

Cancer scanning and seeking is associated with knowledge, lifestyle choices and screening behavior

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Background

- Previous research on cancer information seeking has focused on active information seeking (i.e., calls to the Cancer Information Service).
- There have been some findings linking seeking with cancer decision-making (Baker, 2003; Czaja, Manfredi & Price, 2003).
- These studies exclude information gathered incidentally from sources in the environment.

Information scanning

- Information gathered incidentally from sources in the environment.
- Examples:
 - a television program which is on while someone is engaged in another activity
 - an article one comes across through routine use of the newspaper

Research questions

- What patterns are found in individuals' cancer scanning and seeking behavior?
- How does cancer SSB differ depending on individual characteristics?
- How is cancer SSB associated with knowledge about cancer?
- How is cancer SSB associated with lifestyle and screening behavior?

Methods

- Data: 2003 HINTS, RDD (N=6,369)
- Measurement
 - *Information Scanning*. “How much attention do you pay to information about health or medical topics on...:”
 - *Information Seeking*. Looking for cancer information within the last year.
 - *Information Scanning and Seeking Behavior (SSB)*. A typology of: “Low Scan-No Seek,” “Low Scan-Seek,” “High Scan-No Seek” and “High Scan-Seek.”

Methods (cont.)

- *Individual Characteristics.* Health status, the cancer history of respondents and family members, and socio-demographic characteristics (age, gender, race/ethnicity, education and marital status)
- *Knowledge about cancer.* 11 items including the impact of several risk factors for cancer, as well as knowledge about recommended daily allowances for fruit and awareness of specific screening tests.
- *Lifestyle Behavior.* Smoking, eating fruits and vegetables, and exercising.
- *Screening Behavior.* Colonoscopy, PSA, and mammogram

Results

Socio-demographics

-Gender: 60% female

-Race/Ethnicity: 67% non-Hispanic White,
12% Hispanic, 11% non-Hispanic Black

-Age: 26% 18-34, 21% 35-44, 19% 45-54, 24% 55-74,
9% over 75.

-Education: 31% four or more years of college, 27%
some college, 30% high school degree or GED, 12%
less than a high school degree.

-Marital status: 53% married

Results (cont.)

Cancer Information SSB

		Information Scanning	
		Low Scan	High Scan
Information Seeking	No Seek	40.6% (n=2,556)	30.4% (n=1,913)
	Seek	9.8% (n=617)	19.2 % (n=1,207)

(Gamma=.447, $p < .001$)

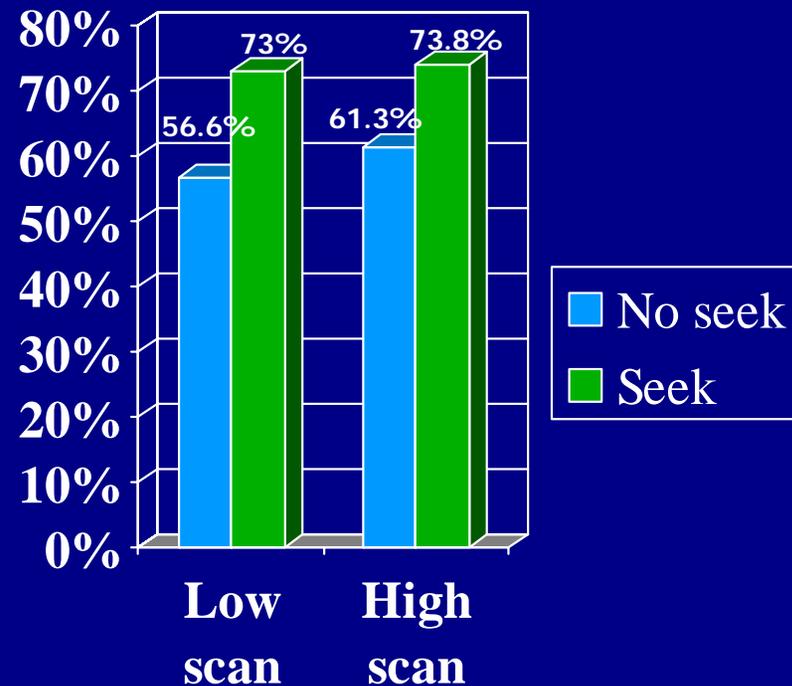
Family history of cancer and SSB

- Those who had a family member with cancer experience were more likely to be scanners (OR= 1.14, 95% CI = 1.06-1.22) as well as seekers (OR= 1.85, 95% CI=1.63-2.09) according to logistic regression.

Note: 62.9% of the total sample had had cancer patients among their family members.

N = 6,298.

Family history by SSB



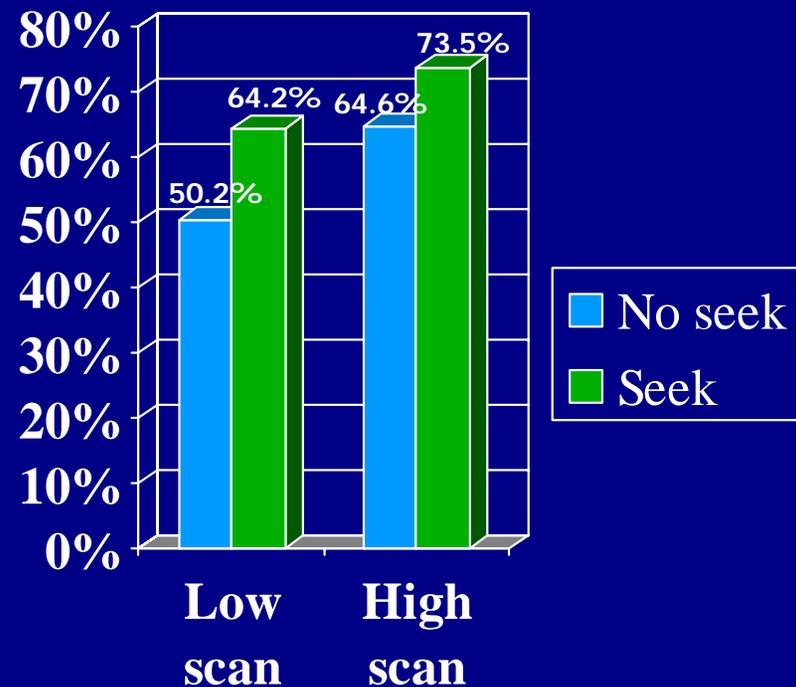
Gender and SSB

Gender had a statistically significant association both with information scanning and with seeking (OR= 1.58, 95% CI= 1.48-1.70 and OR= 1.51, 95% CI=1.34-1.71, according to logistic regression).

Note: 60.4% of the total sample was female.

N= 6,359.

Gender by SSB



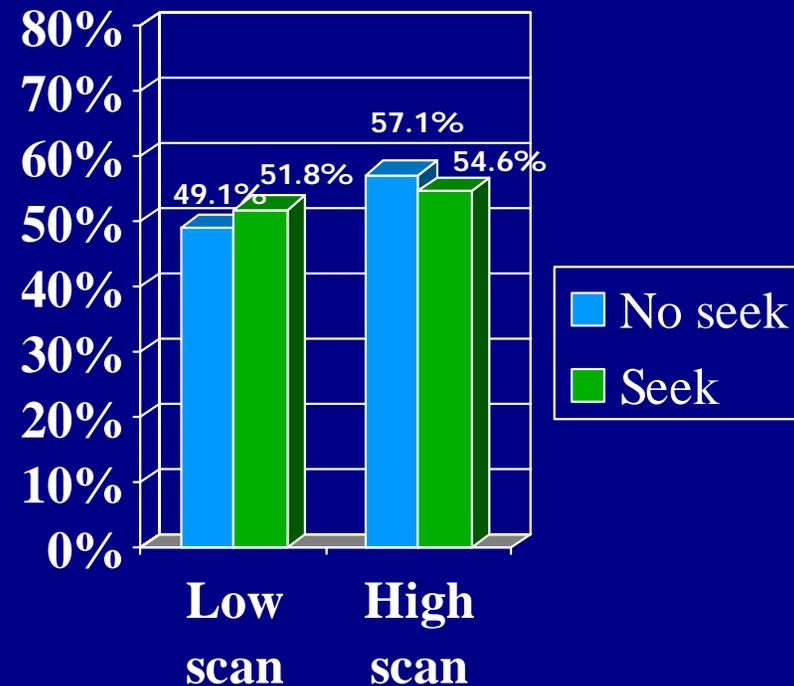
Marital status and SSB

Respondents' marital status had a statistically significant association with cancer information scanning (OR= 1.44, 95% CI=1.18-1.77, according to logistic regression). Interestingly, an interaction of seeking and scanning is significant at $p < .05$.

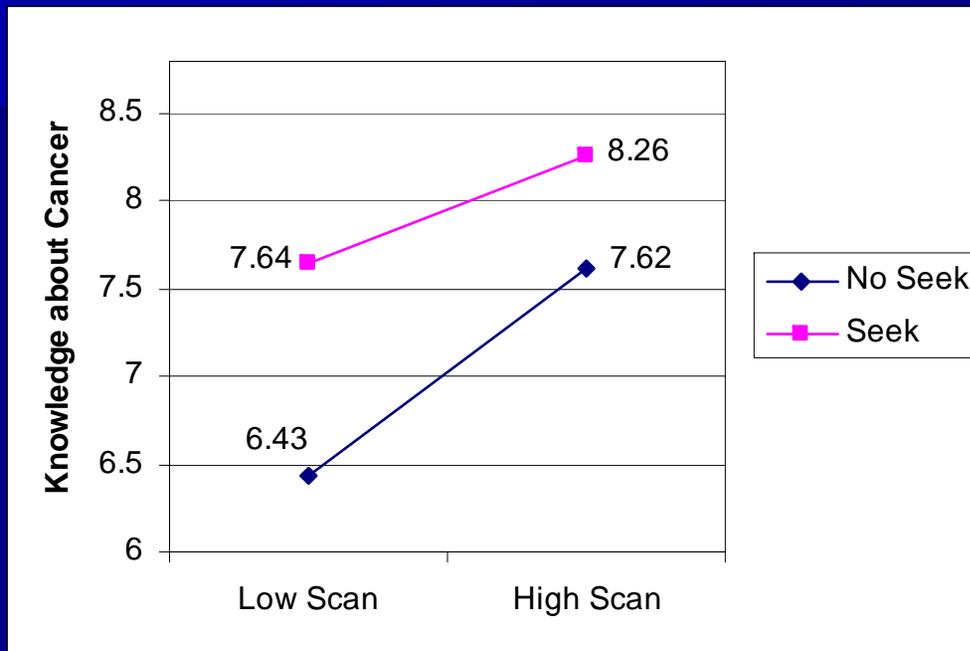
Note: 52.8 % of the sample was married.

$N = 6,126$.

Marital status by SSB



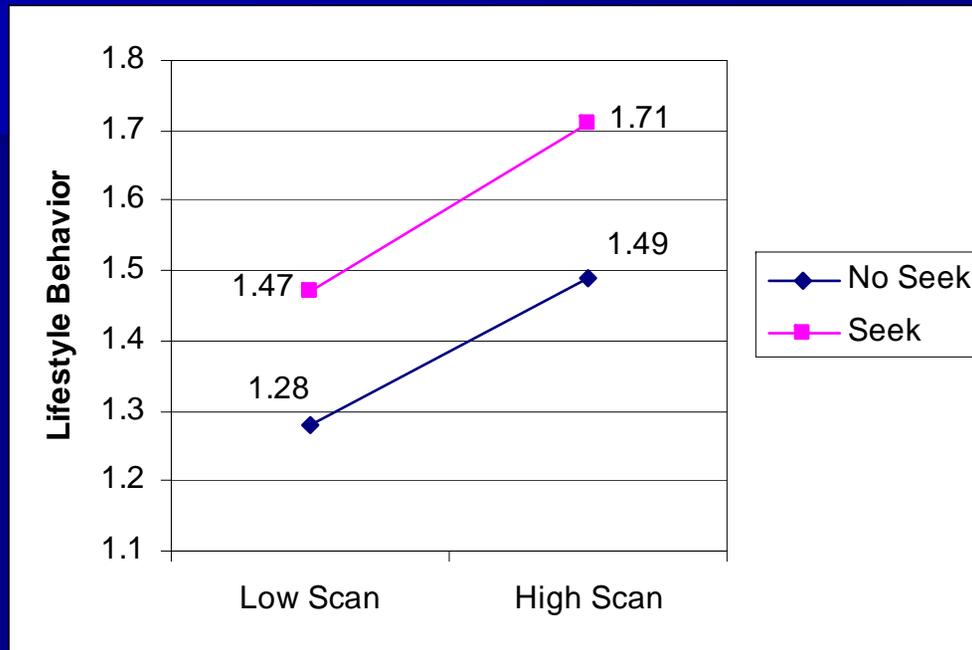
SSB and Cancer Knowledge



Note: Values are the mean of predicted values of cancer knowledge. Among the total sample, the mean was 7.27.

According to OLS multiple regression, both information scanning and seeking were positively associated with knowledge about cancer ($\beta = .175$, $p < .001$ and $\beta = .092$, $p < .001$). Moreover, scanning and seeking had a negative interaction in their effects on knowledge about cancer ($\beta = -.041$, $p < .001$).

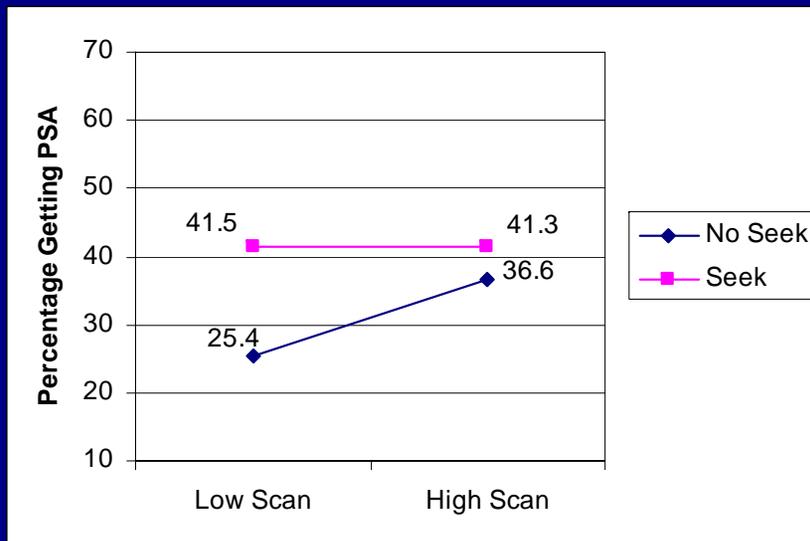
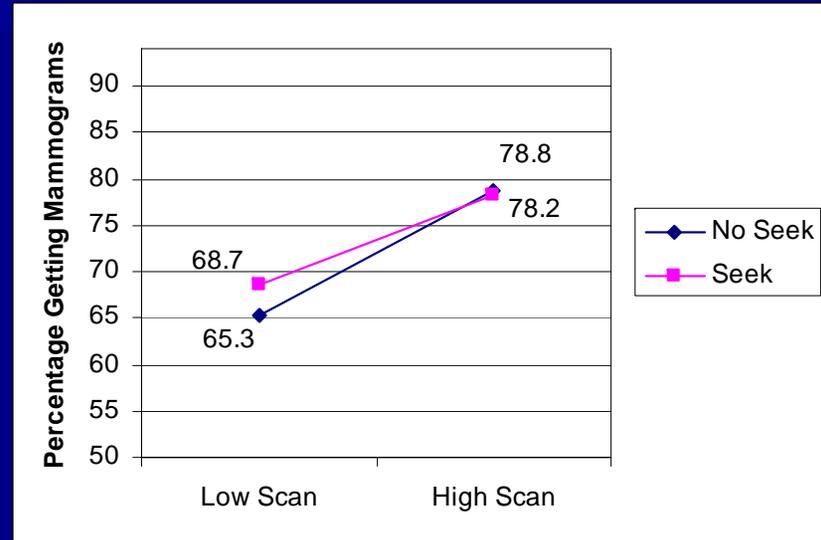
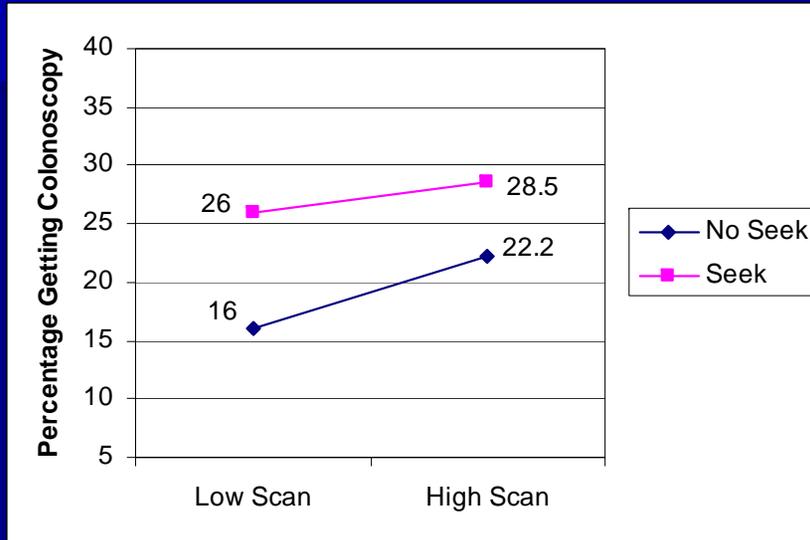
SSB and Lifestyle Behavior



Note: Values are the mean of predicted values for 3 lifestyle behaviors. Among the total sample, the mean was 1.44.

Respondents who paid more attention to health media were more likely to behave in healthy ways ($\beta=.094, p<.001$). Those who sought information for themselves were more likely to adopt healthy lifestyles ($\beta=.065, p<.001$). No interaction between seeking and scanning.

SSB and Screening Behavior



Both scanning and seeking were positively associated with colonoscopy

Scanning, but not seeking, was associated with mammogram

Scanning and seeking were associated with PSA and there was a negative interaction between them

Discussion

- Scanning and seeking are distinct behaviors, often having different associations with demographics or outcome behaviors.
- Both scanning and seeking were positively associated with cancer knowledge.
- Both those who scanned and sought were more likely to engage in the healthy lifestyle behaviors.
- Those who did more scanning, were more likely to get screened.

Discussion (cont.)

- For PSA and colonoscopy (but not for mammograms), seeking was also associated with screening.
- For PSA, there was an interaction between scanning and seeking. Men who reported no information seeking were influenced by scanning while for those who were seekers, scanning had no predictive value.

Limitations

- No causal direction
- Construct validity: Scanning measure confounds attention to each medium with exposure to that medium.
- Only investigating SSB as a persistent style, when it might be context specific.
- Limited measures for lifestyle scale.

Conclusion

- There are a number of unanswered questions, particularly regarding the interactions found in this study.
- HINTS II includes measures which might help to clarify some of these points.
- The CECCR at UPENN's Annenberg School has an active research program aimed at further investigating questions regarding SSB and its association with knowledge, lifestyle and screening behavior.

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