by sex and five-year age groups for the United States: April 1, 2000 to July 1, 2004. Retrieved December 15, 2006, from <http://www.census.gov/popest/states/NST-ann-est.html>
- Vagefi, M. R., Dragon, L., Hughes, S. M., Lippenstein, K. A., Seiff, S. R., & Woog, J. J. (2006). Adverse reactions to permanent eyeliner tattoo. *Ophthalmic Plastic and Reconstructive Surgery*, 22(1), 48-51.
- Webster, J., & Tiggemann, M. (2003). The relationship between women's body satisfaction and self-image across the life span: The role of cognitive control. *The Journal of Genetic Psychology*, 164(2), 241-252.
- Williams, M. E. (2005). Physical diagnosis in elderly people. Retrieved April 23, 2008, from <http://www.cmemedscape.com/viewarticle/501633>