

Uncovering the Socioeconomic Determinants of Breast Reconstruction Decisions Across Diverse Demographics

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Background

Breast cancer is a global public health issue.¹ Advancements in cancer treatments have improved survival rates, but the journey of recovery extends far beyond achieving remission. Breast reconstruction (BR) following mastectomy is an important component of recovery, as it has been shown to improve psychological healing, sexual well-being, and overall quality of life.^{2,3,4} Unfortunately, socioeconomic factors, cultural norms, healthcare accessibility, educational background, and social support systems complicate decision making.⁵ While previous studies have demonstrated barriers to post-mastectomy reconstruction (PMR) for lower socioeconomic status (SES) individuals, existing data lacks ethnic and educational diversity.^{2,5-8}

Research Objective

- Examine the impact of socioeconomic factors on BR decisions.
- Identify disparities in BR decision-making across a wider demographic.
- Enhance equitable understanding for post-mastectomy care.

Methods

- Participants: 413 women with a history of surgical breast cancer treatment
 - 250 white, 99 African American, 29 Hispanic, 24 Asian, and 11 American Indian/Alaska Native women (self-identified)
- Survey Details: 76-item computer-based questionnaire developed with BRAVE (Breast Restoration Advocacy & Education) Coalition and administered via Kantar Lightspeed, LLC.
 - Included BREAST-Q sub-scales and explored relationships between socioeconomic factors—income, education, social support, and information access—and BR decisions. Chi-square tests, Cramer's V's, and odds ratios were utilized for statistical analyses.

Results

- Highly statistically significant associations were found between:
 - Annual Income and Breast Reconstruction (**Figure 1**) ($P < 0.001$)
 - $\leq \$49,999 \rightarrow 51$ had reconstruction vs. 61 who did not
 - $\$50,000$ to $\$74,999 \rightarrow 36$ vs. 24
 - $\$75,000$ to $\$99,999 \rightarrow 39$ vs. 19
 - $> \$100,000 \rightarrow 88$ vs. 18

Figure 1. Income Level vs. Breast Reconstruction Decision



Figure 1. The relationship between income level and decision whether to have breast reconstruction. As income level increased, reconstruction rates significantly increased ($P < 0.001^*$).

Figure 2. Education Level vs. Breast Reconstruction Decision

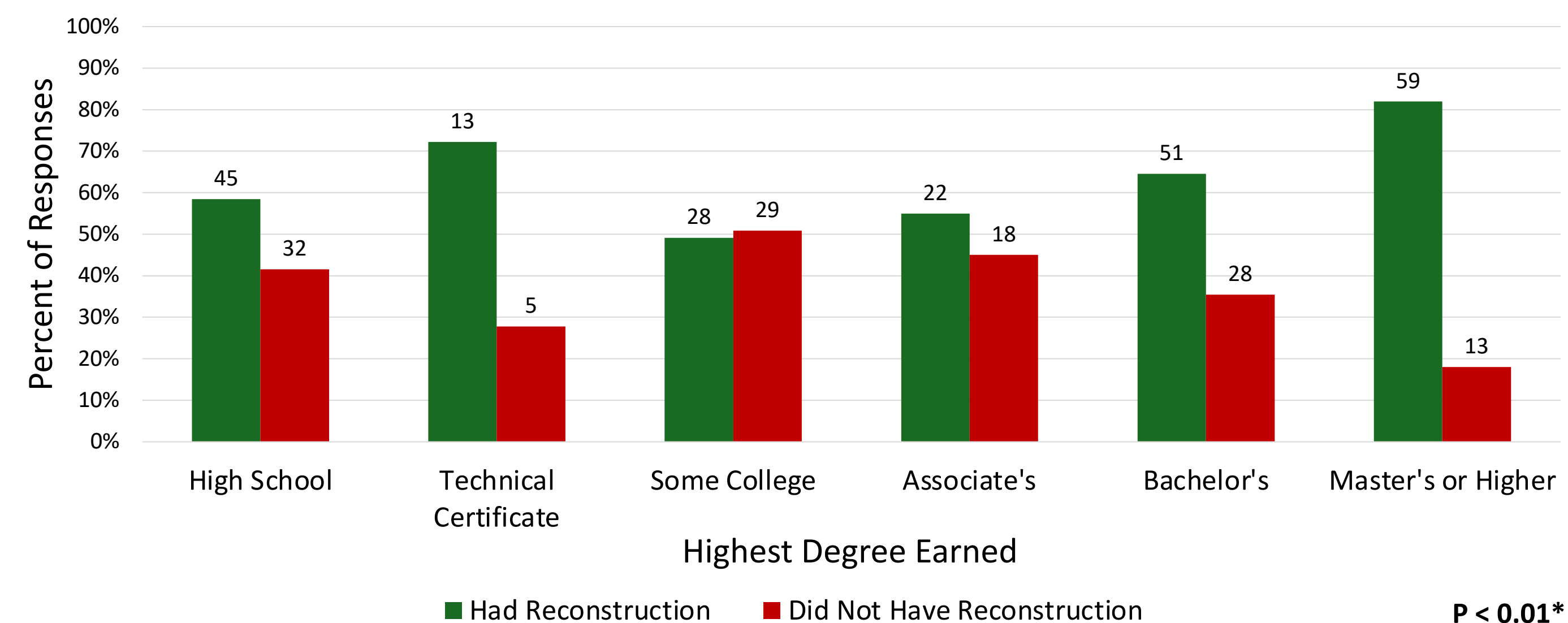


Figure 2. The relationship between education level and decision whether to have breast reconstruction. As education level increased, reconstruction rates significantly increased ($P < 0.01^*$).

Results (continued)

- Education and Breast Reconstruction decision (**Figure 2**) ($P < 0.01$)
 - High School $\rightarrow 45$ vs. 32
 - Technical Certificate $\rightarrow 13$ vs. 5
 - Some College $\rightarrow 28$ vs. 29
 - Advocate's Degree $\rightarrow 22$ vs. 18
 - Bachelor's Degree $\rightarrow 51$ vs. 28
 - Master's or Doctoral Degree $\rightarrow 59$ vs. 13
- Women earning over $\$99,999$ annually were more than 5 times as likely to have BR than women earning under $\$50,000$ ($OR=5.77$, $95\% CI=3.12-11.09$, $p<0.001$).
- Women with a graduate degree were more than 3 times as likely to have BR than high school-educated women ($OR=3.18$, $95\% CI=1.52-6.98$, $p<0.01$).
- Interestingly, associations with ethnicity, social support, and information access were not significant ($P > 0.1$, $P > 0.1$, and $P > 0.5$, respectively).

Limitations

- Self-selection bias due to volunteer participation
- Cross-sectional design limits ability to infer causality
- Subjectivity in self-reported data
- Limited generalizability
- Exclusion of non-binary individuals

Conclusions

- Socioeconomic status, particularly education and income, significantly impacts BR decisions.
- These findings emphasize the importance of tailored counseling for socioeconomically disadvantaged patients.
- The absence of significant ethnicity differences suggests further research is needed investigating social determinants of health.
- Addressing these disparities will empower women to make more informed healthcare decisions, promoting equitable access to BR.

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