

**Adherence to Rescreening for Colorectal Cancer with Faecal Occult Blood
Testing**

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Bachelor of Health Science (Honours)

Thesis submitted in fulfilment of the requirements for the Degree of Doctor of
Philosophy

School of Psychology

The University of Adelaide

June 2012

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Abstract

This thesis aimed to describe and predict adherence to Faecal Occult Blood Test (FOBT) *rescreening* recommendations in South Australia. Specifically this thesis aimed to determine the relevance of social cognitive variables for explaining variations in rescreening adherence. FOBT screening for colorectal cancer (CRC) is recommended every one to two years for those over the age of 50; reductions in incidence and mortality from CRC are dependent on continued compliance with these guidelines. Whilst there has been substantial research on factors associated with initial screening participation, there has been very little research conducted on how to encourage rescreening adherence (i.e., continued participation in annual or biennial screening offers). The few studies that have examined predictors of rescreening have, to date, limited their exploration to demographic and health systems factors. This thesis aims to determine the relevance of the inclusion of behavioural factors previously associated with initial screening (i.e., social cognitive variables) for explaining rescreening and also to explore potential new predictors of rescreening not previously examined in CRC rescreening research.

The thesis used a sequential, mixed-methods research design to address the aims. Three separate studies, one qualitative and two quantitative, were used to explore predictors of adherence to FOBT rescreening. The three studies are presented as three separate papers in the thesis. Study one used 17 semi-structured interviews to explore rescreening participants' past experience with FOB testing. Exploratory thematic analysis was used to determine factors relevant for inclusion in a subsequent questionnaire. The questionnaire was then administered to 4000 potential participants

within the target age range for FOBT screening (50-75 years) in South Australia. Study two analysed questionnaire data to determine associations with stage of readiness (intention) for rescreening. Following survey completion, respondents (survey response rate of 49%) were provided with three annual offers to screen with FOBT. Data collected during the questionnaire phase were used to identify variables predictive of rescreening adherence. Univariate and multivariate modelling were used to determine associations with intention and adherence.

Results of study one revealed that many of the factors previously associated with initial screening (e.g., perceived barriers, benefits and social influence) were associated with rescreening. However, specific barriers, for example, maintaining a screening routine, were identified for rescreening. In addition previous screening experience appeared to influence attitudes toward future participation i.e., improved participants self-efficacy with regard to future participation and reinforced the perceived benefits of participation.

Study two found that almost 30% of prior screeners were non-adherent with rescreening. Social cognitive (self-efficacy, perceived barriers and benefits, social influences, implementation intentions) and demographic/background variables (age, knowledge, and health insurance coverage) were associated with rescreening intention. Conversely, in study three, only few social cognitive variables (perceived barriers, self-efficacy and response efficacy) were marginally associated with screening adherence across three rounds of screening. The demographic variables gender, insurance and marital status better differentiated patterns of adherence. When a measure of satisfaction with prior FOBT screening was added to the multivariate models in study three, none of the social cognitive variables significantly predicted adherence.

Satisfaction with prior screening substantially increased rescreening intention and adherence by 13% and 42% in studies two and three respectively.

Results of the thesis indicate that although social cognitive variables differentiated *intentions* to rescreen, when demographic variables and satisfaction with prior screening were held constant, social cognitive variables did little to predict rescreening adherence. Satisfaction with prior screening was an important predictor of both rescreening intention and adherence. Exploration of the factors contributing to satisfaction with screening may provide an important opportunity to modify and improve screening services to encourage rescreening. Several demographic variables were also found to have a substantial impact on intention and adherence. An investigation of how these demographic and background factors interact with social cognitive variables may allow for greater tailoring of messages to encourage rescreening.

Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution to Amy Duncan and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Chapter four, paper two:

Duncan, A., Turnbull, D., Gregory, T., Cole, S., Young, G., Flight, I., et al. (2012). Using the Transtheoretical Model of Behaviour Change to describe readiness to rescreen for colorectal cancer with faecal occult blood testing. *Health Promotion Journal of Australia*, 23, 122-128.

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Acknowledgements

There are many people I would like to thank for their assistance, support and guidance over the past few years.

To my supervisors Deborah Turnbull and Carlene Wilson thank you so much for your feedback, guidance and advice during this time, you have been invaluable. Thank you for your prompt feedback on the countless drafts that have come your way over the years and for your encouragement and patience especially in the final stages. To Deb, thank you for always helping me to see the bigger picture and for allowing me to interrupt you countless times for impromptu meetings. To Carlene, thank you for always helping me to see the practical implications of our research and for your keen editorial eye. Also, a big thank you to you both for allowing me to travel during my candidature and being flexible with thesis timelines to accommodate this.

To the entire Adelaide Colorectal Cancer Collaborative and associated grant employees both past and present, none of this would have been possible without you. To the grant Chief Investigators (Graeme Young, Stephen Cole, Ingrid Flight, Deborah Turnbull, Carlene Wilson and Adrian Esterman) thank you for giving me the opportunity to be involved in this research and for providing ongoing advice, assistance and guidance throughout the research program. Ian Zajac and Tess Gregory I am extremely grateful for your assistance with data analyses and interpretation. Thank you to the entire team at RGH you have been a pleasure to work with, a special thanks to Jo Osborne for managing a very complex screening program and assisting with data entry and classification of screening outcomes. Thank you to Julie Syrette at CSIRO for creating a fool proof data entry system and Elizabeth Hart for verifying data entry.

To all my uni friends, in particular Ang, Jo, Suzie, Katie, Chrisi and Victoria thank you for everything! Thanks for the many drinks, coffee, dinner, lunch and shopping dates. In particular a big thank you for letting me talk about formatting, statistics and other thesis related topics at these catch ups especially when your theses had become things of the past! Your support and advice, especially during these final stages, was extremely valuable. I am really glad to have made such a great group of friends during my candidature, you made thesis time fun! To my office mates in 245 and 721, thank you for the much needed chats (often shouted through a dividing wall!) and for providing some much needed company on those long days spent underground. Thank you to everyone in the School of Psychology, past and present, for creating a great environment to work in.

To all my friends and family thank you for your ongoing support and always believing in me. Mum and Dad thank you for being eternally optimistic, proud and supportive. Helen, thank you for your continued enthusiasm for all things thesis related, your interest in my topic, progress and findings never ceased to amaze me! Thanks to Lib for being my travel buddy. To all the girls, you are awesome, thanks for the weekend winery distractions, holidays and wedding fun!

Finally a big thank you to Mitch for just being amazing in general. Thank you for enduring my many mood swings and moments of self doubt. Thank you for dropping everything to come and explore Canada with me. Thank you for letting me discuss minor details of my thesis at great length without complaint, and thank you for your unwavering support and belief that I would finish this.

List of Abbreviations

BHS- Bowel Health Service

CRC- colorectal cancer

FOBT- faecal occult blood test

FS- flexible sigmoidoscopy

HBM- Health Belief Model

MHLC- Multidimensional Health Locus of Control

NBCSP- national bowel cancer screening program (Australian)

NBCSPP- national bowel cancer screening pilot program (Australian)

NHMRC- National Health and Medical Research Council

RCT- randomised controlled trial

SCT- Social Cognitive Theory

TPB- Theory of Planned Behaviour

TTM- Transtheoretical Model of Behaviour change

PMT- Protection Motivation Theory