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# Predicting and facilitating upward family communication as a mammography promotion strategy

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**PREDICTING AND FACILITATING UPWARD FAMILY  
COMMUNICATION AS A MAMMOGRAPHY  
PROMOTION STRATEGY**

A thesis submitted in fulfilment of the  
requirements for the award of the degree

Doctor of Philosophy

from the

University of Wollongong

By

**Jessica L. Browne**

B.Psyc(Hons)

School of Psychology

Faculty of Health and Behavioural Sciences

2010

## **Certification**

I, Jessica L. Browne, declare that this thesis, submitted in fulfillment of the requirements for the award of Doctor of Philosophy, in the School of Psychology, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Jessica L. Browne

6<sup>th</sup> May 2010

## **Abstract**

Breast cancer is the second most common cause of cancer-related death amongst Australian women. Regular screening mammography is the best way to facilitate early detection of breast cancer, which in turn increases the chances of survival. Although BreastScreen Australia offers free biennial mammograms to women aged 40 and above (particularly targeting women between the ages of 50-69), many eligible women fail to attend for regular mammography. Mass media campaigns that have aimed to promote mammography to eligible women have not been sufficient to raise the mammography screening rate from the current 57.1% to the target 70%.

The central premise of this thesis is that interpersonal influence may complement the mass media approach to mammography promotion, and serve to increase the national screening rate. In particular, in light of previous research that has identified the family as a potential vehicle for delivering health promotion messages, the potential role that a daughter could play in influencing her mother's health behaviour was given particular attention in the current project. Everyday interpersonal communication initiated by the daughter directed at the mother is referred to as 'upward family communication' in this thesis. Upward family communication about mammography is a novel approach to mammography promotion, and the purpose of the research presented in this thesis was to explore the viability of this strategy.

Family Communication Patterns theory describes four family types based on two dimensions: the conversation orientation and the conformity orientation. This theoretical framework is used in the current project to inform predictions about upward family communication about mammography, particularly in relation to identifying which mother-daughter dyads are likely to engage in such communication effectively. The Revised Family Communication Patterns (RFCP) instrument, used to classify families according to type, was modified as part of the current project for use specifically with mother-daughter dyads. Tailoring the instrument for use specifically with mother-daughter dyads has not previously been attempted, and the data from this project indicate that the internal consistency of the instrument was not compromised in this process. Semi-structured interviews were conducted with eight mother-daughter pairs to explore the nature of existing communication patterns within this relationship, and the modified RFCP instrument was able to differentiate between mother-daughter dyads with different communication patterns. The data from these interviews indicate

that while upward family communication about health is commonplace within these dyads, mammography is not likely to be a spontaneous topic of conversation initiated by daughters.

Thus, two daughter-targeted interventions were piloted that aimed to predict and facilitate upward family communication about mammography. With the Theory of Planned Behaviour (TPB) providing the theoretical background, a volitional intervention using implementation intentions and a motivational intervention using counterfactual thinking were piloted with independent samples. These studies represent the first attempts at using the TPB to predict and facilitate upward family communication about mammography and at applying implementation intentions and counterfactual thinking to this communication behaviour. Young women who participated in the implementation intention (volitional) intervention were significantly more likely to have initiated a conversation with their mothers about mammography within an eight-week period than controls ( $N = 116$ ). In contrast, young women who participated in the counterfactual thinking (motivational) intervention were no more likely to have initiated the specified conversation than controls ( $N = 131$ ). In both studies, the TPB variables predicted both intention and behaviour with some accuracy, thus contributing to the body of knowledge about the utility of this theoretical model. Notably, in both studies, young women reported that initiating a conversation about mammography with their mother had positive consequences, such as increases in knowledge, and an elevated likelihood that their mother would have a mammogram. This result provided evidence for daughters' willingness to engage in an upward family communication mammography promotion strategy, and for the effectiveness of this novel approach.

The primary contribution of the project presented in this thesis is the provision of convergent evidence for the viability and effectiveness of an upward family communication strategy to promote mammography to target women. The current project has also presented a means for identifying mother-daughter dyads most amenable to this novel mammography promotion approach using the predictions of Family Communication Patterns Theory. Further, the results of this project have demonstrated that the TPB model has utility for predicting upward family communication about mammography, and has potential for guiding interventions aimed at facilitating this behaviour.

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Undertaking this PhD has provided many opportunities for self-examination and growth. One particular way in which I have developed is in my understanding of my God-given passions and gifts, and how the life of an academic allows the expression of

these. So at the risk of sounding as though I am delivering a speech at the Oscars, I'd like to thank God for this opportunity, and for the personal refining that has resulted.

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## **List of Abbreviations**

AIHW	Australian Institute of Health and Welfare
BSE	Breast Self-Examination
CBE	Clinical Breast Examination
CFT	Counterfactual Thinking
FCP	Family Communication Patterns
HAPA	Health Action Process Approach
HBM	Health Belief Model
II	Implementation Intentions
NBOCC	National Breast and Ovarian Cancer Centre
RFCP	Revised Family Communication Patterns
SCM	Social Cognitive Model
SCT	Social Cognitive Theory
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
TTM	Transtheoretical Model