

Novel strategies for improving men's mental health through physical activity programs

by Paul Gregory Sharp

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CERTIFICATION OF ORIGINAL AUTHORSHIP

I, Paul Sharp, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Health at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise reference or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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ABSTRACT

Men's mental health promotion presents unique challenges and opportunities that demand novel approaches to prevention, treatment, and management. Generic health promotion programs have failed to engage and retain men in healthy behaviour change. Tailored approaches are needed that consider and account for gender as an important social determinant of health. The aim of this thesis was to explore strategies to engage men in mental health promotion through physical activity and inform the development of behaviour change interventions that support men's health and well-being. This exploration began with a systematic review and meta-analysis of intervention effects on men's physical activity. Findings highlighted the effectiveness of gender-tailored approaches in men's health promotion and revealed opportunities to use physical activity as a gateway to target other health behaviours, including mental health promotion. The focus then narrowed to a purposeful examination of the barriers and facilitators of men's mental health promotion, with consideration to gender roles and relations that influence constructs of masculinities and men's health. Findings support the dynamic nature of masculinities as well as opportunities for community-based mental health promotion. The thesis concludes with an in-depth participatory design process undertaken to develop gender-tailored intervention strategies for men's mental health promotion in the context of physical activity programs for men. Future research directions are identified and a prospective pragmatic randomised control trial is outlined to test the effectiveness of this intervention approach for improving men's mental health.

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Outcomes arising from this thesis

Publications included in this thesis

- **Sharp, P.**, Bottorff, J. L., Hunt, K., Oliffe, J. L., Johnson, S. T., Dudley, L., & Caperchione, C. M. (2018). Men's perspectives of a gender-sensitized health promotion program targeting healthy eating, active living, and social connectedness. *American Journal of Men's Health*, 12(6), 2157-2166
 - Findings from this manuscript have been incorporated into Chapter 1.
- **Sharp, P.**, Bottorff, J. L., Oliffe, J. L., Hunt, K., & Caperchione, C. M. (2020). Process evaluation of HAT TRICK: Feasibility, acceptability, and opportunities for program refinement. *Health Education Research*, 35(6), 605-617.
 - Findings from this manuscript have been incorporated into Chapter 1.
- **Sharp, P.**, Stolp, S., Bottorff, J. L., Oliffe, J. L., Hunt, K., & Caperchione, C. M. (2020). Can lifestyle interventions improve Canadian men's mental health? Outcomes from the HAT TRICK program. *Health Promotion International*, daaa120.
 - Findings from this manuscript have been incorporated into Chapter 1.
- **Sharp, P.**, Spence, J. C., Bottorff, J. L., Oliffe, J. L., Hunt, K., Vis-Dunbar, M., & Caperchione, C. M. (2020). One small step for man, one giant leap for men's health: a meta-analysis of behaviour change interventions to increase men's physical activity. *British Journal of Sports Medicine*, 54(20), 1208-1216.
 - This manuscript is presented in its entirety in Chapter 2.

Related publications not included in this thesis

- **Sharp, P.**, Spence, J. C., Bottorff, J. L., Oliffe, J. L., Hunt, K., Vis-Dunbar, M., Virgile, A., & Caperchione, C. M. (2020). Infographic. One small step for man, one giant leap for men's health: a meta-analysis of behaviour change interventions to increase men's physical activity. *British Journal of Sports Medicine*, 55(14), 816-817

- Caperchione, C. M., Botorff, J. L., Stolp, S., **Sharp, P.**, Johnson, J., Oliffe, J. O., & Hunt, K. (2020). Positive lifestyle behavior changes among men: Findings from the HAT TRICK program. *American Journal of Health Promotion*, 5(2), 193-201.

Conference proceedings

- **Sharp, P.**, Botorff, J. L., Oliffe, J. L., Rice, S., Schulenkorf, N., Impellizzeri, F., Caperchione, C. M. (October 2021). Leveraging physical activity to engage men in mental health promotion: Informing future directions for lifestyle interventions. *ASICS Sports Medicine Australia Conference*, Melbourne, Australia.
- **Sharp, P.** (November 2020). Gender-tailored approaches to improving men's mental health: A participatory design process. *Health Research Student Conference (Award category)*, Sydney, Australia.
- **Sharp, P.** & Caperchione C.M. (October 2020). Australian men's perspectives of mental health and well-being: influences, practices, and opportunities for prevention. *Australian Men's Health Gathering (Cancelled – COVID-19)*
- **Sharp, P.** (November 2019). Understanding the socio-cultural needs and interests of men living in Australia to inform the development of a gender-sensitised health program. *Health Research Student Conference (Award category)*, Sydney, Australia.
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- **Sharp, P.**, Spence, J.C., Botorff, J.L., Oliffe, J.L., Hunt, K., Vis Dunbar, M. & Caperchione, C.M. (October 2019). Meta-analysis of behaviour change interventions to increase physical activity among men. *ASICS Sports Medicine Australia Conference*, Sunshine Coast, Australia.

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Author contributions to published papers

The supervisors of this thesis were Associate Professor Cristina Caperchione, Professor Joan Bottorff, Associate Professor Nico Schulenkorf, and Professor Franco Impellizzeri.

Chapter One (Section 1.13): Findings from the HAT TRICK program.

This section consists of excerpts from three published manuscripts (listed in section 1.2) related to the implementation and evaluation of the HAT TRICK program. CMC was the primary investigator of this research with support from JLB, KH, JLO, STJ, and myself. I contributed to the development and implementation of the intervention and facilitated program delivery and data collection. Quantitative mental health outcomes were analysed by SS. I conducted the qualitative data analysis and process evaluation, in consultation with JLB. As first author, I drafted the manuscripts and all authors provided feedback and approval for respectively authored publications.

Chapter Two: One small step for man, one giant leap for men's health: a meta-analysis of behaviour change interventions to increase men's physical activity.

All content of this manuscript was my original work. I determined the search strategy with MVD and CMC and oversaw the screening of articles. In consultation with JCS, I was responsible for data extraction, analysis, and interpretation. I drafted the manuscript and JLB, JLO, KH, and CMC contributed to the discussion. All authors reviewed the final manuscript.

Chapter Three: "People say men don't talk, well that's bullshit": A focus group study exploring challenges and opportunities for men's mental health promotion.

All content of this manuscript was my original work. I developed the interview guide and facilitated the focus groups, with support from CMC. In consultation with JLO, I conducted

the thematic analysis and interpretation of findings. Themes and interpretations were reviewed for consensus by all authors. I drafted the manuscript and JLB, SR, and JLO contributed to the discussion. All authors provided feedback and approval of the final manuscript.

Chapter Four: Australian masculinities and culture in men's mental health.

All content of this manuscript was my original work. I developed the interview guide and facilitated the focus groups, with support from CMC. I conducted the thematic analysis and JLO contributed to the interpretation of the findings. I wrote the manuscript and all authors provided feedback and contributed to the discussion. All authors reviewed the final manuscript.

Chapter Five: Gender-tailored intervention strategies for men's mental health promotion: A participatory design process.

All content of this manuscript was my original work. I developed the facilitation guides and workshop activities and led the focus groups, workshop, and telephone interviews. CMC and I independently examined the data and developed a coding framework to ensure cross-comparison rigor. I analysed the data for overarching themes and chose representative quotes. I drafted the manuscript and all authors provided feedback and approval of the final draft.

Abbreviations

AFL	Australian Football League
CI	Confidence Interval
CMA	Comprehensive Meta-analysis
EPHPP	Effective Public Health Practice Project
GRADE	Grading of Recommendations, Assessment, Development and Evaluations
ICC	Intracluster Correlation Coefficient
LGBTIQ+	Lesbian, Gay, Bisexual, Transgender/Transsexual, Intersex, Queer/Questioning
MDRS	Male Depression Risk Scale
MetS	Metabolic Syndrome
MH	Mental Health
PA	Physical Activity
PH	Physical Health
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-analysis
RCT	Randomised Controlled Trial
SE	Standard Error
UK	United Kingdom
USA	United States of America