How people fit in at work: systematic review of the association between person–organisation and person–group fit with staff outcomes in healthcare

Jessica Herkes, Kate Churruca, Louise A Ellis, Chiara Pomare, Jeffrey Braithwaite

ABSTRACT

Objectives People interact with their work environment through being, to a greater or lesser extent, compatible with aspects of their setting. This interaction between person and environment is particularly relevant in healthcare settings where compatibility affects not only the healthcare professionals, but also potentially the patient. One way to examine this association is to investigate person–organisation (P-O) fit and person–group (P-G) fit. This systematic review aimed to identify and synthesise knowledge on both P-O fit and P-G fit in healthcare to determine their association with staff outcomes. It was hypothesised that there would be a positive relationship between fit and staff outcomes, such that the experience of compatibility and ‘fitting in’ would be associated with better staff outcomes.

Design A systematic review was conducted based on an extensive search strategy guided by Preferred Reporting Items for Systematic review and Meta-Analyses to identify relevant literature.

Data sources CINAHL Complete, EMBASE, Ovid MEDLINE, PsycINFO and Scopus.

Eligibility criteria Articles were included if they were empirical studies, published in peer-reviewed journals in English language, set in a healthcare context and addressed the association that staff outcomes have with P-O and/or P-G fit.

Data extraction and synthesis Included texts were examined for study characteristics, fit constructs examined and types of staff outcomes assessed. The Quality Assessment Tool was used to assess risk of bias.

Results Twenty-eight articles were included in the review. Of these, 96.4% (27/28) reported a significant, positive association between perception of fit and staff outcomes in healthcare contexts, such that a sense of compatibility had various positive implications for staff, including job satisfaction and retention.

Conclusion Although the results, as with all systematic reviews, are prone to bias and definitional ambiguity, they are still informative. Generally, the evidence suggests an association between employees’ perceived compatibility with the workplace or organisation and a variety of staff outcomes in healthcare settings.

Strengths and limitations of this study

► Systematic review is specific to healthcare, addressing a gap in the literature and informing healthcare professionals.

► Focus is specifically on the components of person–environment fit that contribute to organisational and workplace culture in healthcare settings.

► Results of this review can be leveraged to inform improvements in staff outcomes.

► The body of literature is relatively small; the review may have benefited from a broader search strategy to incorporate articles that used different terminologies.

INTRODUCTION

Understanding how people fit into their environment is a key aspect to understanding organisational and workplace cultures. Research increasingly attempts to make sense of how shared attitudes, values, beliefs and practices can have downstream effects on outcomes such as productivity and staff retention. In healthcare contexts, culture holds consequences for both staff and patients. Uniquely, the presence of patients and the caring role of health providers create an important point of departure from other contexts. Thus, we need to understand how people interact with their environment and how culture improvement strategies can be more efficiently and sustainably implemented in the light of this knowledge.

The person–environment (P-E) fit paradigm provides one such research avenue to further understand culture, focusing on how people perceive themselves in relation to their work environment. The P-E fit theory describes the compatibility of the individual with an aspect of their work context, for example, fit between the person and the work group (person–group (P-G) fit) or organisation...
P-E fit research measures the interacting individual and contextual factors that determine the compatibility of an individual employee with aspects of his or her environment. Components of the environment (eg, the organisation and the job) are studied separately, as it is postulated they may have different effects on staff outcomes. In this theory, fit is defined as a sense of belonging where (1) at least one entity (eg, the person) fulfils the needs of the other (eg, the organisation); (2) the entities share similar characteristics or (3) both 1 and 2 occur. Table 1 offers definitions of the commonly identified components of P-E fit (including supplementary, complementary, needs–supplies and demands–abilities fit) in the literature.

Past reviews of P-E fit, although useful in highlighting the relevance of the topic, have limited utility to healthcare specifically, because of its unique siloed culture and reputation for tribalism, leading to increased burnout compared with other workplaces. Most previous reviews synthesised information from across other industries, while there have been quite a range of studies investigating P-E fit specifically in healthcare settings (such as hospitals, pharmaceutical distribution firms and elderly care facilities) examining outcomes more typically associated with caring work (eg, burnout), these findings have not yet been rigorously synthesised. This could be of importance to healthcare providers, researchers and policymakers in order to more clearly understand the components of change and improvement in the organisation and workplace.

Additionally, past systematic reviews on the fit concept have tended to focus exclusively on the compatibility between employees and one element of their environment, such as the P-O or the P-G fit, or have alternatively examined P-E fit as a whole, without differentiation of environmental components. These approaches do not account for the possible interactions among different types of fit (ie, evidence suggests that employees may simultaneously experience different levels of fit with their organisation and their work group).

In research investigating P-E fit, one of the most important downstream effects to consider is the impact of fit perceptions on the staff themselves. Although the aim of studying organisational culture in healthcare is often ultimately to improve patient outcomes, employees are the first point of reference in attempts to alter, modify and ultimately transform organisational culture. Staff outcomes are particularly important to understand in healthcare settings because of frequent reports of employee burnout, stress, intent to leave and turnover (see figure 1 for a graphical depiction). By first understanding the factors, such as P-E fit, that influence these outcomes in healthcare settings, initiatives may be developed to improve staff well-being or reduce, for example, negative organisational cultures.

In the present systematic review, available evidence for the compatibility of staff with the culture of their organisation or workplace, and the effect of this compatibility on staff outcomes is examined for the first time in healthcare settings. Because of their respective applicability to understand the components of change and improvement in the organisation and workplace.
organisational and workplace cultures, it was decided that both P-O fit and P-G fit would be examined. Therefore, the aim of this systematic review was to identify and synthesise knowledge on both P-O fit and P-G fit in healthcare settings to determine their association with staff outcomes. It was postulated that the majority of studies would show a positive relationship between fit and staff outcomes, such that increased fit would be associated with more positive outcomes for staff.

METHODS

Eligibility criteria

The inclusion criteria consisted of five points that needed to be satisfied for an article to be included in the review. These were (1) being published in English language, (2) being set in a healthcare context, (3) being published in a peer-reviewed journal, (4) being an empirical research article, and (5) ability to address the association of staff outcomes with P-O and/or P-G fit. Articles were excluded if they did not meet all five criteria. All types of ‘healthcare’ settings were eligible for inclusion in the review, encompassing any frontline clinical environment where health professionals (including medical staff, nurses, allied health professionals, paramedics and pharmacists) directly interact with patients, residents or consumers. Additionally, all types of empirical studies were considered, including longitudinal and cross-sectional analysis, and quantitative, qualitative and mixed-method designs. Each of these methods, if conducted in a valid and rigorous way, had the potential to provide insights by which to address the study’s aim.

<table>
<thead>
<tr>
<th>Table 2 General search strategy</th>
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<tbody>
<tr>
<td><strong>Keyword</strong></td>
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<tr>
<td>P-O and P-G fit</td>
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<tr>
<td>Healthcare context</td>
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<tr>
<td>Staff</td>
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</tbody>
</table>

The symbol * is used by the databases to symbolise truncation. At least one keyword was needed from each row.
Scopus. The general search strategy (table 2) was cross-checked with related systematic reviews to ensure relevant keywords were incorporated.4 5 The strategy aimed to include different components within P–G fit and P–O fit. Hence, the strategy encompassed general terms (eg, ‘P–O fit’), as well as more specific terms (eg, ‘supplementary’).15 21 The search strategy also endeavoured to identify staff outcomes, including, but not limited to, work attitude,23 38 staff satisfaction,31 burnout,27–29 work stress26 30 39 40 and organisational commitment.32

The initial search was conducted on 3 April 2017 and then updated on 22 January 2019 to include articles published up to the end of 2018. The results were imported into EndNote by JH, who then deleted duplicate articles.41 Additionally, snowballing was conducted as systematic, narrative, or scoping reviews were identified and their reference lists were searched for other potential articles to include. The reference lists of included articles were subject to the same process. For the complete search strategy, please see online supplementary appendix 1.

**Selection and data collection process**

Guided by the Preferred Reporting Items for Systematic review and Meta-Analyses (PRISMA) statement,42 an initial title and abstract review was completed by JH based on the inclusion criteria (must be published in English language, must be set in a healthcare context, must be published in a peer-reviewed journal article by the end of 2018 and must addresses the association between staff outcomes and P–O and/or P–G fit). Two authors (JH and CP) independently reviewed 10% of the EndNote Library, and then discussed results until consensus was reached.43 A full-text review was then conducted by JH. Results were summarised and synthesised. Included articles were sorted according to the data type, setting, staff outcomes measured and types of fit studied.

**Data items**

Information from each included study was extracted, including their aims, methods (qualitative, quantitative or mixed method; and cross-sectional or longitudinal), results and conclusions. The staff outcomes and type of fit studied were also recorded. Definitions of fit components were compared with the definitions of this systematic review, and any discrepancies were recorded.

**Bias**

It was anticipated that there would be biases in individual studies. The Quality Assessment Tool44 was used to assess the bias and quality across nine categories. 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.6 45 For example, to receive a ‘good’ rating for the ‘abstract and title’ category, an article required a clear title and a structured abstract, including all necessary information to understand the article.44 JH classified each article to ensure consistency and to decrease variability. The classification system quality grades facilitate the categorisation of articles as low (9–23 points), medium (24–29 points) and high (30–36 points).46 There was also possible bias in the type of results published, for example, publication bias.47

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**Table 3** Setting of included studies in systematic review

<table>
<thead>
<tr>
<th>Study setting</th>
<th>Included studies conducted in this context (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>53 55 59 62 63 66 68 69 71 75</td>
</tr>
<tr>
<td>Elderly care facilities</td>
<td>40 54 70 73</td>
</tr>
<tr>
<td>Acute care facilities</td>
<td>41</td>
</tr>
<tr>
<td>Ambulatory care</td>
<td>50</td>
</tr>
<tr>
<td>Disability services</td>
<td>25</td>
</tr>
<tr>
<td>Community health</td>
<td>64</td>
</tr>
<tr>
<td>No contextual information</td>
<td>26 72</td>
</tr>
<tr>
<td>Multiple settings</td>
<td>51 52 60 67 74</td>
</tr>
</tbody>
</table>

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Figure 3 Trends in the frequency of published person–organisation and person–group fit research conducted in a health setting over time.
RESULTS

Study selection

Four hundred ninety-eight articles were identified from the database search and snowballing techniques. Once duplicates were removed, 10% of the EndNote Library was subject to the double screening by two authors with a Cohen kappa statistic of 0.61, indicating a moderate level of agreement. Two hundred seventy-three texts did not meet the inclusion criteria, and the remaining 90 articles were subjected to a full-text review (figure 2). Ultimately, 28 articles were included in the review.

Risk of bias in individual studies

Based on the Quality Assessment Tool, the included articles scored between 23 and 36 points out of a potential 36 points. In this study, there were 3 low-quality, 2 medium-quality and 23 high-quality articles. For a complete classification of each article, see online supplementary appendix 2.

Study characteristics

The articles in the final analysis originated from multiple countries, including nine from the USA, two from Canada, four from Spain, China and Greece, Turkey, the Netherlands, New Zealand, Norway and the UK. There were also differences in the study setting, though the largest proportion of research was conducted in hospitals (46%) (table 3).

The included studies differed in their design. Of the 28 articles, 5 were longitudinal and the remaining 23 were cross-sectional. The sample size varied considerably from 56 to 19,149 participants. 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 online supplementary appendix 3.

In the included studies, P-G fit, that is, the compatibility that healthcare staff members experience with their work group, was only measured through value congruence, whereby the similarity of values between the individual and the group is measured. All four articles identified in this category also measured similar staff outcomes, namely, job satisfaction and turnover intent, although one also measured employee attitude and time pressure. In all of these articles, increased value congruence was significantly positively associated with job satisfaction, and negatively associated with intention to leave the job. However, Dotson et al counterintuitively reported that value congruence was positively associated with intent to leave the entire nursing profession; the authors speculated this may have been due to a lack of fulfillment of altruistic values in the nursing field, as well as external financial or bureaucratic pressures. Overall, the four studies indicated a relationship between P-G value congruence and staff outcomes, particularly a positive relationship with job satisfaction and a negative relationship with turnover intent.

Articles measuring P-O fit

In contrast with P-G fit, P-O fit, the compatibility that healthcare staff members experience with their organisation, was measured more frequently and in terms of various components of fit. Different ways of measuring some or all of the components were present in the 26 P-O fit articles (24 that solely measured P-O fit and 2 that also measured P-G fit). Table 4 reports on what authors purported to measure in their P-O fit studies.

<table>
<thead>
<tr>
<th>Component of P-O fit</th>
<th>Studies (n)*</th>
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<tbody>
<tr>
<td>Supplementary</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>22</td>
</tr>
<tr>
<td>Personality</td>
<td>2</td>
</tr>
<tr>
<td>Knowledge, skills and abilities</td>
<td>1</td>
</tr>
<tr>
<td>Goal</td>
<td>1</td>
</tr>
<tr>
<td>Unspecified</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>25†</td>
</tr>
<tr>
<td>Complementary</td>
<td>1</td>
</tr>
<tr>
<td>Needs–supplies</td>
<td>1</td>
</tr>
<tr>
<td>Demands–abilities</td>
<td>0</td>
</tr>
<tr>
<td>Total studies measuring P-O fit</td>
<td>26‡</td>
</tr>
</tbody>
</table>

*Studies may have reported measuring additional types of fit in different aspects of the person–environment paradigm (eg, Rehfuss et al measured needs–supplies and demands–abilities person–job fit). These are not relevant to the aims of this systematic review and are not reported here.
†The 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 one study.
‡The 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 one study.

P-O, person–organisation.
Supplementary fit was the most commonly measured component of P-O fit in healthcare literature.\(^{14} 15 76 77\) P-O supplementary value congruence was measured in 22 studies. Eight articles measured value congruence through the Areas of Worklife Scale,\(^{78}\) where ‘values’ was one of six components the scale measured.\(^{50} 56 58-61 63 65 68\) Consequently, ‘fit’ or ‘compatibility’ was not the main focus of these articles, but they still reported the correlations with outcomes, including burnout,\(^{50} 58-61 63\) turnover intent\(^{61}\) and job satisfaction.\(^{37}\) In a variety of healthcare settings, including hospitals\(^{57-59} 63\) and acute care facilities,\(^{61}\) the remaining survey tools measuring P-O value congruence were heterogeneous, with five studies\(^{51} 62 65 66 71\) using the Perceived Fit Scale from Cable and DeRue,\(^{79}\) four studies deriving their survey questions from other sources,\(^{53} 62 65 66 71\) and five studies using tools crafted specifically for that study.\(^{20} 52-54 72\) The heterogeneity of tools and study contexts made it difficult to compare across studies. However, these studies collectively suggested there are several valid ways to measure P-O supplementary value fit and its associations with staff outcomes.

Personality congruence was measured in two studies, one of which also measured knowledge, skills and abilities (KSA) congruence. Cha \textit{et al}.\(^{70}\) measured personality congruence under the heading of ‘prosocial P-O fit’, whereby high scores on personal and prosocial identities (in other words, high personality congruence) was associated with higher organisational citizenship and caring behaviour from hospital employees. However, they reported an unexpected link between the misfit of the person and organisation with prosocial behaviour, such that individuals would be intrinsically motivated to engage in these behaviours even if the organisation did not actively encourage them. 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.\(^{72}\) However, personality and KSA congruence were not analysed separately, so there was not enough evidence to deduce individual associations between each of these types of fit and staff outcomes.

Supplementary goal congruence was measured in one study of job strain among aged care workers, where Schmidt\(^{76}\) found that goal incongruence was related to absenteeism and self-reported burnout. As there was only one study on goal congruence, it was difficult to draw conclusions regarding this particular component of supplementary fit.

Two studies did not specify the aspect of supplementary fit that they measured. Hatton \textit{et al}\(^{25}\) used an ‘ideal–real’ organisational culture tool to test the congruence between employees’ perceptions of their organisation compared with 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 study measuring an unspecified component of supplementary fit was also the sole article reporting a measure of complementary fit. Reportedly, each fit component (supplementary and complementary) was measured through four items.\(^{74}\) However, on review of the original survey items, it became apparent that the complementary fit scale consisted of items that would be defined as different elements of fit (needs–supplies and supplementary).\(^{80}\) This combination of items made it difficult to draw theoretical conclusions from the study. Although general complementary fit itself was not measured, this article indicates the potential importance of needs–supplies P-O fit.

Zhang \textit{et al}.\(^{74}\) reported that needs–supplies P-O fit was directly associated with job satisfaction, as well as significantly inversely associated with intent to leave among community health workers in China. These results aligned with those of Cooper-Thomas \textit{et al}.,\(^{74}\) 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.

**Articles measuring P-O fit and P-G fit**

There was a dearth of research examining P-O fit and P-G fit together in healthcare, limiting knowledge regarding their relationship. Of the two articles purporting to measure both P-O fit and P-G fit, it appeared that, based on the items used, one rigorously measured only P-O fit,\(^{72}\) and the other did not delve into the fit framework but rather measured P-O fit and P-G value congruence.\(^{52}\) As such, it was not possible to draw any reasonable conclusions on the potential interactional effect between P-O fit and P-G fit on staff outcomes in health environments. This indicates the importance of definitional consistency in fit research.

**Staff outcomes measured**

In addition to the variability among the type of fit studied, there was also a variation in the staff outcomes measured. The main types of outcomes included satisfaction, intention to quit, organisational commitment, burnout and absenteeism (table 5).

**Overall findings**

Overall, 96.4\% of included articles (27/28) 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 was associated with more positive outcomes for staff (e.g., lower levels of burnout and increased satisfaction). Of these, 22 articles reported an exclusively positive relationship, showing that the relationship between fit and each measured staff outcome was in the direction hypothesised. Five further articles reported a partially positive relationship; in other words, some staff outcomes had a significant association with fit in the direction hypothesised, but the association with other outcomes did not reach a level of statistical significance.
Not only may this have positive downstream effects on the employees themselves, but also it has the potential to positively impact on the outcomes they produce in the work environment, which, in healthcare, equates to better patient care.6

Research regarding the process of individual adaptation to the work context is growing,82 83 which will add richness to the understanding of how to most effectively foster perceived fit and improve cultures in healthcare settings. This review will, we hope, offer welcome guidance to policymakers, managers and other custodians of organisational culture in healthcare on the importance of enhancing fit perceptions between individuals and their work environments. Ultimately, such strategies aim to increase mutually beneficial fit at work.

The results have important implications for clinicians, allied health professionals, healthcare managers and policymakers involved in the development and implementation of culture change interventions. Most apparently, they suggest the importance of individuals being motivated to seek work at organisations that hold values and goals similar to their own.52 84 Alternatively, in the case of employed individuals being incompatible with the workplace or organisation, the results suggest the importance of bridging this gap.85–87 The systematic review is the first in the context of healthcare to highlight the mutual benefit of adaptation and flexibility of both the individual and the environment, in order to create better fit between healthcare staff and the places they work, which may also potentially improve patient care.

Strengths and limitations
There are several strengths and limitations to this study. The review searched multiple databases and was thorough and rigorous, applying PRISMA methodology and assessing bias and quality. Bias is unavoidable, and thus readers should be mindful of this potential bias when judging the strength of evidence of the association between P-O fit and P-G fit with staff outcomes. Additionally, the included articles were inconsistent and heterogeneous in their labelling and measuring of fit. For example, some articles measured value congruence but did not explain the wider concept of supplementary fit,88 89 while others specified this information.51 75 This meant we had to make some choices regarding the identification and grouping of articles for this review. In the future, empirical studies of P-O fit and P-G fit in health settings could address these limitations by explicitly identifying what facet of fit they are studying and linking this to their measurement tool.

CONCLUSION
The results of this systematic review indicate that fitting in at work is conducive to improved staff outcomes in healthcare. The results argue in favour of the intrinsic benefit
of improving staff well-being. However, the approach on how to best enhance organisational cultures in order to therefore have downstream effects on employees’ productivity and quality of work remains unclear.

Contributors JH conceptualised and drafted the manuscript. JH, KC and CP were involved in the search strategy and data extraction. KC, LAE and JB edited the manuscript and critically reviewed its intellectual content. All authors approved the final version of the manuscript.

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