Thinking Style and Health Behaviour:

A Dual-Process Approach to the Prediction of Preventive Health Behaviours.

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Abstract

Dual-process theories propose that cognition involves two different forms of processing: rapid, autonomous, associative type 1 processing, and slower, resource-intensive, more deliberative type 2 processing. Individual differences have been identified in the degree to which people rely on each type of processing, and a measure called the Rational-Experiential Inventory has been used to quantify these preferences — known as thinking style — as two independent variables. People who are high in *experientiality* tend to listen to their gut feelings and intuitions (i.e. type 1 processing) whereas those high in *rationality* are more likely to enjoy and value thinking hard (i.e. type 2 processing). Given the differing strengths of both types of thinking and the robust associations between some personality variables and health behaviour, it is worthwhile investigating the implications of thinking style for health behaviour. The aims of this project were to determine whether self-reported health behaviour was predicted by thinking style, whether it was better predicted by health-specific thinking style, and whether the influence of attitudes over behaviour is moderated by thinking style.

The first study made use of a subset of participants from a previous project (n = 585, all males, mean age 61.4 years) to explore the effect of thinking style on male-specific cancer screening behaviour. Rationality explained a small amount of variance in self-reported participation in digital rectal examinations (r = .11, p = .016). In the second study, N = 992 adults (54.1% female; mean age 46.5 years) completed an online survey, n = 510 of whom took part in a follow-up survey. A short form of the Rational-Experiential Multimodal Inventory was devised and validated, with acceptable results. Next, the short form thinking style items were translated to pertain to the health context, and this measure of health thinking style also demonstrated adequate reliability and validity. Moreover, health thinking

style demonstrated incremental validity over trait thinking style in the prediction of self-reported health behaviour: health rationality predicted variance in diet quality (ß = .17, $p <$ .001), faecal occult blood test participation (ß = .20, p = .001), and pap smear participation (ß = .14, p = .008), while health intuition predicted variance in faecal occult blood test participation (ß = .20, p = .001). Finally, limited evidence was found to support the proposal that health rationality moderates the influence of explicit attitudes — and health intuition moderates the influence of implicit attitudes — over health behaviour. However, results diverged from expectations: moderations operated in an unexpected manner and both health rationality and health intuition moderated the prediction of diet quality by explicit attitudes.

This suite of results suggests that thinking style can explain some variance in health behaviour, and aligns with previous suggestions that people alter their thinking style depending on the domain. Health thinking style shows promise as a health psychological measure that can enable better understanding of health behaviour. The results also show that the interaction between thinking styles and attitudes in regards to health behaviour may be more complicated than previously thought.

Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution 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. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Published work:

Chapter 3.

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Chapter 4.

McGuiness, C. E., Zajac, I., Wilson, C., Turnbull, D. (in press). The REIm-13: a brief measure of thinking style. *European Journal of Psychological Assessment*.

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Signed: Date: 27 January 2017

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Overview

The thesis begins with a review of the literature and a thorough description of the concepts and variables around which the research revolves. The Introduction chapter concludes with statements of the aims of the research. Following this, the methodology of the research is described in more detail than could be included in the papers for publication. Next, four research papers are presented with preambles situating them with regards to the overall aims. I begin by testing for a link between thinking style and cancer screening behaviour in Chapter 3, and in Chapter 4 I prepare for subsequent work by creating a brief form of a recent thinking style measure. In Chapter 5 I use this short measure as a basis for the development of a scale to measure health thinking style, and I investigate its incremental validity in predicting health behaviour. Finally, in Chapter 6 I bring attitudes about health behaviour into the picture, and explore the ways in which they interact with health thinking style in predicting behaviour. The Discussion chapter summarises and integrates the findings, acknowledges the studies' limitations, discusses their implications and provides suggestions for future research.

References for all chapters are collected at the end of the thesis. Likewise, all Appendices are to be found at the end. Table and figure numbering are continuous throughout the document.

Dedication

For Dan and Natalie.