

CULTURE IN CONTEXT: THE ASSOCIATION BETWEEN FIT AT WORK AND STAFF OUTCOMES

Ms Jessica Herkes, BSc (Adv)

Australian Institute of Health Innovation
Faculty of Medicine and Health Sciences
Macquarie University

A thesis submitted on 9 October 2017 as partial fulfilment of the requirements of the
degree of Master of Research in Health Innovation



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October 2017

Abstract: 220

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ABSTRACT

Organisational and workplace cultures are important factors in health systems through their capacity to influence outcomes, both for patients and employees. One potentially promising method of studying organisational and workplace cultures in health care is through the lens of person-environment fit, which examines the individuals' perceptions of if, and in what way, they are compatible with aspects of their work context. This thesis focuses on fit in relation to two contextual aspects: the person's work group and their organisation (termed person-group (P-G) fit and person-organisation (P-O) fit, respectively). A two-part method was used to study the associations between fit and staff outcomes, including job satisfaction, burnout and work stress in primary mental health facilities across Australia. In Part 1, an online survey was developed and validated using confirmatory factor analysis, prior to hypothesis testing. Part 2 consisted of follow-up interviews analysed using thematic analysis. Part 1 yielded two valid and reliable subscales. The subsequent multiple regression analyses indicated that P-O fit accounted for a significant proportion of variability in all staff outcomes, but the P-G fit results were less conclusive. Results of Part 2 provided a more holistic description of the associations between different components of fit and their relation to staff outcomes. Ultimately, this thesis contributes a deeper understanding of fit in the context of a workplace and organisation.

DECLARATION

I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree or diploma at Macquarie University or any other educational institution, except where due acknowledgement is made in this thesis. Any contribution made to the research by others, with whom I have worked with at Macquarie University or elsewhere, is explicitly acknowledged in the thesis.

I also declare that the intellectual content of this thesis is the product of my own work, except to the extent that the assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged.

I declare that ethics approval was sought and obtained as necessary from Macquarie University Human Research Ethics Committee (5201700241) and Alfred Hospital Ethics Committee (project number 198/17).

Signed:

Date: 6 October 2017

ACKNOWLEDGEMENTS

First and foremost, I would like to thank my supervisors for being such a supportive team this year. Thank you to Dr Kate Churruca for her tireless patience and advice, particularly with the qualitative aspects of the thesis. Thank you to Dr Louise A. Ellis, who taught me how to use statistical programs and guided me through writing the quantitative results. And thank you to Professor Jeffrey Braithwaite for offering wisdom and guidance, and being a mentor throughout, not only this year, but also my time as a Research Assistant.

Thank you to the staff at Macquarie University who supported me this year. Thank you to Ms Mary Simons, Clinical Librarian at Macquarie University Library, for her advice and expertise that was much appreciated in helping to develop my search strategy for the systematic review. Thank you to the team at the Research Office for their advice, understanding, and assistance in gaining Macquarie University HREC Approval. And thank you to Ms Pei Ting, Biostatistician, for reviewing my quantitative results.

A special thank you to my colleagues and friends, Ms Kristiana Ludlow, Ms Chiara Pomare, Ms Jackie Mullins, Ms Sue-Christian Hayes, Dr Wendy James, Dr Adam Dunn, Ms Kelly Smith and Mr Reza Bilimoria, for all their support, kindness, advice, and for constantly filling the chocolate jar.

Thank you to all participants, particularly interviewees, for volunteering their time and making data collection possible. Thank you also to Ms Liza Hopkins for her assistance in gaining Alfred Health Ethics Approval.

And finally, thank you to my family and friends who have helped keep me grounded and motivated me to do my best. Particularly, thank you to my parents, Sharon and Geoffrey, who have been my constant support through the ups and downs of research, and of life. Thank you to my partner, Thomas, for his unyielding support from 900 kilometres away. And thank you to my siblings, cousins and friends, for listening to me, offering new perspectives, and keeping me balanced.

DEDICATION

For three women who are ahead of their time.

For Helen Herkes, who is a strong advocate for education and opportunity. Thank you for the countless hot breakfasts, choc-chip cookies and for always welcoming us up to visit. Your drive is inspiring, and I can only hope to emulate it one day.

For Valerie Burns (aka Nan-Nan), who inspired me with her story of balancing studying at University, researching part-time and raising three children. Thank you for your guidance and for the solace I can always find on my visits.

And for Judith Meppem (aka AJ) who has reformed NSW Nursing and travelled the world. Thank you for your advice, stories, and steadfast support.

PUBLICATIONS AND PRESENTATIONS ARISING FROM OR ACHIEVED DURING THE COURSE OF THIS CANDIDACY

Not all listed publications and presentations are a direct output from the results of this thesis, but were contributions by the candidate and are related to the thesis.

Prizes

1. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Survey development in a haphazard research landscape: making a mark by developing a tool for person-environment fit. Awarded best Poster Presentation at the *NEWMAC Humanities Postgraduate Conference*, Macquarie University, Sydney, Australia, 17 July.

Published papers in peer-reviewed journals

1. Braithwaite, J., **Herkes, J.**, Ludlow, K., Lamprell, G. and Testa, L. (2017) Association between organisational and workplace cultures, and patient outcomes: systematic review. *BMJ Open*, accepted 14 September.
2. Braithwaite, J., Mannion, R., Matsuyama, Y., Shekelle, P., Whittaker, S., Al-Adawi, S., Ludlow, K., James, W., Ting, H.P., **Herkes, J.**, Ellis, L.A., Churruca, K., Nicklin, W. and Hughes, C. (2017) Accomplishing reform: successful case studies drawn from the health systems of 60 countries. *International Journal for Quality in Health Care*, accepted 17 August.
3. Braithwaite, J., Westbrook, J., Coiera, E., Runciman, W.B., Day, R., Hillman, K. and **Herkes, J.** (2017) A systems science perspective on the capacity for change in public hospitals. *Israel Journal of Health Policy Research*, 6(16). doi: 10.1186/s13584-017-0143-6.
[\[https://ijhpr.biomedcentral.com/articles/10.1186/s13584-017-0143-6\]](https://ijhpr.biomedcentral.com/articles/10.1186/s13584-017-0143-6).

Papers submitted to peer-reviewed journals

1. Braithwaite, J., Testa, L., Lamprell, G., **Herkes, J.**, Ludlow, K., McPherson, E., Holt, J. and Campbell, M. (2017) Built to last? The sustainability of health system improvements, interventions and change strategies: a study protocol for a systematic review. Currently being reviewed by *BMJ Open*.

Invited or peer-reviewed presentations

1. Braithwaite, J., Churruca, K., Ellis, L.A. and **Herkes, J.** (2017) Cases of resilient health care: a look back with a view to moving forward. *6th Resilient Health Care Meeting*, Vancouver, Canada, August 14.
2. Braithwaite, J., Churruca, K., Ellis, L.A. and **Herkes, J.** (2017) Cases of resilient health care: selected key lessons. *6th Resilient Health Care Meeting*, Vancouver, Canada, August 16.
3. **Herkes, J.** (2017) Making the most of your HDR experience. *Faculty of Medicine and Health Sciences: Central Commencement Program*, Macquarie University, Sydney, Australia, August 8.
4. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Survey development in a haphazard research landscape: making a mark by developing a tool for person-environment fit. *NEWMAC Humanities Postgraduate Conference: Making a Mark*, Macquarie University, Sydney, Australia, July 17.
5. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Trailblazing a new method to measure person-environment fit: forging a new understanding of ‘fitting’ into your workplace. *NEWMAC Humanities Postgraduate Conference: Making a Mark*, Macquarie University, Sydney, Australia, July 17.
6. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Person-organisation and person-group fit and staff outcomes in health care: systematic literature review. *NEWMAC Humanities Postgraduate Conference: Making a Mark*. Macquarie University, Sydney, Australia, July 17.
7. Braithwaite, J., Churruca, K., Ellis, L.A., Ludlow, K., **Herkes, J.**, Pomare, C. and Long, J. (2017) Complexity science meets implementation science. “*We need to talk about complexity*” Conference, University of Oxford, United Kingdom, June 13.
8. **Herkes, J.** and Pomare, C. (2017) The tale of two Masters students: the setbacks, the hopes, and the research. *CHRIS Centre Conversations*. Macquarie University, Sydney, Australia, May 9.

Refereed or published abstracts and posters

1. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Survey development in a haphazard research landscape: making a mark by developing a

- tool for person-environment fit. Poster presented at the *NEWMAC Humanities Postgraduate Conference*, Macquarie University, Sydney, Australia, July 17.
2. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Survey development in a haphazard research landscape: making a mark by developing a tool for person-environment fit. Abstract in the *NEWMAC Humanities Postgraduate Conference*, Macquarie University, Sydney, Australia, July 17.
 3. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Trailblazing a new method to measure person-environment fit: forging a new understanding of ‘fitting’ into your workplace. Abstract in the *NEWMAC Humanities Postgraduate Conference*, Macquarie University, Sydney, Australia, July 17.
 4. **Herkes, J.**, Churruca, K., Ellis, L.A. and Braithwaite, J. (2017) Person-organisation and person-group fit and staff outcomes in health care: systematic literature review. Abstract in the *NEWMAC Humanities Postgraduate Conference*, Macquarie University, Sydney, Australia, July 17.
 5. Braithwaite, J., Churruca, K., Ellis, L. and **Herkes, J.** (2017) Complexity science meets implementation science. Abstract in the *Complexity Workshop*, University of Oxford, England, June 13-14.

Published reports

1. Braithwaite, J., Churruca, K., Ellis, L.A., Long, J., Clay-Williams, R., Damen, N., **Herkes, J.**, Pomare, C. and Ludlow, K. (2017) Complexity Science in Healthcare—Aspirations, Approaches, Applications and Accomplishments: a White Paper. Australian Institute of Health Innovation, Macquarie University: Sydney, Australia. ISBN: 978-74138-456-7.

Panel Discussions

1. **Herkes, J.**, Sareff, R. and Hastings, C. (2017) Social and Humanitarian Issues. *NEWMAC Humanities Postgraduate Conference: Making a Mark*. Macquarie University, Sydney, Australia, July 17.
2. **Herkes, J.**, Hong, Y. and Alam, R. (2017) Sociology. *NEWMAC Humanities Postgraduate Conference: Making a Mark*. Macquarie University, Sydney, Australia, July 17.

LIST OF ABBREVIATIONS

AWS	Areas of Worklife Scale
CFA	Confirmatory Factor Analysis
CPREQ	Consolidated Criteria for Reporting Qualitative Research
EM	Expectation Maximization
EXP	Experience at Centre (time worked or volunteered at centre)
FWE	Familywise Error
GHQ	General Health Questionnaire
HPWS	High Performance Work Systems
HRM	Human Resource Management
IP	Interview Participant
JDS	Job Diagnostic Survey
KSA	Knowledge, Skills and Abilities
LGBTI	Lesbian, Gay, Bisexual, Transgender and Intersex
MAR	Missing at Random
MBI	Maslach Burnout Inventory
MCAR	Missing Completely at Random
ML	Maximum Likelihood
MRA	Multiple Regression Analysis
NHMRC	National Health and Medical Research Council
NNFI	Non-Normed Fit Index (also called the Tucker-Lewis Index, or TLI)
OCB	Organisational Citizenship Behaviour
OECD	Organisation for Economic Co-operation and Development
P-E	Person-Environment
P-G	Person-Group

P-J	Person-Job
P-O	Person-Organisation
P-S	Person-Supervisor
P-V	Person-Vocation
PRISMA	Preferred Reporting Items for Systematic review and Meta-Analyses
RMSEA	Root Mean Square Error of Approximation
RNI	Relative Non-centrality Index
SEM	Structural Equation Modeling
SR	Survey Respondent
SRMR	Standardized Root Mean Square Residual
TLI	Tucker-Lewis Index (also called the Non-Normed Fit Index, or NNFI)
UVI	Unit Variance Identification

CONCEPTUAL GLOSSARY

Burnout	A syndrome that can present itself in people who work with clients, customers or patients in their job (coined “people-work”), characterised by experiences of emotional exhaustion, depersonalisation and reduced personal accomplishment. ^{1,2}
Climate	A specific method of measuring the culture (in relation to both the organisational and workplace), by which employees are asked to gauge how they perceive the culture at their work. ³ Researchers often use the term climate synonymously with culture, but they are distinct concepts. ⁴
Complementary fit	A feeling of being accepted in which the individual fills a gap in, adds something unique to, complements, or “makes whole” the organisation or workplace. ⁵⁻⁷
Culture	Culture is commonly acknowledged to be difficult to define, measure and change. ^{3,8-12} In the context of this thesis, culture is defined as the complex, overarching shared phenomenon within a group, team, unit, or collection of people who work in the same workplace or organisation. ^{3,4} One such way to measure culture is to compare and contrast the values, goals and personalities of the individual and the environment.
Cynicism	A state of withdrawal at work when interacting with colleagues or patients (in the case of health care). ¹³ This can also be evident in the dehumanisation of those involved in one’s work. ^{2,13,14}
Demands-abilities fit	A sense of compatibility between the person and environment in which the individual has the required capabilities and capacity to meet the demands of the organisation. ¹⁵
Depersonalisation	A component of burnout that involves a sense of psychological removal from interactions and relationships with colleagues and/or clients. ^{2,16}
Emotional exhaustion	A component of burnout that involves a state of psychological

	depletion resulting from the work one does. ^{2,13,14}
Goal congruence	The measurement of the alignment of goals between an individual and an aspect of their context. ¹⁷
Health care	For this thesis, a health care context will be defined as a front-line clinical environment where health professionals (including clinicians, nurses, allied health professionals, paramedics and pharmacists) directly interact with patients, residents, or consumers. ⁹ This broad definition incorporates many contexts, including hospitals, nursing homes and pharmacies.
High performing work systems (HPWS)	A combination of human resource practices, such as selective recruitment, collaborative teamwork, effective communication, and training of employees, which are considered important for increasing organisational performance and empowering employees to achieve the goals of the organisation. ^{18,19}
Job satisfaction	How satisfied a person is with their job, defined by two components, a cognitive and an emotional or affective component. ²⁰⁻²² In lay terms, job satisfaction measures both what a person thinks and feels about their job.
Needs-supplies fit (also called supplies-values fit)	A feeling of fit in which the desires, inclinations or requirements of the person eg, for further training in their field, or collegial communication and supervision, are fulfilled by the job environment. ^{15,23}
Organisational culture	The sum of the shared values, attitudes and beliefs across an organisation, eg, across a hospital. ^{3,8,9}
Personality congruence	Measuring the stable traits of personality and how similar or compatible they are with the “personality” of an aspect of the context. ²⁴
Person-environment (P-E) fit	The compatibility between an individual and the environment they work in. The environment is conceptualised to include many components, such as the individual’s job, group and organisation. ¹⁵

Person-group (P-G) fit	The compatibility between an individual and their “work group”; that is, the people they work most closely with in their organisation. ^{15,25}
Person-organisation (P-O) fit	The compatibility between an individual (eg, employees, interns or volunteers) and the organisation they are involved with that occurs when 1) at least one entity fulfils the needs of the other, and/or 2) they share similar characteristics. ¹⁵
Scope of practice	The collection of actions, tasks or activities that the individual is qualified or entitled to conduct in their position or job at work. ²⁶
Stress at work	A first-level outcome arising from the organisation, work or job (rather than the stress resulting from staff outcomes eg, burnout, which is classified as a second-level outcome). ²⁷
Supplementary fit or similarity fit	Compatibility in which the individual and the environment are congruent and have similar characteristics. This component emphasizes the consistency of the person and the values, goals, and “personality” that permeates the organisational and workplace cultures. ^{5,15}
Work group	For this thesis, “work group” is defined as the group of people with whom the individual works most closely. ^{15,25} This will therefore differ between individuals depending on their role.
Workplace culture	A specific type of sub-culture by which people form clusters within the wider organisational culture. These workplace cultures may be formed on the basis of shared profession, job, work-type, or interests. ⁹
Value congruence	Seeks to measure the alignment of values, which is defined as the relatively stable principles that guide and influence employees’ behaviour at work. ^{15,28} Specifically, this measure looks at the similarity between the values of the individual and those of the context.

METHODOLOGICAL AND STATISTICAL GLOSSARY

Commensurate measure	A technique of measurement used in fit research, which allows the respondents' perception of the “real” and “ideal” culture to be compared. ²⁹
Direct measure	Also termed “perceived fit”. This measure is used in fit studies where participants are explicitly asked if they think, and to what extent, a good fit exists between the person and organisation or group. ^{15,30}
Indirect measure	A measure of fit where there is a comparison between separately rated individual and organisational or group characteristics. ¹⁵
Just-identified model	In structural equation modelling (SEM), a model in which there is a perfect fit between the degrees of freedom and the free parameters. ³¹
Over-identified model	In SEM, a model with positive degrees of freedom, whereby there is more unique covariance and variance terms than parameters to be estimated. This is the ideal model for confirmatory factor analysis (CFA). ³¹
Reciprocity	Recognising the connections between the ethics of the research being conducted and the creation of knowledge, and the importance of balancing the benefit between the researcher and the participant. ³²
Reflexivity	The inevitable perspective that the researcher brings to the field—including in their research questions, analysis, and data collection, eg, interacting with interview participants. ³³
Saturation or thematic saturation	The level where no further codes, concepts, definitions or themes are identified in qualitative analysis. ³⁴
Triangulation	The use of multiple methods, researchers, sources or theories to conduct rigorous research and ensure the veracity of the findings. ³⁵

ETHICS

Ethics approval for this project was sought and received from the Macquarie University Human Research Ethics Committee (HREC) (5201700241). The majority of research sites recruited for this study accepted Macquarie University HREC approval, and no further ethics approval was necessary. An additional ethics application was lodged and approved by Alfred Hospital Ethics Committee (project number 198/17) prior to data collection at some research sites. Further to this, some sites required HREC approval from localised Ethics Committees that are not acknowledged by the National Health and Medical Research Council (NHMRC). The ethics approval letters and amendments for each committee (if any) are presented in **Appendix A**. In addition, please see the Appendices for details of the approved emails to participants and Participant Information and Consent Forms for both the online survey (**Appendix D**) and the semi-structured interviews (**Appendix E**).

SCHEMA OF THE FLOW OF THE THESIS

To guide the reader, an illustration at the beginning of each chapter will visually place the individual within the context of the thesis, as shown below.

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

CHAPTER 1. INTRODUCTION: FITTING THE THESIS INTO FIT LITERATURE

*“Of all the issues in psychology that have fascinated scholars and practitioners alike
none have been more pervasive than the one concerning
the fit of person and environment”*

— Schneider, 2001, p.141.³⁶

Overview of Chapter 1

Chapter 1 introduces the thesis in context. The research area is introduced, including the gaps and controversies in the field of person-environment (P-E) fit. The research design for this thesis is then introduced in light of the published literature.

Highlights

- Introduction to organisational and workplace culture literature in health care, and to the field of P-E fit.
- The aims and hypotheses of this thesis are introduced.

Schema of the flow of the thesis

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

1.1 Importance of the research project: The study in context

There is growing interest in research on organisational culture, which includes the shared attitudes, values, beliefs and practices that permeate an entire establishment.^{8,9,37} There is also an interest in workplace culture, which focuses on the emergence of any specific, localised sub-cultures within this wider organisation.⁹ This area of research aims to make sense of how organisational and workplace culture (together termed *localised culture* for this thesis) can have measurable downstream effects on outcomes for both employees and customers.

This question is perhaps particularly important in health care contexts, as the consequences of organisational and workplace cultures—whether positive or negative—not only impact staff, but also patients who receive care.^{3,9,38} The interplay in the well-being of staff and patients can be conceptualised as a cycle, with one influencing the other.³⁹ Drawing the analogy further (see **Figure 1.1**), this cycle occurs within specific localised cultures. This thesis will focus on a part of the cycle—specifically the relationship between the employees and their localised culture.

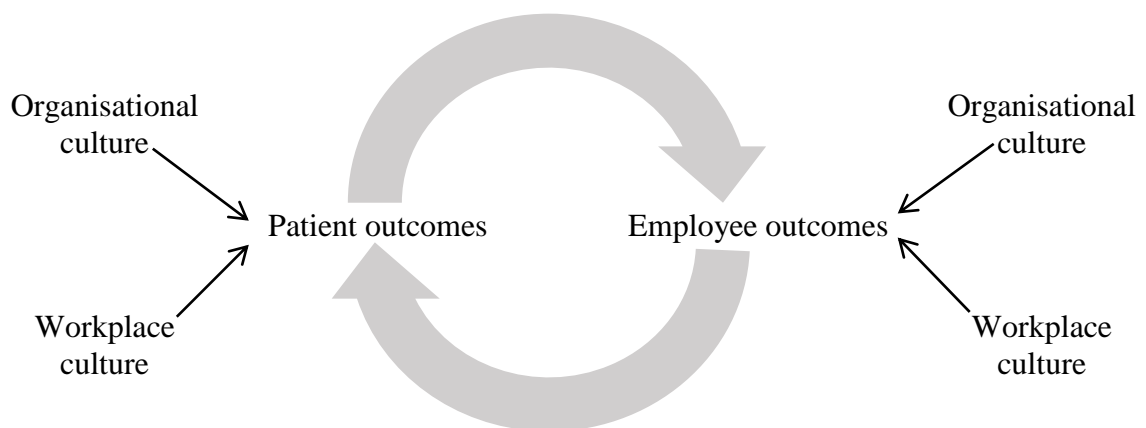


Figure 1.1. Conceptual diagram of the relationships between employee and patient outcomes in a health care context

Source: Author's conceptualisations, building upon the ideas of Montgomery et al.³⁹

Health care settings can suffer from unhealthy localised cultures, and poor employee outcomes.⁴⁰⁻⁴⁵ Particularly, health environments can perpetuate tribal behaviours, hierarchies, communication siloes,⁴⁶ and even bullying, incivility and negative team behaviours,^{40,41} which indicate poor localised culture. This is concerning as studies have shown that localised cultures are associated with staff outcomes (eg, job satisfaction and

burnout) and patient outcomes (eg, mortality and disability).^{9,10} Additionally, clinicians have disproportionately high rates of suicide and suicidal ideation,⁴⁷⁻⁵⁰ depression^{47,51} and burnout^{16,51,52} compared to other professions.^{16,41,47-52} These outcomes are harmful to the individuals, and can also have downstream effects on patients through decreased employee productivity,⁵² and an increased risk of medical errors.^{53,54} It has been suggested that research into understanding localised culture may be important in explaining this phenomenon, and facilitating effective culture change interventions within health care contexts.⁵²

Leveraging the importance and untapped potential of localised culture is particularly relevant in the health system. Studies have shown the risk and protective factors for staff and patient outcomes can be linked to localised cultures.^{50,55} For example, supportive meetings and an empowering leadership team have been associated with lower levels of suicidal ideation among physicians, whereas having been harassed at work was associated with increased suicidal ideation.⁵⁰ Similarly, the absence of competent leadership, communication and opportunities for training have been associated with an increased risk of physician burnout, which in turn can increase the risk of depression.⁵⁵ Thus, harnessing culture change interventions could be an effective way to improve these outcomes for health professionals.

The ultimate aim of culture change interventions in health care contexts is to improve staff and patient outcomes. There is limited understanding of how to design and implement effective cultural interventions, as 70% of localised culture change interventions in contexts within and beyond health care are thought to fail.⁵⁶ In a systematic review of health literature,^{10,38} two culture intervention studies were identified,^{57,58} both of which led to positive improvements in only *some* measured outcomes, signifying the need to further understand culture interventions. Additionally, studying organisational culture is important for the effective implementation of health care reform more broadly, as even structural organisational changes have been noted to alter organisational culture and hence must be accounted for.⁵⁹ Thus, a greater understanding of the nuances of localised cultures in health care is needed to improve the success of such health reform and culture improvement interventions.

One important aspect of culture is the “fit” between the individual and aspects of the context, termed person-environment (P-E) fit. It is believed that a better fit is associated with improved staff outcomes.^{60,61} Understanding P-E fit can have important applications to improve outcomes, and yet it has been understudied in health care compared to other

contexts such as hospitality, management and business.⁶²⁻⁶⁶ Moreover, of the studies that have been conducted in a health care setting, many have also recruited participants from settings outside of health care and do not analyse them separately,^{6,65,67,68} making it difficult to identify potential contextual nuances of health care in results. This thesis endeavoured to focus on fit in a health setting to fill this research gap.

More specifically, this study was conducted in a mental health setting. Culture research conducted in these facilities is rare compared to studies in other types of health context, and some studies that are conducted in mental health tend to be more abstract and less generalizable.⁶⁹ In a recent systematic review of organisational and workplace cultures and their associations with patient outcomes in health care settings, only three (4.8%) of the 62 included studies were conducted in contexts outside hospitals and aged care facilities.¹⁰ Of these, only one was conducted exclusively in mental health facilities,⁷⁰ with one further article examining mental health facilities amongst other health contexts.⁷¹ Addressing this literature gap was particularly important because mental health services may be influenced more by localised culture than other types of health facility, due to the importance and integrity of human relationships in the personalisation and continuity of care for mental illnesses.⁷⁰

1.2 Research aims and hypotheses

The scope of this thesis was to investigate the relationship between two components of P-E fit, person-organisation (P-O) and person-group (P-G) fit, and key staff outcomes, including job satisfaction, burnout and stress at work in a mental health setting. The thesis examined only employees' *perceptions* of their own fit within the workplace and organisation. Given the literature assessed to date,^{15,72-74} four overarching aims were developed to fulfil this scope (**Table 1.1**). Each of these aims are discussed below.

Table 1.1. The overall aims of the current thesis

Aim	
1	To investigate, through systematically reviewing the literature, the extent to which P-O and P-G fit are associated with staff outcomes in health care settings.
2	To develop a holistic, multi-dimensional tool to measure P-O and P-G fit and understand how the components of fit (eg, supplementary, complementary, needs-supplies and demands-abilities) affect each other.
3	To investigate to what extent each component of P-O and P-G fit is associated with the staff outcomes of satisfaction, burnout and work stress, in the context of mental health facilities.
4	To explore if and what further insights into P-O and P-G fit can be gained through the addition of qualitative research methods.

1.3 Person-environment fit

In an effort to express the complexity of what it means to fit, researchers have explored the multi-dimensionality of both the person and the environment.⁷⁴ It was hoped that the results of this thesis would identify ways that human resource management (HRM), by which the employment relationship is managed, could improve the employment relationship⁷⁵ and consequently increase fit.

Multi-dimensionality of the person

Numerous aspects of the individual, such as the congruence of their values,^{76,77} goals^{78,79} and personality²⁴ (see **Conceptual Glossary**), are important in assessing their capacity to fit. While studies have suggested the importance of multiple types of congruence in shaping one's compatibility, fit studies have predominantly measured only one aspect at a time, rather than multiple aspects. This method falls short of representing reality because people are complex and multi-faceted, and assess their own fit with reference to many aspects or parts of themselves.⁶¹ Moreover, each type of congruence may have unique associations with different staff outcomes.³⁰ Understanding these associations is an important step to enrich the understanding of the relative importance of each congruence measure in overall fit. This thesis, therefore, measured three types of congruence (values, goals and personality).

Multi-dimensionality of the environment

P-E fit is thought to comprise several distinct levels of environmental interaction, including person-job (P-J), person-supervisor (P-S), person-vocation (P-V), P-G and P-O fit.^{36,60} Conceptually, P-E fit can be illustrated as in **Figure 1.2**.

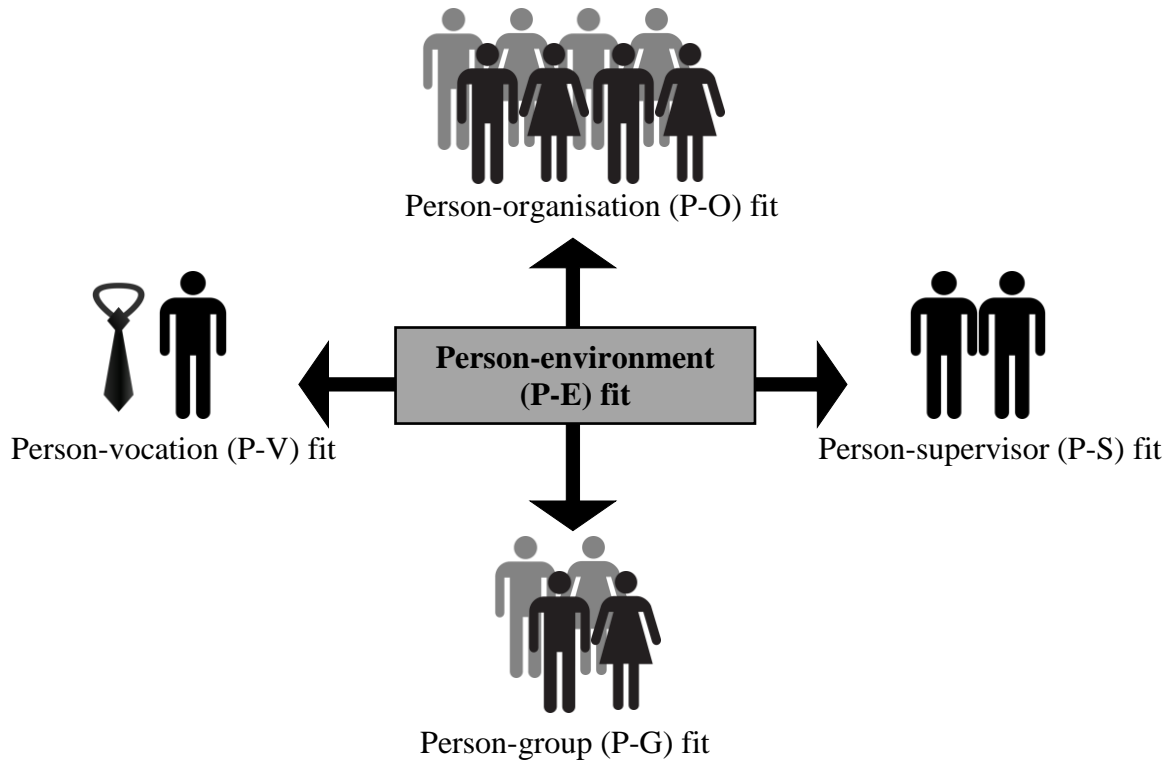


Figure 1.2. Conceptual diagram of Person-Environment (P-E) fit

Source: Author's conceptualisations, based on literature. Please note that this is not an exhaustive list, and other components of the environment may also contribute to an individual's feeling of fitting in.

Typically, researchers have studied each environmental dimension independently.^{68,80} However, it is beneficial to investigate multiple levels of environmental interaction simultaneously, as they are never experienced in isolation,^{17,80} and fit at different environment levels may interact or have additive effects on outcome measures.⁷⁴ Moreover, each of these levels of the environment is thought to comprise of multiple components of fit, which conceptualise different ways that the individual can fit within that level of the environment (eg, supplementary, complementary, needs-supplies and demands-abilities fit).^{15,60} This thesis measured multiple components of P-O and P-G fit dimensions, as they are the most commonly targeted environmental levels in culture change interventions.^{15,80} The following sections (**1.4** and **1.5**), detail the definitions, components, controversies and gaps in the fields of P-O and P-G fit respectively, in order to understand the contribution that this thesis makes to the research field.

1.4 Person-organisation fit

P-O fit explores the individuals' feeling of compatibility with the company, business or establishment they work for. This sense of compatibility can occur if: 1) one or both entities fulfil the other's needs; and/or 2) each entity has similar characteristics.¹⁵ P-O fit is thought to consist of four ways, or "components" of fitting in (supplementary, complementary, needs-supplies and demands-abilities) as defined in **Table 1.2**. However, very few studies assess these multiple components of P-O fit.⁸⁰

Table 1.2. Defining the different components of P-O fit

Component of P-O fit	Definition
Supplementary fit or similarity fit	Compatibility in which the individual and the organisation, company, institute or business are congruent and have similar characteristics. ^{5,15} This component emphasizes the consistency of the person and the values, goals, and "personality" that permeate the organisational culture.
Complementary fit	Fit in which the individual or organisation fills a gap in, adds something unique to, or "makes whole" the other. ⁵⁻⁷
Needs-supplies fit or supplies-values fit	A feeling of fit in which the needs, inclinations or requirements of the person are fulfilled by the organisation, eg, desire for further training or support. ^{15,23}
Demands-abilities fit	Fit in which the individual has the required capability and capacity to meet the demands of the organisation. ¹⁵

There are conflicting perspectives of how these P-O fit components interact with one another. Some researchers define needs-supplies and demands-abilities fit as sub-components of complementary fit (**Figure 1.3**),^{15,79} whilst other describe complementary fit as distinct from the other three fit components (**Figure 1.4**).^{5,6,81}

These differing theoretical frameworks have far-reaching consequences. Each school of thought has developed different tools to measure complementary fit, making them difficult to reconcile in a single study.⁶ Moreover, some researchers have not clearly stated the fit components they are studying, which makes it unclear which model of fit is more well-supported for use in future studies.^{5,68} Researchers must therefore make *a-priori* assumptions about how the components of fit interact, and clearly state these in the dissemination of their work, lest the component they are measuring remain unclear.⁶⁰

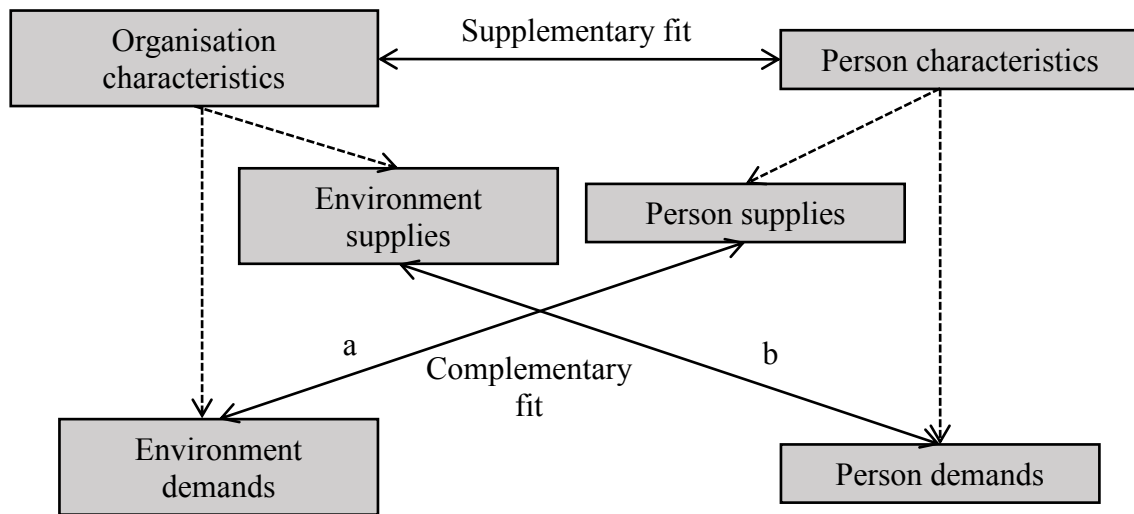


Figure 1.3. Schematic of demands-abilities (a) and needs-supplies (b) fit as components of complementary fit, within the framework of P-O fit

Demands-abilities fit, signified by the arrow labelled “a”, is characterised by the person supplying what the environment demands, such as resources (time, effort and commitment) in task and interpersonal realms.¹⁵ In needs-supplies fit (arrow label “b”), the environment supplies what the person demands, including resources (financial, physical and psychological) and opportunities (task-related and interpersonal).¹⁵

Source: Author’s conceptualisations, adapted from Kristof.¹⁵

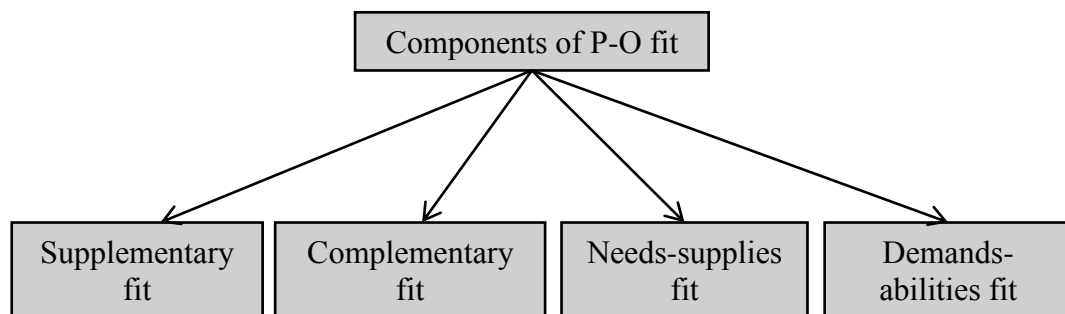


Figure 1.4. Schematic of needs-supplies, demands-abilities, complementary, and supplementary fit as individual components of P-O fit

This school of thought provides important measures of complementary fit as a separate construct from needs-supplies and demands-abilities fit.

Source: Author’s conceptualisations, based on arguments of Piasentin and Chapman,^{5,6} and Guan et al.⁸¹

Theoretical decisions for this thesis regarding P-O fit literature

To resolve this ambiguity and attempt to reconcile the different schools of thought, a conceptual model of P-O fit was developed for this thesis that synthesised elements from each model, and accounted for the multi-dimensionality of the person (**Figure 1.5**).⁶⁸

Based on this model, the thesis aimed to *develop a holistic, multi-dimensional tool to measure P-O (and P-G) fit (Aim 2)*. In line with this working model, hypothesis 1 (**H1**) was developed, as it is hypothesised that needs-supplies fit and demands-abilities fit will be

sub-factors of complementary fit in the P-O fit factor structure (H1.1); and that this will be psychometrically strong in terms of its factor structure (H1.2) and reliability (H1.3).

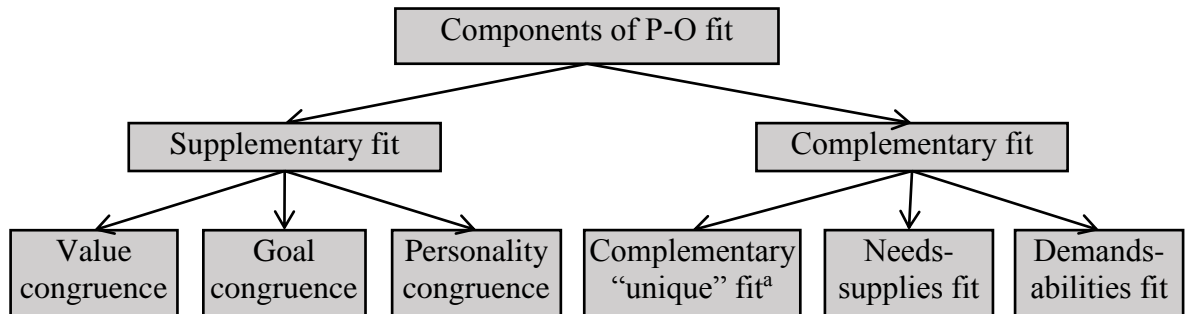


Figure 1.5. The working theory used for the current study in order to test for components of P-O fit

^a“Unique” fit measures of complementary fit are derived from the School of Thought depicted in **Figure 1.4**.
Source: Author’s conceptualisations, adapted from **Figure 1.3** and **Figure 1.4**.

1.5 Person-group fit

P-G fit involves the compatibility of an individual and their “work group”, defined as the group that the individual identifies as working most closely with.^{15,25} Similarly to P-O fit, P-G fit comprises multiple facets.^{17,80,82,83} Most commonly, P-G fit has been measured through supplementary and complementary components (**Table 1.3**).^{25,82}

Table 1.3. Defining the components of P-G fit

Component of P-G fit	Definition
Supplementary fit	A feeling of compatibility based on an individual’s perception that they have similar characteristics to their work group (eg, shared values, goals, personality traits, knowledge, skills or abilities). ⁸²
Complementary fit	Compatibility where an individual believes that they hold unique characteristics (eg, personality, skills, abilities) and that these characteristics help them fit in with their work group. ⁸²

There has been a dearth of studies that have explicitly measured P-G complementary fit,^{25,83} and an even more conspicuous deficiency of studies measuring either P-G needs-supplies or demands-abilities fit measures. A review of research in other areas of P-E fit (eg, P-O fit, P-J fit),^{23,68,84} suggests that needs-supplies and demands-abilities fit permeate each level of the environment. Furthermore, close inspection of published P-G fit study

tools indicates an implicit measurement of needs-supplies and demands-abilities constructs.^{25,82,83,85} This suggests that the lack of tools developed to measure these P-G components is not due to their absence, but rather due to the embryonic nature of the field compared to other aspects of P-E fit (see **Chapter 2** for further discussion).

Theoretical decisions for the thesis regarding P-G fit

It was postulated that needs-supplies and demands-abilities fit were components in P-G fit. This was tested in **Aim 2**, which intended to *develop a holistic, multi-dimensional tool to measure (P-O and) P-G fit*. In testing this aim, hypothesis 2 (**H2**), was developed: *it is hypothesised that (in addition to supplementary and complementary fit), needs-supplies fit and demands-abilities fit will be sub-factors of complementary fit in the P-G fit factor structure (H2.1); and that this will be psychometrically strong in terms of its factor structure (H2.2) and reliability (H2.3).*

1.6 Staff outcomes

As mentioned above, part of the value in studying fit is in understanding and potentially influencing their relationship to staff outcomes, which is arguably particularly important in health care. Moreover, it is ultimately staff that have the capacity to alter localised culture,^{2,29,58,64,86-89} so it is important to understand how they are affected by it. Research outside health care suggests that staff outcomes may be related to P-O and P-G fit, and the current thesis will expand on this knowledge. The rationale for selecting the specific staff outcomes measured in this thesis (job satisfaction,⁶³ burnout^{87,90} and work stress,^{87,90} definitions in **Conceptual Glossary**) are discussed below.

Job satisfaction

Job satisfaction is measured through gauging the individual's thoughts and emotions regarding their job.^{21,91} Job satisfaction is one of the most frequently examined outcomes when measuring P-O fit, but the outcome has rarely been studied in a mental health context, or with a P-G fit lens. This underscores the value of exploring associations between P-O and P-G fit and job satisfaction in mental health.

Burnout

Burnout is characterised by emotional exhaustion, negativity, and even callousness² in people who work with clients, patients or residents; in this case, on the front line in the health system.¹ Burnout has been studied disproportionately in mental health facilities due to its prevalence relative to other health care contexts.^{86,87,90} However, although researchers postulate a relationship between organisational culture and the development of burnout,³⁹ few burnout studies are conducted within the fit paradigm. This was an important aperture to fill in light of postulations that burnout may be caused by a mismatch between an individual and aspects of their environment; in other words, the level of fit.^{2,14} Thus, this thesis endeavoured to provide useful information regarding this potential link.

Stress at work

Stress at work is another commonly identified issue in the health system, amongst other industries.²⁷ In mental health facilities, high levels of stress have been linked to increased absenteeism and decreased self-esteem.⁹² Researchers have also noted the potential downstream effects on quality of care (eg, more distant and less empathetic nurses).^{89,93} This is concerning as caring qualities, although highly sought after in all types of health professionals, may be particularly important in mental health settings. This thesis, for the first time, studied stress in mental health settings within the context of fit.

Association of staff outcomes with P-O and P-G fit

It was postulated that there would be an association between compatibility and staff outcomes. Thus, hypothesis 3 (**H3**) and hypothesis 4 (**H4**) were developed postulating that P-O and P-G fit respectively would account for a significant proportion of the variance in job satisfaction, burnout, and work stress, beyond that accounted for by demographic characteristics of participants (see **Table 1.4**).

1.7 Interaction between P-O and P-G fit

Previous research hypothesised there would be an interaction between P-O and P-G fit, such that P-G would moderate the relationship between P-O and staff outcomes.¹⁷ This past hypothesis has not been supported, though Vogel et al¹⁷ suggested that this non-significant result could be attributed to the sole measurement of supplementary fit. This

thesis re-tested the hypothesis in hypothesis 5 (**H5**), accounting for the limitation reported by Vogel et al.¹⁷

1.8 Organisation of thesis

This thesis is organised in six chapters. In this chapter, the research area was introduced, and the need for further study on this topic, particularly in mental health was noted. The aims and hypotheses were introduced (see **Table 1.4** for schematic).

Table 1.4. The aims and hypotheses of this thesis

Aim	Hypotheses
To investigate through systematically reviewing the literature, the extent to which P-O and P-G fit are associated with staff outcomes in health care settings.	Hypothesis contained in Chapter 2: It is postulated that most studies would show a relationship between the two constituents (P-O or P-G fit and staff outcomes), such that being more compatible with the workplace or organisation will be associated with better staff outcomes.
To develop a holistic, multi-dimensional tool to measure P-O and P-G fit and understand how the components of fit work in relation to each other.	<p>H1: It is hypothesised that needs-supplies fit and demands-abilities fit will be sub-factors of complementary fit in the P-O fit factor structure (H1.1); and that this will be psychometrically strong in terms of its factor structure (H1.2) and reliability (H1.3).</p> <p>H2: It is hypothesised that (in addition to supplementary and complementary fit), needs-supplies and demands-abilities fit will each be significant, distinct components within P-G fit (H2.1) and that this will be psychometrically strong in terms of its factor structure (H2.2) and reliability (H2.3).</p>
To investigate to what extent each component of P-O and P-G fit is associated with specific staff outcomes.	<p>H3: It is postulated that P-O fit will account for a significant proportion of variance in a) job satisfaction, b) burnout [comprising b.1) emotional exhaustion and b.2) depersonalisation], and c) work stress, beyond that already accounted for by age, gender and experience at the centre.</p> <p>H4: It is postulated that P-G fit will account for a significant proportion of variance in a) job satisfaction, b) burnout [comprising b.1) emotional exhaustion and b.2) depersonalisation], and c) work stress, beyond that already accounted for by age, gender and experience at the centre.</p>

Aim	Hypotheses
	H5: The positive relationship of P-O fit with a) job satisfaction, and the negative relationship of P-O fit with b) burnout, and c) stress at work, will be moderated by P-G fit. The relationships will be stronger for those with a high P-G fit than those with a low P-G fit for a). Conversely, the relationship will be weaker with those with a high P-G fit for b) and c) than for those with a low P-G fit.
To explore if and what further insights into P-O and P-G fit can be gained through the addition of qualitative research methods.	No formal hypothesis. Formal hypotheses are generally not appropriate for qualitative data collection and analysis. The relative dearth of research using qualitative inquiry to study P-O and P-G fit, particularly in a health care context, suggested that this approach might offer new insights into this field that might then warrant further discussion and research.

Building on this introduction chapter, **Chapter 2** provides the methods and results of a systematic literature review conducted to identify what prior research on P-O and P-G fit and its association with staff outcomes was evident within a health care environment. **Chapter 3** presents the methodology, including the study setting, and the methods used for Part 1 (quantitative survey using a multi-dimensional tool) and Part 2 (qualitative, follow-up interviews). **Chapter 4** outlines the quantitative results of the survey, including testing hypothesised factor structure models of P-O and P-G fit, and the relationship of different ways of fitting in and staff outcomes. **Chapter 5** includes a thematic analysis of qualitative data drawn from both semi-structured interviews and open-ended survey response questions. Finally, **Chapter 6** concludes the thesis, drawing together the results to discuss their implications for conceptualising P-O and P-G fit, and proposes ideas for future research.

CHAPTER 2. LITERATURE REVIEW: MAPPING THE FIT SUPERMARKET

*“I’m lost in the supermarket of fit research,
and I haven’t yet stepped inside!”*

—Harrison, 2007. p.389.⁹⁴

Overview of Chapter 2

Chapter 2 outlines the methods and results of a systematic review conducted to determine the extent of evidence supporting the association that P-O and P-G fit each have with staff outcomes in health care settings. The chapter comprises five main sections: introduction, methods, results, discussion, and conclusion.

Highlights

- It was postulated that increased P-O and P-G fit would be associated with better staff outcomes (eg, increased satisfaction, decreased burnout).
- The systematic review was conducted in accordance with the Preferred Reporting Items for Systematic review and Meta-Analyses (PRISMA) statement.
- 95.8% of included articles (23/24) reported a significant, positive association between a staff member's perception of fit and outcomes including their levels of stress, burnout, and intention to quit, such that feeling more compatible had various positive implications for staff.
- The results suggested an association between an employee's perceived compatibility with the workplace or organisation and a variety of staff outcomes.

Schema of the flow of the thesis

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

2.1 Introduction

Rationale

2.1.1.1 The research area

As detailed in **Chapter 1**, further research is needed to understand the relationship between P-E fit and staff outcomes, particularly in health care settings. The following literature review addressed this need. P-O and P-G fit were focused upon as they most readily inform organisational culture interventions.⁹⁵ Staff outcomes were the other focus of the review as, although the aim of studying organisational culture in health care is often to improve both staff and patient outcomes, employees are the first point of reference in attempts to alter, modify and ultimately transform organisational culture.^{2,29,58,64,86-89} Hence, this review focused on staff outcomes to understand how these factors would help inform organisational culture change initiatives, and therefore be valuable in health settings.

Although fit studies have been conducted on various aspects of the health system, including in hospitals⁹⁶ and elderly care facilities,⁹⁷ no comprehensive review has been undertaken to date that synthesises this information. This chapter addressed this gap by providing an assessment of the literature in this research field.

2.1.1.2 Past reviews

Previous systematic reviews on P-E fit have provided a useful understanding of the importance of fit across different settings, but they did not specify the study context.^{5,7,15,30} Hence they are unable to provide results specifically relevant to health care.^{37,38} The current study narrowed the scope to studies conducted to a health context.

Another convention in past fit systematic reviews was to focus exclusively on one element of the environment; eg, P-O *or* P-G fit.^{5,15,30} Whilst this provided depth of understanding of this type of fit specifically, it did not account for the interactions of different types of fit. Therefore, this systematic review included both P-O and P-G fit articles to assist in understanding how different aspects of the context work in relation to one another. This was expected to provide a more holistic review of fit research, and pave the way for future research teams when conducting similar systematic reviews.

Objectives

The aim was to *investigate the extent to which P-O and P-G fit are associated with staff outcomes in health care settings*. It was postulated that most studies would show a

relationship between the two constituents, such that increased compatibility would be associated with better staff outcomes.

2.2 Methods

Eligibility criteria

All types of empirical study were considered, including longitudinal and cross-sectional analysis, quantitative, qualitative and mixed-methods designs. Each of these methods, if conducted in a valid and rigorous way, had the potential to provide insights into the aim. Inclusion was limited to published, peer-reviewed articles, and grey literature was excluded. Additionally, all types of “health care” settings could be included in the review, aligning with the broad definition of “health care” in the **Conceptual Glossary**. Context was reported where relevant and available.

Information sources

Information was extracted from CINAHL Complete, EMBASE, Ovid MEDLINE, PsycINFO and Scopus. To ensure the maximum number of relevant research articles were included in the review, a date restriction was not used. The general search strategy (**Table 2.1**) was cross-checked with related systematic reviews to ensure relevant keywords were incorporated.^{37,38} The initial search was conducted on April 3, 2017 (see **Appendix B** for the specific search strategies) and the results were exported into Endnote.⁹⁸ Additionally, systematic, narrative, or scoping reviews were identified in the Endnote library and their reference lists were searched for other potential articles to include.

Table 2.1. General search strategy

Keyword	Related terms/synonyms	Alternative terms
P-O and P-G fit	Person*organisation fit OR supplementary fit OR complementary fit OR needs-supplies fit OR supplies-values fit OR demands-abilities fit OR supplementary congruence OR complementary congruence OR similarity fit OR value congruence OR goal congruence OR personality congruence OR person-group fit OR person-team fit	Organization
Health care context	Health organisation* OR hospital* OR health facilit* OR acute care OR primary care OR primary health care OR health context OR health setting OR	Health care Healthcare Health-care

Keyword	Related terms/synonyms	Alternative terms
	health service OR health*care OR tertiary care OR nurse* OR health profession* OR doctor OR GP OR physician* OR dentist* OR health OR health care service* OR gyn*ecologist* OR h*ematologist* OR internist* OR obstetrician* OR p*ediatrician* OR pharmacist* OR physiotherapist* OR psychiatrist* OR psychologist* OR radiologist* OR surgeon* OR surgery OR therapist* OR counse*lor* OR neurologist* OR optometrist*	Organization
Staff outcomes	Burnout OR staff outcome* OR job satisfaction OR staff satisfaction OR employee satisfaction OR employee outcome* OR retention OR staff recognition OR employee recognition OR intention to stay OR intention to leave OR debrief* OR intent to turnover OR turnover intention OR organisation* commitment OR stress OR work attitude OR occupational hazard* OR collegiality OR working relationship* OR teamwork OR collaboration	Organization

The symbol * is used by the databases to symbolise truncation.
At least one keyword was needed from each row.

Selection and data collection process

Guided by the Preferred Reporting Items for Systematic review and Meta-Analyses (PRISMA) statement,⁹⁹ an initial title and abstract review was completed in line with the inclusion criteria (English language, health care context, published peer-reviewed journal article, addresses the aim of the review). The full text review was then conducted. Results were summarised and synthesised. Included articles were sorted according to the type of data collected, setting, staff outcomes and the type of fit studied.

Data items

The systematic review aimed to identify different components of fit. Hence, the search strategy encompassed general terms (eg, “person-organisation fit”) as well as more specific terms that identified components of these measures (eg, “supplementary”).^{5,15} The search strategy also endeavoured to identify articles measuring staff outcomes, such as work attitude,^{30,100} staff satisfaction,⁶⁴ burnout,^{2,87,88} work stress,^{69,86,89,101} and organisational

commitment.⁵⁸ Broad search terms such as “staff outcome” were also included, as some studies may have focused on staff outcomes other than those identified.

Bias

It was anticipated that there would be biases in individual studies. The Quality Assessment Tool¹⁰² was used to assess the bias and quality of the overall article. There was also possible bias in the type of results published; eg, publication bias.¹⁰³ Readers should be mindful of this potential bias when judging the strength of evidence for the association between P-O and P-G fit with staff outcomes.

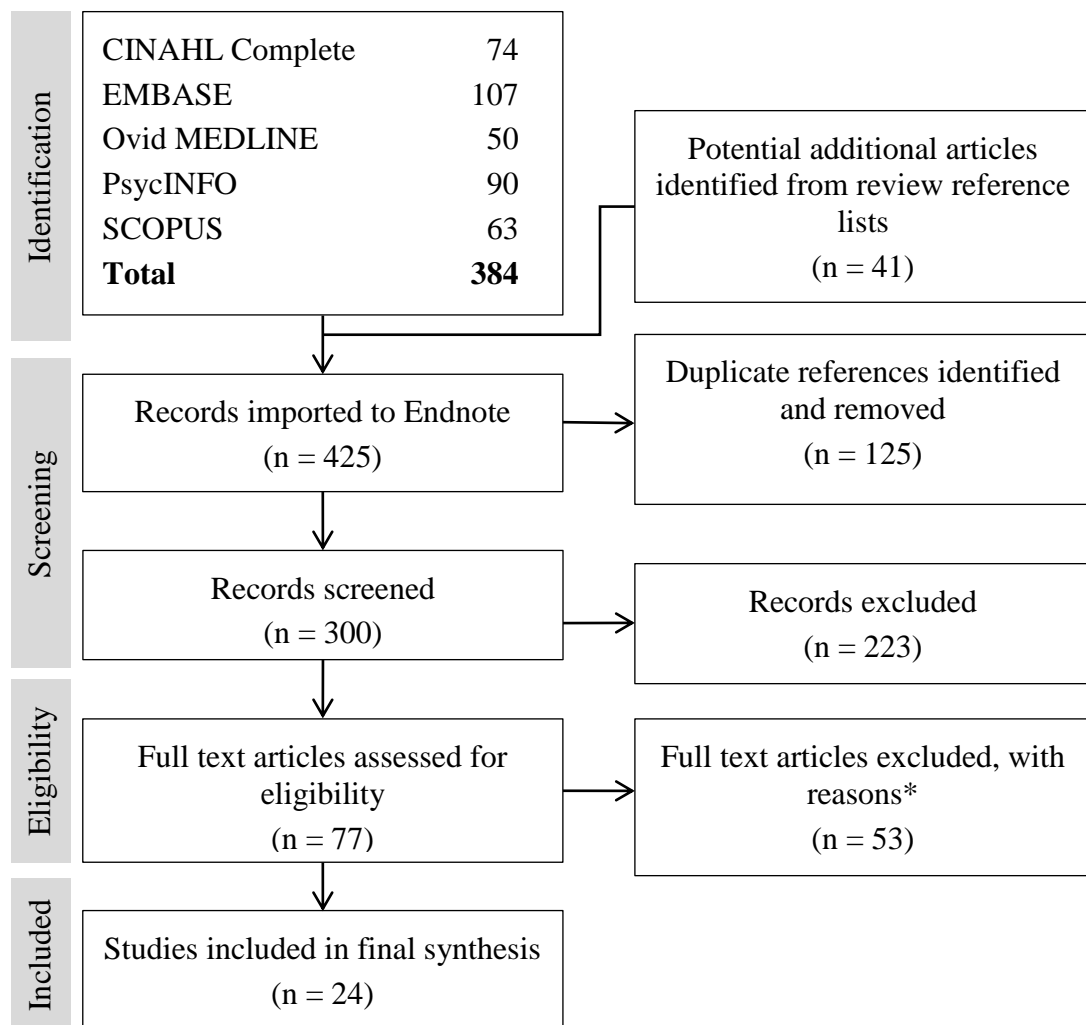
2.3 Results

Study selection

Three hundred and eighty-four articles were identified from the database search. Of these, two relevant reviews were identified and their reference lists were examined, yielding another 13 potential studies for inclusion. Duplicates were deleted and the remaining articles were screened. Two hundred and one texts did not meet the inclusion criteria, and the remaining 71 articles were screened a second time. To verify that no eligible study had been overlooked in this search process, the reference lists of the included articles from the database search were examined. Once duplicates were removed, the 28 texts identified were subject to abstract screening with the same inclusion criteria as in the original screening process (these numbers were aggregated for simplicity in **Figure 2.1**). Ultimately, 24 articles were included.

Risk of bias in individual studies

The Quality Assessment Tool was used to assess quality across nine categories (abstract and title, introduction and aims, methods and data, sampling, data analysis, ethics and bias, results, transferability and generalizability, and implications and usefulness).¹⁰² Each category was rated on a 4-point scale (from 1=“very poor” to 4=“good”) to create a total score, with higher scores denoting higher quality.^{10,104} The included articles scored between 23-36 points. According to the altered quality grades,¹⁰⁵ this corresponds to three articles of low quality (9-23 points), two medium quality (24-29 points) and 18 high quality articles (30-36 points).¹⁰ For complete classification of each article, see **Appendix B**.



***Reason for exclusion of articles with full text review**

Reason for exclusion	Number of texts excluded for this reason ^a
Full text not available	6
Not in English language	4
Not primary empirical study	4
Not in health care context	31
Not peer reviewed journal article	5
Does not measure association	9

Figure 2.1. Search process

^aTotal for “reasons for exclusion” does not add up to the total number of articles excluded, as some articles had multiple reasons for exclusion.

Study characteristics

The articles in the final analysis originated from multiple countries, including seven from the United States of America (USA),^{13,96,97,106-109} four from Canada,¹¹⁰⁻¹¹³ two from Spain,^{114,115}, and one each from China,¹¹⁶ Germany,¹¹⁷ Greece,¹¹⁸ Turkey,¹¹⁹ Korea,¹²⁰ Netherlands,¹²¹ New Zealand,¹²² Norway,¹²³ and the United Kingdom.²⁹ Two articles^{124,125} did not specify in which country data was collected. There were also differences in the study setting (see **Table 2.2**).

Table 2.2. Setting of included studies in systematic review

Study setting	Number of included studies conducted in this context
Hospitals	11 [*]
Elderly care facilities	4 ^{97,108,117,121}
Acute care facilities	1 ¹¹³
Ambulatory care	1 ¹³
Disability services	1 ²⁹
Community health	1 ¹¹⁶
No contextual information	1 ¹¹⁹
Multiple settings	4 ^{106,107,112,122}

The included studies also differed in their design. Of the 24 articles, five were longitudinal,^{13,96,117,121,124} and the remaining 19 were cross-sectional. The sample size varied widely, from 56¹²³ to 2,563 participants.¹¹² Additionally, the type of participants varied. The most commonly recruited participants were nurses,[†] followed by physicians.[‡] Further information about the specific characteristics of each study is reported in **Appendix B**.

Trends in publication of the included articles provide an insight into the potential of future fit research. Only two of the 24 included articles were published before the year 2000, with the majority being published after 2010 (**Figure 2.2**). The trend-line added to this graph illustrates the upward trajectory in the number of articles published on P-O or P-G fit in health care.

^{*}References 110, 124, 125, 118, 96, 120, 114, 109, 111, 123, 115.

[†]References 110, 113, 122, 107, 124, 97, 125, 119, 118, 29, 96, 114, 121, 120, 111, 108.

[‡]References 110, 112, 13, 118, 96, 121, 120, 109.

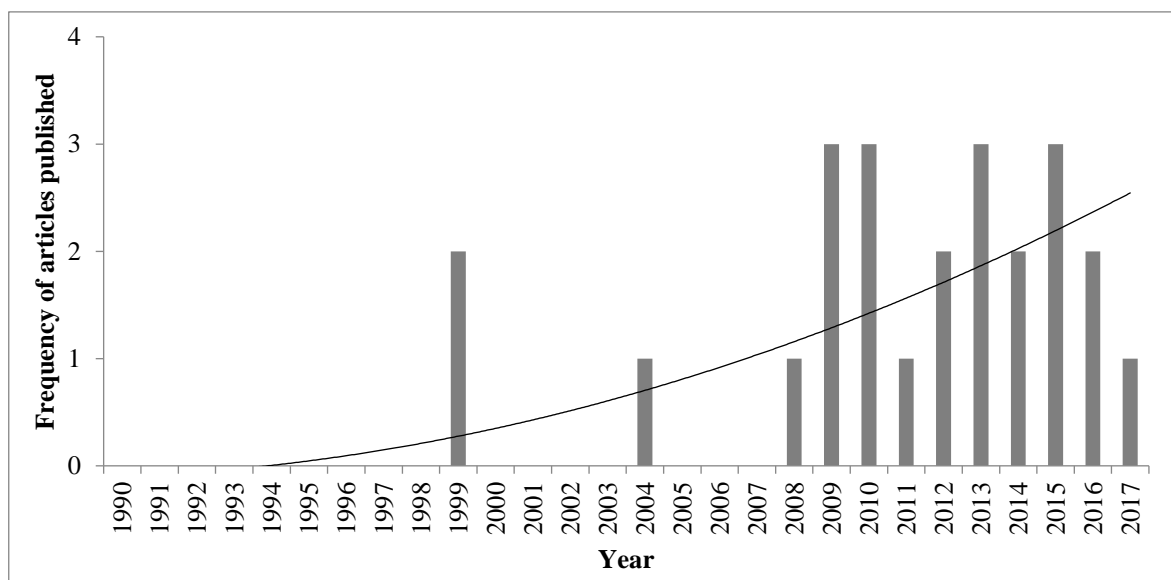


Figure 2.2. Trends in the frequency of published P-O and P-G fit research conducted in a health setting over time

Bars represent the number of peer-reviewed articles on this topic in the corresponding year (as established from inclusion in the systematic review). There may be additional 2017 publications published after the initial search strategy was conducted.

Synthesis of results

Twenty articles exclusively measured P-O fit, two measured P-G fit, and two measured both P-O and P-G fit. All four articles measuring P-G fit only measured supplementary value congruence. On the other hand, P-O fit articles measured various components of fit. The strength of the evidence for both P-O and P-G fit is examined in turn, before discussing the inferences for fit studies as a whole.

2.3.1.1 Articles measuring P-G fit

In the included studies, P-G fit was only measured through an aspect of supplementary fit known as value congruence, whereby the similarity of values between the individual and the group are measured. Additionally, all four articles identified in this category measured similar staff outcomes, namely job satisfaction^{107,119,123,124} and turnover intent,^{107,119,124} although one article also measured employee attitude and time pressure.¹²³ In all of these articles, increased value congruence was significantly positively associated with job satisfaction, and negatively associated with intention to leave the job.^{107,119,123,124} However, Dotson et al¹⁰⁷ counter-intuitively reported that value congruence was *positively* associated with intent to leave the entire nursing profession. It should be noted that this study measured value congruence with items that, on close inspection, measured different aspects of the environment including P-O fit (eg, “my *company* and I agree on patient

care”; emphasis added) and P-S fit (eg, “those *above me in the organization* put quality care of the patient first”; emphasis added).¹⁰⁷ Problematically, although all items measured value congruence, they were not differentiated by the level of the environment they focused on. Hence, this unexpected result may be attributed to an oversimplified methodology. Overall, the four studies indicated a relationship between P-G value congruence and staff outcomes, particularly in relation to job satisfaction and turnover intent.

2.3.1.2 Articles measuring P-O fit

In contrast to P-G fit, P-O fit was measured in terms of various facets of the environment and the person. Different types of measures are presented in the 22 P-O fit articles (20 that solely measured P-O fit and two that also measured P-G fit). **Table 2.3** reports only what can be derived from the article itself (eg, survey items or author descriptions of items).

Table 2.3. Number of studies reported for each type of P-O fit

Component of P-O fit		Number of studies ^a
Supplementary	Value	18
	Personality	2
	Knowledge, skills and abilities (KSA)	1
	Goal	1
	Unspecified	2
Total		21^b
Complementary		1
Needs-supplies		1
Demands-abilities		0
Total studies measuring P-O fit		22^c

^aStudies may have reported measuring additional types of fit in different aspects of the P-E paradigm (eg, Rehfuess et al. (2012) measured needs-supplies and demands-abilities P-J fit).¹⁰⁶ These are not relevant to the aims of this systematic review and not reported here.

^bThe total number of articles measuring supplementary fit does not equate to the number of studies measuring each individual component of supplementary fit, as some studies measured multiple components of supplementary fit in the one study.

^cThe total number of articles measuring P-O fit does not equate to the number of studies measuring each individual component, as some studies measured multiple components of P-O fit in the one study.

As expected, supplementary fit was the most commonly measured construct within the P-O fit paradigm in health care literature.^{15,60,81,126} P-O supplementary value congruence was

measured in 18 studies. Six articles measured value congruence through the Areas of Worklife Scale (AWS)¹²⁷ where “values” were one of six components measured.^{13,110-113,115,124} Consequently, “fit” or “compatibility” was not the main focus of these articles, but they still reported the correlation between value similarity and outcome measures, including burnout,^{13,110-113,115} turnover intent,¹¹³ and job satisfaction.¹²⁵ The remaining survey tools measuring P-O value congruence were heterogeneous, with three studies^{106,114,121} using the widely-used Perceived Fit Scale from Cable and DeRue,⁶⁸ four studies deriving their survey questions from other sources,^{109,114,118,120} and five studies using tools crafted specifically for that study.^{96,97,107,108,119} The heterogeneity of tools made it difficult to make comparisons across studies. However, there appeared to be several valid ways to measure P-O supplementary value fit and their associations with staff outcomes.

Personality congruence was measured in two studies, one of which also measured knowledge, skills and abilities (KSA) congruence. Cha et al¹²⁰ measured personality congruence under the heading of “prosocial P-O fit”, whereby the congruence between the employee’s perception of themselves as being “caring” or “generous” was compared to if they perceived their workplace as having these traits. High scores on personal and prosocial identities (in other words, high personality congruence) was associated with higher organisational citizenship and caring behaviour from employees.¹²⁰ However, they reported an unexpected link between the misfit of the person and organisation with prosocial behaviour, such that an individual would be intrinsically motivated to engage in these behaviours even if the organisation did not actively encourage them.¹²⁰ Similarly, the study measuring P-O KSA and personality congruence found that the overall measure of P-O fit was significantly associated with both job satisfaction and turnover intention.¹¹⁹ However, personality and KSA congruence were not analysed separately, so there was not enough evidence to deduce the strength of the association between each type of congruence individually with staff outcomes. Further studies could assist in elucidating the differential relationship of these types of congruence with staff outcomes.

Supplementary goal congruence was measured in one study, where Schmidt¹¹⁷ found that greater goal incongruence was positively related to absenteeism and self-reported burnout. As there is only one study on goal congruence, it was difficult to draw conclusions regarding this particular component of supplementary fit, but there did seem to be an association to explore in further studies.

Two studies measured an “unspecified” aspect of supplementary fit. Hatton et al¹²⁹ used a “ideal-real” organisational culture tool to test the congruence between employee’s perceptions of their organisation compared to those of an “ideal” organisation. It could not be determined from the original scale which component or components of supplementary fit were examined. The second conceptually ambiguous article was also the sole article reporting a measure of complementary fit. Reportedly, each fit component (supplementary and complementary) was measured through four items.¹²² However, on close inspection of the original survey items, it became apparent that the items did *not* measure complementary fit, as defined in this thesis. Rather, the complementary fit survey items consisted of two items measuring supplementary congruence (one for value and the other personality), and two items measuring needs-supplies fit.¹²⁸ This combination of items made it difficult for readers to draw theoretical conclusions from the study. Although general complementary fit itself was not measured, this article made an important contribution to literature on needs-supplies P-O fit.

Zhang et al¹¹⁶ reported that needs-supplies P-O fit was directly associated with job satisfaction, as well as significantly inversely associated with intent to leave. These results aligned with that of Cooper-Thomas and Poutasi,¹²² who reported a significant positive correlation of P-O fit with job satisfaction and organisational commitment, and a negative correlation with intention to quit. Moreover, both studies reported that job satisfaction partially mediated the relationship between needs-supplies P-O fit and intention to quit.^{116,122} Further studies in this area could help to verify the applicability of this model to health systems in different countries and settings.

2.3.1.3 Articles measuring P-O and P-G fit

Unfortunately, this systematic review was unable to contribute additional knowledge regarding the relationship between P-O and P-G fit, which highlights the limitations of the research field. Of the two articles purporting to measure both P-O and P-G fit, one measured only P-O fit,¹¹⁹ and the other did not delve into the fit framework, but rather measured P-O and P-G value congruence.¹⁰⁷ This meant that, in both articles, the potential interaction between P-O and P-G fit was not analysed. Future studies, as in **Chapters 3-4** could differentiate between these two measures in the results to investigate the presence of an interaction in the context of health care. It is hoped that this study will spark further analysis into the nuances of these theoretical constructs in the future.

2.3.1.4 Staff outcomes measured

In addition to the variability amongst the type of fit studied, there was also variation in the staff outcomes measured. These main outcome groups included satisfaction, intention to quit, organisational commitment, burnout, absenteeism and other (**Table 2.4**).

Table 2.4. Staff outcomes assessed in the studies included in this review

Term	Alternative terms	Number of included articles measuring and recording this outcome ^a
Satisfaction	Job satisfaction, work satisfaction, career satisfaction	14
Intention to quit	Turnover intent, intention to stay, job search behaviour, intent to leave job, intent to leave profession, actual turnover	14
Organisational commitment	Loyalty, organisational citizenship behaviour (OCB) ^b , caring behaviour	9
Burnout	N.A.	9
Stress	Time pressure, job stress, psychosomatic complaints	4
Absenteeism	Sick leave behaviour	4
Other	Eg, Self-rated health, accident propensity, employee attitude	2

^aThe total of this column does not equate to the total number of included articles, as some studies measured outcomes from more than one column.

^bOrganisational citizenship behaviour (OCB) is an interesting and unique category that warrants further study. OCB is defined as voluntary actions undertaken by an employee and directed towards individuals or organisations. The actions may not be rewarded, but they contribute to the work environment.¹²⁰

2.3.1.5 Overall findings

This review synthesised findings of how P-O and P-G fit relate to staff outcomes in a health care environment. Overall, 95.8% of included articles (23/24) reported a significant, positive relationship between P-O or P-G fit and staff outcomes, such that greater compatibility with one's workplace or organisation led to more positive outcomes for staff (eg, lower burnout, increased satisfaction). Of these, 18 articles reported an exclusively positive relationship, such that the relationship between fit and each measured staff outcome was reported as significant, and in the direction hypothesised in this review. A further five articles reported a partially positive relationship; in other words, some of the

staff outcomes reported in the study had a significant association with fit in the direction hypothesised, but the association with other outcomes did not reach a level of statistical significance. For example, one study reported a positive association between measures of fit and job satisfaction and loyalty, but no association with turnover.¹¹⁸ Finally, one article reported no significant association between the two entities (namely, P-O value fit and actual turnover).¹²¹ Ultimately, this indicates that some staff outcomes may be associated more strongly with fit perceptions than others.

2.4 Discussion

In this review, articles were identified and synthesised from various health settings globally, with the majority of the studies conducted in hospitals, chiefly from the USA, Canada, and Europe. Although there were challenges in identifying and analysing the varied articles for this review, the results provided robust evidence for the initial postulation that stronger P-O or P-G fit would be associated with more positive staff outcomes, such as increased organisational commitment and job satisfaction, and decreased intent to quit, burnout, and stress. Ultimately, the results suggested a relationship between the two entities in the hypothesised direction.

This systematic review was the first of its kind to restrict the study setting, in this case to health care, and to combine two types of fit, P-O and P-G, into one literature review. Thereby the current review acknowledged that more than one type of fit needs to be studied simultaneously,^{5,15,30} in order for the findings to be more applicable to clinicians, allied health professionals, health care managers, and policymakers involved in developing and implementing culture change interventions.

Future studies are needed to build on the knowledge of the importance of fit in a health care setting. Specifically, further studies on complementary, needs-supplies and demands-abilities P-O fit, and all components of P-G fit, are necessary to fully elucidate the relationships between the elements of the environment and different staff outcomes.

Strengths and limitations

The systematic review identified a small number of articles pooled from the databases in the initial search, regardless of an extensive search strategy, indicating that there is scope for further original fit research publications within health settings. Moreover, articles were inconsistent and heterogeneous in the way they labelled and measured fit. For example,

some articles measured value congruence but did not explain the wider concept of supplementary fit,^{110,115} whilst others specified what type of congruence they were measuring.^{106,121} This meant the researcher had to make subjective decisions regarding the identification and grouping of articles for the discussion. However, this issue did not preclude a rigorous discussion, synthesis and analysis of the current research landscape. In the future, empirical studies of P-O and P-G fit in health settings could address these limitations by explicitly identifying what facet of fit they are measuring.

2.5 Conclusion

A plethora of studies examine organisational culture in health settings, but very few focus on P-O and P-G fit, and their relationship with staff outcomes. Of the studies that do explore this association, most study P-O fit, with very few measuring P-G fit. The trend across the included studies is that employees' perceptions of compatibility with the work group or organisation are conducive to better staff outcomes. Further studies, including the empirical research supported in this thesis, are needed in a variety of health settings to confirm this association and offer guidance to policymakers on how to use this information to increase perceptions of "fit", and therefore improve staff, and ultimately patient outcomes, in health settings.

CHAPTER 3. METHODS: “THE BEST THING SINCE SLICED BREAD”—A NEW PRODUCT IN THE FIT SUPERMARKET

“Qualitative and quantitative data can be fruitfully combined when they elucidate complementary aspects of the same phenomenon.”

—Patton, 1999. p.1194.³⁵

Overview of Chapter 3

Chapter 3 outlines the methods developed for the current study, filling a gap in the literature analysed in **Chapter 2**. The method consisted of two parts; firstly, a quantitative survey with qualitative extended response questions; and secondly semi-structured follow-up interviews. The seven sections that follow explain these methods. They are: setting and participants; survey development; survey data analysis; qualitative methods; thematic analysis; ethical considerations of the research; and summary and limitations.

Highlights

- Most published literature examines multiple components of fit, but rarely have all elements been studied in the same study, and never in a health setting.
- Past survey tools are heterogeneous, with many tools developed to measure the same construct.³⁰ This chapter sifts through the most commonly used items and selects the most appropriate for developing a new multi-dimensional tool tailored to the current study.
- The methods include a qualitative component, something not previously attempted in fit research in a health setting. This qualitative component was analysed through thematic analysis and may provide new insights into staff perceptions of their P-O and P-G fit.

Schema of the flow of the thesis

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

3.1 Setting and participants

Study setting

The study was conducted in mental health facilities. Specifically, 97 headspace centres across Australia were invited to participate, and 31 centres across six states accepted this invitation. In the spirit of reciprocity (definition in **Methodological and Statistical Glossary**), each participating centre received an Executive Report of the findings. To ensure anonymity of participating centres, no further geographical details regarding the location of participating centres can be disclosed.

Due to the unique qualities of headspace, some contextual information is useful to frame the study. Headspace is a national mental health organisation aiming to provide early intervention mental health services for young people (aged 12-25 years old).¹²⁹ It relies on multiple funding streams and Lead Agencies. But regardless of the differences between individual centres, headspace centres have injected funding, time and energy into building a national presence, identity and character.¹²⁹ Because of this, the organisation has become well-known for being youth-focused and accepting of minority groups, such as Aboriginal and Torres-Strait Islanders, and the Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) community. It is important to consider the results in light of these contextual details, as they impact the individual's views of his or her organisation.

Recruitment of participants

To be eligible to participate in the study, individuals were required to meet inclusion criteria (**Table 3.1**).

Table 3.1. Inclusion criteria for participants

Status	Requirement
Age	≥ 18 years old
Employment	Be an employee, volunteer ^a , contractor or student at a participating centre
Ability	Able to complete an English language survey Able to complete an online survey (i.e. computer literate) ^b
Willingness	Willing to provide informed consent, and to participate in the study

^aVolunteers were eligible to participate based on past evidence that low P-O and P-G fit makes volunteers more susceptible to outcomes such as burnout and turnover intent,¹³⁰ similarly to employees.^{87,112,113}

^bPast fit surveys have been successfully conducted in an online platform,¹³¹ verifying this platform for the current study. Computer literacy was not expected to be a barrier to participation, as headspace is known for embracing the digital era, eg, through online access to support services.

Approximately 640 participants were invited to participate via email on 19 May 2017. A reminder email was sent out two weeks after the initial invitation. The survey was closed on 18 July 2017. For copies of these emails, see **Appendix D**.

3.2 Survey development

Survey procedure

Once informed consent was gained, participants were directed to the survey. The survey structure is illustrated in **Figure 3.1**.

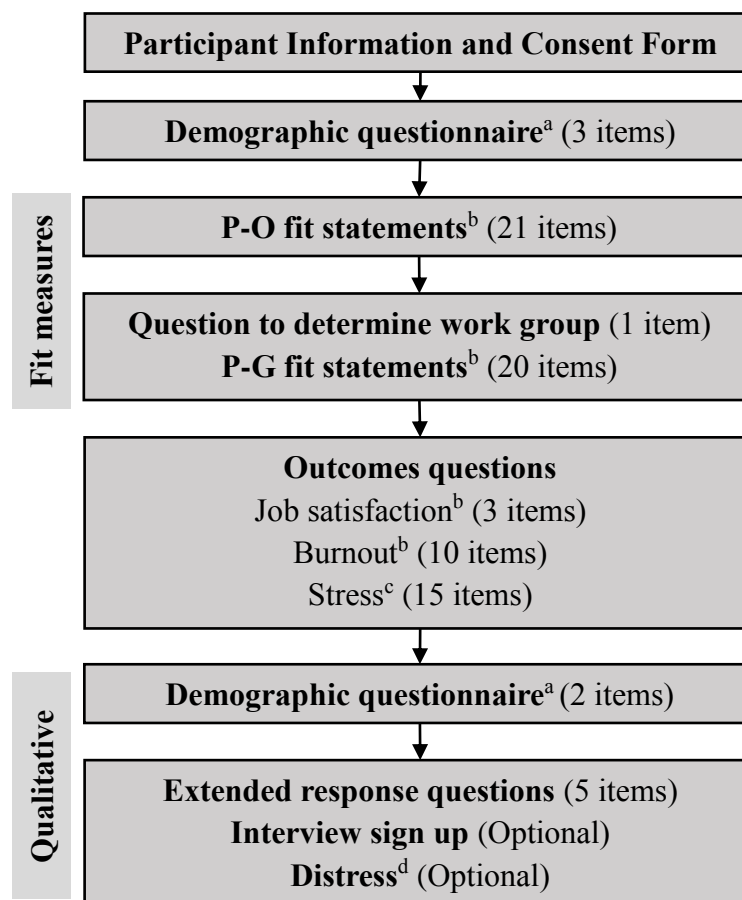


Figure 3.1. Research design of survey

^aSome items of less importance to the study, but still of interest, were placed at the end of the survey.

^bItems were answered on a 7-point Likert scale, and the order of the items was randomly assigned.

^cItems were answered on a 4-point scale.

^dDistress was monitored regularly so the team psychologist could contact the participants, should they request to communicate with the research team about the study.

Source: Author's conceptualisations.

Survey item selection and development

Many methods have been used to understand different facets of fit⁷³ and culture.^{69,132,133} Measuring the strength and relative importance of different components of fit (as in this

thesis) is typically accomplished through quantitative standardised surveys.^{25,61,82,134} **Table 3.2** distinguishes the three main survey styles, to determine the most useful for this thesis.

Table 3.2. Definitions of types of measures of the P-O fit paradigm

P-O fit measure; descriptor ^a	Definition	Rationale for use of fit measure ^b	
		Strengths	Weaknesses
Commensurate; Subjective	Comparison between the person and the organisation or group when described using the same terms. ¹⁵ In this way, the “real” and “ideal” culture are compared. ²⁹	Ensures mutual relevance of the characteristics under investigation	Measures will most likely be non-identical, so “commensurability” is difficult to achieve; difficult to create measures for latent characteristics; leads to the anthropomorphising of environments
Direct; Perceived	Explicitly asking participants if they think, and to what extent, a good fit exists between the person and organisation or group. ^{15,30}	Significant relationships with individual outcome variables; easy to administer online	Ambiguity in what is being assessed; confound person and environment constructs; risk of participant biases impacting results
Indirect; Objective	Comparison between separately rated individual and organisational or group characteristics. ¹⁵	Allows assessment without asking for implicit judgements	Controversy as to if individual data can be aggregated to create organisational level variables

^aThere is ambiguity and inconsistency in the literature regarding these terms, with some research teams differentiating between perceived and subjective fit, others use the terms “subjective” and “perceived” interchangeably.^{6,126} Other researchers claim that commensurate measures gauge perceived fit and direct measures gauge subjective fit.³⁰ Kristof-Brown and Guay⁶⁰ defined the terms as classified in the table. The current thesis will use these definitions.

^bIdeas derived from sources^{15,60} and the author’s conceptualisations.

After this suite of survey types were examined, the decision was made as to what type of measures would be used in this thesis. Indirect measures were not used, as double the sample size would need to be obtained (one group being asked about individual characteristics, and the other group about organisational characteristics). Commensurate measures often do not pinpoint the precise aspect of P-O fit being measured, and nor can these be identified by inspecting the items themselves.²⁹ Thus, direct measures, where

participants were explicitly asked to what extent they perceive themselves to be compatible with their workplace and organisation, were deemed most appropriate for the current study.³⁰ These measures gauge psychological reactions and have a stronger association with individual outcome measures than other measures of fit.^{15,88,135} Conceptually, these measures align with measuring organisational and workplace climate, whereby the respondents' perception of the culture is being measured.

Past direct measures surveys often confound, confuse and distort measures of P-G, P-O and even P-J fit, which has made it difficult to determine what relationships are present. For example, Piasentin and Chapman⁶ developed a now widely used measure of supplementary and complementary P-O fit. However, the terminology used (eg, “co-workers”; “employees I work with”; “people who work for this company”) suggests that these items did not differentiate between P-O and P-G fit. Because of these inconsistencies, a multi-dimensional survey tool, with items crafted to measure P-O and P-G fit to a more detailed degree than past studies, was developed. In undertaking this challenge, **Aim 2** (*to develop a holistic, multi-dimensional tool to measure P-O and P-G fit*) was investigated (see **Appendix C** for final fit items, and **Appendix D** for their setup in the online survey).

3.2.1.1 Demographic questionnaire

Five demographic questions were asked in the survey (see **Appendix D**). These detailed the participants' age, gender, location of the headspace centre they most frequently work at, length of time they have been working at this centre, and role within the centre.

3.2.1.2 Measures of supplementary fit

A multi-dimensional tool was developed using distinct items to measure P-O and P-G goal, personality and value congruence. Many initial P-O fit survey questions were altered for the current study.⁶¹ P-G measures were more difficult to identify than P-O items and often required additional tailoring. For example, P-G value congruence items were selected from Seong et al²⁵ who reported a three-item measure in a similar format to Cable and DeRue,⁶⁸ based on “team” values, which were adapted for the current study to measure “group” values.

3.2.1.3 Measures of complementary fit

Few P-O fit scales measured complementary fit,^{136,137} and those that did measure it were worded such that they potentially confounded different parts of the environment (eg, by unintentionally measuring P-G fit: “My co-workers rely on me because I have competencies that they do not have”).^{6,81} Thus, selected items were altered to more specifically measure the construct in question. In P-G fit literature, a combination of questions was selected to obtain an all-inclusive measure of general complementary fit. Items included the personality,⁶ KSA,⁶ and general complementarity dimensions.¹³⁸

3.2.1.4 Measures of needs-supplies fit

Needs-supplies scales were scarce for both P-O and P-G fit. Items were adjusted from scales measuring P-J needs-supplies fit to measure P-O needs-supplies fit.^{15,68,80} P-G needs-supplies items were derived from surveys with different formats (eg, “How well do you feel your group understood and listened to you?”⁸³ altered to “I feel that my work group understand and listen to me”). Additional items were derived from the “Experienced meaningfulness of the work” scale from Hackman and Oldham,¹³⁹ which is conceptually aligned with needs-supplies fit.^{139,140} Although outside the realm of fit literature, parts of this scale have been successfully applied in past P-G fit studies, so its use was deemed acceptable in this study.¹⁴¹

3.2.1.5 Measures of demands-abilities fit

Due to the assumption that individuals are hired as they can fulfil the role,⁶⁰ demands-abilities fit has rarely been studied. The Cable and DeRue⁶⁸ P-J demands-abilities items were altered to measure P-O demands-abilities fit. P-G demands-abilities fit items were derived from Seong et al²⁵ and altered for the current study.

3.2.1.6 Staff outcomes items

Single-item measures of staff outcomes were considered, as past studies have reported that they may be acceptable,¹⁴² and have been widely used to measure stress at work.¹⁰¹ However, it has been argued that they may oversimplify outcome measures.¹⁴³ Hence, multiple items were used in the current study to make the results more generalizable to other contexts.¹⁴⁴ The final survey items are in **Appendix D**.

The Job Satisfaction section of the Job Diagnostic Survey (JDS) consisted of five items, three of which related to the individual's feelings about their job, and two that measured satisfaction indirectly by asking what their perceptions were of the satisfaction levels of "most people".¹³⁹ The scale has been previously validated in a mental health setting.¹³⁹ For this study, the last two items were excluded to prevent confounding of results with perceptions of the fit of other co-workers, and the remaining three were used.⁹¹

Burnout is measured by a variety of surveys, but the most common in fit research is the Maslach Burnout Inventory (MBI),^{1,2,14} which has also been validated in an internet survey context.¹³¹ The original survey consisted of 22 items measuring three sub-scales; emotional exhaustion, depersonalization, and personal accomplishment.² For the current study, "personal accomplishment" items were not suitable as they were tailored only towards clinical staff.² These items were excluded, and it was anticipated that burnout could still be effectively measured with 10 items from the remaining two sub-scales (emotional exhaustion and depersonalisation). This decision was justified as the altered two sub-scales have been successfully applied to measure burnout in past studies.^{88,145}

The General Health Questionnaire (GHQ)¹⁴⁶ has been widely used to measure work stress, and has been validated in a mental health context.¹⁴⁷ For this survey, where busy participants are volunteering their time, the GHQ-12 was used, with only one alteration ("many things stressful" was replaced by "stressful" as it was deemed confusing in the context of this survey).

3.3 Survey data analysis

Obtaining the necessary sample size

A sample size was targeted which would be adequate for both confirmatory factor analysis (CFA) and multiple regression analysis (MRA). The sample size necessary for an adequately powered CFA is widely debated. Some researchers suggest minimum sample size can be derived by multiplying the number of variables by a factor, whilst others recommend a numerical minimum, ranging from 100-1,000 participants.¹⁴⁸ For this research field, where the number and type of variables present was ambiguous, a numerical minimum was deemed more appropriate. Hence, based on the recommendations of commonly accepted rules-of-thumb,¹⁴⁹ a minimum sample size of 100 participants was targeted for the CFA responses.

For MRAs, there are also various sample size rules-of-thumb. Unfortunately, most

of these rely on knowledge of the number of independent or predictor variables,¹⁵⁰ but because of the nature of factor analysis, this was not verified until after the CFA was conducted. As a basis, it was assumed that there would be eight independent or predictor variables (supplementary, complementary, needs-supplies and demands-abilities fit for both P-O and P-G fit). Schmidt^{150,151} suggested a minimum 15-to-1 ratio of participants to predictors, which would yield a target minimum sample size of 120 participants. Another rule-of-thumb suggested $N \geq 50 + 8m$ (where $m = 8$ for the current study),^{150,152} which equates to 114 participants. Hence, the current study aimed for a minimum sample size of 120 participants, to adequately power both the CFA and MRA.

Analysis of the measurement instruments

3.3.1.1 Reliability

For this study, Cronbach's Alpha (α) was used to measure reliability.¹⁵³ Although there is no universal consensus on what indicates an "acceptable" level of reliability, this thesis used widely regarded cut-off values as a guide. Thus, alpha values greater than 0.70 were considered as satisfactory, and .80 as excellent.¹⁵⁴

3.3.1.2 Factor structure

For quantitative analysis, data was imported into PRELIS and subsequently analyzed using LISREL 9.30.¹⁵⁵ A series of CFAs were conducted to test **H1** and **H2**, whereby *it was hypothesised that needs-supplies fit and demands-abilities fit would be sub-factors of complementary fit in the P-O and P-G fit factor structure; and that this will be psychometrically strong in terms of its factor structure and reliability.* Multiple CFAs were conducted, including those with first- and second-order factors (see **Figure 3.2**).¹⁵⁶

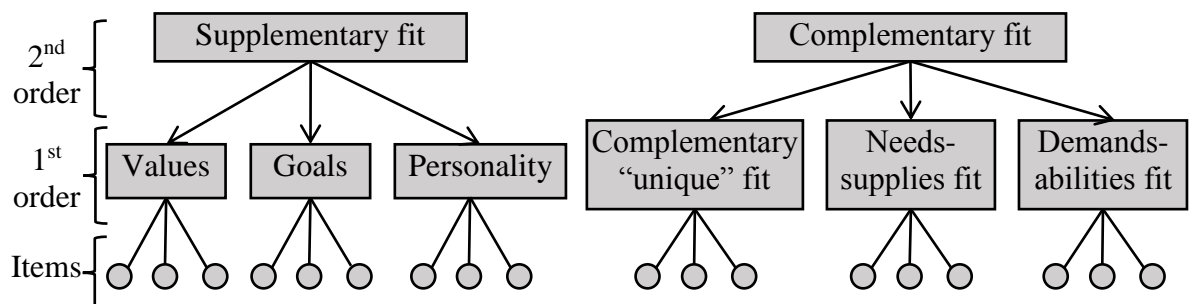


Figure 3.2. Illustration of the relationship between items, first- and second-order latent factors in CFA

Values=Value congruence; Goals=Goal congruence; Personality=Personality congruence.

A series of CFAs was conducted in accordance with the steps in **Table 3.3**. The fit of the first-order model (including no second-order factors) was termed the “target model” as it provided the optimum goodness-of-fit statistics. By comparing the goodness-of-fit indices between first- and second-order models, the presence of parsimony was determined.¹⁵⁷ This is discussed further in **Chapter 4**.

Table 3.3. Methodology for Confirmatory Factor Analyses

Step ^a	Details of methodology
1. Development of theoretical model	In this thesis, the theoretical model was introduced in Chapter 1 . The CFAs tested the factor structure of P-O and P-G fit, in accordance with H1 and H2 .
2. Construction of path diagram, then conversion to a set of structural and measurement equations	A path diagram was constructed in LISREL. Each survey item loaded onto one latent factor, and all other correlations and residuals for each measured variables are constrained to zero. ¹⁵⁸ The unit variance identification (UVI) method was used to fix the variance of each latent variable at 1.00. Syntax was then produced for each model.
3. Assessment and identification of the model	At least three items were mapped onto each latent construct. This means that the latent factors with three items were <i>just identified</i> and those with four were <i>overidentified</i> (see Methodological and Statistical Glossary). These models are preferred for structural equation modeling (SEM). ³¹
4. Evaluation and interpretation of results for goodness-of-fit	Because of the comparison between models as well as the validation of models, several types of fit indices were evaluated.
5. Modification of the model (if theoretically justified)	When the most appropriate model was selected, theoretically justified changes were made to the modification indices. Through this method, the goodness-of-fit statistics were further improved through analysis and alteration of modification indices and residuals, which gave indication that if certain parameters were freely estimated, a better fitting model could be produced. ¹⁵⁹ The suggested changes, where theoretically justifiable, were entered sequentially into the <i>a-priori</i> CFA.
6. Final model produced	Two final models were obtained, one for P-O fit and one for P-G fit. The correlations and residual statistics of these models were discussed. Factor correlations could be useful in indicating the distinctiveness between factors, and the

Step ^a	Details of methodology
	residual error variances indicated the proportion of score variance in the first-order factors that could not be explained by the second-order factors. ¹⁵⁹

^aSteps are based on Reisinger et al.¹⁶⁰ and Hair et al.³¹

Steps 1-4 were repeated for all CFAs and compared to determine the model with the best fit in comparison to the “target” first-order model. When a final model was selected, Steps 5-6 were conducted on those models only.

A variety of goodness of fit statistics were examined to assess and compare model fit. For the Tucker-Lewis Index (TLI) (also called the non-normed fit index (NNFI)) and the Relative Non-centrality Index (RNI), values between 0.90 and 0.95 indicated acceptable and excellent fit respectively;¹⁶¹ and for the root-mean-square error of approximation (RMSEA) and the Standardized Root Mean Square Residual (SRMR), values of ≤ 0.05 ¹⁶² and ≤ 0.08 ¹⁶³ were classified as ideal and acceptable, respectively.^{164,165} For the chi-square statistic (X^2), a good model fit would provide an insignificant result ($\geq .05$).¹⁶⁵ In the X^2/df ratio,¹⁶⁵ values between 2-4 were considered acceptable.¹⁵⁶ The Akaike Information Criterion (AIC) was presented to compare second-order models in this thesis as it can be used to compare non-nested models.¹⁶⁶ Lower AIC scores indicated better fit when comparing models.

3.3.1.3 Missing data

In the survey data, 15.0% and 25.6% of item results were missing for the P-O fit CFA and P-G fit CFA, respectively. As missing data reduces the power and complicates the analysis of a study, data cleansing techniques were applied in a way that reduced bias and increased the representativeness of samples.¹⁶⁷ In the early data cleansing process, participants who had answered less than 50% of the survey questions of interest (eg, only answered demographic information and did not complete the remainder of the survey) were excluded listwise, as this has been illustrated as the most effective simple missing data technique for factor analysis.¹⁶⁸

For the remaining missing data items in the relatively complete data set, listwise deletion would have resulted in a significantly decreased sample size. This was an unacceptable trade-off for CFA and MRA, which required a large sample size for significant results. Missing data substitution techniques (eg, mean substitution, regression substitution) were considered, but these techniques have negative consequences when using programs such as LISREL.¹⁶⁹ Instead, the Expectation Maximization (EM) algorithm

was used to provide Maximum Likelihood (ML) estimates, offering a more sophisticated and accurate data substitution technique to estimate the value of the missing data.¹⁷⁰ This was the most appropriate method for the current data as, although the data is not missing completely at random (MCAR) according to Little's MCAR test, the level of missing data was low and the data was assumed to be missing at random (MAR).¹⁷¹ This EM was undertaken in IBM SPSS Version 24¹⁷² to compute missing values at the sub-scale level.

Testing the relationship of fit and staff outcomes

To test **H3-H5**, hierarchical MRAs were conducted. This allowed variables to be entered on different steps of the regression, and the independent variability accounted for on each step could be analysed. Thus, the variability of fit (entered on Step 2 of the regression) could be measured over and above the variability in outcomes accounted for by demographic characteristics (entered on Step 1). The assumptions of the MRA (normality, linearity and homoscedasticity of residuals, multicollinearity, and a lack of univariate and multivariate outliers) were tested prior to the analyses.

Data screening allowed the identification of outliers and extreme scores, which have been known to distort the results of parametric tests.^{152,168,173} Data transformations were not applied as they could affect relationships between variables and the hypotheses being tested.¹⁶⁸ Rather, outliers and extreme scores were identified through a visual study of boxplots and histograms. Data adjustment then occurred whereby the scores were altered to still be "extreme", but not to the extent that they skewed the results. Thus, the scores were altered to the mean score ± 2 standard deviations, as is common practice in MRA analyses to prevent the unnecessary skewing by extreme scores.¹⁶⁸

After this, composite scales were computed for each component of fit being measured, based on the means of the included items from the final CFA models. Computing mean scores was deemed the most appropriate method based on the equal number of items in each latent factor,¹⁷⁴ and the fact that it increases the researcher's control over the scale and analyses, and fosters easier interpretation.¹⁷⁵ To test **H5**, interaction terms were produced between the products of the variables in question, and these variables were centred (converted into deviation scores from the mean) to avoid multicollinearity.^{152,176}

To account for the inflated familywise error (FWE) caused by computing multiple tests, *post hoc* adjustments were made through the Bonferroni adjustment.¹⁷⁷ Based on the

12 tests to be conducted with this data, the new alpha value for each test was $\alpha=.00417$. However, the Bonferroni adjustment is very conservative and is known to increase the probability of committing a Type II error (accepting the null hypothesis when there is a statistically significant result).¹⁷⁸ Hence, as is often encouraged, significance was discussed in relation to both adjusted ($\alpha=.00417$) and non-adjusted ($\alpha=.05$) alpha values.^{178,179}

3.4 Qualitative methods

The addition of a qualitative component to the study added a way to reduce the systemic bias in data. Specifically, the current methods tested the consistency of findings generated by different data collection methods (termed *methods triangulation*).³⁵ Qualitative methods are not often employed in fit research,⁷³ which is concerning as all quantitative fit measures assume that individuals are aware of and able to consciously express their ability to fit within their organisation,⁷³ but some researchers have argued that this awareness may be held at a sub-threshold conscious level.⁷³ If so, then qualitative methods of data collection and analysis may allow deeper access to this information.^{72,73}

Survey extended response item development

Five optional extended response questions were developed for the conclusion of the survey, as listed in **Appendix C**. The first question asked how the individual perceives “fit”, in order to elucidate what components of fit were identified. The next three questions were based on each staff outcome, and the last question was open for the participants to add detail to be brought to the researcher’s attention. These data were analysed using thematic analysis (see **3.5** for details).

Semi-structured interviews

The follow-up interviews were an opportunity to build on the ideas developed from the extended response questions.³⁴ A minimum sample size for the follow-up interviews was not rigid. Rather, the researcher continued to increase the sample size until thematic saturation was reached, whereby no additional themes were identified (see **Methodological and Statistical Glossary** for more detailed definition).⁷² It was expected that a small number of interviews (5-10 half an hour interviews) would be required to validate the ideas and themes.

Interview questions were based on concepts that warranted further exploration from the preliminary survey analysis, and were developed using the guidelines of Turner et al¹⁸⁰ and Fylan¹⁸¹ for developing open-ended semi-structured interview questions. In preparing for these interviews, non-leading interview questions and follow-up items were developed (prior to any data analysis) and refined (based on extended survey responses).¹⁸⁰ In this process, the researcher also reflected upon reflexivity,³³ which is reported in the analysis. The final interview questions are in **Appendix E**.

Interviews were conducted over the phone. This medium was chosen because the results are comparable to face-to-face interviews in a health context, even when discussing “difficult” topics such as mental health.¹⁸² Practically, this meant that participants could register their interest in participating from all over Australia. The interviews were on average 26 minutes in duration (20-34 minutes), and were audio recorded, with permission from the participants, and professionally transcribed verbatim. Integrity checks were then conducted and the transcripts were coded in NVIVO¹⁸³ software.

3.5 Thematic analysis

Thematic analysis was an appropriate method for the current study as it is applicable to different types of data,¹⁸⁴ such as the extended response and interview transcripts of this thesis. There are many methods of thematic analysis, including the Framework Method,¹⁸⁵ Hybrid Approach,¹⁸⁶ Content Analysis,¹⁸⁷ and the Six Phase Approach.¹⁸⁸ This thesis used an analysis tailored for the current study, (see **Figure 3.3**) drawing on the strengths of these models.

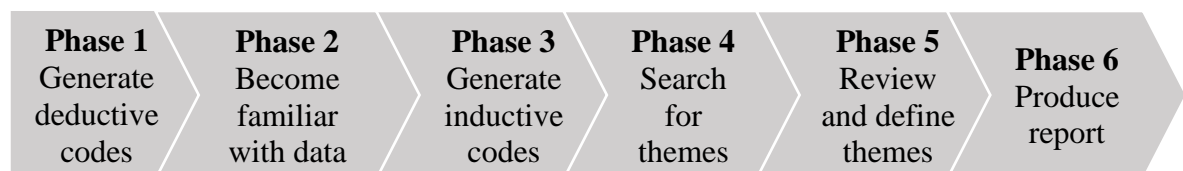


Figure 3.3. Process of thematic analysis

Author's conceptualisations, modified from Braun and Clarke¹⁸⁸ and Fereday et al.¹⁸⁶

It was anticipated that the survey open-ended questions would provide the basis for a more specific investigation in the follow-up interviews. Thus, data analysis involved the initial development of an *a-priori* codebook in which codes were developed based on the P-O and P-G fit paradigms (deductive coding; see **Appendix F**).^{186,189} Coding also involved the researcher remaining open to the occurrence of new themes relating to fit (inductive

coding; see **Chapter 5** for further information). This method, termed hybrid thematic analysis, allowed the exploration of concepts in greater complexity and depth.

3.5.1.1 A hybrid approach to thematic analysis

In the first phase of thematic analysis for this thesis, the theory driven codes were developed. In phase 2, the researcher read the extended response online answers and became familiar with the data. Data-driven codes were then developed (phase 3). In phase 4, a series of mind-maps were developed to assist in identifying potential themes, which were then reviewed (phase 5) in a draft report. This initial report assisted in highlighting areas for further investigation through the semi-structured interviews.

Following the interviews being conducted, the thematic analysis process was conducted a second time, with some alterations. Phase 1 was already completed in the codes derived from theory and the data-driven codes from the extended response online answers. In phase 2, the researcher performed an integrity check to ensure the accuracy and quality of the transcribed manuscript compared to the original audio file. Corrections were made where errors were identified. The interview manuscripts were then read and initial interview data-driven codes were developed and added to the theory- and survey data-driven codes. Codes were reviewed by KC, and some codes were re-defined. In phase 4 and 5, themes from the survey analysis were reviewed and alterations were made based on the semi-structured interview findings. Ultimately, themes were identified, defined and summarised. The Consolidated Criteria for Reporting Qualitative Research (CPREQ) was used as a guide for the process.¹⁹⁰ The final report was then written (phase 6). For the final report, see **Chapter 5**.

3.6 Ethical considerations of the research

Precautions were taken to ensure the potential ethical risks to participants were minimised. The potential for distress or discomfort was mitigated by emphasising the voluntary nature of participation, and by the presence of optional “distress” questions in the online survey (see **Appendix D**). Additionally, participant stress levels were monitored throughout the follow-up interviews.

Security measures were enforced to ensure anonymity of participants. Survey responses, audio-recordings and interview transcripts were de-identified and stored electronically on a secure, password-protected computer that was accessible only to the

research team. The identities and contact details of participants who registered interest in the follow-up interviews were stored securely and separately to the remaining data.

3.7 Summary and limitations

Utilising both qualitative and quantitative methods allowed a richer, more holistic discussion of the associations and relationships present between different aspects of fit and staff outcomes. Triangulation of data also reduced the risk of systematic error.

Inevitably, there were limitations to the methodology. The need to develop a new survey instrument due to the embryonic nature of the research field created the issue of potentially unexpected results being attributed to poor validity or reliability of the tool itself. The broad nature of the survey extended response questions could also be identified as a limitation of the study, as there was difficulty in reconciling the fit paradigm and outcomes in simple, easy-to-answer questions. At the same time, the methods of semi-structured interviews and thematic analysis often encounter criticism for lacking generalizability or objectivity. The presence of these complementary qualitative methodologies to triangulate results helped minimise these limitations.

CHAPTER 4. QUANTITATIVE FINDINGS: HYPOTHESIS TESTING AND THE GOODNESS-OF-FIT OF FIT MODELS

*“Factor analysis is at the heart of the measurement
of psychological constructs”*

—Nunnally, 1978. p.112-113.¹⁹¹

Overview of Chapter 4

Chapter 4 presents the quantitative findings from the survey data. The results have been organised such that the demographic information about participants is presented first, followed by the factor-structure of each instrument (testing **H1** and **H2**). Following this, a series of MRAs were conducted, and the results are presented (testing **H3**, **H4** and **H5**). The support for each hypothesis is discussed.

Highlights

- The most appropriate factor models for P-O and P-G fit were established through conducting a series of CFAs, which were compared based on a suite of fit statistics.
- Hierarchical MRAs were conducted with the items in the validated models, in order to test **H3**, **H4** and **H5**.
- From the analyses, **H1** and **H3** were supported. **H2** and **H4** were partially supported and **H5** was rejected. Each of these is discussed in turn.
- The results offer insights into the relationships between the P-O and P-G fit with each other, and with staff outcomes.

Schema of the flow of the thesis

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

4.1 Participant demographics

The number of participants differed for each section of the statistical analysis, based on the completeness of the information. See **Figure 4.1** for further details.

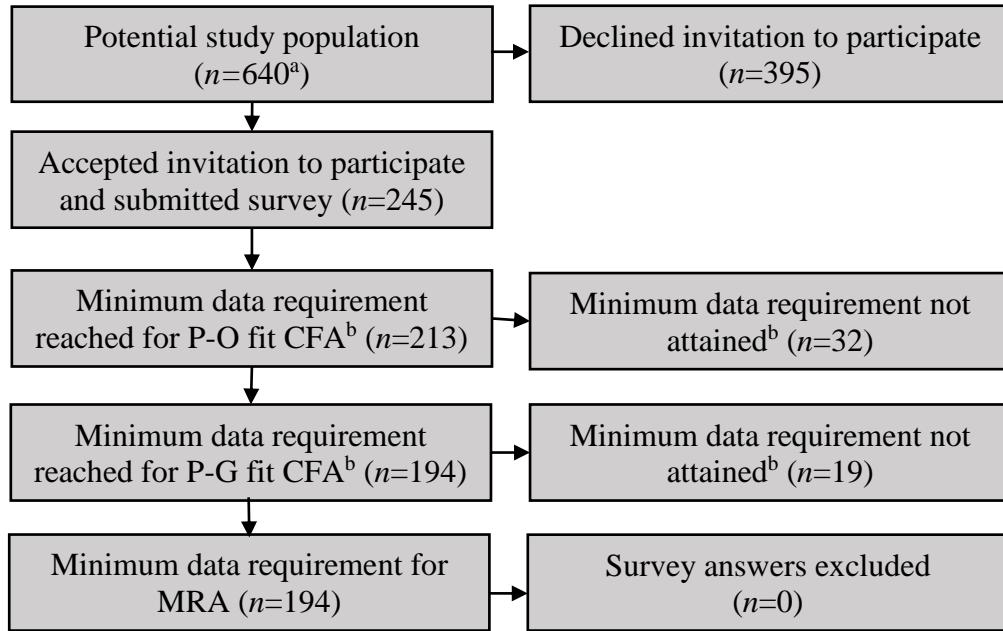


Figure 4.1. Recruitment of participants and data cleansing process

^aStudy potential participants is approximated, based on information provided by each centre.

^bThe minimum data required for confirmatory factor analysis (CFA) was determined to be answering majority of the questions (over 50%) for that measure. If this cut-off was attained, the remainder of items were estimated through the Expectation Maximization (EM) algorithm to attain Maximum Likelihood (ML) estimates. Hence, the P-G fit CFA had less participants because these questions were after the P-O fit questions in the survey, and was thus subject to an increased dropout rate.

CFA=confirmatory factor analysis.

MRA=multiple regression analysis.

Participants varied in demographic characteristics (see **Table 4.1**). They had a wide variety of backgrounds, including different genders, roles in the organisation, age groups and length of time at the centre. Participants also had different definitions of what classified as their “work group”. There was also a wide range of answers to each suite of items in the survey. This is evident in **Table 4.2** below, which reports the descriptive statistics of the sample.

Table 4.1. Summary of participant demographic characteristics and work group affiliation

Demographic question	Item	Frequency ^a	Percentage (%)
Role in organisation	Administrative staff	34	16.0
	Clinical staff	118	55.4
	Management	23	10.8
	Volunteer	4	1.9
	Other	34	16.0
Gender	Male	41	20.9
	Female	151	77.0
	Prefer not to answer	4	2.0
Age group (years)	18-29	57	29.1
	30-39	63	32.1
	40-49	49	25.0
	50-59	22	11.2
	60 or older	5	2.6
Length of employment at organisation	Less than 1 month	5	2.3
	1-3 months	13	6.1
	3-6 months	28	13.1
	6-12 months	36	16.9
	1-2 years	54	25.4
	2-5 years	58	27.2
	More than 5 years	19	8.9
Classification of what constitutes the participant's work group	People in my headspace cluster ^b	17	8.6
	People in my headspace centre	125	63.5
	A smaller group within the headspace centre	44	22.3
	I work independently	8	4.1
	Other	3	1.5

^aThe percentage is calculated only for those who answered the questions. Hence, although the percentages will add up to 100%, the frequency scores do not add to the total number of participants ($n=213$) in the age and gender demographic questions. This can be attributed to dropouts as these questions, deemed less vital for the research, were placed at the end of the online survey.

^b“Cluster” is a term used by the organisation being studied to describe a group of centres. These centres are often geographically close together, and may be run by the same lead agency.

Table 4.2. Descriptive statistics for fit and outcome variables

Variable	N	Average score		Mean ^a	Standard deviation ^a
		Minimum	Maximum		
P-O Value congruence	213	2	7	5.80	0.94
P-O Goal congruence	213	2	7	5.73	0.87
P-O Personality congruence	213	2	7	5.64	0.89
P-O Complementary fit	213	1	7	4.71	1.16
P-O Needs-supplies fit	213	1	7	5.43	1.16
P-O Demands-abilities fit	213	1	7	5.87	0.87
P-G Value congruence	194	2	7	5.55	0.91
P-G Goal congruence	194	2	7	5.43	1.05
P-G Personality congruence	194	2	7	5.52	0.90
P-G Complementary fit	194	1	7	5.07	1.08
P-G Needs-supplies fit	194	2	7	5.68	0.97
P-G Demands-abilities fit	194	2	7	5.87	0.77
Satisfaction scale	197	2	6	4.59	0.48
Burnout: Emotional exhaustion	197	1	7	3.03	1.40
Burnout: Depersonalisation	197	1	7	2.44	1.20
Stress at work scale	195	1	4	2.07	0.45

^aRounded to two decimal places as necessary.

4.2 P-O fit confirmatory factor analyses

Factor structure

The CFAs were conducted in three stages to identify the most suitable factor model.¹⁵⁶ In the first stage, the “target” model statistics were established by conducting a CFA with only first-order latent factors. The high correlations between the first-order latent factors (eg, 0.97 between value and goal congruence) suggested it was appropriate to explore the potential applicability of second-order models.¹⁹² The second-order factor models 2-5 (whose first- and second-order factors are illustrated in **Figure 4.2**) were then tested for their goodness-of-fit compared to the target model.

The difference in the goodness-of-fit statistics was negligible between the first- and second-order models, suggesting parsimony (**Table 4.3**).¹⁵⁷ This perpetuates the theoretical

ambiguity introduced in **Chapter 1**, as multiple models may be valid. To determine which second-order model provided the best approximation of the data, the X^2/df ratio was used.¹⁵⁷ Model 4 was excluded based on this ratio, as well as its high RMSEA compared to the other Models. The Akaike Information Criterion (AIC) was then used to compare Models 2, 3 and 5 on their improvement over the competing models. Model 5 had a lower AIC value than Models 2 and 3.¹⁵⁷ Thus, **H1.1** was supported by the results, as it was found that needs-supplies and demands-abilities fit were sub-factors of complementary fit in the P-O fit factor structure.

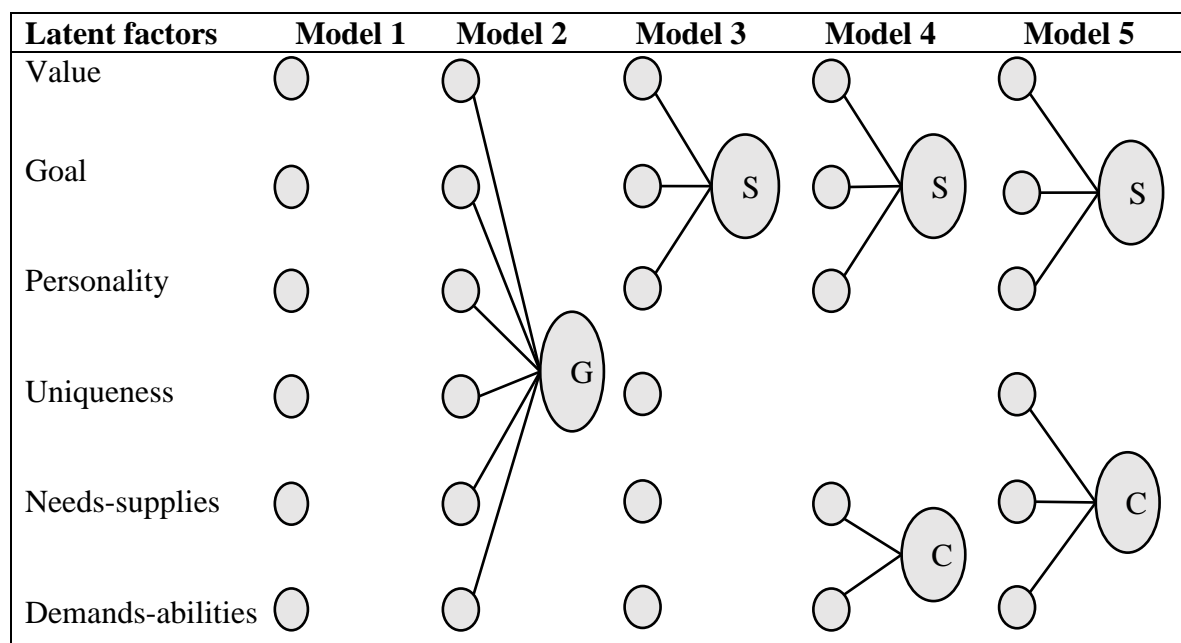


Figure 4.2. Illustration of the second-order models to be tested in the P-O CFA

G= General latent factor; S=Supplementary fit; C=Complementary fit.

Small circles represent first-order latent factors; larger circles represent second-order latent factors.

Model 3 and Model 4 correspond to **Figure 1.4** and **Figure 1.3** respectively. Model 2 and Model 5 are the authors' conceptualisations based on an understanding and synthesis of fit literature.

The goodness-of-fit of Model 5 was subsequently further improved through alteration of modification indices which, where theoretically justifiable, were entered sequentially into the *a-priori* CFA. Alterations included freeing the error covariance between POV2 and POV3; POG2 and POG4; PON2 and PON3; and POD2 and POD3. Ultimately, this CFA yielded a chi-square of 251.46 (df=124), a TLI of 0.940, RFI of 0.890, RMSEA of 0.071, and SRMR of 0.0508 (see **Table 4.3**, and for final factor structure, loadings and items, see **Appendix G**). The high covariance between second-order latent variables (.83) suggested that both sub-scales were indeed part of the same P-O fit scale. The goodness-of-fit

statistics provided moderate support for the psychometric strength of the P-O fit factor structure, which supported **H1.2**.

Table 4.3. P-O CFA results

Model	df	χ^2/df	RMSEA	RFI	TLI	SRMR	AIC
<i>“Target” Model 1</i>	120	2.695 ^a	0.0892	0.856	0.905	0.052	6647.587
Model 2	129	2.709 ^b	0.090	0.856	0.904	0.063	6655.734
Model 3	126	2.971 ^c	0.096	0.842	0.889	0.121	6686.598
Model 4	84	4.011 ^d	0.119	0.832	0.869	0.070	5932.777 ^g
Model 5	128	2.613 ^e	0.087	0.861	0.087	0.056	6642.653
Modified Model 5	124	2.045 ^f	0.071	0.890	0.940	0.051	6569.868

RMSEA=Root Mean Square Error of Approximation; RFI=Relative Fit Index; TLI=Tucker-Lewis Index; χ^2 =chi-square; SRMR=Standardized Root Mean Square Residual; AIC= Akaike Information Criterion.

^a χ^2 =323.34; ^b χ^2 =349.48; ^c χ^2 =374.35; ^d χ^2 =336.89; ^e χ^2 =334.40; ^f χ^2 =251.46.

^gThe AIC of Model 4 cannot be compared to the other models as there is one less first-order latent variable.

In addition, it was useful to look at the factor correlations for further information about the data. The correlations ranged from 0.350 to 0.817, and over 50% of the correlations were less than 0.5 (see **Table 4.4**). As expected, the highest correlations occurred between value, goal and personality congruence, hypothesised components of supplementary fit. This suggests satisfactory discrimination between the factors, supporting the results of the CFA.

Table 4.4. Correlations for the P-O fit scale

	Val	Goal	Pers	Comp	Needs	Dem
Val	1.0	0.817	0.648	0.350	0.663	0.431
Goal		1.0	0.619	0.427	0.659	0.493
Pers			1.0	0.431	0.588	0.473
Comp				1.0	0.436	0.352
Needs					1.0	0.550
Dem						1.0

Val=Value congruence; Goal=Goal congruence; Pers=Personality congruence; Comp=Complementary fit; Needs=Needs-supplies; Dem=Demands-abilities.

It was also important to evaluate the residual statistics of the first-order factors. Inspection of the residual variances indicated that the factors accounted for approximately 63% of the true score variance in supplementary fit items, and 64% of the true score variance in

complementary fit items (see **Appendix G** for all error variances). In all of the factors, with the exception of item POD2 (error variance=0.56), the second-order factor explained more than half of the true score variance, which was deemed exceptional.¹⁵⁹ This justified that, although the fit statistics themselves indicated modest fit, the model was rigorous in accounting for the variance of first-order factors.

Internal consistency estimates

Internal consistency estimates of the first- and second-order latent factors were also examined (**Table 4.5**). Internal consistency estimates ranged from satisfactory to excellent (range = .770 to .921). Overall, these scores provided reasonable support for the reliability of the P-O responses, so **H1.3** was supported. For further details, see **Appendix G**.

Table 4.5. Reliability statistics for P-O latent factors

	P-O factor	Cronbach's alpha	Mean inter-item correlation	No. of items
2 nd order factors	Supplementary fit	.921	0.614	9
	Complementary fit	.845	0.619	9
	Mean reliability score	.883		
1 st order factors	Value congruence	.857	0.669	3
	Goal congruence	.807	0.586	3
	Personality congruence	.809	0.588	3
	Uniqueness	.770	0.528	3
	Needs-supplies	.890	0.737	3
	Demands-abilities	.814	0.594	3
	Mean reliability score	.825		

4.3 P-G fit confirmatory factor analyses

Factor structure

As with P-O fit, the first-order P-G fit model was established first to gain baseline “target” statistics. However, unlike with P-O fit, multiple first-order models were tested (**Table 4.6**) as there was less of a theoretical basis for which first-order model was most appropriate.

Table 4.6. Comparison of the first-order P-G fit models tested with CFA

First-order factors	Model A	Model B	Model C	Model D
Value	X	X	X	X
Goal	X	X	X	X
Personality	X	X	X	X
Uniqueness	X	X	X	X
Needs-supplies	X	X		
Demands-abilities	X		X	

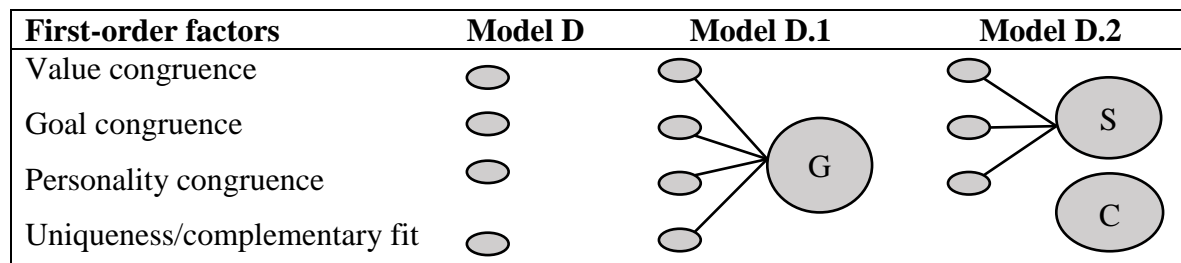
Value=Value congruence; Goal=Goal congruence; Personality=Personality congruence.

“X” indicates that the first-order factor is present in the model.

Source: Author’s conceptualisations.

The fit statistics from the first-order CFAs were compared to determine which model yielded the most appropriate “target” statistics. Model D appeared to be the most suitable, with the smallest RMSEA (0.099) (see **Table 4.7**). This model aligned with previous literature, which did not include needs-supplies and demands-abilities items.^{25,82} Thus, **H2.1** (*it was hypothesised that needs-supplies fit and demands-abilities fit would be sub-factors of complementary fit in the P-G fit factor structure*) was only partially supported, as the P-G fit measure included supplementary and complementary components, but not needs-supplies and demands-abilities P-G fit components.

Further to this first-order analysis, two second-order factor models (Model D.1 and D.2; see **Figure 4.3**) were tested for parsimony with Model D. From the results, it appears that both Model D.1 and D.2 provided a comparable representation of the data. To further differentiate between the two models, the modification indices were examined, and the error variance between the items PGG1 and PGG2 was freed on each model (to create modified Model D.1 and modified Model D.2 respectively).

**Figure 4.3. Second-order P-G models being tested**

S=Supplementary fit; C=Complementary fit; G=P-G general factor.

The small circles are first-order latent factors, and the larger circles are second-order latent factors.

With these modifications, the two models still had comparable goodness-of-fit statistics, with modified Model D.1, seeming to be a better fit. However, the mapping of

complementary fit onto the general P-G factor in modified Model D.1 was low (0.42). Moreover, on examination of the error variances, it appeared that modified Model D.2 accounted for slightly more of the true scores for the items than modified Model D.1 (for example, 4% more of the true score for item PGC1 is accounted for by Model D.2). Furthermore, there was one more latent factor in modified Model D.2 than in modified Model D.1, which accounted for the slightly inflated AIC value (AIC = 3797.192). Thus, modified Model D.2 was selected as the most appropriate model as it provided the most theoretically nuanced version of the data.

Table 4.7. Comparison of the goodness-of-fit of P-G fit models

	<i>df</i>	<i>X²/df</i>	RMSEA	RFI	TLI	SRMR	AIC ⁱ
Model A	120	3.582 ^a	0.115	0.827	0.869	0.061	6345.180
Model B	80	3.411 ^b	0.111	0.857	0.895	0.062	5634.130
Model C	80	3.341 ^c	0.110	0.862	0.899	0.059	4516.864
<i>“Target” Model D</i>	48	2.909 ^d	0.099	0.900	0.932	0.059	3798.971
Model D.1	50	3.037 ^e	0.102	0.895	0.927	0.064	3807.188
Model D.2	50	3.037 ^f	0.102	0.895	0.927	0.064	3807.188
Modified Model D.1 ^j	48	2.635 ^g	0.092	0.909	0.942	0.058	3785.819
Modified Model D.2 ^j	49	2.854 ^h	0.098	0.902	0.934	0.063	3797.192

RMSEA=Root Mean Square Error of Approximation; RFI=Relative Fit Index; TLI=Tucker-Lewis Index; X²=chi-square; SRMR=Standardized Root Mean Square Residual; AIC= Akaike Information Criterion.

^aX²=429.86; ^bX²=272.84; ^cX²=267.25; ^dX²=139.61; ^eX²= 151.83; ^fX²=151.83; ^gX²=126.46; ^hX²=139.83.

ⁱAIC of Models A-C were added for completeness, but are not compared.

^jRefer to **Figure 4.3** for the factor structures of Modified Model D.1 and Modified Model D.2.

Subsequently, the factor correlations (**Table 4.8**) were examined. They indicated, as expected, high correlations between value, goal and personality congruence, but distinctness from complementary fit, with all correlations <0.4, which provided evidence for the distinctness of factors. Thus, **H2.2** (*it is hypothesised that the P-G fit factor structure will be psychometrically strong*) was supported.

Table 4.8. Correlations for P-G fit factors

	Val	Goal	Pers	Comp
Val	1.0	0.806	0.763	0.374
Goal		1.0	0.686	0.338
Pers			1.0	0.377
Comp				1.0

Val=Value congruence; Goal=Goal congruence; Pers=Personality congruence; Comp=Complementary fit.

The residual error variances of modified Model D.2 indicated that this model provided the best fit to the data overall. The second-order factor of complementary fit accounted for 62% of the true scores in P-G complementary fit items, and the supplementary fit second-order factor accounted for 73% of the variance in value, goal and personality congruence items. Moreover, none of the residual error variances were over 0.40, indicating that the model is exceptional at accounting for item variance. For error variances of each item, see **Appendix G**.

Internal consistency estimates

The reliability of the final P-G fit model was tested. The reliability scores of the items were good to excellent, so **H2.3** (*it is hypothesised that the P-G fit factor structure will be psychometrically strong in terms of its reliability*) was supported (see **Table 4.9** and **Appendix G**).

Table 4.9. Reliability of first-order P-G items

	P-G factor	Cronbach's alpha	Mean inter-item correlation	No. of items
2 nd order latent factors	Supplementary fit	.926	0.799	9
	Complementary fit	.796	0.379	3
	Mean reliability score	.861		
1 st order latent factors	Value congruence	.849	0.658	3
	Goal congruence	.812	1.042	3
	Personality congruence	.869	0.697	3
	Mean reliability score	.843		

4.4 Summary of reliability and CFA results

The factor structure of each instrument was identified. Consistent with **H1.1** and **H1.2**, the factor structure of P-O fit was found to include all identified *a-priori* factors in the hypothesised latent structure. The goodness-of-fit indices for each model suggested reasonable fit, and the items had consistently high factor loadings. **H2.1** was partially supported, as the best CFA model of P-G fit included only four of the six hypothesised latent components. However, when this was tested psychometrically, there was found to be a good fit of the model, which supported **H2.2**. The factor correlations also showed satisfactory discrimination between the scales.

For each item, internal consistency reliability estimates were good, with the possible exception of Uniqueness in the P-O fit scale and Complementary fit in the P-G fit scale, which both scored acceptable reliability (see **Appendix G** for final items). Thus, the results demonstrated that the sub-scales were reliable measures of fit, supporting **H1.3** and **H2.3**.

Finally, an analysis was completed on the entire scale, including both P-O and P-G sub-scales. Based on published the methods in literature that has measured multiple sub-scales of P-E fit in the one study, there was no final CFA conducted including all sub-scales.⁸⁰ Rather, the relations amongst the measures are reported. The correlations amongst the ten factors are presented in **Table 4.10**.

Table 4.10. Correlations amongst the 10 factors

	POV	POG	POP	POC	PON	POD	PGV	PGG	PGP	PGC
POV	1.0									
POG	0.817	1.0								
POP	0.648	0.619	1.0							
POC	0.350	0.427	0.431	1.0						
PON	0.633	0.659	0.588	0.436	1.0					
POD	0.431	0.493	0.473	0.352	0.550	1.0				
PGV	0.504	0.518	0.491	0.384	0.367	0.353	1.0			
PGG	0.380	0.485	0.356	0.221	0.340	0.320	0.806	1.0		
PGP	0.373	0.367	0.582	0.283	0.279	0.297	0.763	0.686	1.0	
PGC	0.176	0.244	0.227	0.434	0.173	0.259	0.374	0.338	0.377	1.0

POV=P-O value congruence; POG=P-O goal congruence; POP=P-O personality congruence; POC=P-O complementary/uniqueness items; PON=P-O needs-supplies fit; POD=P-O demands-abilities fit; PGV=P-G value congruence; PGG=P-G goal congruence; PGP=P-G personality congruence; PGC=P-G complementary/uniqueness fit.

Correlations ranged from 0.173 to 0.817, and although some of the correlations were moderate, none approached 1.0. The highest correlations were between P-O value and goal congruence ($r = 0.817$), and between P-G value and goal congruence ($r = 0.806$). Conceptually, these high correlations were explained by previous research that has suggested high correlations between these aspects of supplementary fit. More importantly, the low correlations between the items in different CFAs (P-O factors versus P-G factors) suggested satisfactory discrimination between the factors of the different sub-scales.

4.5 Multiple regression analysis

Hierarchical MRAs were conducted to test if the components of P-G and P-O fit were significantly associated with staff outcomes. To test these hypotheses (**H3-H5**) MRAs were performed using IBM SPSS Statistics Version 24.¹⁷²

Prior to interpreting the MRA results, the assumptions inherent in MRAs were evaluated using SPSS Statistics. First, stem-and-leaf plots and boxplots indicated that each variable in the regression was normally distributed, with only minor deviations. The boxplot indicated the presence of univariate outliers and extreme scores. As MRA are sensitive to outliers, these were reduced (for further discussion, see **3.3.1.3**).¹⁷³ Next, inspection of the normal probability plot of standardised residuals against standardised residual values indicated that the assumptions of normality, homoscedasticity and linearity of variables were met. Correlations between the dependent variables were not excessive (ie, not exceeding 0.90) and there were relatively high tolerances (defined for this thesis as values <0.1) for all predictors, suggesting multicollinearity was not a concern. Multivariate outliers were assessed using Mahalanobis values. The initial Mahalanobis value was 35.537, which exceeded the critical χ^2 value for $df=10$ (at $\alpha=.001$) of 29.588.^{152,173} Hence, the Mahalanobis distance values of each case were examined. Five multivariate outlier data cases were identified and deleted, as suggested by Hills.¹⁵² Not only did these adjustments fulfil the criteria of MRAs, but also increased the generalizability of the model.¹⁷³ After these adjustments, the new Mahalanobis value was 29.267 ($n=189$), indicating that multivariate outliers were no longer a concern.

For **H3** and **H4**, hierarchical MRAs allowed prediction of the incremental contribution of the fit components beyond the variance accounted for by demographic characteristics.^{168,173} For each hierarchical MRA, Step 1 consisted of the age, gender, and length of stay at the participating centre. This allowed testing of if a significant proportion

of the variance in the factors added in Step 2 were accounted for beyond that accounted for by demographics. In Step 1 of the hierarchical MRA, the demographics collectively accounted for a non-significant 3.4% of the variability in satisfaction ($R^2=.034$, $F(3,184)=2.167$, $p=.93$); 3.0% in emotional exhaustion ($R^2=.030$, $F(3,184)=1.872$, $p=.136$); 6.0% in depersonalisation ($R^2=.060$, $F(3,184)=3.901$, $p=.01$); and 3.4% in work stress ($R^2=.034$, $F(3,184)=2.168$, $p=.93$). Age was the only variable that did account for a statistically significant proportion of the variance in the depersonalisation outcome (a sub-component of burnout) ($p<.001$). On Step 2 of the MRA, the respective fit survey data was added to the regression equation. The R^2 , ΔR^2 and other relevant statistics were reported.

Hypothesis 3

The P-O fit measures (value, goal and personality congruence, complementary, needs-supplies and demands-abilities fit) were added on Step 2 of each of the four regression analyses, and accounted for a statistically significant increase in the variability accounted for by the model in all four outcomes (see **Table 4.11**). Thus, **H3** (*it was postulated that P-O fit would account for a significant proportion of variance in a) job satisfaction, b) burnout [comprising b.1) emotional exhaustion and b.2) depersonalisation], and c) work stress, beyond that already accounted for by age, gender and experience at the centre*) was supported.

Table 4.11. Proportion of variance of outcome measures accounted for by P-O fit measures, adjusted for age, gender and time at the centre.

Variable	R^2	Adjusted R^2	ΔR^{2a}	F (9, 178) ^b	ΔF	p of ΔF
Satisfaction	0.352	0.319	0.318	10.742	14.550	<.001**
Emotional exhaustion	0.270	0.233	0.240	7.302	9.751	<.001**
Depersonalisation	0.327	0.293	0.267	9.622	11.795	<.001**
Work stress	0.225	0.186	0.191	5.755	7.326	<.001**

^a ΔR^2 based on change in the R^2 from Step 1 of the multiple regression analysis.

^bF value based on Step 2 of the hierarchical multiple regression analysis.

**Significant at $\alpha=.00417$ after Bonferroni adjustment.

There were differential results in regards to the relationship of each outcome to the components of P-O fit (see **Appendix H**). The results indicated that needs-supplies fit was the only individually statistically significant component of P-O fit, accounting for a significant proportion of the variance in satisfaction ($p<.001$), emotional exhaustion

($p=.001$) and work stress ($p<.001$). None of the other fit components, and none of the individual fit components for the depersonalisation regression, accounted for a significant proportion of the variance.

Hypothesis 4

H4 was tested with the same methods as for **H3**. In Step 1 of the hierarchical MRA, the demographic characteristics were added, resulting in the equivalent first-level analysis as described in section 4.5. In Step 2, the four components of P-G fit (value congruence, goal congruence, personality congruence and complementary fit) were added. The results (Table 4.12), suggest that **H4** (*it was postulated that P-G fit would account for a significant proportion of variance in a) job satisfaction, b) burnout [comprising b.1) emotional exhaustion and b.2) depersonalisation], and c) work stress, beyond that already accounted for by age, gender and experience at the centre*) was only partially supported, as there was a significant proportion of the variance accounted for in job satisfaction and depersonalisation, but this association was not significant for emotional exhaustion or work stress. However, if the Bonferroni adjustment was not considered, P-G fit accounted for a significant proportion of variation in all outcome measures.

Table 4.12. Proportion of variance of outcome measures accounted for by P-G fit measures, adjusted for age, gender and time at the centre.

Variable	R^2	Adjusted R^2	ΔR^{2a}	F (7, 180) ^b	ΔF	p of ΔF
Satisfaction	0.164	0.132	0.130	5.062	7.020	<.001**
Emotional exhaustion	0.86	0.050	0.056	2.414	2.767	0.029*
Depersonalisation	0.282	0.254	0.222	10.109	13.942	<.001**
Work stress	0.087	0.051	0.052	2.437	2.582	0.039*

^a ΔR^2 based on change in the R^2 from Step 1 of the multiple regression analysis.

^bF value based on Step 2 of the hierarchical multiple regression analysis.

**Significant at $\alpha=.00417$ after Bonferroni adjustment.

*Significant at $\alpha=.05$.

There was also an interesting pattern in the unique contribution of each component of P-G fit when mapped to outcome variables. **Appendix H** indicates that, although the additive components of P-G fit accounted for a significant proportion of the variance in satisfaction, emotional exhaustion and work stress, none of the components individually were significant when the Bonferroni adjustment was used. Only goal congruence accounted for a significant proportion of the variance of depersonalisation ($p=.004$).

Hypothesis 5

Three-step hierarchical MRAs were conducted to test if P-G fit moderated the relationship between P-O fit and the outcome variables. Demographic statistics were entered into Step 1, the main effects of P-O and P-G fit were entered on Step 2, and the interaction product term was entered on Step 3, to test if the interaction effect was beyond that of the main effect of P-O fit and P-G fit. This simplified interaction term for overall fit was appropriate due to the exploratory nature of the study, and to considerations that conducting multiple interaction tests (eg, one hierarchical MRA each for the interaction in P-O and P-G value, goal and personality congruence) would further decrease the Bonferroni adjusted alpha value. Step 1 of the hierarchical MRA suggested that demographics accounted for a non-significant proportion of variability, as reported earlier in 4.5.

In Step 2, the mean P-O fit and P-G fit scores were added to the regression equation. As expected from the results in **H3** and **H4**, the addition of P-G and P-O fit terms accounted for a significant proportion of the variance in the outcomes. Specifically, the addition of P-O and P-G mean scores accounted for 53.4% of the variance in satisfaction ($R^2=.534$. $F(5,182)=14.497$, $p<.001$); 18.1% in emotional exhaustion ($R^2=.181$. $F(5,182)=8.063$, $p<.001$); 32.9% in depersonalisation ($R^2=.329$. $F(5,182)=17.884$, $p<.001$); and 11.9% in work stress ($R^2=.119$. $F(5,182)=4.907$, $p<.001$).

In Step 3, the four tests indicated that there was not a statistically significant increase in the amount of variability accounted for when the interaction term was added to the model. **Table 4.13** suggests that **H5** (*it was hypothesised that the positive relationship of P-O fit with a) job satisfaction, and the negative relationship of P-O fit with b) burnout, and c) stress at work, will be moderated by P-G fit*) was not supported by the results, as the ΔF was not significant at the α level.

Table 4.13. Proportion of variance in the interaction between P-O and P-G fit accounted for in each outcome variable.

Variable	R^2	Adjusted R^2	ΔR^{2a}	$F(6, 181)^b$	ΔF	p of ΔF
Satisfaction	0.278	0.254	0.002	11.620	0.379	0.539
Emotional exhaustion	0.188	0.161	0.006	6.977	1.446	0.231
Depersonalisation	0.329	0.307	0.000	14.822	0.003	0.955
Work stress	0.122	0.093	0.003	4.180	0.598	0.440

^a ΔR^2 based on change in the R^2 from Step 1 of the multiple regression analysis.

^b F value based on Step 2 of the hierarchical multiple regression analysis.

*Significant at $\alpha=.00417$ after Bonferroni adjustment.

4.6 Summary and limitations

Overall, the results offered new insights into the relationship of the components of P-O and P-G fit with staff outcomes. The validity and reliability of the P-O and P-G fit items was reported, and second-order models were validated for each fit measure. The results of the MRAs indicated the presence of a significant association between P-O fit and all measured staff outcomes (satisfaction, emotional exhaustion, depersonalisation, and work stress). Only satisfaction and depersonalisation, however, accounted for a significant proportion of the variance in P-G fit when the Bonferroni adjustment was used. The interaction hypothesis was refuted, which may be attributed to limitations in the P-G fit survey items. Thus, the results offered a foundation for further research.

Limitations included the relatively small sample size for CFA analysis which, when combined with having just-identified latent factors, may have decreased the models' goodness-of-fit.¹⁹³ Although the goodness-of-fit statistics of the models were acceptable, they did not fulfil the strict criterion of the most conservative cut-off values for excellent factor structure.^{156,159} Future studies with a conservative CFA sample size should take this on board and develop further items for each latent factor to minimise the effect of this small sample size.

**CHAPTER 5. QUALITATIVE FINDINGS: “MAYBE STORIES ARE
JUST DATA WITH A SOUL”¹⁹⁴—DR BRENÉ BROWN**

“The value of qualitative description lies not only in the knowledge that can originate from it, but also because it is a vehicle for presenting and treating research methods as living entities that resist simple classification”

—Vaismoradi, Turunen and Bondas, 2013. p.399.¹⁸⁷

Overview of Chapter 5

Chapter 5 details the results and findings from the hybrid thematic analysis conducted on the extended response survey items and follow-up interviews. The content, meaning and findings from the data are discussed. The first theme was based on the individual adapting to their workplace to achieve compatibility. The second highlighted a different mindset in which some participants were adamant they would be their authentic selves in the work environment. The third explored needs-supplies fit, and the ways the environment could support the individual to increase fit. Ultimately, the data suggested the importance of recognising that the individual and environment are not static in their goals, values, skills and desires, but have the capacity for flexibility and adaption.

Highlights

- The three themes derived from the data are detailed, presenting a deeper understanding of needs-supplies fit than was developed from quantitative data alone.
- The follow-up interviews provided a unique opportunity to add richness to the ideas that had been discussed in the survey extended responses.
- The hybrid thematic analysis method allowed the exploration of the utility of the existing framework for P-O and P-G fit, whilst still being open to the existence of other categories, themes or ideas.

Schema of the flow of the thesis

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

5.1 Data analysis

Participants

One hundred and fifty-six participants answered one or more of the five online extended response items. This data provided a good basis for shaping the interview questions.

As detailed in **Chapter 3**, interview participants were added until thematic saturation was reached, as measured by the method of Ando et al.³⁴ A purposive sample of participants was invited to participate in the interview in July 2017. Potential interviewees were selected to maximise the possibility for diversity in responses, such as through variation in age, gender, role, and time worked in the centre.¹⁹⁵ Interview recruitment was conducted in two stages, whereby in each stage additional participants would be emailed and invited to participate. The average response rate from stage 1 (36%) was taken into account for the subsequent recruiting stage. Interviews were coded and analysed as they were completed and transcribed. In this process, data driven codes were developed and added to the *a-priori* theory-driven codes (see **Appendix F**). Overall, only five new codes were added, and these were developed in the coding of the first two interviews only (stage 1). The addition of stage 2 participants and the lack of additional codes illustrated that thematic saturation had been reached, and hence there was no need to recruit additional participants. Ultimately, nine participants over two stages of interview recruitment accepted the invitation to be interviewed.

For simplicity when quoting participants, the following notation has been created (**Table 5.1**). Additionally, any spelling and grammatical errors from survey participants have been corrected.

Table 5.1. Notations used when quoting participants

Abbreviation	Meaning
SR	Survey respondent
IP	Interview participant
EXP	Experience at centre (measured in time worked or volunteered at centre)

Contextual nuances

Context-specific information, although not generalizable, added depth to the findings. For example, some participants had experienced mental health issues in the past, and they identified that working in mental health affected their personal mental health recovery. For

some, this environment was helpful and has “Been and will continue to be, a big part of my wellbeing and my recovery” (SR 204, “other” role, EXP: 2-5 years). Interestingly, working in this environment seemed to aid recovery, and perhaps some participants were motivated to enter the mental health field for that reason. For others, working in this context became an obstacle to personal recovery as “Work stress sometimes interacts with my anxiety in an unhelpful way” (SR 181, clinical, EXP: 1-2 years). Although outside the scope of this thesis to examine these comments, it is worthwhile to view the results in light of these contextual details.

In addition to that detailed in **3.1**, some specifics regarding headspace organisation are useful in framing the results. For example, some participants mentioned that they felt more of a sense of fit with the Lead Agency or funders, rather than the mental health organisation itself. This leads to conceptual questions in the results, such as to what extent the Lead Agency and headspace can be classified as independent. For this thesis, this was not focused upon because the emphasis was on the fit paradigm more generally, not the specifics of its manifestation within headspace.

5.2 Themes and sub-themes

Three themes were derived from the data (**Table 5.2**). Each is discussed in turn, below.

Table 5.2. Themes and sub-themes in the thematic analysis

Theme	Sub-themes
1. Fit as evolution—adapting to place	<ul style="list-style-type: none"> - Adapting to the organisation - Adapting to demands - Adapting to the workplace
2. Being one’s own person	<ul style="list-style-type: none"> - The perfect fit - Resisting pressure to change
3. Fit as a two-way street—place supporting the person	<ul style="list-style-type: none"> - Interpersonal support at work - Feeling valued

Fit as evolution—Adapting to place

5.2.1.1 Adapting to the organisation

For some respondents, fit was adaptive and involved altering their own values, goals or behaviours to align with their organisation. Notably, some participants indicated that fitting in meant “Being happy with taking on the goals and values of the organisation as your own

during work time” (SR 49, clinical, EXP: 1-2 years). Rather than this alteration being static, however, some participants indicated that these changes were ongoing. “If you’re not prepared to change, and change pretty quickly, then you won’t last in this industry ... we have to be incredibly adaptable and flexible” (IP 3, management, EXP: 6-12 months). For some, this was viewed as a desirable trait of an individual, meaning that “You’re really only getting the people who are very passionate about what we’re doing who are working in this environment” (IP 6, management, EXP: 2-5 years). However, other participants who had adapted to toxic localised environments viewed this process negatively. “I got pretty heavily penalised for speaking up and saying that I had a particular difficulty and I’d like to address that ... I’ve had to basically adapt my behaviour, as a result” (IP 8, clinical, EXP: 1-2 years). Ultimately, the data suggested that adaption had a temporal element, and that individuals can choose to alter their fit with an organisation. This notion has not been captured by previous studies, and differs from the previous perception of fit as a relatively static phenomenon.

5.2.1.2 Adapting to demands

Some participants also highlighted that an important part of determining fit was meeting and surpassing the organisation’s expectations of them (in other words, demands-abilities fit). One interviewee explained the paradox of trying to surpass the demands of one’s role;

You fit in more because you’re doing more almost outside of your role, so you’re doing more of a job than you’re actually meant to be ... In a way it’s almost like, yeah, I’m fitting in with what headspace is really about. I mean, I think in some way it helps [you to fit in], but other times that can bounce back and be bounced back on you to say oh that wasn’t really your position—that wasn’t your job to be doing that. And then you feel like I don’t really fit in here because I’m not sure whether I’m really making the right decision.

(IP 4, administration, EXP: 6-12 months).

This passage suggests that, on the one hand, surpassing one’s job description creates a sense of fulfilment of the values and goals of the organisation. On the other hand, going beyond one’s role can also be perceived negatively, leading to a questioning of one’s fit. Ultimately, there is a suggestion that adapting to situations beyond one’s job description in the workplace can have positive or negative implications for both the individual and the organisation.

5.2.1.3 Adapting to the workplace

Some participants indicated the importance of being able to fit in with colleagues, and recognised the effort required to achieve this fit. The capacity of the individual to change was particularly referred to when discussing the workplace, perhaps because the immediate work environment is often subject to modifications in staffing, and consequent changes in work group; that is, P-G fit. Some participants saw this process as passive, as “I think when you’re working closely with other people it does change you a little bit as well” (IP 4, administration, EXP: 6-12 months). There also appeared to be a temporal element to this adaption, based on the time the individual had been at that workplace.

Other participants explained adapting to the workplace as more of an active choice, but their descriptions still included this temporal element. One participant described the drive for the “Ability to not only work with others but also the ability to adapt and change to others’ needs” (SR 94, volunteer, EXP: 1-3 months). Furthermore, some participants talked of the evolving nature of their work persona, which was influenced by the time they had been in the position and what they had learnt from their environment. “I think probably initially when I first came on board that I was a little bit more reserved. It took me a while to get comfortable and get to know the people around and work out how I fit within that” (IP 9, clinical, EXP: 1-2 years). Regardless of how participants thought about this adaption, each process involved an acknowledgement of changes in the individual based on their interactions in the workplace.

Being one’s own person

5.2.1.4 The perfect fit

The congruence between an individual and the goals and values of the organisation was highlighted as an important component of fit. Some participants highlighted the importance of supplementary fit, including “Having goals and values that align with those of the organisation” (SR 23, clinical, EXP: 2-5 years), such as one participant who explained: “I can be totally true to who I am and what I’m about, and know that that’s aligned with the way in which the organisation I work for is operating too. That’s fantastic” (IP 1, “other” role, EXP: 1-2 years). Fit seemed to have occurred very naturally for some participants, both in terms of aligning values and fit with colleagues: “In this job it is the perfect fit” (IP 6, management, EXP: 2-5 years). In participants who identified as having this type of fit, it

was explained in a positive way, such that it seemed desirable for both the person and their workplace and organisation.

When discussing the “perfect fit”, some participants talked of recruitment strategies. Participants themselves sought out employment at the organisation because of its congruence with their own interests and values: “I kind of jumped at this job because of it being headspace and an organisation that is wanting to help people” (IP 4, administration, EXP: 6-12 months). Other participants who had been on recruiting panels to fill job positions emphasised that it was important “Not to let in bad fits” (IP 5, clinical, EXP: >5 years). Another participant explained:

We put a strong emphasis on recruitment and recruiting into roles based on people who are a good fit for the organisation, and a good fit for the philosophical approach that we have. They’re not always going to be, and none of us is, absolutely at that point in time where we want them to be. But, they are people who, based on those values and beliefs, very much have the ability to work towards being strong advocates for the approach that was taken here.

(IP 1, “other” role, EXP: 1-2 years).

This suggests that, although there is no such thing as a “perfect fit” upon organisational entry, identifying individuals with good fit when recruiting could allow a smoother adaptation to the workplace and organisation. Therefore, perhaps seeking out good fits through recruiting and advertising strategies could promote a more harmonious localised culture in the longer term.

On the other hand, participants also emphasised that finding the “perfect fit” did not necessarily mean someone similar to other staff members. Rather, participants emphasised the value of having employees with a wide range of backgrounds, cultures and gender identities, which encompassed what the organisation stands for. This conceptually maps to complementary fit in the work group level, and supplementary fit on the organisational level. “We actually almost rejoice if can get someone that perhaps is a little bit different ... because it helps everybody else to learn and understand the needs. And also to be able to have a better chance of engaging with those communities” (IP 3, management, EXP: 6-12 months). This highlighted the importance of elements *other* than supplementary fit, which is interesting considering it has been studied more thoroughly than other fit components.^{13,96,97,106-115,118-121,125} Participants themselves also reported their unique qualities, and how these helped to validate the public’s perception of the diversity of the organisation: “I guess I have a very different and unique upbringing compared to the other staff here. So I guess that’s something I feel I bring into the centre. I feel that positively

contributes towards the diversity of our clients—clients can expect here. So I think that's really important" (IP 8, clinical, EXP: 1-2 years). Thus, the common value of embracing and celebrating diversity throughout the organisation meant that a plethora of people, including minority groups, could be viewed as an ideal fit for the organisation.

5.2.1.5 Resisting pressure to change

In the absence of having the "perfect" or a good fit, an approach that respondents adopted was to remain true to themselves within the workplace and resist pressure to change or adapt. Some respondents reported that the attempt to uphold one's uniqueness was stressful and isolating: "I found it very distressing in the early days and probably could have adapted and become more accepting of the status quo. But my personality type probably didn't allow me so much" (IP 2, clinical, EXP: >5 years). This particularly appeared to be the case when the pressure to change originated from the workplace or work group, rather than the organisation. For example, one interviewee met resistance when entering her role and "It was initially very difficult for me" (IP 3, management, EXP: 6-12 months). However, in this case, it was the support from higher levels of the organisation that helped the individual resist workplace pressure to change: "I knew I had the backing of my seniors. So all of the next levels up to the very top. I knew they were all backing me, because they had really pushed me to do this job" (IP 3, management, EXP: 6-12 months). Thus, it seemed that pressure from the workplace or co-workers to change could be a catalyst to work stress, distress or discomfort in the work environment.

In contrast, some participants reported that their work group or workplace was uniting to resist pressure to change from the organisational level. Mostly, this resistance was towards changes in behaviour, such as note taking techniques. For example, one participant explained that her and her co-workers were "This really strong group of GPs and I think we're very indispensable in this particular headspace site. So when people try to get us doing more paperwork and we want to see more people we just ignore them and just do what we want" (IP 5, clinical, EXP: >5 years). Sharing this resistance with co-workers appeared to decrease the cognitive and emotional load compared to the respondent facing resistance from co-workers themselves, making it less of a distressing experience. Another interviewee reported the protective nature of their immediate superior from pressure higher in the organisation: "They [centre managers] actually do their best to protect us [employees] from them [organisation managers], from whatever those pressures

or stresses might be that they're getting" (IP 6, management, EXP: 2-5 years). This suggests that the organisation sometimes placed unrealistic pressure on workplaces, eg, by making demands that the workers were unable or unwilling to meet, and that this in turn led to low demands-abilities fit. This finding links to a plethora of related literature on workplace predictors for openness or resistance to organisational change, including workplace factors eg, being involved in and informed about the decision making process,¹⁹⁶ and individual factors eg, work stress, personality, and attitude towards change.^{197,198} Although this literature provides insights, it would be interesting to conduct further research on this "safety in numbers" mentality to resist organisational change within the context of fit literature.

Fit as a two-way street—Place supporting the person

5.2.1.6 Interpersonal support at work

The desires that an individual has of their organisation, eg, aspiration for formal training or informal support, comes under the umbrella of needs-supplies fit. Each of these components has been shown to impact the fit of the individual and their work group or organisation. The following section details potential avenues of change that the organisation or workplace could introduce to improve the fit of employees and workers.

Respondents highlighted the importance of formal support, including access to training programs specific to working in a mental health environment. Some respondents suggested the importance of successfully up-skilling, "We've just finished doing considerable training" (IP 3, management, EXP: 6-12 months). Many other participants reported they had sought out training but not yet received it: "They're supportive of me wanting to do that [mental health first aid course], but probably not—it's not such a priority" (IP 4, administration, EXP: 6-12 months) and "I have sought that [training] out and it hasn't happened as yet, which I'm a little disappointed about" (IP 3, management, EXP: 6-12 months). These reports suggest that, similar to the individual adapting to the place, the person is not static in their desires and requirements from an employing workplace or organisation, but rather respond to the requirements of their role and identifies their weaknesses and limitations on which they would like to improve.

There were also mixed reports regarding the support received from managers, supervisors and co-workers. Some respondents felt isolated due to negative experiences with centre managers; "I didn't feel very supported ... I felt trust was broken and then I felt

basically really let down” (IP 8, clinical, EXP: 1-2 years), whilst others suggested they “Have never felt less than supported” (SR 14, administrative, EXP: 6-12 months). Moreover, there was an emphasis on the importance of quality support from co-workers, which was suggested to be a protective factor from negative staff outcomes, including burnout and work stress: “There’s no question that we’re all busy and very, very busy at sometimes. But we do look after each other which I think kind of takes that pressure off” (IP 2, clinical, EXP: >5 years). Thus, the importance of effective support was highlighted, and it was suggested that it attenuated feelings of stress and increased work satisfaction.

Additionally, the data indicated that support and training were connected, such that individuals in supported workplaces were perhaps more likely to seek out training and up-skilling opportunities: “As long as it’s within your scope of practice, and you feel comfortable enough. Not even comfortable enough, because you often don’t feel comfortable. Supported, would be my word” (IP 3, management, EXP: 6-12 months). Attaining this balance was perceived as based on achieving “The right combination of feeling like I know my stuff as well as challenging and stimulating” (SR 28, clinical, EXP: 6-12 months), which may perhaps be different for each individual. Further research on support and training within the context of fit would be useful in elucidating these findings.

5.2.1.7 Feeling valued

Many participants reported the desire and need to feel valued and utilised in the work environment. This aspect of needs-supplies fit appeared, from the data, to be almost inextricably linked to work satisfaction. Participants talked of “The immense privilege of being able to work with young people and help them to better their lives” (SR 23, clinical, EXP: 2-5 years) and how satisfaction could arise from watching an individual improve their situation through recovery from mental illness. As one participant explained: “I feel valued. I feel worthy and I feel of use, both to myself here and to the service. That’s enough for me, really. That’s pretty good” (IP 1, “other” role, EXP: 1-2 years). Thus, it appears that, in a mental health context, many participants found the nature of the work rewarding and satisfying, which led to a feeling of being valued. This unique association should be noted for further studies in mental health facilities.

Some participants also identified the feeling of value that stemmed from identifying and fostering the individual talents and strengths of staff members. It seemed that these strengths were often rooted in the individual’s background or interests, but were also

adaptive and based on finding a niche area in the organisation. Thus, this concept represented a fusion of adaption and being one's true self. One participant explained:

I think it kind of helps us fit in that we're different, more in the sense that they'll [the organisation and workplace] kind of utilise those strengths when they need to. I think we're [clinical intake workers] all—I mean our different backgrounds, so we're not all of the same kind of clinical experience or life experiences, within the field, but we utilise those differences to the best of our strengths, which I think actually works better, because we're able to provide a variety of options to the young people ... I think the [individual's] background definitely helps influence it [the specialty area], but I think it's more about finding the niche once they get set in the service, because they'll find out what they feel more comfortable in doing, what they're more passionate about as well since being here.

(IP 7, clinical, EXP: 6-12 months).

Not only did these individuals adapt the work that they themselves completed based on their strengths, but they also altered the types of clients they referred to certain clinicians based on their particular areas of expertise. This differs, perhaps, to medical referrals in the health system more broadly, where the choice of referral clinician are made on more basic criteria, such as sharing the same medical record system or having a reciprocal referring relationship.¹⁹⁹ Thus, the unique structure and nature of this mental health organisation within the health system allowed a more sophisticated referral pattern to eventuate.

As well as feeling valued by the nature of the work, participants indicated the importance of feeling that their opinions were appreciated by leaders: “I think there's a real understanding from our managers at the top who do perpetuate and enable that aspect of recognising that value of caring for staff, and the full-on impact that has on that service” (IP 6, management, EXP: 2-5 years). This interaction with leaders seemed to have the capacity to alter the perceptions of the individual in their job. For example, one interviewee in an Administration position suggested changes to the system, which were taken on board and adopted. The interviewee expanded on the effect that this had: “I feel like it validated me in my role as senior admin to be supportive of the changes that I—improvements that I suggested, just a couple of little things. I felt like it did help me feel like I was in the right role and in the right organisation as well. I'm in the right job for me, in a way” (IP 4, administration, EXP: 6-12 months). This signified that a feeling of being valued by leadership figures could increase one's perception of their fit.

In contrast, some respondents reported feeling underutilized in their centre. This group felt “Like I could do more” (SR 94, volunteer, EXP: 1-3 months). This perceived mismatch between the individual's ability and the quantity and type of tasks they were

allocated was linked to decreased work satisfaction. Another participant suggested that the organisation should do more to promote this feeling of individual value, eg, “Headspace needs to reach out more to private contractors to make them feel appreciated” (SR 150, clinical, EXP: 1-2 years). Thus, if a workplace or organisation could perpetuate employees’ feelings of being valued and even irreplaceable to the centre, and to the clients it serves, work satisfaction may follow.

5.3 Summary and limitations

This data provided a qualitative description of how individuals perceived their fit within the work group and organisation, and how this may have impacted on their sense of job satisfaction, stress and feeling of burnout. The thematic analysis suggested that fit is not static, but rather evolves as the person and the environment adapt and shape each other.

The data may have limited generalizability to other contexts within the health system, even with the added corroboration of extended response survey items and interview results. Ultimately, the specific context of the study and the purposeful sampling of interview participants³⁵ meant that full generalizability could not be ensured. Further studies in other contexts are necessary to identify the nuances in each context, and what ideas are generalizable.

CHAPTER 6. DISCUSSION AND CONCLUSION: HOW THE THESIS FITS WITHIN THE RESEARCH LANDSCAPE

“The people make the place”

—Schneider, 1987. p.437.²⁰⁰

Overview of Chapter 6

Chapter 6 summarises the study results and integrates the findings in order to address the four aims of this thesis. Each aim is addressed in turn and discussed in relation to published literature. Following this, the study challenges, lessons and limitations are presented alongside recommendations for future studies in the field.

Schema of the flow of the thesis

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

6.1 Summary of results

This thesis had four aims that were addressed in various chapters (**Table 6.1**). The results and implications corresponding to each aim are discussed.

Table 6.1. Summary of thesis aims and results

Aim number	Thesis aim	Results	Chapter
1	To investigate the extent to which P-O and P-G fit are associated with staff outcomes in health care settings.	Literature review	Chapter 2
2	To develop a holistic, multi-dimensional tool to measure P-O and P-G fit.	CFA	Chapter 4
3	To investigate to what extent each component of P-O and P-G fit are associated with specific staff outcomes.	MRA	Chapter 4
4	To explore if and what further insights into P-O and P-G fit could be gained through the addition of qualitative research methods.	Thematic analysis	Chapter 5

CFA: Confirmatory Factor Analysis.

MRA: Multiple Regression Analysis.

Aim 1: Systematic literature review

6.1.1.1 Summary

The systematic literature review indicated a strong association between increased P-O and P-G fit with various positive staff outcomes. Of the 24 included studies, 23 supported the presence of this association in the hypothesised direction.

6.1.1.2 Discussion

The results highlighted the limitations and areas for improvement in existing fit literature. Notably, this included the need for further studies that measured multiple aspects of P-O and P-G fit, particularly complementary, needs-supplies and demands-abilities components. Further studies that include both P-O and P-G components would be useful in determining the relationship between these two environmental aspects, and investigating if an interaction is present. It was also identified that some types of health context were relatively neglected compared to the densely studied contexts of hospitals and aged care facilities. For a more in-depth discussion of the results, see **Chapter 2**. Ultimately, the research methods designed for this thesis built on these results through the development of

the multi-dimensional survey tool that included components of both P-O and P-G fit, and through choosing mental health facilities as the study setting.

Aim 2: P-O and P-G fit tool validation

6.1.1.3 Summary

A multi-dimensional survey tool was developed and tested for validity using a series of CFAs. Adequate goodness-of-fit and reliability was attained for the second-order P-O and P-G fit models. Moreover, the factor correlations and residual error variances suggested that the factor structure provided an appropriate representation of the data.

6.1.1.4 Discussion

The results from the P-O and P-G CFAs, discussed below, provided unique insights into the factor structure underlying these sub-scales.

The results of the P-O CFA provided interesting reflections on previous fit literature. For example, the best-fit factor structure of the P-O fit CFA included all six theorised components. Additionally, the models corresponding to each school of thought regarding the placement of complementary fit within the model both had acceptable fit statistics.^{5,6,15,79,81} However, the fit statistics of Model 4 (corresponding to **Figure 1.3** in the introduction) indicated a poorer fit of the data than Model 3 (corresponding to the theoretical design in **Figure 1.4**). Interestingly, neither model yielded fit statistics that surpassed those of Model 5, which was conceptualised by the researcher as a synthesis between Model 3 and Model 4. This suggested that there is an alternative to researchers subscribing to one of the two complementary fit schools of thought, as this third model could provide an opportunity for researchers to explore P-O fit without having to make arbitrary theoretical decisions *a-priori*.

The results of the P-G CFA aligned with previous literature. For example, the needs-supplies and demands-abilities questions did not adequately fit the factor structure to be included in the final factor model. This aligned with past research that has noted a lack of investigation of needs-supplies and demands-abilities components of P-G fit.^{25,83} The omission of these components from the factor structure of this study should not be interpreted as validation that these components are indeed not present, but rather as an acknowledgement that further work is needed to develop and test items that adequately explain these P-G fit components.

After establishing the four component first-order P-G fit model, the testing of the second-order P-G fit models yielded further ambiguity. Ultimately, both Models D.1 and D.2 provided adequate and equivalent fit of the data. After modifications of each model and a weighing up of various goodness-of-fit statistics, modified Model D.2 was chosen as the most appropriate factor structure. This almost equivalent goodness-of-fit between the models may be resolved through further differentiation in future studies, whereby needs-supplies and demands-abilities components could be measured effectively. If this were to be the case, having more first-order factors mapping onto the second-order complementary fit factor may allow further differentiation of the different models.

Aim 3: Quantitative MRA analysis

6.1.1.5 Summary

The results of the hierarchical MRAs indicated that the components of P-O and P-G fit had a significant impact on staff outcomes, above that accounted for by demographic characteristics. P-O fit accounted for a significant proportion of the variance in all staff outcome measures, and P-G fit accounted for a significant proportion of variance in satisfaction and depersonalisation, but not emotional exhaustion or work stress. However, if the Bonferroni alpha adjustment was not accounted for, the variance in all four outcomes reached significance level. There was no significant interaction of P-O and P-G fit beyond the main effects. The results of the two main effects and the interaction are discussed below.

6.1.1.6 Discussion

Firstly, there was a statistically significant association between age and depersonalisation in the results. This added to the plethora of conflicting literature on the association between age and the components of burnout. Some studies on nurses have found that age is a significant risk factor for both depersonalisation and emotional exhaustion, with younger nurses being more susceptible to burnout.²⁰¹ In contrast, another study on staff in Primary Health Care found no significant association of burnout with age.²⁰²

The significant association of P-O fit with all four of the outcome variables has numerous implications. It aligns with the results of previous literature, as elucidated in the systematic review (**Chapter 2**).^{13,29,110-112,115,125} Moreover, the significant variance accounted for by needs-supplies P-O fit for the outcomes of satisfaction, emotional

exhaustion and work stress indicated, perhaps even more than previously predicted, the importance of the individual feeling valued, validated and recognised in the work environment. It also showcased the need for cross-disciplinary collaboration in extrapolating the meaning behind these results. For example, past psychological research has investigated the influence of employee recognition (a possible component of fit) on emotions, interpersonal behaviour and job outcomes.^{203,204} There is also growing recognition of the importance of health facilities developing the characteristics of high performance work systems (HPWS); characteristics that are also linked to good-fit, eg, a selective hiring process and training to enhance employees' KSAs.^{18,205} However, these fields have not yet been acknowledged for their potential to complement the fit paradigm.

The interesting pattern of results from the P-G MRA, whereby only two of the postulated associations between P-G fit and staff outcomes were significant, raised various questions about the data. The non-significant associations of P-G fit with emotional exhaustion and work stress may be attributed to limitations in the P-G fit survey, which had only modest goodness-of-fit compared to the P-O CFA. Alternatively, it could be attributed to the perhaps overly conservative Bonferroni adjusted alpha value, as these associations were significant without the adjustment. From within the significant results for satisfaction and depersonalisation, only goal congruence accounted for a significant proportion of depersonalisation. This emphasised both the importance of testing for multiple components of fit in order to attain more nuanced, accurate results, and the need to refine the theoretical understanding of P-G fit in future research.

It is interesting that both P-O and P-G MRA results distinguished in significance between the aspects of burnout. As emotional exhaustion and depersonalisation are sub-parts of the same outcome measure, one would assume a similar pattern of results between the two measures. However, the individual significance of fit components differed between the different outcomes. Needs-supplies only accounted for a significant proportion of variance in emotional exhaustion in the P-O MRA, and only goal-congruence accounted for a significant proportion of depersonalisation in the P-G MRA. There is currently no research suggesting an explanation for this particular phenomenon, although definitions from past research may provide an insight into the results. Particularly, inherent in the definition of depersonalisation is the assumption that this aspect of burnout affects how the individual interacts with their co-workers (in other words, P-G interactions), whereas emotional exhaustion describes the psychological state of fatigue from work,¹⁶ which may

be influenced by what the employees want or desire from their company or organisation. However, it is interesting that emotional exhaustion was associated only with only the organisation, and not the work group.

Finally, consistent with the results of Vogel et al,¹⁷ there was no significant interaction between P-O and P-G fit that went beyond that accounted for by the main effects and demographic characteristics. Although this study accounted for the limitations of Vogel et al,¹⁷ and tested components other than supplementary fit, there may still have been methodological limitations that prevented any such interaction from reaching the required significance level. It is also possible that the results of this test were not an error and there is in fact no interaction, but the qualitative results indicate to the contrary.

Aim 4: Qualitative results

6.1.1.7 Summary

Three themes were identified and considered from the qualitative data. The first related to an individual adapting to their workplace or organisation. The second explored another experience that some respondents described, whereby they refused to change for the organisation and remained true to themselves. The third theme was based on needs-supplies fit, whereby the individual desired or requested things such as training, support and the feeling of being valued, from their workplace or organisation.

6.1.1.8 Discussion

The unique addition of qualitative methods to this research provided in-depth insights into the composition and characteristics of fit perceptions in a mental health setting. The results expanded on previous research, and presented fit as a fluid, evolving entity. Previous research on this concept has been limited to discussing adaption within one component of fit (eg, supplementary personality fit),²⁴ which oversimplifies the nuance of the topic. Thus, these results added a layer of complexity to past understandings in the primarily quantitative literature in this area.

The results indicated the nuances in feelings of fit, and thus the potential limitations in existing theoretical models. For example, participants often mentioned the importance of multiple aspects of fit. This indicated that there were perhaps interactions between the components of fit themselves (eg, an interaction between P-O and P-G supplementary fit).

The qualitative results also highlighted the importance of the previously neglected components of fit, such as needs-supplies and demands-abilities fit. Participants often emphasised the importance of different components in helping them feel a sense of fit, such as fulfilling what was expected of them (demands-abilities), and the importance of interpersonal support, training and validation from leadership and colleagues (needs-supplies fit). The ambiguity that some participants reported regarding their scope of practice highlighted the need, as has been previously suggested, for an interdisciplinary dialogue and agreement in mental health, amongst other health settings, to establish essential work roles.²⁶ Ultimately, the qualitative information gained from this study could be used to develop survey items for these components of P-G fit, to gain a more accurate quantitative measure of these constructs.

The results of the qualitative analysis also provided clues as to how to practically improve fit of existing employees. The goal, as some participants described, to identify job applicants with “good fit” could be an insight into one strategy to improve localised cultures in the long term. This also indicated the danger of focusing too-much on demands-abilities fit, and suggested that perhaps job selection techniques should be more focused on the fit between the applicant and the environment, rather than solely on the applicant and the job.^{206,207} For further details on this topic, see related research on applicant selection.^{62,134,206,207}

The results also hinted at ways in which fit could be improved for current employees. In terms of increasing the fit perceptions of current employees, workplaces and organisations could use strategies termed “adaptive responses”²⁰⁸ to moderate the effects of work stressors on employees.²⁰⁸ The focus of the interviewee responses suggested the importance of primary interventions, whereby there was an increased prevalence of positive psychosocial factors, eg, through stress monitoring and leadership development; and secondary interventions that increased the employees’ capability eg, training.²⁰⁸ However, although rarely mentioned in the qualitative results, the importance of tertiary interventions, whereby the effect of a negative employee outcome is minimised,²⁰⁸ must also be acknowledged.

Building on this past research, the results highlighted the specific theoretical areas of fit that should be addressed in order to potentially improve individuals’ perceptions of fit. Specifically, addressing needs-supplies aspects of fit, such as employees’ requests for training related to their work, offering support and ensuring they feel their role is valued

and respected, may lead to improvements in fit perceptions, and have potentially positive effects on employees' wellbeing. This focus on being valued in the workplace is perhaps particularly salient in the context of this study, and within health care more broadly.

6.2 Study challenges and lessons

Conducting research on a national scale meant a great deal of long distance communication. This may have influenced the response rate of the survey, which was lower than preferable. This low response rate was counteracted by contacting more headspace centres than were deemed the necessary minimum to conduct the study (five centres deemed minimum necessary; 97 centres contacted). It was only through these extreme "safety net" measures that an appropriate sample size was obtained to conduct CFA and MRA. This long distance communication also meant conducting interviews by phone, which was ethically challenging, particularly when participants disclosed emotional, personal information.

A further challenge in this study was addressing questions of reflexivity. The data was collected by a novice qualitative researcher, and thus may have potentially been limited by missed opportunities to follow-up on interesting ideas in the semi-structured interviews. Moreover, data interpretation may have been skewed due to the researcher's interest and professional background in studying psychology. These potential biases were minimised through one-on-one interview training, practice interviews, and refinement of interview questions. Data interpretation biases were also minimised through double-coding of the qualitative interview and survey data.

6.3 Translation from research into practice

Workplace and organisation level

To support the translation of this research into changes in the organisation and workplace, each participating centre and interviewee received an Executive Report of the findings. It is hoped that the centres will be able to learn about their organisation and implement changes to improve the fit between individuals and their workplace, which will perhaps ultimately have positive downstream effects for employees, volunteers and the clients with mental health issues to which they provide services.

National level

The ultimate goal of many health researchers, in organisational culture research and beyond, is to generate research that can be translated into front-line improvements. It is anticipated and hoped that in the future, research of this kind will have the potential to improve staff outcomes, and hence also improve client circumstances.

One way of implementing change is by altering policy. The Australian Government is currently implementing the Fifth National Mental Health Plan, in which one of the seven priority areas being targeted is “Safety and quality in mental health care”.²⁰⁹ This indicates the ongoing political and social importance of the issue. However, difficulties in overcoming the practicalities of translating research into policy, and then policy into practice, cannot be disregarded.²¹⁰ Not only is translating research into policy time consuming, but it is also not guaranteed to be effective. This chasm between the researchers, policymakers and politicians who do work-as-imagined (WAI) and the health professionals on the front line who do work-as-done (WAD) is hard to reconcile.²¹¹ Thus, implementing a policy or guideline; although a powerful tool for change in some circumstances; may not be the most effective place for this research to be seen and acted upon.

A different but related avenue to enact change to improve localised cultures is through educating leaders. This may be particularly important in health care contexts, where leaders are often clinicians who have learnt management skills from their environment, and may lack formal management training.²¹² Moreover, it may be specifically effective to target workplace managers and organisational leaders for culture interventions, as they often focus on processes and procedures that shape localised culture, such as recruitment and retention of staff.^{19,208} This could have positive downstream impacts on employees and volunteers, and also have a positive effect on patient outcomes.¹⁰ Ultimately, implementing these changes also relies on leaders at each level of the environment recognising the importance of culture and the impact that it can have on how organisations and workplaces function.

6.4 Original research contribution

This thesis aimed to advance knowledge of how the individual perceives themselves within their localised culture, specifically within a mental health setting. Although past studies have indicated the importance of localised cultures in mental health settings,^{70,86,87} or have

suggested the importance of fit in other contexts,* no study has previously measured various aspects of fit and their relationship with staff outcomes in this specific context.

In this thesis, the limitations of published research in the field were examined. Notably, the mismatch between the theoretical frameworks underpinning the research field and the survey tools available were noted, with most research instruments focusing on only one or two of the four theorised components that encompassed fit.^{5,6,15,68,80,82} These methodological limitations were suggested as factors that prevented significant results from being obtained, for example in the P-O and P-G fit interaction hypothesis of Vogel et al.¹⁷ Thus, an original, tailored multi-dimensional tool that encompassed all theorised components of P-O and P-G fit was developed and validated for this context. In the future, it is hoped that this survey instrument will be used widely, so that future studies may be more comparable and less limited by constraints in survey instruments.

This study was also the first of its kind to incorporate qualitative and quantitative methods, giving a more holistic understanding of the complex links between fit and outcomes. These results suggested that researchers should remain open to the possibility of adding to the current theoretical frameworks of fit, and that both the individual and environment are entities that can adjust depending on time, space and context.

6.5 Future research

Overcoming study challenges

Future studies of this kind, that conduct interviews on a national scale, could more accurately gauge the interviewee's emotional state through the use of interactive technologies. Using simulations of face-to-face conversations (eg, Skype) could assist in ensuring the researcher is able to steer the interview appropriately.

Understanding the fit theory

The results of this study have laid the foundation for future research. Further studies are needed to understand the components of P-G fit, and verify if needs-supplies and demands-abilities fit are indeed significant components of this construct. Although this was not found in the current study, further research could refine and tweak these items so they more accurately represent the construct, and ultimately create a more holistic survey

*References: 118, 121, 68, 120, 64, 80, 13, 66, 15.

including all the proposed components of P-G fit. Only once this is achieved can there be accurate testing to determine if there is indeed an interaction between P-O and P-G fit.

Research could also assist in understanding if there are interactions between demographic factors (eg, age, length of time at the workplace) and fit perceptions. Although outside the specific aims of this thesis, research in these areas would assist in gaining a holistic picture of the associations present.

Applying the findings of this research in the future

Future studies could verify that the survey developed for this thesis, conducted in a mental health context, may be generalised to other settings within the health system. Specifically, as identified in **Chapter 2**, there are a disproportionate number of studies conducted in hospital settings, and in Western, high- and middle-income, Organisation for Economic Co-operation and Development (OECD) countries. A wider sample from different countries and more varied health settings would be useful to gain an understanding of the generalizability of the survey to different health settings, and to understand if perceptions of fit have different impacts on outcomes based on wider cultural variations between countries.

Research is also needed to establish the most effective mechanisms to improve an individual's perception of fit. For example, this may be through strategies that additively and over time change the shape of the localised culture (eg, creating support networks or social lunches, having more formal and informal meetings with supervisors, and creating a more fit-orientated hiring procedure). The effectiveness of these interventions could be tested eg, through a stepped-wedge study design that allows each participating institution access to the intervention at different time points, thus maintaining the "control" setting.²¹³ Another interesting research avenue would be to further investigate the process and predictors of adapting to the workplace or organisation. On the other hand, every localised culture is complex and unique, and thus may have its own nuance. Research in other contexts will assist in determining which parts of the results from this study are specific, and which are more general.

6.6 Conclusion

This thesis employed both qualitative and quantitative methods, for the first time in this research area, to conduct an in-depth exploration of what it meant to fit with one's work

group and organisation. Drawing from the limitations in literature identified in the systematic review, multi-dimensional survey sub-scales were developed for this study, which included more aspects of P-O and P-G fit than have been included in previous surveys. The survey tool was validated in multiple CFAs, and the reliability of its sub-scales was verified.

The consequent results of hypotheses testing suggested that having a perception of fitting with both of these environmental entities was linked to staff outcomes. Specifically, having a perception of fitting in with one's organisation was significantly associated with job satisfaction, emotional exhaustion, depersonalisation and work stress, whilst fitting in with one's work group was significantly associated with job satisfaction and depersonalisation. Moreover, the qualitative results built on the understanding that P-O and P-G fit were multi-dimensional constructs, and also added a temporal element to this theoretical framework.

Ultimately, this thesis provided key information by which to improve workplaces and organisations, and understand how fit has been conceptualised. It is a building block for future culture change. It is also an important stepping-stone for future research in P-O and P-G fit. Although further research is needed, particularly in P-G fit and needs-supplies fit, the results of this thesis contributed a new, unique understanding of the nuanced theoretical framework of P-O and P-G fit, and how they have downstream impacts on staff outcomes.

Schema of the flow of the thesis

1	2	3	4	5	6	7
Introduction	Systematic Review	Methods	Quantitative Results	Qualitative Results	Discussion and Conclusion	References and Appendices

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CHAPTER 7. APPENDICES

Appendix A: Ethics approval letters

Macquarie University HREC

Office of the Deputy Vice-Chancellor
(Research)

Research Office
Research Hub, Building C5C East
Macquarie University
NSW 2109 Australia
T: +61 (2) 9850 4459
<http://www.research.mq.edu.au/>
ABN 90 952 801 237



5 April 2017

Dear Professor Braithwaite

Reference No: 5201700241

Title: *The association between person-organisation fit and staff outcomes in a mental health context*

Thank you for submitting the above application for ethical and scientific review. Your application was considered by the Macquarie University Human Research Ethics Committee (HREC (Medical Sciences)).

I am pleased to advise that ethical and scientific approval has been granted for this project to be conducted at:

- Macquarie University

This research meets the requirements set out in the *National Statement on Ethical Conduct in Human Research* (2007 – Updated May 2015) (the *National Statement*).

Standard Conditions of Approval:

1. Continuing compliance with the requirements of the *National Statement*, which is available at the following website:

<http://www.nhmrc.gov.au/book/national-statement-ethical-conduct-human-research>

2. This approval is valid for five (5) years, subject to the submission of annual reports. Please submit your reports on the anniversary of the approval for this protocol.

3. All adverse events, including events which might affect the continued ethical and scientific acceptability of the project, must be reported to the HREC within 72 hours.

4. Proposed changes to the protocol and associated documents must be submitted to the Committee for approval before implementation.

It is the responsibility of the Chief investigator to retain a copy of all documentation related to this project and to forward a copy of this approval letter to all personnel listed on the project.

Should you have any queries regarding your project, please contact the Ethics Secretariat on 9850 4194 or by email ethics.secretariat@mq.edu.au

The HREC (Medical Sciences) Terms of Reference and Standard Operating Procedures are available from the Research Office website at:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics

The HREC (Medical Sciences) wishes you every success in your research.

Yours sincerely

Professor Tony Evers

Chair, Macquarie University Human Research Ethics Committee (Medical Sciences)

This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research* (2007) and the *CPMP/ICH Note for Guidance on Good Clinical Practice*.

Approved Amendments by Macquarie University HREC

Amendment 1

APPROVED

By Rebeka Tennent at 1:30 pm, May 15, 2017



Human Research Ethics Committee

REQUEST FOR AMENDMENT FORM

Please complete this form for all amendments/modifications including extensions to approved ethics projects.

For quick and efficient review of your amendment, please provide sufficient information in this document to allow the amendment to be reviewed as a standalone document (i.e. it does not require the Ethics Secretariat or HREC reviewing the original application).

Please attach tracked and clean copies of all amended documents to the amendment request. Documents could include participant information and consent forms (PICF), advertising material, surveys, interview questions, verbal scripts, support letters from external organizations.

Submitting this form:

HREC approved applications: Please send this form to ethics.secretariat@mq.edu.au.

Faculty/School-approved applications:

Please send this form to the ethics subcommittee administrator of the relevant Faculty/School

Faculty of Human Sciences: fhs.ethics@mq.edu.au

Faculty of Science and Engineering: sci.ethics@mq.edu.au

Faculty of Arts: artsro@mq.edu.au

Faculty of Business and Economics: fbe-ethics@mq.edu.au

MGSM: ethics@mgsm.edu.au

PACE: pace.ethics@mq.edu.au

Faculty of Medicine and Health Sciences: ethics.secretariat@mq.edu.au.

Handwritten forms will not be accepted.

1. **Human Research Ethics Committee Reference No:** 5201700241

2. **Chief Investigator/Supervisor:** Professor Jeffrey Braithwaite

Faculty: Medicine and Health Sciences

Department: Australian Institute of Health Innovation

Email: Jeffrey.braithwaite@mq.edu.au

Date of amendment: 24/04/17

Amendment 2

APPROVED

By Ethics Secretariat at 1:49 pm, May 18, 2017



Human Research Ethics Committee

REQUEST FOR AMENDMENT FORM

Please complete this form for all amendments/modifications including extensions to approved ethics projects.

For quick and efficient review of your amendment, please provide sufficient information in this document to allow the amendment to be reviewed as a standalone document (i.e. it does not require the Ethics Secretariat or HREC reviewing the original application).

Please attach tracked and clean copies of all amended documents to the amendment request. Documents could include participant information and consent forms (PICF), advertising material, surveys, interview questions, verbal scripts, support letters from external organizations.

Submitting this form:

HREC approved applications: Please send this form to ethics.secretariat@mq.edu.au.

Faculty/School-approved applications:

Please send this form to the ethics subcommittee administrator of the relevant Faculty/School

Faculty of Human Sciences: fhs.ethics@mq.edu.au

Faculty of Science and Engineering: sci.ethics@mq.edu.au

Faculty of Arts: artsro@mq.edu.au

Faculty of Business and Economics: fbe-ethics@mq.edu.au

MGSM: ethics@mgsm.edu.au

PACE: pace.ethics@mq.edu.au

Faculty of Medicine and Health Sciences: ethics.secretariat@mq.edu.au.

Handwritten forms will not be accepted.

1. **Human Research Ethics Committee Reference No:** 5201700241

2. **Chief Investigator/Supervisor:** Professor Jeffrey Braithwaite

Faculty: Medicine and Health Sciences

Department: Australian Institute of Health Innovation

Email: Jeffrey.braithwaite@mq.edu.au

Date of amendment: 10/05/17

Version 16-10-15

Alfred Hospital Ethics Committee



ETHICS COMMITTEE CERTIFICATE OF APPROVAL

This is to certify that

Project No: 198/17

Project Title: The association between person-organisation fit and staff outcomes in a mental health context

Principal Researcher: Dr Liza Hopkins

was considered for Low Risk Review and APPROVED on 23/05/2017

It is the Principal Researcher's responsibility to ensure that all researchers associated with this project are aware of the conditions of approval and which documents have been approved.

The Principal Researcher is required to notify the Secretary of the Ethics Committee, via amendment or report, of

- Any significant change to the project and the reason for that change, including an indication of ethical implications (if any);
- Serious adverse effects on participants and the action taken to address those effects;
- Any other unforeseen events or unexpected developments that merit notification;
- The inability of the Principal Researcher to continue in that role, or any other change in research personnel involved in the project;
- A delay of more than 12 months in the commencement of the project; and,
- Termination or closure of the project.

Additionally, the Principal Researcher is required to submit

- A Final Report on completion of the project.

Approval covers the project as described in the application (including any modifications made prior to approval). Low Risk projects are subject to audit and ethical approval may be withdrawn if the project deviates from that proposed and approved.

SPECIAL CONDITIONS

None

SIGNED:

**Professor John J. McNeil
Chair, Ethics Committee**

Please quote project number and title in all correspondence

Other Ethic Committees

Better health, Better lifestyles, Stronger communities



24th April 2017

Ms Jessica Herkes
Centre for Healthcare Resilience and Implementation Science
Macquarie University
NSW 2109

Latrobe Community
Health Service Ltd
ABN: 74 136 502 022

All correspondence:
PO Box 960
Morwell 3840

Bairnsdale Centre
68 Macleod Street
Bairnsdale 3875

Churchill Centre
20-24 Philip Parade
Churchill 3842

Morwell Centre
81-87 Buckley Street
Morwell 3840

Moe Centre
42-44 Fowler Street
Moe 3825

Sale Centre
52 Macarthur Street
Sale 3850

Traralgon Centre
Cnr Princes Hwy &
Seymour Street
Traralgon 3844

Wangaratta Centre
45-47 Mackay Street
Wangaratta 3677

Warragul Centre
31 Mason Street
Warragul 3820

Wendouree Centre
Office 5, 15 Violet Grove
Wendouree 3355

William Angliss Institute
Level 2 Building C,
555 La Trobe Street
Melbourne 3000

Wonthaggi Centre
86-88 Graham Street
Wonthaggi 3995

Call: 1800 242 696
www.lchs.com.au

Dear Jessica,

Re: Project – The association between person-organisation fit and staff outcomes in a mental health context

Thank you for submitting a request to conduct a staff survey and interviews at headspace Morwell. I hereby grant permission for this research to be conducted according to the attached overview.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'A Skeldon'.

Alison Skeldon

Executive Director Community Support and Connection

Latrobe Community Health Service



Appendix B: Systematic review supplementary material

Please see below for the search terms used to complete the searches for each electronic database. These are CINAHL Complete (**Table 7.1**), EMBASE (**Table 7.2**), Ovid MEDLINE (**Table 7.3**), PsycINFO (**Table 7.4**) and SCOPUS (**Table 7.5**).

Table 7.1 CINAHL Complete search strategy

1	(MH "Job Satisfaction") OR (MH "Personnel Turnover") OR (MH "Attitude of Health Personnel+") OR (MH "Personnel Retention") OR (MH "Personnel, Health Facility+") OR (MH "Burnout, Professional+")
2	(Burnout OR staff outcome* OR job satisfaction OR staff satisfaction OR employee satisfaction OR employee outcome* OR retention OR staff recognition OR employee recognition OR intention to stay OR intention to leave OR debrief* OR intent to turnover OR turnover intention OR organi*ation* commitment OR stress OR work attitude OR occupational hazard* OR collegiality OR working relationship* OR teamwork OR collaboration)
3	1 OR 2
4	(Health organi*ation* OR hospital* OR health facilit* OR acute care OR primary care OR primary health care OR health context OR health setting OR health service OR health*care OR tertiary care or nurse* or health profession* or doctor or GP or physician* or dentist* or health or health care service* or gyn*ecologist* or h*ematologist* or internist* or obstetrician* or p*ediatrician* or pharmacist* or physiotherapist* or psychiatrist* or psychologist* or radiologist* or surgeon* or surgery or therapist* or counse*lor* or neurologist* or optometrist*)
5	(person-organi*ation fit or person organi*ation fit or supplementary fit or complementary fit or needs-supplies fit or supplies-values fit or demands-abilities fit or supplementary congruence or complementary congruence or similarity fit or value congruence or goal congruence or personality congruence or person-group fit or person-team fit)
6	3 AND 4 AND 5

Table 7.2. EMBASE search strategy

1	(person-organi*ation fit or person organi*ation fit or supplementary fit or complementary fit or needs-supplies fit or supplies-values fit or demands-abilities fit or supplementary congruence or complementary congruence or similarity fit or value congruence or goal congruence or personality congruence or person-group fit or person-team fit).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
2	(person adj3 group).ti,ab.

3	(person adj3 organi*ation).ti,ab.
4	1 OR 2 OR 3
5	(Health organi*ation* or hospital* or health facilit* or acute care or primary care or primary health care or health context or health setting or health service or health*care or tertiary care or nurse* or health profession* or doctor or GP or physician* or dentist* or health or health care service* or gyn*ecologist* or h*ematologist* or internist* or obstetrician* or p*ediatrician* or pharmacist* or physiotherapist* or psychiatrist* or psychologist* or radiologist* or surgeon* or surgery or therapist* or counse*lor* or neurologist* or optometrist*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
6	exp health care facility/
7	exp health care delivery/
8	5 OR 6 OR 7
9	(Burnout or staff outcome* or job satisfaction or staff satisfaction or employee satisfaction or employee outcome* or retention or staff recognition or employee recognition or intention to stay or intention to leave or debrief* or intent to turnover or turnover intention or organi*ation* commitment or stress or work attitude or occupational hazard* or collegiality or working relationship* or teamwork or collaboration).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
10	Exp health personnel attitude/
11	job satisfaction/
12	stress/
13	burnout/
14	9 OR 10 OR 11 OR 12 OR 13
15	4 AND 8 AND 14

Table 7.3. Ovid MEDLINE search strategy

1	(person-organi*ation fit or person organi*ation fit or supplementary fit or complementary fit or needs-supplies fit or supplies-values fit or demands-abilities fit or supplementary congruence or complementary congruence or similarity fit or value congruence or goal congruence or personality congruence or person-group fit or person-team fit).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
2	(person adj3 group).ti,ab.
3	(person adj3 organi*ation).ti,ab.
4	1 OR 2 OR 3

5	(Health organi*ation* or hospital* or health facilit* or acute care or primary care or primary health care or health context or health setting or health service or health*care or tertiary care or nurse* or health profession* or doctor or GP or physician* or dentist* or health or health care service* or gyn*ecologist* or h*ematologist* or internist* or obstetrician* or p*ediatrician* or pharmacist* or physiotherapist* or psychiatrist* or psychologist* or radiologist* or surgeon* or surgery or therapist* or counse*lor* or neurologist* or optometrist*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
6	“Delivery of Health Care”/
7	5 OR 6
8	(Burnout or staff outcome* or job satisfaction or staff satisfaction or employee satisfaction or employee outcome* or retention or staff recognition or employee recognition or intention to stay or intention to leave or debrief* or intent to turnover or turnover intention or organi*ation* commitment or stress or work attitude or occupational hazard* or collegiality or working relationship* or teamwork or collaboration).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
9	job satisfaction/
10	Stress, psychological/
11	Burnout, professional/
12	Personnel turnover/
13	Interprofessional relations/
14	8 OR 9 OR 10 OR 11 OR 12 OR 13
15	4 AND 7 AND 14

Table 7.4. PsycINFO search strategy

1	(person-organi*ation fit or person organi*ation fit or supplementary fit or complementary fit or needs-supplies fit or supplies-values fit or demands-abilities fit or supplementary congruence or complementary congruence or similarity fit or value congruence or goal congruence or personality congruence or person-group fit or person-team fit).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
2	(person adj3 group).ti,ab.
3	(person adj3 organi*ation).ti,ab.
4	1 OR 2 OR 3
5	(Health organi*ation* or hospital* or health facilit* or acute care or primary care or primary health care or health context or health setting or health service or health*care or tertiary care or nurse* or health profession* or doctor or GP or physician* or

	dentist* or health or health care service* or gyn*ecologist* or h*ematologist* or internist* or obstetrician* or p*ediatrician* or pharmacist* or physiotherapist* or psychiatrist* or psychologist* or radiologist* or surgeon* or surgery or therapist* or counse*lor* or neurologist* or optometrist*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
6	Exp health care delivery/
7	5 OR 6
8	(Burnout or staff outcome* or job satisfaction or staff satisfaction or employee satisfaction or employee outcome* or retention or staff recognition or employee recognition or intention to stay or intention to leave or debrief* or intent to turnover or turnover intention or organi*ation* commitment or stress or work attitude or occupational hazard* or collegiality or working relationship* or teamwork or collaboration).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
9	Exp health personnel attitudes/
10	Exp job satisfaction/
11	Exp occupational stress/
12	Exp employee turnover/
13	8 OR 9 OR 10 OR 11 OR 12
14	4 AND 7 AND 13

Table 7.5. SCOPUS search strategy

TITLE-ABS-KEY(((“person-organi*ation fit” OR “person organi*ation fit” OR “supplementary fit” OR “complementary fit” OR “needs-supplies fit” OR “supplies-values fit” OR “demands-abilities fit” OR “supplementary congruence” OR “complementary congruence” OR “similarity fit” OR “value congruence” OR “goal congruence” OR “personality congruence” OR “person-group fit” OR “person-team fit”) AND (“Health organi*ation*” OR “hospital*” OR “health facilit*” OR “acute care” OR “primary care” OR “primary health care” OR “health context” OR “health setting” OR “health service” OR “health*care” OR “tertiary care” OR “nurse*” OR “health profession*” OR “doctor” OR “GP” OR “physician*” OR “dentist*” OR “health” OR “health care service*” OR “gyn*ecologist*” OR “h*ematologist*” OR “internist*” OR “obstetrician*” OR “p*ediatrician*” OR “pharmacist*” OR “physiotherapist*” OR “psychiatrist*” OR “psychologist*” OR “radiologist*” OR “surgeon*” OR “surgery” OR “therapist*” OR “counse*lor*” OR “neurologist*” OR “optometrist*”) AND (“Burnout” OR “staff outcome*” OR “job satisfaction” OR “staff satisfaction” OR “employee satisfaction” OR “employee outcome*” OR “retention” OR “staff recognition” OR “employee recognition” OR “intention to stay” OR “intention to leave” OR “debrief*” OR “intent to turnover” OR “turnover intention” OR “organi*ation* commitment” OR “stress” OR “work attitude” OR “occupational hazard*” OR “collegiality” OR “working relationship*” OR “teamwork” OR “collaboration”)))

Please see the tables below for information about the included articles from the systematic review. **Table 7.6** includes the information on the Quality Assessment Tool ratings for each included article.

Table 7.6. Quality assessment ratings

Reference	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability/generalizability	Usefulness	Total
Bao Y, Vedina R, Moodie S, and Dolan S. (2013) <i>Journal of Advanced Nursing</i> . 69(3):631-641.	4	4	4	4	4	4	4	4	4	36
Bellou V. (2009) <i>Employee Relations</i> . 31(5):455-470.	4	4	4	4	4	2	4	4	4	34
Boon C, and Biron M. (2016) <i>Human Relations</i> . 69(12):2177-2200.	4	3	4	4	4	2	3	4	4	32
Cha J, Chang YK, and Kim T-Y. (2014) <i>Journal of</i>	4	4	4	4	4	2	4	4	4	34

Reference	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability/ generalizability	Usefulness	Total
<i>Business Ethics.</i> 123(1):57-69.										
Cooper-Thomas HD, and Poutasi C.(2011) <i>Asia Pacific Journal of Human Resources.</i> 49(2):180-192.	4	4	4	4	4	4	4	3	4	35
Dotson MJ, Dave DS, Cazier JA, and Spaulding TJ. (2014) <i>Journal of Nursing Administration</i> . 44(2):111-116.	3	2	2	3	3	1	3	3	3	23
Findik M, Öğüt A, and Çagliyan V. (2013) <i>Mediterranean Journal of</i>	4	2	2	3	3	1	3	3	2	23

Reference	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability/ generalizability	Usefulness	Total
<i>Social Sciences.</i> 4(11):434-440.										
Gates MG, and Mark BA. (2012) <i>Research in Nursing and Health.</i> 35(3):265-276.	3	4	4	4	4	2	4	3	4	32
Gregory ST and Menser T. (2015) <i>Journal of healthcare management / American College of Healthcare Executives.</i> 60(2):133-148.	3	3	2	2	4	1	4	2	2	23
Hatton C, Rivers M, Mason H, et al. (1999) <i>Journal of Intellectual Disability Research.</i> 43(3):206-218.	4	4	3	3	4	1	3	3	4	29

Reference	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability/ generalizability	Usefulness	Total
Kalliath TJ, Bluedorn AC, and Strube MJ. (1999) <i>Journal of Organizational Behavior.</i> 20(7):1175- 1198.	4	4	3	4	4	4	3	4	4	34
Leiter MP, Day A, and Price L. (2015) <i>Burnout Research.</i> 2(1):25-35.	4	2	3	3	3	4	3	4	4	30
Leiter MP, Frank E, and Matheson TJ. (2009) <i>Canadian Family Physician.</i> 55(12):1224- 1226.	3	4	4	4	3	2	3	4	4	31
Leiter MP, Gascon S, and Maru'nez- Jarreta B.	3	4	4	4	4	3	4	4	4	34

Reference	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability/ generalizability	Usefulness	Total
(2010) <i>Journal of Applied Social Psychology</i> . 40(1): 57-75.										
Leiter MP, Jackson NJ, and Shaughnessy K. (2009) <i>Journal of Nursing Management</i> . 17(1):100-109.	4	4	4	3	4	2	4	2	4	31
Leiter MP. (2008) <i>Giornale Italiano di Medicina del Lavoro Ed Ergonomia</i> . 30(1 Suppl A):A52-58.	4	3	3	4	3	2	1	3	3	26

Reference	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability/ generalizability	Usefulness	Total
Rehfuss MC, Gambrell CE, and Meyer D. (2012) <i>The Career Development Quarterly</i> . 60(2):145-151.	4	4	4	3	4	4	4	3	4	34
Ren T, and Hamann DJ. (2015) <i>Personnel Review</i> . 44(4):550-566.	3	4	4	3	4	3	4	4	4	33
Ren T. (2013) <i>Journal of Business Ethics</i> . 112(2):213- 224.	4	4	4	3	4	2	3	3	4	31
Risman KL, Erickson RJ, and Diefendorff JM. (2016) <i>Applied Nursing Research</i> .	4	4	4	3	4	1	3	3	4	30

Reference	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability/ generalizability	Usefulness	Total
31:121-125. Schmidt KH. (2010) <i>International Journal of Nursing Studies.</i> 47(7):855-863.	4	4	4	3	3	2	4	4	4	32
Somers MJ. (2010) <i>Journal of Occupational and Organizational Psychology.</i> 83(2):443-453.	3	4	4	3	4	1	4	3	4	30
Verplanken B. (2004) <i>International Journal of Nursing Studies.</i> 41(6):599-605.	4	4	4	4	4	1	4	3	3	31
Zhang M, Yan F, Wang W, and Li G. (2017) <i>BMJ Open.</i> 7(2).	4	4	4	3	4	4	4	4	4	35

Table 7.7 provides further, more detailed information on each article, such as the aims, participants, study design, and major findings of each included article.

Table 7.7. Information about included articles from the systematic review

Reference	Study objectives/hypotheses/ research questions related to systematic review	Study design	Context; type of participants; number of participants	PO/PG fit?*; type of fit studied; findings direction; staff outcome	Key findings
Bao Y, Vedina R, Moodie S, and Dolan S. (2013) <i>Journal of Advanced Nursing</i> . 69(3):631-641.	Value incongruence will be positively related to burnout, turnover intention and accident propensity, and negatively related to self-rated health. Moreover, it was hypothesised that burnout mediates the relationship between value incongruence and self-rated health/turnover intention/accident propensity. (see p. 633-634)	Quantitative; cross-sectional	Large university hospital; nurses; 234	PO; value congruence; self-rated health, turnover intention, accident propensity, burnout; partly positive	“Of the three value axes, Economical and Ethical value incongruence are correlated with burnout. This suggests that hypothesis H1 is supported on these two axes. Moreover, Emotional and Ethical value incongruence were correlated with accident propensity. Thus, hypothesis H4a was supported on these two axes. All three types of value incongruence were correlated with turnover intention (hypothesis H3a fully confirmed), but none of them was related to health (H2a rejected).” (p. 635-636)
Bellou V. (2009) <i>Employee Relations</i> . 31(5):455-470.	“This study is an attempt to explore the effect that value congruence between employees and public organizations has on exit,	Quantitative; cross-sectional	Three public hospitals; medical, nursing and administration	PO; supplementary value congruence; exit, voice, loyalty and	“The greater the P-O fit, the higher the job satisfaction and the loyalty. On the contrary, the relationship between P-O fit and neglect is negative whereas between P-O fit and exit and voice is

	voice, loyalty, and neglect (EVLN) displayed by the former ... This study expects to reveal the mediating role of job satisfaction in the relationship between P-O fit and these responses.” (p. 456)		staff; 125	neglect (EVLN), and job satisfaction; partly positive	non-significant.” (p. 463, statistics excluded from quote)
Boon C, and Biron M. (2016) <i>Human Relations</i> . 69(12):2177-2200.	“We examine the role of leader–member exchange in the relationship between two types of person–environment fit over time: person–organization and person–job fit, and subsequent turnover” (p. 2177)	Quantitative; longitudinal	Elderly care organisation; nurses, therapists, physicians and support staff; 160	PO; supplementary value congruence; turnover; nil	PO fit was significantly correlated with needs-supplies and demands-abilities fit, but were not significantly correlated with actual turnover (p. 2188)
Cha J, Chang YK, and Kim T-Y. (2014) <i>Journal of Business Ethics</i> . 123(1):57-69.	“Hypothesis 3a Organizational citizenship and caring behavior will decrease as personal prosocial identity increases toward organizational prosocial identity and will increase as personal prosocial identity exceeds organizational prosocial identity. Hypothesis 3b Organizational citizenship	Quantitative; cross-sectional	104 hospitals; doctors, nurses, administrative staff; 589	PO; supplementary personality and value congruence; organizational citizenship behaviour (OCB), caring behaviour; positive	“Hypothesis 3a was supported only for OCBI and caring behavior ... Hypothesis 3b was supported” (p. 64-65) OBCI=OBC towards individuals (rather than organisations)

	and caring behavior will be higher when personal and organizational prosocial identities are both high than when both are low.” (p. 61)				
Cooper-Thomas HD, and Poutasi C.(2011) <i>Asia Pacific Journal of Human Resources</i> . 49(2):180-192.	“Research question 1: Is PJ fit or PO fit the more important predictor of (a) job satisfaction and (b) organizational commitment? Research question 2: Which mediated path is the strongest predictor of intent to quit?” (p. 183)	Quantitative; cross-sectional	Different contexts; Pacific health care workers with various roles, eg, nursing, administration, management (heritage from a Pacific Island, have higher rates of chronic illness than other ethnic groups); 99	PO; complementary and supplementary (but it is unspecified which component of supplementary fit is being examined); job satisfaction, organisational commitment, intention to quit; positive	PO fit was significantly positively correlated with job satisfaction and organisational commitment, and significantly negatively correlated with intention to quit. Job satisfaction and organizational commitment themselves also have significant direct effects on intention to quit.
Dotson MJ, Dave DS, Cazier JA, and Spaulding TJ. (2014) <i>Journal of Nursing Administration</i> . 44(2):111-116.	Measured the effect of value congruence on intention to leave the job and the nursing profession, and job satisfaction	Quantitative; cross-sectional	Various nursing contexts, eg, hospital, administration, doctors office, school. In rural and urban environments; nurses; 861	PO, PG; supplementary value congruence; intention to leave job, intention to leave profession, job satisfaction; partly positive	As expected, value congruence was significantly positively associated with job satisfaction, and negatively associated with intention to leave the job. However unexpectedly it was also significantly <i>positively</i> associated with intention to leave the nursing profession

Findik M, Ögüt A, and Çağliyan V. (2013) <i>Mediterranean Journal of Social Sciences</i> . 4(11):434-440.	“To study the relationships between the level of person-organization fit, the level of job satisfaction, and the levels of turnover intentions.” (p. 436)	Quantitative; cross-sectional	Doctors and professors working in internal medicine, surgical or basic medicine areas; health personnel; 128	PO, PG; PO: supplementary value congruence, knowledge, skills and abilities (KSAs), personality. PG: supplementary value congruence; job satisfaction, turnover intent; positive	The study reported a statistically significant relationship between PO fit and both job satisfaction and turnover intent
Gates MG, and Mark BA. (2012) <i>Research in Nursing and Health</i> . 35(3):265-276.	“The greater the diversity based on values, the more negative the outcomes.” (p. 267)	Quantitative; longitudinal	Participants included in the final study worked in 239 units from 133 hospitals; nurses; 1,450	PG; supplementary value congruence; job satisfaction, intent to stay; positive	“The less similar nurses perceived themselves to be relative to others in their unit in terms of values (eg, greater perceived value diversity), the less likely they were to be satisfied with their jobs and the less likely they were to report intent to stay in their current position” (p. 272)
Gregory ST and Menser T. (2015) <i>Journal of healthcare management / American College of Healthcare Executives</i> . 60(2):133-148.	“This study is an opportunity to develop and test the theory for burnout in the primary care setting; specifically, it will determine the applicability of the AWS model in measuring burnout for primary care physicians.” (p. 137)	Quantitative; longitudinal	Ambulatory units: primary care physicians; 153 (97 at baseline, 91 at the 3-month follow-up, and 56 at the final 6-month follow-up) representing 244 total	PO; supplementary value congruence; burnout; positive	It was reported that values were significantly association with all three aspects of burnout (emotional exhaustion, depersonalization, and self-efficacy, which is defined as the level of personal accomplishment one feels with respect to their work). ^{2,13,14}

responses					
Hatton C, Rivers M, Mason H, et al. (1999) <i>Journal of Intellectual Disability Research</i> . 43(3):206-218.	“To investigate relationships between person± organization ‘fit’ and staff outcomes. If the theory is correct, greater person±organization ‘fit’ should be associated with better staff outcomes across a range of indices.” (p. 43)	Quantitative; cross-sectional	UK services for people with intellectual disabilities (village, community residential, education and community teams); staff at all levels, eg, administrative, domestic, managerial and therapeutic staff; 450	PO; NA; job stress, job search behaviour, intention to leave, sick leave behaviour, work satisfaction; partly positive	“Higher levels of general stress were strongly associated with poorer person-organization fit on the organization culture dimension of tolerant/ staff-oriented. Greater job strain was strongly associated with poorer person-organization fit on four dimensions ... Intention to leave was strongly associated with poorer person-organization fit on four organizational culture dimensions ... Actual job search behaviour and sick leave in the previous 6 months were not strongly associated with any dimension of organizational culture. Finally, higher levels of work satisfaction were very strongly associated with better person-organization fit on all nine dimensions of organizational culture” (p. 43)
Kalliath TJ, Bluedorn AC, and Strube MJ. (1999) <i>Journal of Organizational Behavior</i> . 20(7):1175-1198.	“The greater the congruence between individuals' (a) internal process (b) open systems (c) human relations, and (d) rational goal values and their perceptions of (a) internal process (b) open systems (c) human relations, and (d) rational	Quantitative; cross-sectional	Two hospitals; executives, middle managers, first-line supervisors, employees, resident physicians, contract workers; 1358	PO; value congruence; job satisfaction, organisational commitment; positive	There were significant positive intercorrelations between value congruence on the one hand, and job satisfaction and organisational commitment on the other. Moreover, “These results indicate weak support for the four congruence hypotheses predicting organizational commitment ... [and] predicting job satisfaction” (p. 1189)

	goal values in the organization, respectively, the higher their levels of organizational commitment ... [and] job satisfaction” (p. 1181)				
Leiter MP, Day A, and Price L. (2015) <i>Burnout Research</i> . 2(1):25-35.	“To examine the contribution of attachment dimensions to predicting burnout beyond measures of workload, value congruence, and coworker incivility” (p. 31-32)	Quantitative; cross-sectional	Hospital; managers and front-line staff from many professions; 1624	PO; supplementary value congruence; burnout; positive	“The contribution of attachment styles to a model of burnout based on workload and value congruence emphasizes the importance of considering employees’ understanding of their social context” (p.34) ... value congruence was significantly associated with all other variables
Leiter MP, Frank E, and Matheson TJ. (2009) <i>Canadian Family Physician</i> . 55(12):1224-1226.	“Values and manageable workload would interact differently for women and men when predicting burnout.” (p. 1225.e1)	Quantitative; cross-sectional	NA (online survey); physicians; 2536	PO; supplementary value congruence; burnout; positive	“Values congruence predicted exhaustion and cynicism for men and women (P = .001)” (p. 1225e2) ... “The results also confirmed that workload and values congruence interact differently for women and men.” (p. 1225e4)
Leiter MP, Gascon S, and Maru'nez-Jarreta B. (2010) <i>Journal of Applied Social Psychology</i> .	“The study evaluates a structural equation model in which the three aspects of burnout— exhaustion, cynicism, and efficacy— mediate the relationship of the work environment with employees’ evaluation of	Quantitative; cross-sectional	Three hospitals in northern and Eastern Spain; nurses and physicians; 874; 603	PO; value congruence; burnout; positive	There was a significant negative correlation for both doctors and nurses value congruence with exhaustion and cynicism (components of burnout), and a significantly positive correlation with efficacy. (p. 66) ... “Second, value congruence was significantly related to all three aspects of relationships with

40(1): 57-75.	organizational change” (p. 57)				work. The path from values to cynicism was relatively small in the modified model, indicating that most of that relationship was mediated through exhaustion in light of the large zero-order correlation between the two constructs. They are clearly related, but much of that relationship is associated with the energetic process captured by exhaustion. Together, the analysis supports the core constructs of the model.” (p. 70)
Leiter MP, Jackson NJ, and Shaughnessy K. (2009) <i>Journal of Nursing Management</i> . 17(1):100-109.	Authors expected there would be “a more powerful relationship of work values with generation than with organizational tenure. This contrast is central to the study’s focus on generation as a value position: the important point is not simply a nurses’ age or job tenure, but the inherent generational values.” (p. 103)	Quantitative; cross-sectional	Acute care facilities; nurses; 667	PO; supplementary value congruence; burnout, turnover intent; positive	“The analysis identified a greater person/organization value mismatch for Generation X nurses than for Baby Boomer nurses. Their greater value mismatch was associated with a greater susceptibility to burnout and a stronger intention to quit for Generation X nurses.” (p. 100)
Leiter MP. (2008) <i>Giornale Italiano di</i>	To test “the extent to which value congruence enhances the prediction of burnout beyond	Quantitative; cross-sectional	Tertiary hospitals, regional hospitals,	PO; value congruence; burnout; positive	There was a significant correlation between value congruence and each dimension of burnout ... For further analysis, “Only two correlated error

<i>Medicina del Lavoro Ed Ergonomia.</i> 30(1 Suppl A):A52-58.	the prediction provided by demands and resources.” (p. A52)		community hospitals and other settings; nurses; 725		terms were freed in the analysis: MBI-3 with MBI-4 and Control-1 with Control-2.” (p. A56) So values were not analysed in results.
Rehfuss MC, Gambrell CE, and Meyer D. (2012) <i>The Career Development Quarterly.</i> 60(2):145-151.	“We hypothesized that each type of fit would be positively related to counselor career satisfaction.” (p. 146)	Quantitative; cross-sectional	Various counselling and counselling education contexts; counsellors; 437	PO; supplementary value congruence; career satisfaction; positive	“P-O and N-S fit were both positively related to career satisfaction, and no relationship was found between career satisfaction and D-A fit.” (p. 149) Please note, N-S and D-A fit were measured for person-job fit, and are not considered further for this systematic review
Ren T, and Hamann DJ. (2015) <i>Personnel Review.</i> 44(4):550-566.	Examine how employee-organisation value congruence was related to the staff outcomes of satisfaction, turnover intent and organisational commitment at different levels of nursing.	Quantitative; cross-sectional	Nursing homes; nurses; 562	PO; supplementary value congruence; satisfaction, turnover intent and organisational commitment; positive	“Value congruence is found positively associated with nurses’ job satisfaction and organizational commitment, but negatively with turnover intention.” (p. 550)
Ren T. (2013) <i>Journal of Business Ethics.</i> 112(2):213-224.	“Organizational ownership moderates the relationship between employee–organization value congruence and employees’ (a) job satisfaction, (b) organizational commitment, and (c) intent to quit in a way that the	Quantitative; cross-sectional	23 non-profit and 7 for-profit nursing homes; registered nurses, licenced practicing nurses, certified nursing assistants; 407	PO; value congruence; Job satisfaction, Organisational commitment, intention to quit; positive	“Employees’ value congruence has a positive relationship with employees’ self-rating on job satisfaction ($p < 0.01$, two-tailed test), organizational commitment ($p < 0.01$, two-tailed test), and a negative relationship with intent to quit ($p < 0.01$, two-tailed test) ... in general, value congruence improves the three aspects of job attitudes across different ownership types of

	effect is stronger among for-profit employees in comparison to the nonprofit counterparts.” (p. 215)				organization, and among two out of the three cases the effect appears to be stronger in for-profit organizations” (p. 221-222)
Risman KL, Erickson RJ, and Diefendorff JM. (2016) <i>Applied Nursing Research</i> . 31:121-125.	“This study investigates the relationship of perceived value congruence with ... job satisfaction ... [it is hypothesised that] value congruence will be positively related to nurses’ job satisfaction.” (p. 122)	Quantitative; cross-sectional	Hospital; nurses; 753	PO; supplementary value congruence (although one item unintentionally measures goal congruence); job satisfaction; positive	Perceived value congruence was significantly correlated with job satisfaction
Schmidt KH. (2010) <i>International Journal of Nursing Studies</i> . 47(7):855-863.	“Goal incongruence is expected to be positively related to indicators of job strain.” (p. 857)	Quantitative; longitudinal	Six nursing homes; employees in the nursing homes; 242	PO; goal congruence; burnout, psychosomatic complaints, absenteeism; positive	Goal incongruence was significantly correlated with all outcome variables ... “the results show that the perceived mismatch between personal and organizational goals is positively related to a broad spectrum of indicators of strain that includes both self-report measures (exhaustion, depersonalization, psychosomatic complaints) and measures of absenteeism covering a period of 12 months after the administration of questionnaires.” (p. 860)

Somers MJ. (2010) <i>Journal of Occupational and Organizational Psychology</i> . 83(2):443-453.	“The level of person–organization value congruence for highly committed employees, those with an AC–NC dominant profile, and those with an AC dominant profile is significantly greater than is the level of person–organization value congruence for the other commitment profiles.” (p. 447). AC=affective commitment; NC=normative commitment	Quantitative; longitudinal	Hospital in an urban area; employees directly involved in patient care; 572	PO; supplementary value congruence; organisational commitment, turnover intent, turnover, absenteeism; partly positive	Value congruence was significantly correlated with affective and normative commitment, turnover intention and turnover, but not absenteeism. The P-O fit hypothesis was supported such that “the AC–NC dominant profile had the highest levels of person-organization value- congruence followed by highly committed employees and those with an AC dominant profile. Although, the ordering of the means was as expected, it should be noted that the difference between highly committed employees and those with an AC dominant profile was not statistically significant.” (p. 450)
Verplanken B. (2004) <i>International Journal of Nursing Studies</i> . 41(6):599-605.	“The present study addressed the question how value congruence relates to job satisfaction” (p. 600)	Quantitative; cross-sectional	Hospital surgery ward; nurses; 56	PG; value congruence; job satisfaction, employee attitude, time pressure; positive	“It was expected that job satisfaction would be predicted by ward attitudes. The correlation between these two variables was indeed the largest, but human relations and rational goal value congruence were also significantly correlated with job satisfaction.” (p. 602) ... human relations value congruence was significantly correlated with ward attitude (p<.001) and job satisfaction (p<.05) (p. 603)

Zhang M, Yan F, Wang W, and Li G. (2017) <i>BMJ Open</i> . 7(2).	“This study aims to examine the mediation effect of job satisfaction on the relationship between P-O fit and turnover intention” (p. 1)	Quantitative; cross-sectional	Community health facility; community health workers; 656	PO; needs-supplies; turnover intent, job satisfaction; positive	PO fit was significantly positively associated with job satisfaction, and inversely correlated with turnover intent.
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*Included studies may have also measured other types of P-E fit eg, P-J or P-V fit, but this was not reported in this table as it is unrelated to the aims of the systematic review.

Appendix C: Fit survey items developed by the research team for the multi-dimensional measurement tool

As seen in **Table 7.8**, the final survey questions for each component of P-O and P-G fit are displayed. To apply these items to other organisations, supplement “headspace” with the organisation name of the study setting.

Table 7.8. Final fit survey items and their corresponding hypothesised latent factors

Component identified	Type of fit being measured	
	P-O	P-G
Value	<ul style="list-style-type: none"> • “The things that I value in life are very similar to the things that my organisation values”⁶⁸ • “My personal values match my organisation’s values and culture”⁶⁸ • “My organisation’s values and culture provide a good fit with the things that I value in life”⁶⁸ 	<ul style="list-style-type: none"> • “The things that my work group members value in life are very similar to my values”^{25*} • “My values match my work group's values”^{25*} • “My work group's values provide a good fit with the things that I value in a group”^{25*}
^ Goal	<ul style="list-style-type: none"> • “I identify strongly with the goals of my organisation”¹⁷ • “My personal goals and the goals of my organisation are very similar”¹⁷ • “I don't care about the goals of this organisation as much as the organisation would ideally like me to” (reverse-scored)^{17*} • “My goals match or fit those of the organisation”^{214*} 	<ul style="list-style-type: none"> • “The people in my work group and I have the same expectations of the effort needed to reach goals”^{80*} • “My work group have the same expectations of reward for goal achievement as I do”^{80*} • “My goals are similar to those of the people in my work group”^{215*}
Personality	<ul style="list-style-type: none"> • “My personality matches or ‘fits’ this organisation”^{206*} • “The ‘personality’ of the organisation reflects my own personality”^{206*} • “My personality is well suited for the personality or ‘image’ of this organisation”⁶ • “My personality prevents me from fitting into this 	<ul style="list-style-type: none"> • “I feel that my personality matches my work group’s image”^{82*} • “My personality matches my work groups’ personality”^{82*} • “My personality provides a good fit with my work group’s personality”^{82*}

	organisation because it is different from other employees' personalities" (reverse-scored) ^{6*}	
General/ Unique complementary fit	<ul style="list-style-type: none"> • "I feel that I am a unique piece of the puzzle that makes this organisation work"⁶ • "My organisation seem to value that I am different from the 'typical' employee"^{6*} • "My knowledge, skills, and abilities offer something that other employees in this organisation do not have"⁶ • "I feel like I stand out in this organisation"⁶ 	<ul style="list-style-type: none"> • "When key decisions are made, people in my work group consult me because I have a different perspective than they do"^{6*} • "Even though my personality differs from the people in my work group it seems to complement their personalities"⁶ • "I feel that I am an important part of my work group because I have such different skills and abilities than the people in my work group"⁶ • "The people in my work group rely on me because I have competencies that they do not have"¹³⁸
Needs-supplies fit	<ul style="list-style-type: none"> • "There is a good fit between what headspace offers me and what I am looking for in an organisation"^{68*} • "The attributes that I look for in an organisation are fulfilled very well by headspace"^{68*} • "Headspace gives me just about everything I want from an employing organisation"^{68*} 	<ul style="list-style-type: none"> • "I feel that my work group understand and listen to me"^{83*} • "My work group provides me with a variety of interesting things to do"^{85*} • "I personally see opportunities to learn new things from my work group"^{140*} • "I get the help and support I need from the people in my work group"^{85*}
Demands- abilities fit	<ul style="list-style-type: none"> • "The match is very good between the demands of my organisation and my personal skills"^{68*} • "My abilities and training are a good fit with the requirements of my organisation"^{68*} • "My personal abilities and education provide a good match with the demands that my organisation places on me"^{68*} 	<ul style="list-style-type: none"> • "My abilities and training are a good fit with the requirements of my work group"^{25*} • "My knowledge, skills and abilities provide a good fit with the needs the work group have of me"^{25*} • "The match is very good between the demands of my work group and my skills"^{25*}

*Original wording of the survey item altered for the current study; ^Supplementary fit.

The reference after each item indicates the source upon which each particular survey item was based.

Participants will be asked to rate their agreement with each item on seven-point Likert scale, from strongly disagree to strongly agree.

Consistency was obtained between items eg, replacing the word "company" with "organisation" and "team" with "work group".

Appendix D: Survey information

Please note that a slightly different recruitment email and Participant Information and Consent Form was sent to the centres participating under the Alfred Hospital Ethics Committee (project number 198/17), as necessary to fulfil requirements from that committee. For simplicity, only the main email is shown below.

Emails to potential participants

The emails below were sent from the researcher to the contact at each centre. Subsequently, this was sent to employees, contractors and volunteers in each centre.

Initial email to potential participants

Dear headspace employee

My name is Jessica Herkes, and I am a researcher at the Centre for Healthcare Resilience and Implementation Science, Australian Institute of Health Innovation, Macquarie University. My team is conducting research on organisational culture; which can be defined as the shared values, attitudes and beliefs of an organisation.

It would be a great benefit to this research if you had the time to fill in this five-minute survey: https://mqedu.qualtrics.com/SE/?SID=SV_bK2m9IN3rpnFyrH. It is expected that the results will advance knowledge of the person-organisation fit theory, and provide much-needed research in organisational culture in mental health facilities. If you have any questions regarding the research, please do not hesitate to contact me at Jessica.herkes@students.mq.edu.au.

Thank you in advance for taking the time to complete the survey. I look forward to your replies.

Kind regards

Jessica Herkes

Reminder email to potential participants:

Dear headspace employee

This is a reminder to complete a five-minute survey on person-organisation fit in your workplace. You can access the survey via the link here: https://mqedu.qualtrics.com/SE/?SID=SV_bK2m9IN3rpnFyrH. If you have any questions regarding the research, please do not hesitate to contact me at Jessica.herkes@students.mq.edu.au.

Thank you in advance for taking the time to complete the survey. I look forward to your replies.

Kind regards

Jessica Herkes

Participant Information and Consent Form (Surveys)

A study of organisational culture and staff outcomes in mental health facilities.

Chief Investigator: Professor Jeffrey Braithwaite

What is the study about?

You are invited to participate in a study of organisational culture and its association with staff outcomes. The purpose of the study is to investigate the way staff feel they fit in with the organisation they work for (person-organisation fit) and the way they feel they fit in with the people they work with (person-group fit), and how these different types of fit impact on staff outcomes, including stress, burnout and staff satisfaction. More specifically, it will examine how the compatibility of a person with the organisational culture of their workplace is associated with these employee outcomes.

Who is carrying out the study?

The study is being conducted by Professor Jeffrey Braithwaite (email below), Dr Louise Ellis (louise.ellis@mq.edu.au), Dr Kate Churruca (kate.churruca@mq.edu.au) and Ms Jessica Herkes (jessica.herkes@students.mq.edu.au), from the Centre for Healthcare Resilience and Implementation Science, Australian Institute of Health Innovation (AIHI), Macquarie University. The research is being conducted to meet the requirements of the Master of Research degree under the supervision of Professor Jeffrey Braithwaite (Jeffrey.braithwaite@mq.edu.au) of the AIHI, Faculty of Medicine and Health Sciences.

What does the study involve?

If you decide to participate, you will be asked to complete a five-minute online survey asking questions on your perception of the organisation and your levels of satisfaction, stress and burnout. It is not anticipated that the survey will pose any discomfort to participants. You will not receive any direct benefit for participating, but may find the experience of speaking about your perceptions to be a rewarding one.

How will my data be used?

No individual will be identified in any publication of the results. Findings (including de-identified, illustrative quotes) from this research will form the basis of a Master of

Research thesis, and may be disseminated through peer-reviewed publications and at academic conferences. A summary of the results of the data will also be presented in a report to headspace, and can be made available to you on request.

Confidentiality and privacy

Any information or personal details gathered in the course of the study are confidential, except as required by law. Data will be accessible only to the research team, and will be securely stored in de-identified form. The data collected will be destroyed after a period of time has passed, post-study, in keeping with ethical principles. The information you provide to us will remain anonymous, confidential, and will not be traced back to you, unless you wish to provide your identity and contact details for participation in an interview. All contact details and identifying information that you provide to us will be stored securely and separate to your survey responses.

Do I have to take part?

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

How do I volunteer for involvement in further studies?

At the completion of the survey, you will be asked to register your interest to participate in a follow-up interview on a similar topic. If interested, participants can leave their name and contact details for the researcher to arrange an interview time at their convenience. The survey data will not be linked to this contact information.

Return of the questionnaire will be regarded as consent to use the information for research purposes, and an acknowledgement that the participant has read and understood the information above and that any questions the participant has asked have been answered to their satisfaction. The participant agrees to participate in this research, knowing that they can withdraw from further participation in the research at any time without consequence. Withdrawal will occur in the circumstance that a survey is incomplete, as it will not be used in the analysis of the research.

Investigator's Name: JEFFREY BRAITHWAITE

Date: 28/02/17

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Survey Questions

Please see below for the survey in its entirety. At each junction of questions, a new scale will be depicted if relevant.

You at headspace

What role do you have in headspace?

Administrative staff

Clinical staff

Management

Volunteer

Other: _____

In which headspace centre do you primarily work? (please write only one)

How long have you worked at this centre?

Less than 1 month

1-3 months

3-6 months

6-12 months

1-2 years

2-5 years

More than 5 years

Please note. Each of the items below are to be answered by the participant on a seven-point Likert scale (similar to the one pictured below), ranging from strongly disagree to strongly agree.

Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

You and headspace

The following statements concern how you feel you are compatible with your organisation, **headspace**. In these questions, when we say "organisation" we are referring to **headspace as a whole**, not your specific headspace centre. Please rate the extent to which you feel

each of the following statements apply to you, from strongly disagree to strongly agree.

“The things that I value in life are very similar to the things that my organisation values”

“My personal values match my organisation’s values and culture”

“My organisation’s values and culture provide a good fit with the things that I value in life”

“I identify strongly with the goals of my organisation”

“My personal goals and the goals of my organisation are very similar”

“I don't care about the goals of this organisation as much as headspace would ideally like me to”

“My goals match or fit those of the organisation”

“My personality matches or ‘fits’ this organisation”

“The ‘personality’ of the organisation reflects my own personality”

“My personality is well-suited for the personality or ‘image’ of this organisation”

“My personality prevents me from fitting into this organisation because it is different from other employees' personalities”

“I feel that I am a unique piece of the puzzle that makes this organisation work”

“My organisation seem to value that I am different from the ‘typical’ employee”

“My knowledge, skills, and abilities offer something that other employees in this organisation do not have”

“I feel like I stand out in this organisation”

“There is a good fit between what headspace offers me and what I am looking for in an organisation”

“The attributes that I look for in an organisation are fulfilled very well by headspace”

“Headspace gives me just about everything I want from an employing organisation”

“The match is very good between the demands of my organisation and my personal skills”

“My abilities and training are a good fit with the requirements of my organisation”

“My personal abilities and education provide a good match with the demands that my organisation places on me”

You and your work group

The next set of questions ask about **you and the group of people you work most closely**

with at headspace (ie, your **“work group”**). Please select which statement best describes the group of people you work most closely with.

People in my headspace cluster*

People in my headspace centre

A smaller group within the headspace centre

I work independently

Other _____

**Please note, “cluster” is a term used by the organisation being studied to describe a group of centres. These centres are often geographically close together, and may be run by the same funding or lead agency.*

Please answer the extent to which each statement applies to you in relation to your work group.

“The things that people in my work group value in life are very similar to my values”

“My values match my work group’s values”

“My work group’s values provide a good fit with the things that I value in a group”

“The people in my work group and I have the same expectations of the effort needed to reach goals”

“My work group has the same expectations of reward for goal achievement as I do”

“My goals are similar to those of the people in my work group”

“I feel that my personality matches my work group’s image”

“My personality matches my work group’s personality”

“My personality provides a good fit with my work group’s personality”

“When key decisions are made, people in my work group consult me because I have a different perspective than they do”

“Even though my personality differs from the people in my work group, it seems to complement their personalities”

“I feel that I am an important part of my work group because I have such different skills and abilities than the people in my work group”

“The people in my work group rely on me because I have competencies that they do not have”

“I feel that my work group understand and listen to me”

“My work group provides me with a variety of interesting things to do”

- “I personally see opportunities to learn new things from my work group”
- “I get the help and support I need from the people in my work group”
- “My abilities and training are a good fit with the requirements of my work group”
- “My knowledge, skills and abilities provide a good fit with the needs the work group have of me”
- “The match is very good between the demands of my work group and my skills”

You and your job

This next set of questions is about your feelings regarding your job at headspace. Each statement below is something a person may say about their job. Please indicate your own personal feelings by answering how much you agree with each of the following statements.

- “All in all I am satisfied with my job”
- “In general, I don’t like my job”
- “In general, I like working here”

Feelings at work

The next questions will focus on your feelings of burnout at headspace. Please rate the extent each statement applies to you.

- “I feel emotionally drained at work”
- “I feel tired when I get up in the morning and have to face another day on the job”
- “I feel burned out from my work”
- “I feel used up at the end of the workday”
- “Working all day is really a strain for me”
- “I have become less enthusiastic about my work”
- “I have become more cynical about whether my work contributes anything”
- “I have become less interested in my work since I started my job”
- “I just want to do my job and not be bothered”
- “I doubt the significance of my work”

Stress at work

Please note. Each of the items below are to be answered by the participant on a four-point Likert scale (similar to the one pictured below).

Never Sometimes Most of
 the time Always
☐ ☐ ☐ ☐

Do you find your job at headspace stressful? For each of the following words or phrases, please answer the extent to which they apply to you in your job at headspace. Do you find your job at headspace ...

Demanding

Hectic

Calm

Relaxed

Stressful

Pressured

Pushed

Irritating

Under control

Nerve-wracking

Hassled

Comfortable

More stressful than I'd like

Smooth running

Overwhelming

Some more questions about you:

What is your gender?

Male

Female

Prefer not to answer

What is your age?

18-29

30-39
40-49
50-59
60 or older

Further thoughts

Finally, here are some optional open-ended questions for you to respond to. What does being “compatible” with your organisation mean to you?

Overall, how satisfying do you find your work and why?

What are some factors in your job that contribute to feeling burnt out?

Everyone experiences some stress in the job. What are some factors or problems in your job that result in the most stress for you?

Do you have any other comments you wish to make?

One last thing ...

As part of the study, we will be conducting follow-up interviews on this topic. Would you be interested in taking part in a follow-up interview? If so, please provide your name and email or phone number for the researchers to contact you.

Name_____

Email_____

Phone number_____

How are you feeling?

Did you feel distressed or upset when taking this survey? Would you like to discuss this with the psychologist on the research team? If so, please provide your contact details and we will arrange for our psychologist to call you back. If you do not want to talk with a psychologist on our research team, but would still like some support, please call a Crisis Helpline or speak with an appropriate colleague from headspace. Helpful Crisis Helplines include:

- The Suicide Call Back Service which offers confidential support to professionals (on 1300 659 467)
- The Macquarie University Counselling Service (on 9850 7497 or 02 9850 7498).

Appendix E: Semi-structured interviews

Please see below for the Participant Information and Consent form (Interviews) and the email sent to potential participants. Please note, a slightly different form was used for a small number of participating centres (participating under the Alfred Hospital Ethics Committee (project number 198/17)), as required by the multiple ethics committees.

Email to potential participants

Dear [*Participant name*]

My name is Jess Herkes and I am a researcher at Macquarie University.

Thank you for completing the recent survey on organisational culture and staff outcomes. I am emailing because you registered your interest in a follow-up interview, which I now invite you to participate in. This interview is expected to take approximately half an hour at a time convenient to you over the phone. [*Information regarding suitable time and date for the interview*]. Please see the attached Participant Information and Consent Form for further details regarding participating.

If you are happy to participate, please reply with a time that suits you and a written acknowledgement that you have read and understand the Participant Information and Consent Form. Thank you for your time and I look forward to hearing from you.

Kind regards

Jess

Jessica Herkes

Master of Research candidate

Centre for Healthcare Resilience and Implementation Science

Australian Institute of Health Innovation

Macquarie University

Level 6, 75 Talavera Road

Macquarie University | NSW | 2109

Participant Information and Consent Form (Interviews)

A study of organisational culture and staff outcomes in mental health facilities.

Chief Investigator: Professor Jeffrey Braithwaite

What is the study about?

You are invited to participate in a study of organisational culture and its association with staff outcomes. The purpose of the study is to investigate the way staff feel they fit in with the organisation they work for (person-organisation fit) and the way they feel they fit in with the people they work with (person-group fit), and how these different types of fit impact on staff outcomes, including stress, burnout and staff satisfaction. More specifically, it will examine how the compatibility of a person with the organisational culture of their workplace is associated with these employee outcomes.

Who is carrying out the study?

The study is being conducted by Professor Jeffrey Braithwaite (email below), Dr Louise Ellis (Louise.ellis@mq.edu.au), Dr Kate Churruca (kate.churruca@mq.edu.au) and Ms Jessica Herkes (jessica.herkes@students.mq.edu.au), from the Centre for Healthcare Resilience and Implementation Science, Australian Institute of Health Innovation (AIHI), Macquarie University. The research is being conducted to meet the requirements of the Master of Research degree under the supervision of Professor Jeffrey Braithwaite (Jeffrey.braithwaite@mq.edu.au) of AIHI, Faculty of Medicine and Health Sciences.

What does the study involve?

If you decide to participate, you will be asked to take part in a 30-minute interview on your perception of your work environment and your levels of satisfaction, stress and burnout. With your permission, this interview will be audio-recorded. It is not anticipated that the interview will pose any discomfort to participants. You will not receive any direct benefit for participating, but may find the experience of speaking about your perceptions to be a rewarding one.

How will my data be used?

No individual will be identified in any publication of the results, though we may use some verbatim quotations in presentations of our results. Findings from this study will form the

basis of a Master of Research thesis, and may be disseminated through peer-reviewed publications and at academic conferences. A summary of the results of the data will also be presented in a report to headspace, and can be made available to you on request.

Confidentiality and privacy

Any information or personal details gathered in the course of the study are confidential, except as required by law. Data will be accessible only to the research team, and will be securely stored in de-identified form. Your personal details will not be kept with your interview data, and the data collected will be destroyed after a period of time has passed, post-study, in keeping with ethical principles.

Do I have to take part?

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, _____ have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name (Block letters): _____

Participant's Signature: _____ Date: _____

Investigator's Name (Block letters): JEFFREY BRAITHWAITE

Investigator's Signature:  Date: 28/02/17

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Interview questions

Introduction and verify information in participant information and consent form (including permission to record interview).

- To start off, could you please tell me a bit about your role at headspace?
 - Who do you work most closely with?
- So today, as you'd probably gathered from the surveys, I would like to focus on the idea of being compatible, or fitting in, with both the organisation and with the group you work with.
- What does fitting in at work mean to you? (eg, some people talked about values, and others about having similar personalities with co-workers)
- Do you think that you have had to adapt or change to feel you fit in with your colleagues, or with headspace?
 - Eg, Some of the people I've talked to suggested that headspace or their work colleagues could offer them more **communication** or **support**.
 - Do you think this happens? Or if not, do you think it should?
 - Is this something that you want or have wanted in the past, or not?
- Do you think that you can be unique or different, and still fit in?
 - For example, in terms of skill set, or personality?
- Some people find they fit in despite their differences, and others think it is because of these differences. Do you have an experience with this?
- To what extent, if any, do you think it is important to fulfil your job description to feel a sense of fit?
 - Do you think this impacts your sense of belonging at work?
- How do you generally feel about your caseload/workload?*
- Do you use any strategies do you implement to try and maintain work-life balance?
 - How does this impact your feelings about the organisation you work for, and your job?

Conclusion, thank participant for their time, provide contact details, verify if participant would like copy of Executive Report.

Appendix F: Qualitative data codebook

The table below (**Table 7.9**) includes information on each code developed for the thematic analysis of survey and interview data. The codebook also provides information about when in the data analysis process each code was developed, and examples from the data itself.

Table 7.9. Codebook

Origin	Details		Examples from data
Theory driven codes	Code Label	Culture	“Just going and knocking on each other’s doors and having a chat is definitely part of the culture” (IP 2, clinical, EXP: >5 years) “I’ve really tried very hard to create a culture of teamwork” (IP 3, management, EXP: 6-12 months)
	Definition	An overarching code that encompasses reference to the shared values, beliefs, attitudes and behaviours in the workplace or organisation.	
	Code Label	P-O fit	“A fit between personal values and personal capabilities between myself and my organisation” (SR 91, clinical, EXP: 1-2 years)
	Definition	A reference to the relationship and compatibility between the individual and the organisation.	
	Code Label	P-G fit	“Feeling like I share the same community goals as my colleagues” (SR 140, clinical, EXP: 1-2 years)
	Definition	A reference to the relationship and compatibility between the individual and the work group; in other words, colleagues or co-workers.	
	Code Label	Supplementary fit	“In terms of fitting in with colleagues I feel like it was – it’s a very open and welcoming organisation and the team is really great so I haven’t really probably had to change that much because of that” (IP 4, administration, EXP: 6-12 months)
	Definition	Reference to the similarity between the individual and the context being an important component of one’s fit.	
	Code Label	Goal congruence	“Being able to work together with similar goals” (SR 35,

Origin	Details		Examples from data
	Definition	Congruence described between an individual and their organisation or work group.	“other” role (community engagement), EXP: 2-5 years) “Same attitudes and ideas for helping people” (SR 11, management, EXP: 1-2 years)
	Code Label	Value congruence	“Work and Life Values being similar” (SR 200, “other” role, EXP: 1-2 years)
	Definition	Similarity and alignment in the standards, morals or ethical principals held by the individual and their place of work, or those they work closely with.	
	Code Label	Personality congruence	“Similar personalities to other colleagues” (SR 149, clinical, EXP: 3-6 months) “Personality fits to culture” (SR 151, management, EXP: 1-3 months)
	Definition	Similarity and alignment of the personalities of individuals with the personalities of others they work with.	
	Code Label	KSA congruence	“Skills and abilities that fit both person and organisation” (SR 7, “other” role, EXP: 1-2 years)
	Definition	The importance of knowledge, skills or abilities in determining one’s fit with the environment.	
	Code Label	Uniqueness	“It’s okay just to be me. Even though it’s different, and ... for everyone else to be who they want to be, and that’s okay” (IP 6, management, EXP: 2-5 years)
	Definition	The value of being unique as important for one’s feeling of fit within their organisation or workplace.	
	Code Label	Demands-abilities	“It made me feel like I had an important role to play initially, even if it wasn’t being recognised. So I knew that I was fulfilling my role obligations, you know my description” (IP 2, clinical, EXP: >5 years)
	Definition	Reference to the ability to do one’s job well and fulfil requirements of themselves.	
	Code Label	Needs-supplies	“I know I have something valuable to contribute to the organisation by just being me” (SR 136, “other” role (youth worker), EXP: 2-5 years)
	Definition	The ability of the organisation or group to fulfil the needs of the individual.	

Origin	Details		Examples from data
Survey data-driven codes	Code Label	Fit with agency or management	“More of the complexity and detail sits in accordance with who and what the lead agency that’s managing that franchise or group of franchises, all about what their drive and strategic perspective is” (IP 1, “other” role, 1 EXP: -2 years)
	Definition	Identifying as fitting in with the lead or funding agency, rather than headspace itself. This is classified as a sub-category of P-O fit.	
	Code Label	Dynamic nature of the workplace	“We have what we call special lunches every Thursday and anyone who’s here on a Thursday can join us in the meeting room and some of us order food and stuff like that” (IP 2, clinical, EXP: >5 years)
	Definition	Reference to the workplace dynamics, such as leaving and arriving times, the roles of the individual, group activities within the workplace eg, lunches.	
	Code Label	Leadership and management altering the culture	“I think that the leadership has given the workers more than average say” (IP 5, clinical, EXP: >5 years)
	Definition	Reference to the support that the leaders give the individual, including through uptake of suggestions, encouraging the individual and making them feel valued in their role.	
	Code Label	Interactions with other staff members	“Generally, people who have been working in and around fields that have an emphasis on the ability to communicate effectively. So, for me there is a real strength in that, in the organisation” (IP 1, “other” role, EXP: 1-2 years) “Poor or inconsistent communication from upper management” (SR 199, management, EXP: >5 years)
	Definition	Reference to the means by which one communicates with peers in the work environment, or the means by which it could be improved. Alternatively, this could also be a comment about the nature of communication that individual has experienced.	
	Code Label	Positive perceptions of working with youth—client centredness	“You empower people to come along and explore things in ways that perhaps they wouldn’t have been able to in another forum. It’s very powerful” (IP 1, “other” role, EXP: 1-2 years)
	Definition	A reference to one’s drive or motivation to do the work that they do. This is specifically common, but	

Origin	Details		Examples from data
		not limited to, clinical workers.	
	Code Label Definition	Positive perceptions of working with youth— Satisfaction with work Reporting a sense of gratification or fulfilment in the work that is completed by the individual.	“I find the face to face work immensely satisfying at times, it is the reason that keeps me coming to work” (SR 135, clinical, EXP: 2-5 years)
	Code Label Definition	Overload or overwhelmed Reported feelings of a lack of control and being overworked.	“Too many projects going on at the same time. Competing deadlines” (SR 201, “other” role, EXP: 1-2 years)
	Code Label Definition	Underwhelmed or bored Reported feelings that one’s job, workplace or organisation is not making full use of the individual’s skill set.	“I find my work a little frustrating only because I feel I am more qualified than the position I hold” (SR 94, volunteer, EXP: 1-3 months)
	Code Label Definition	Interpersonal support at work—Informal or social support at work Identification of the importance of support from co-workers or supervisors at work.	“I mean really in lot of ways you’re privileged to be offered opportunity. To have people believe in you, to think that you can do things that you perhaps think you can’t do yourself, is really very rewarding” (IP 3, management, EXP: 6-12 months)
	Code Label Definition	Interpersonal support at work—Formal support Acknowledging the importance of or desire for additional support, eg, training, often to assist in enabling the individual to do their job to a higher degree.	“I acknowledge when you lack self confidence in something then you have to work at it to upskill yourself. So I have sought that out” (IP 3, management, EXP: 6-12 months)
	Code Label Definition	Adaption The acknowledgement of changing or altering oneself to fit the work group or organisation.	“You grow in your role” (IP 4, administration, EXP: 3-6 months)

Origin	Details		Examples from data
Interview data-driven codes	Code Label	Image in the public eye	“People in the public identify with us as headspace” (IP 1, “other” role, EXP: 1-2 years)
	Definition	Acknowledgement that the organisation is visible to the public, and that the organisation (and employees) have a certain image to uphold.	
	Code Label	Genuine or the true self	“It’s okay just to be me. Even though it’s different, and ... for everyone else to be who they want to be, and that’s okay (IP 6, management, EXP: 2-5 years)
	Definition	Identifying with feeling that one can be completely themselves in their workplace or organisation, without fear of judgement or repercussions.	
	Code Label	Fit in job entry	“We’ve only had a couple of bad fit people, but you can’t absorb them. So we try really hard to, at the interview process and at the selection, not to let in bad fits” (IP 5, clinical, EXP: >5 years)
	Definition	Identifying the importance of identifying and selecting people for positions in that workplace partially based on a gut instinct or understanding that the individual will “fit” into that environment.	
	Code Label	Resisting pressure to change	“I feel like headspace, the organisation, would like me to change how I do things, but I ignore that pressure” (IP 5, clinical, EXP: >5 years)
	Definition	Acknowledgement that the individual does <i>not</i> adapt or change to the group or organisation, regardless of perceived pressure to do so.	

Appendix G: Factor loadings for CFA included items

This Appendix gives further details into the means, standard deviations, and factor loadings, of each included item in the multi-dimensional P-O and P-G fit tools. Please see **Table 7.10** and **Figure 7.1** for information regarding the P-O fit tool, and **Table 7.11** and **Figure 7.2** for information on the P-G fit tool.

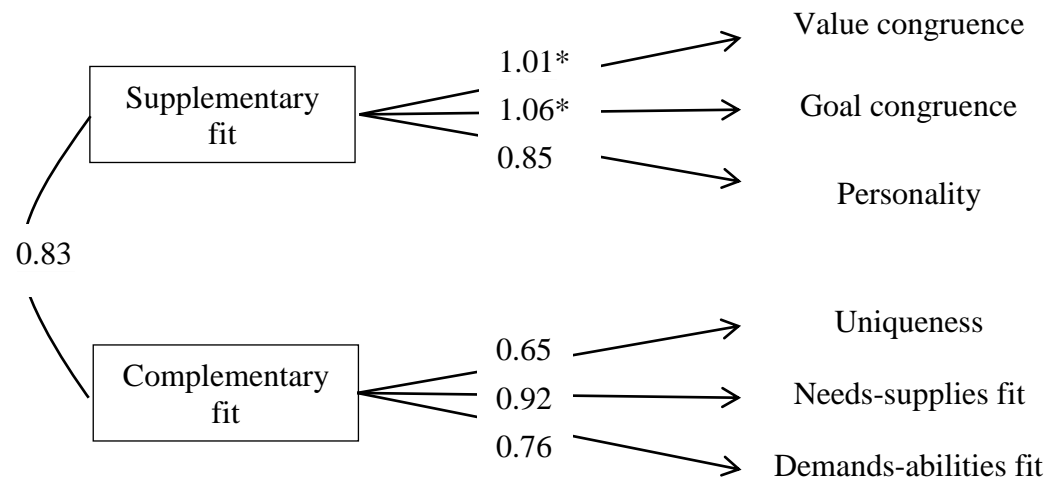


Figure 7.1. Second-order P-O fit factor structure

Each of the first-order factors consist of three items with the factor loadings reported in Appendix H.

*As explained by Jöreskog, standardised coefficients can be above a magnitude of 1.²¹⁶

Table 7.10. P-O CFA Included items, statistical information and factor loadings.

		Items included in P-O CFA	Mean ^a	Standard deviation ^a	Residual variance ^a	Factor Loading ^b
Supplementary fit	Values	“The things that I value in life are very similar to the things that my organisation values” ⁶⁸ (POV1)	5.68	1.09	0.26	0.86
		“My personal values match my organisation’s values and culture” ⁶⁸ (POV2)	5.88	0.99	0.38	0.79
		“My organisation’s values and culture provide a good fit with the things that I value in life” ⁶⁸ (POV3)	5.83	1.08	0.31	0.83
	Goals	“I identify strongly with the goals of my organisation” ¹⁷ (POG1)	5.86	0.97	0.47	0.73
		“My personal goals and the goals of my organisation are very similar” ¹⁷ (POG2)	5.44	1.22	0.42	0.76
		“My goals match or fit those of the organisation” ^{214*} (POG4)	5.69	1.03	0.43	0.76
	Personality	“My personality matches or ‘fits’ this organisation” ^{206*} (POP1)	5.66	1.08	0.31	0.83
		“The ‘personality’ of the organisation reflects my own personality” ^{206*} (POP2)	5.16	1.23	0.37	0.79
		“My personality is well suited for the personality or ‘image’ of this organisation” ⁶ (POP3)	5.74	1.09	0.46	0.73
Complementary fit	Uniqueness	“I feel that I am a unique piece of the puzzle that makes this organisation work” ⁶ (POC1)	4.97	1.50	0.43	0.75
		“My organisation seem to value that I am different from the ‘typical’ employee” ^{6*} (POC2)	4.83	1.50	0.30	0.83
		“I feel like I stand out in this organisation” ⁶ (POC4)	4.18	1.42	0.54	0.68

Needs-supplies	“There is a good fit between what headspace offers me and what I am looking for in an organisation” ^{68*} (PON1)	5.63	1.21	0.14	0.93
	“The attributes that I look for in an organisation are fulfilled very well by headspace” ^{68*} (PON2)	5.55	1.19	0.33	0.82
	“headspace gives me just about everything I want from an employing organisation” ^{68*} (PON3)	5.10	1.45	0.26	0.86
Demands-abilities	“The match is very good between the demands of my organisation and my personal skills” ^{68*} (POD1)	5.76	1.05	0.22	0.89
	“My abilities and training are a good fit with the requirements of my organisation” ^{68*} (POD2)	5.97	0.99	0.56	0.66
	“My personal abilities and education provide a good match with the demands that my organisation places on me” ^{68*} (POD3)	5.87	1.02	0.49	0.71

^aStatistics reported to two decimal places.

^bFactor loading is standardised.

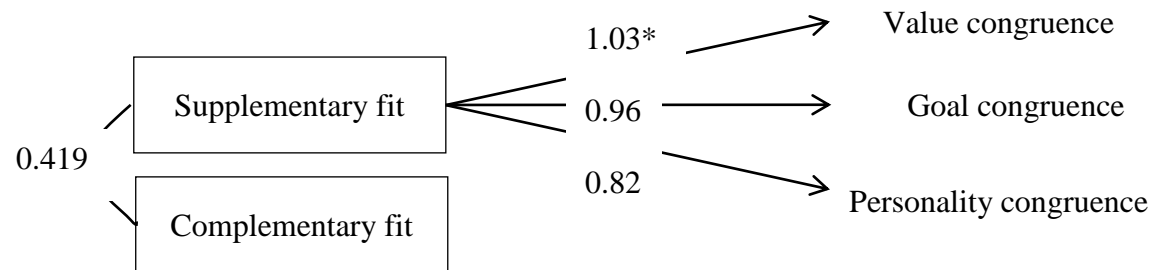


Figure 7.2. Second-order P-G fit factor structure

Each of the first-order factors consist of three items with the factor loadings reported in Appendix H.

*As explained by Jöreskog, standardised coefficients can be above a magnitude of 1.²¹⁶

Table 7.11. P-G fit CFA included items statistical information and factor loadings

Items included in P-G CFA		Mean ^a	Standard deviation ^a	Residual variance ^a	Factor Loading ^b	
Supplementary fit	Values	“The things that my work group members value in life are very similar to my values” ^{25*} (PGV1)	5.40	1.11	0.38	0.79
		“My values match my work group’s values” ^{25*} (PGV2)	5.62	0.97	0.22	0.88
		“My work group’s values provide a good fit with the things that I value in a group” ^{25*} (PGV3)	5.63	1.04	0.14	0.93
	Goals	“The people in my work group and I have the same expectations of the effort needed to reach goals” ^{80*} (PGG1)	5.42	1.32	0.40	0.77
		“My work group have the same expectations of reward for goal achievement as I do” ^{80*} (PGG2)	5.28	1.26	0.39	0.78
		“My goals are similar to those of the people in my work group” ^{215*} (PGG3)	5.59	1.08	0.33	0.82
	Personality	“I feel that my personality matches my work group’s image” ^{82*} (PGP1)	5.55	0.96	0.21	0.89
		“My personality matches my work groups’ personality” ^{82*} (PGP2)	5.40	1.12	0.26	0.86
		“My personality provides a good fit with my work group’s personality” ^{82*} (PGP3)	5.62	0.94	0.12	0.94
Complementary fit	Uniqueness	“When key decisions are made, people in my work group consult me because I have a different perspective than they do” ^{6*} (PGC1)	4.89	1.46	0.44	0.75
		“I feel that I am an important part of my work group because I have such different skills and abilities than the people in my work group” ⁶ (PGC3)	5.09	1.41	0.30	0.84
		“The people in my work group rely on me because I have competencies that they do not have” ¹³⁸ (PGC4)	4.99	1.55	0.40	0.77

^aStatistics reported to two decimal places.^bFactor loading is standardised

Appendix H: Results from hierarchical MRAs

Please see below for results of the MRAs. Please note that Step 1 has only been reported in **Table 7.12**, which show the results for the main effects of P-O fit.

Table 7.12. P-O MRA results

Variable		<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
<i>Step 1</i>							
	Gender	-0.103 [-0.244, 0.038]	-0.106	-0.104	0.011	-1.442	.151
	Age	-0.069 [-0.131, -0.007]	-0.170	-0.158	0.025	-2.186	.030
	LOS	0.005 [-0.038, 0.049]	0.019	0.018	0.0003	0.245	.807
<i>Step 2</i>							
Satisfaction	Gender	-0.134 [-0.254, -0.014]	-0.138	-0.133	0.018	-2.209	.028
	Age	-0.051 [-0.104, 0.001]	-0.127	-0.116	0.014	-1.926	.056
	LOS	0.017 [-0.020, 0.054]	0.061	0.056	0.003	0.926	.356
	Value congruence	0.157 [0.032, 0.281]	0.284	0.150	0.023	2.489	.014*
	Goal congruence	-0.063 [-0.185, 0.060]	-0.115	-0.061	0.004	-1.012	.313
	Personality congruence	0.073 [-0.019, 0.165]	0.139	0.095	0.009	1.571	.118
	Complementary fit	-0.031 [-0.081, 0.019]	-0.088	-0.075	0.056	-1.239	.217
	Needs-supplies fit	0.147 [0.069, 0.225]	0.347	0.225	0.051	3.725	.000**
	Demands-abilities fit	0.017 [-0.074, 0.108]	0.028	0.022	0.001	0.365	.715

	Variable	<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
Emotional exhaustion	<i>Step 1</i>						
	Gender	0.167 [-0.309, 0.644]	0.051	0.050	0.003	0.692	.490
	Age	-0.185 [-0.396, 0.025]	-0.136	-0.126	0.016	-1.739	.084
	LOS	0.149 [0.001, 0.297]	0.155	0.144	0.021	1.985	.049*
	<i>Step 2</i>						
	Gender	0.188 [-0.241, 0.617]	0.057	0.055	0.003	0.865	.388
	Age	-0.222 [-0.411, -0.033]	-0.162	-0.148	0.022	-2.316	.022*
	LOS	0.124 [-0.009, 0.256]	0.129	0.118	0.014	1.838	.068
	Value congruence	-0.101 [-0.547, 0.345]	-0.054	-0.029	0.001	-0.447	.655
	Goal congruence	-0.059 [-0.499, 0.380]	-0.032	-0.017	<0.001	-0.267	.790
Depersonalisation	Personality congruence	-0.013 [-0.341, 0.316]	-0.007	-0.005	<0.001	-0.076	.939
	Complementary fit	0.188 [0.009, 0.367]	0.155	0.132	0.017	2.068	.040*
	Needs-supplies fit	-0.501 [-0.781, -0.222]	-0.350	-0.227	0.052	-3.543	.001**
	Demands-abilities fit	-0.386 [-0.731, -0.058]	-0.188	-0.149	0.022	-2.326	.021*
	<i>Step 1</i>						
	Gender	-0.187 [-0.569, 0.196]	-0.070	-0.069	0.005	-0.964	.336
	Age	-0.286 [-0.455, -0.117]	-0.257	-0.239	0.057	-3.340	.001**
	LOS	0.082 [-0.037, 0.200]	0.105	0.097	0.001	1.360	.176
	<i>Step 2</i>						
	Gender	-0.152 [-0.488, 0.183]	-0.057	-0.055	0.003	-0.896	.371

		Variable	<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i>^{2a}	<i>t</i>	<i>Sig.</i>
Work stress		Age	-0.301 [-0.449, -0.154]	-0.271	-0.247	0.061	-4.023	.000**
		LOS	0.070 [-0.034, 0.174]	0.089	0.082	0.007	1.326	.186
		Value congruence	0.007 [-0.342, 0.355]	0.004	0.002	<0.001	0.037	.971
		Goal congruence	-0.231 [-0.574, 0.113]	-0.154	-0.081	0.007	-1.325	.187
		Personality congruence	-0.070 [0.327, 0.187]	-0.048	-0.033	0.001	-0.536	.593
		Complementary fit	0.031 [-0.109, 0.171]	0.032	0.027	0.001	0.441	.660
		Needs-supplies fit	-0.280 [-0.498, -0.061]	-0.240	-0.155	0.024	-2.526	.012*
		Demands-abilities fit	-0.335 [-0.591, -0.079]	-0.200	-0.159	0.025	-2.584	.011*
	<i>Step 1</i>							
		Gender	-0.009 [-0.154, 0.137]	-0.009	-0.009	<0.001	-0.118	.906
		Age	-0.013 [-0.078, 0.051]	-0.032	-0.030	<0.001	-0.413	.680
		LOS	0.056 [0.011, 0.101]	0.193	0.179	0.032	2.469	.014*
		<i>Step 2</i>						
		Gender	-0.025 [-0.160, 0.110]	-0.025	-0.024	0.001	-0.363	.717
		Age	-0.032 [-0.092, 0.027]	-0.078	-0.071	0.005	-1.075	.284
		LOS	0.051 [0.009, 0.092]	0.173	0.158	0.025	2.394	.018*
		Value congruence	-0.045 [-0.185, 0.095]	-0.079	-0.042	0.002	-0.631	.529
		Goal congruence	0.067 [-0.071, 0.205]	0.119	0.063	0.004	0.956	.341
		Personality congruence	0.072 [-0.301, 0.175]	0.133	0.091	0.008	1.375	.171
		Complementary fit	0.026 [-0.030, 0.082]	0.071	0.061	0.004	0.917	.360

Variable	<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
Needs-supplies fit	-0.207 [-0.295, -0.119]	-0.473	-0.306	0.094	-4.644	.000**
Demands-abilities fit	-0.080 [-0.183, 0.023]	-0.127	-0.101	0.010	-1.529	.128

B=Unstandardised regression coefficient; β =standardised regression coefficient; *sr*=semi-partial (or “part”) correlations; *sr*²=squared semi-partial correlations for each predictor in the regression model; *t*=*t* value; *Sig*=alpha significance value; LOS=“length of stay” signifying the length of time the individual has been an employee or volunteer at the centre in question.

^aValues given to three decimal places, unless no non-zero value has yet been given, in which case <0.001 is reported.

**Significant at $\alpha=.00417$.

*Significant at $\alpha=.05$.

Table 7.13 shows the results of the MRA for P-G fit, which tested H4. **Table 7.14** shows the results for the test for an interaction (H5). Both tables also had step 1, which yielded the same results as in **Table 7.12**.

Table 7.13. P-G MRA results

	Variable	<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
Satisfaction	Gender	-0.136 [-0.270, -0.003]	-0.140	-0.137	0.0188	-2.012	.046*
	Age	-0.072 [-0.131, -0.012]	-0.177	-0.162	0.026	-2.377	.018*
	LOS	0.006 [-0.037, 0.048]	0.019	0.018	0.0003	0.258	.797
	Value congruence	0.199 [-0.015, 0.253]	0.234	0.120	0.014	1.755	.081
	Goal congruence	0.047 [-0.031, 0.178]	0.165	0.095	0.009	1.391	.166
	Personality congruence	-0.003 [-0.120, 0.114]	-0.006	-0.003	<0.001	-0.051	.959
	Complementary fit	-0.015 [-0.077, 0.047]	-0.088	-0.032	0.001	-0.474	.636

Variable		<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
Emotional exhaustion	Gender	.231 [-.241, .704]	0.070	0.069	0.005	0.967	.335
	Age	-.191 [-.401, .018]	-0.140	-0.128	0.016	-1.80	.074
	LOS	.150 [.000, .299]	0.156	0.141	0.020	1.973	.050*
	Value congruence	-0.046 [-0.517, 0.426]	-0.027	-0.014	<0.001	-0.190	.849
	Goal congruence	-0.286 [-0.655, 0.082]	-0.190	-0.109	0.012	-1.533	.127
	Personality congruence	-0.089 [-0.501, 0.322]	-0.051	-0.030	0.001	-0.428	.669
	Complementary fit	0.069 [-0.153, 0.286]	0.049	0.043	0.002	0.598	.551
Depersonalisation	Gender	-0.079 [-0.420, 0.263]	-0.029	-0.029	0.001	-0.455	.650
	Age	-0.282 [-0.434, 0.263]	0.077	-0.232	0.054	-3.673	.000**
	LOS	0.095 [-0.013, 0.204]	0.055	0.110	0.012	1.742	.083
	Value congruence	-0.177 [-0.518, 0.163]	-0.127	-0.065	0.004	-1.027	.306
	Goal congruence	-0.392 [-0.658, -0.125]	-0.319	-0.183	0.034	-2.903	.004**
	Personality congruence	-0.089 [-0.384, 0.209]	-0.062	-0.037	0.001	-0.589	.557
	Complementary fit	0.009 [-0.150, 0.167]	0.008	0.007	<0.001	0.107	.915
Work stress	Gender	-0.003 [-0.147, 0.141]	-0.003	-0.003	<0.001	-0.042	.966
	Age	-0.011 [-0.075, 0.053]	-0.025	-0.023	0.001	-0.328	.744
	LOS	0.057 [0.012, 0.103]	0.196	0.177	0.031	2.478	.014*
	Value congruence	0.020 [-0.124, 0.164]	0.039	0.020	<0.001	0.278	.782
	Goal congruence	0.067 [-0.253, -0.028]	0.119	-0.175	0.031	0.956	.341
	Personality congruence	0.072 [-0.088, 0.164]	0.133	0.042	0.002	1.375	.171

Variable	<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
Complementary fit	0.026 [-0.060, 0.074]	0.071	0.014	<0.001	0.917	.360

Values based on results of Step 2 of the hierarchical MRA.

B=Unstandardised regression coefficient; β =standardised regression coefficient; *sr*=semi-partial (or “part”) correlations; *sr*²=squared semi-partial correlations for each predictor in the regression model; *t*=*t* value; *Sig*=alpha significance value; LOS=“length of stay” signifying the length of time the individual has been an employee or volunteer at the centre in question.

^aValues given to three decimal places, unless no non-zero value has yet been given, in which case <0.001 is reported.

**Significant at $\alpha=.00417$.

*Significant at $\alpha=.05$.

Table 7.14. Interaction MRA results

	Variable	<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
Satisfaction	Age	-0.065 [-0.119, -0.010]	-0.160	-0.148	0.022	-2.351	.020*
	Gender	-0.128 [-0.251, -0.005]	-0.132	-0.129	0.017	-2.048	.042*
	LOS	0.006 [-0.033, 0.044]	0.020	0.019	<0.001	0.295	.768
	P-O fit mean	0.148 [-0.297, 0.593]	0.236	0.042	0.002	0.657	.512
	P-G fit mean	-0.100 [-0.555, 0.356]	-0.174	-0.027	0.001	-0.433	.666
	Interaction product ^b	0.001 [-0.002, 0.004]	0.406	0.039	0.002	0.615	.539
Emotional exhaustion	Age	-0.200 [-0.394, -0.005]	-0.146	-0.136	0.019	-2.028	.044*
	Gender	0.213 [-0.229, 0.655]	0.065	0.064	0.004	0.952	.343
	LOS	0.136 [-0.002, 0.274]	0.142	0.130	0.017	1.940	.054
	P-O fit mean	0.092 [-1.501, 1.685]	0.043	0.008	<0.001	0.114	.910
	P-G fit mean	1.027 [-0.604, 2.658]	0.530	0.083	0.007	1.243	.216

Variable		<i>B</i> [95% CI]	β	<i>sr</i>	<i>sr</i> ^{2a}	<i>t</i>	<i>Sig.</i>
Depersonalisation	Interaction product ^b	-0.007 [-0.020, 0.005]	-0.842	-0.081	0.007	-1.203	.231
	Age	-0.290 [-0.434, -0.146]	-0.261	-0.242	0.059	-3.973	.000**
	Gender	-0.086 [-0.413, 0.241]	-0.032	-0.032	0.001	-0.518	.605
	LOS	0.100 [-0.002, 0.202]	0.128	0.118	0.014	1.936	.054
	P-O fit mean	-0.626 [-1.806, 0.554]	-0.362	-0.064	0.004	-1.047	.297
	P-G fit mean	-0.422 [-1.630, -0.786]	-0.267	-0.042	0.002	-0.689	.492
	Interaction product ^b	0.000 [-0.009, 0.009]	0.036	0.003	<0.001	0.056	.955
Work stress	Age	-0.017 [-0.078, 0.045]	-0.040	-0.037	0.137	-0.528	.598
	Gender	0.003 [-0.138, 0.143]	0.003	0.003	<0.001	0.039	.969
	LOS	0.054 [0.010, 0.098]	0.184	0.169	0.029	2.430	.016*
	P-O fit mean	0.003 [-0.503, 0.509]	0.004	0.001	<0.001	0.010	.992
	P-G fit mean	0.203 [-0.315, 0.712]	0.344	0.054	0.003	0.775	.440
	Interaction product ^b	-0.002 [-0.005, 0.002]	-0.563	-0.054	0.003	-0.773	.440

Values based on results of Step 3 of the hierarchical MRA.

B=Unstandardised regression coefficient; β =standardised regression coefficient; *sr*=semi-partial (or “part”) correlations; *sr*²=squared semi-partial correlations for each predictor in the regression model; *t*=*t* value; *Sig*=alpha significance value; LOS=“length of stay” signifying the length of time the individual has been an employee or volunteer at the centre in question.

^aValues given to three decimal places, unless no non-zero value has yet been given, in which case <0.001 is reported.

^bInteraction values based on the centred product of the means of the P-O and P-G terms.

**Significant at $\alpha=.00417$.

*Significant at $\alpha=.05$.

