

11-2011

Smoking and Breast Cancer: Girls' and Boys' Reactions to Tailored, Internet Delivered Messages

Joan L. Bottorff

University of British Columbia – Okanagan Campus, Canada

Chris G. Richardson

University of British Columbia, Canada

Rebecca Haines-Saah

University of British Columbia

John Oliff

University of British Columbia, Canada

Peter Hutchinson

University of British Columbia – Okanagan Campus, Canada

See next page for additional authors

Follow this and additional works at: https://uknowledge.uky.edu/nursing_present



Part of the [Nursing Commons](#), and the [Public Health Commons](#)

Right click to open a feedback form in a new tab to let us know how this document benefits you.

Repository Citation

Bottorff, Joan L.; Richardson, Chris G.; Haines-Saah, Rebecca; Oliff, John; Hutchinson, Peter; Ratner, Pamela A.; Okoli, Chizimuzo T.C.; Gotay, Carolyn; and Johnson, Kenneth, "Smoking and Breast Cancer: Girls' and Boys' Reactions to Tailored, Internet Delivered Messages" (2011). *Nursing Presentations*. 15. https://uknowledge.uky.edu/nursing_present/15

This Presentation is brought to you for free and open access by the College of Nursing at UKnowledge. It has been accepted for inclusion in Nursing Presentations by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

Authors

Joan L. Bottorff, Chris G. Richardson, Rebecca Haines-Saah, John Oliff, Peter Hutchinson, Pamela A. Ratner, Chizimuzo T.C. Okoli, Carolyn Gotay, and Kenneth Johnson

Smoking and breast cancer: Girls’ and boys’ reactions to tailored, internet delivered messages

Joan L. Bottorff¹, Chris G. Richardson², Rebecca Haines-Saah³, John L. Oliffe³, Peter Hutchinson¹, Pam A. Ratner³, Chizimuzo T.C. Okoli⁴, Carolyn Gotay², Kenneth Johnson⁵

¹ Faculty of Health & Social Development, UBC Okanagan, Kelowna, BC; ² School of Population and Public Health, Faculty of Medicine, UBC, Vancouver, BC; ³ School of Nursing, UBC, Vancouver, BC; ⁴ University of Kentucky, ⁵ Centre for Chronic Disease Protection & Control, Public Health Agency of Canada, Ottawa



Background

- Active smoking and exposure to secondhand smoke (SHS) are causally linked to premenopausal breast cancer(BC).
- To date, there have been few efforts to raise awareness of active smoking and SHS as risk factors for BC.

Purpose

- To develop and evaluate messages for Aboriginal and non-Aboriginal adolescent girls and boys to raise awareness about tobacco exposure as a risk factor for BC.

Methods

Message Development

- Preliminary messages were designed based on our previous research (Bottorff et al., 2010; Haines et al., 2010), the literature, and gendered norms among youth.
- The messages were presented for feedback on design and appropriateness to 43 youth (18 were female, 20 were of Aboriginal descent) in 8 focus groups.
- The findings informed the development of tailored messages.

Message Evaluation

- Nested randomized trial within a web-based cohort study of 2,273 youth from 74 secondary schools in British Columbia (BC Adolescent Substance Use Survey).
- Participants within each school were randomized to either a control or intervention group [n=1498].
- The intervention group received a message tailored according to each participant’s gender and Aboriginal status about the risk for BC associated with tobacco.
- The control group received a standard message about the risk of cancer associated with smoking.

Messages

Intervention Message for Girls

Smoking affects more than your lungs.

Cigarette smoke, even second hand smoke, puts girls at risk of **breast cancer** at an early age.

Avoid places where you and your friends are exposed to second hand smoke.

START a place of mind

If you smoke, think about quitting. Do it for yourself and for all the girls you know.

Intervention Message for Boys

HEY GUYS, SHOW YOU CARE!

Respect the girls around you by not exposing them to second hand smoke.

SMOKING AFFECTS MORE THAN GIRLS' LUNGS.

Second hand smoke increases their risk of **breast cancer** at an early age.

START a place of mind

If you smoke, think about quitting. Do it for yourself and for all the girls you know.

Control Message

WARNING

YOU'RE NOT THE ONLY ONE SMOKING THIS CIGARETTE

The smoke from a cigarette is not just inhaled by the smoker. It becomes second-hand smoke, which contains more than 50 cancer-causing agents.

Health Canada

Sample Description

		Aboriginal		Non-Aboriginal	
		Male (n=74)	Female (n=93)	Male (n=590)	Female (n=741)
Age in years (%)	13	18 (24)	20 (22)	106 (18)	121 (16)
	14	26 (35)	50 (54)	331 (56)	422 (57)
	15	30 (41)	22 (24)	147 (25)	194 (26)
	16 plus	0	1 (1)	6 (1)	4 (1)
Have tried smoking tobacco (%)	Yes	22 (30)	23 (25)	53 (9)	66 (9)
Does anyone smoke in your home every day or almost every day? (%)	Yes	13 (18)	18 (20)	46 (8)	91 (13)
Past month exposure to second hand smoke (%)	Every day	3 (4)	4 (4)	13 (2)	34 (5)
	Almost every day	12 (17)	17 (19)	41 (7)	81 (11)
	At least once a week	21 (29)	30 (33)	149 (26)	191 (26)
	At least one in past month	32 (44)	25 (28)	249 (44)	325 (45)
	Never	4 (5.6)	15 (17)	121 (21)	93 (13)
Cigarette smoke identified as a risk factor for BC (%)	Yes	19 (25)	25 (27)	149 (25)	188 (25)
Family member has had breast cancer (%)	Yes	19 (27)	21 (24)	89 (15)	178 (24)

Result

Table 1. When you are exposed to SHS, do you consistently do things to reduce your exposure to the smoke?

	Aboriginal				Non-Aboriginal			
	Control (n=32)	Intervention (n=32)	Control (n=49)	Intervention (n=27)	Control (n=254)	Intervention (n=145)	Control (n=320)	Intervention (n=249)
YES, I have been for more than 6 mo. (%)	15 (50)	17 (53)	34 (69)	17 (63)	167 (66)	145 (66)	219 (68)	172 (69)
YES, I have been, but for less than 6 mo. (%)	6 (19)	1 (3)	5 (10)	3 (11)	18 (7)	26 (12)	35 (11)	25 (10)
NO, but I intend to in the next 30 days (%)	0	3 (9)	2 (4)	2 (7)	7 (3)	12 (6)	8 (3)	7 (3)
NO, but I intend to in the next 6 mo. (%)	0	2 (6)	2 (4)	0	11 (4)	2 (1)	13 (4)	8 (3)
NO, and I do NOT intend to in the next 6 mo. (%)	11 (34)	9 (28)	6 (12)	5 (19)	51 (20)	34 (16)	45 (14)	37 (15)

* indicates significance at p<.05

Table 2. Interest in more information about the link between tobacco and BC

		Aboriginal		Non-Aboriginal	
		Male (n=74)	Female (n=93)	Male (n=590)	Female (n=741)
Participants interested (%)	Control (%)	6 (17)	11 (19)	39 (12)	70 (16)*
	Intervention (%)	5 (13)	10 (29)	21 (8)	68 (22)*

* indicates a significant difference between control and intervention messages.

Key Findings

- Exposure to a web-based message (control or intervention) did not significantly influence intentions to consistently reduce SHS exposure in the future.
- Compared to the control group, non-Aboriginal boys in the intervention group were more likely to indicate that they planned to reduce their SHS exposure
- Exposure to the intervention was associated with an increase in requests to receive additional web-based information regarding the link between tobacco exposure and BC in both Aboriginal and non-Aboriginal girls, but not in boys.

Conclusions

- Few teens are aware of the increased risk of breast cancer associated with tobacco smoke exposure.
- Brief gender and Aboriginal-specific messages have the potential to stimulate information seeking about tobacco exposure and breast cancer risk.

Acknowledgements

Funded by the **Canadian Breast Cancer Research Alliance** and the **Canadian Breast Cancer Foundation**.



For more information:
www.ubc.ca/okanagan/start



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA