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To cite this article: Heloise F. Agreli , Marina Peduzzi & Christopher Bailey (2017): Contributions of team climate in the study of interprofessional collaboration: A conceptual analysis, *Journal of Interprofessional Care*, DOI: [10.1080/13561820.2017.1351425](https://doi.org/10.1080/13561820.2017.1351425)

To link to this article: <http://dx.doi.org/10.1080/13561820.2017.1351425>



Published online: 06 Sep 2017.



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Contributions of team climate in the study of interprofessional collaboration: A conceptual analysis

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ABSTRACT

The concept of team climate is widely used to understand and evaluate working environments. It shares some important features with Interprofessional Collaboration (IPC). The four-factor theory of climate for work group innovation, which underpins team climate, could provide a better basis for understanding both teamwork and IPC. This article examines in detail the common ground between team climate and IPC, and assesses the relevance of team climate as a theoretical approach to understanding IPC. There are important potential areas of overlap between team climate and IPC that we have grouped under four headings: (1) interaction and communication between team members; (2) common objectives around which collective work is organised; (3) responsibility for performing work to a high standard; and (4) promoting innovation in working practices. These overlapping areas suggest common characteristics that could provide elements of a framework for considering the contribution of team climate to collaborative working, both from a conceptual perspective and, potentially, in operational terms as, for example, a diagnostic tool.

ARTICLE HISTORY

Received 4 August 2016

Revised 17 May 2017

Accepted 3 Jul 2017

KEYWORDS

Interprofessional collaboration; professional practice conceptual analysis; team climate

Introduction

Healthcare systems are being challenged to change their approach to healthcare delivery from the current multiprofessional model to interprofessional collaboration (IPC) (Frenk et al., 2010; Khalili, Hall, & DeLuca, 2014). This change is being driven by healthcare organisations around the world (e.g. Orchard et al., 2010; Tomblin Murphy, Alder, MacKenzie, & Rigby, 2010; World Health Organisation, 2010) and its objectives are to address the complexity of healthcare more fully, and improve patient outcomes (Khalili et al., 2014), safety, and effectiveness in healthcare (Fox & Reeves, 2015; Valentijn, Schepman, Opheij, & Bruijnzeels, 2013).

In spite of the growing interest in IPC and efforts to measure it (Archibald, Trumppower, & MacDonald, 2014; Kenaszchuk, Reeves, Nicholas, & Zwarenstein, 2010; Orchard, King, Khalili, & Bezzina, 2012; Sakai et al., 2017) there is no consensus about how to analyse or evaluate it (Institute of Medicine, 2015). IPC is defined as a type of interprofessional work (alongside coordination, network, and teamwork). It involves members of different health and social professions who regularly come together to solve problems or provide services (Reeves, Lewin, Espin, & Zwarenstein, 2010). In a practice setting, IPC is defined as occurring when professionals from different backgrounds, generally organised in teams, work together with patients, families, carers, and communities to positively impact the quality of healthcare (World Health Organisation, 2010).

Reeves et al. (2010) argue that the terms interprofessional teamwork and IPC are often used interchangeably, however, they represent different types of interprofessional interaction: collaboration is “a broad activity whereby two or more people interact to advance some form of endeavour—in healthcare and social—this is usually to improve the delivery of patient/client care. Teamwork, on the other hand is a more focused activity” (p. 16).

Interprofessional teamwork has been defined as an intervention that involves different health and/or social professions who share a team identity and work closely together in an integrated and interdependent manner to solve problems and deliver services (Institute of Medicine, 2015; Reeves et al., 2010). Fox and Reeves (2015) argue that efforts to build interprofessional teams might also take into account social, political, and economic conditions. Reeves et al. (2010) in their conceptual framework for interprofessional teamwork, describe factors that affect teamwork, synthesised into four domains: relational, processual, organisational, and contextual. These domains convey some of the complexity of interprofessional teamwork, which is contingent to the organisation of multiple professionals. It means that teams and teamworking do not exist on a spectrum from weak to strong, rather teams are matched more or less closely to the purpose they are intended to serve and local needs. Furthermore, a team might function if it could employ different types of interprofessional interaction, such as teamwork and collaboration, in an adaptive manner (Reeves et al., 2010).

Both the literature on teamwork and IPC highlight the relevance of team organisation and the interaction between professionals in establishing genuine, (West & Lyubovnikova, 2012), real, effective, integrated, (Peduzzi, 2001; West & Lyubovnikova, 2013) and collaborative teams (Fox & Reeves, 2015; Orchard, Curran, & Kabene, 2005). One way to study teams is through the meaning given by professionals to the team situation, described as “team climate”. In evaluating the performance of teams, team climate has been shown to have an important role, and is widely used to understand and evaluate working environments (Agrelli, Peduzzi, & Bailey, 2017; Agrell & Gustafson, 1994; Boada-Grau, De Diego-Vallejo, De Llanos-Serra, & Vigil-Colet, 2011; Chatzi & Nikolaou, 2008; Mathisen, Einarsen, Jørstad, & Brønnick, 2004; Ragazzaoni, Baiardi, Zotti, Anderson, & West, 2002; Silva et al., 2016; Tseng, Liu, & West, 2009). However, the role of teams, and in particular team climate in supporting the development of IPC has received little attention.

Team climate is the employee's shared perception of organisational events, practices, and procedures (Anderson & West, 1998) and gives an indication of the attitudes and behaviours of team members (West & Richter, 2011). The four-factor theory of climate for work group innovation (West, 1990) is a theory that may offer something to our understanding of IPC. This article examines this potential for common ground in more detail, and assesses the relevance of team climate as a theoretical approach to understanding and evaluating IPC.

Underpinning this work is a detailed exploration of the literature on team climate since the publication of the four-factor theory of climate for work group innovation (1990), including theoretical and empirical studies about team climate, the Team Climate Inventory (TCI), teamwork (from the perspective of organisational psychology), and IPC.

Background

Organisational and team climate

Organisational climate can be defined as the “perceptions and shared meanings about policies, practices, and procedures that employees of an organisation experience” (Schneider, Ehrhart, & Macey, 2013). The concept of shared perceptions, when applied in the context of small work groups, instead of an entire organisation, is defined as team climate. Anderson and West (1998) describe small work groups as “proximal work groups”, which they define as: “either the permanent or semi-permanent *team* to which individuals are assigned, whom they identify with, and whom they interact with regularly in order to perform work-related tasks” (p. 236).

Team climate is based on the assumption that active social construction of climate is initially developed as part of teams, and then becomes integrated at the organisational level (Hosking & Anderson, 1992; West & Field, 1995), as interactions are shared and perceptions are co-constructed more widely (Anderson & West, 1998; Hosking & Anderson, 1992). In general, there is more agreement between perceptions of team atmosphere among members of the same team

than between teams (Anderson & West, 1998; Carter & West, 1998).

TCI is an example of how the measurement of team climate has been operationalised (Anderson & West, 1998). The TCI was developed by Anderson and West (Anderson & West, 1998), who highlight, in particular, the importance of team climate for innovation in team function. In a recent review of survey instruments used to assess dimensions of teamwork in healthcare services, the TCI was one of the few instruments classified as having psychometric validity and an established relationship with a non-self-reported outcome (Valentine, Nembhard, & Edmondson, 2015). The TCI was developed using the four-factor theory of climate for work group innovation (West, 1990) and represents a conceptual and operational step forward in the study of team climate. It describes the four main dimensions of team climate: (1) participative safety, (2) common objectives, (3) task orientation or commitment to excellence, and (4) support for innovation (Anderson & West, 1998; West, 1990; West & Anderson, 1996). These dimensions reflect issues such as the existence of minority dissent, shared decision-making processes, (De Dreu & West, 2001) and clarity of objectives.

West and Borril (2006) argue that team climate is a variable amenable to measurement and that measuring it can generate insights and progress towards more effective teamwork. Previous research has indicated that team climate acts as a predictor of quality in healthcare (Bower, Campbell, Bojke, & Sibbald, 2003; Proudfoot et al., 2007), innovation (Hülsheger, Anderson, & Salgado, 2009), team effectiveness (Pirola-Merlo, 2010) and improvements in quality of care and patient satisfaction (Bower et al., 2003).

Whilst it is important not to overstate the case, or the closeness of the connections, the TCI, which reflects aspects of team climate, and its underpinning theory, with its four main dimensions, may provide the tools for a better understanding of both teamwork and IPC. IPC may be better understood, for example, if it were interpreted as resting on a concept such as team climate, as well as on more established components such as patient-centredness.

It is helpful, therefore, to consider in more detail if the four dimensions of climate for work group innovation do indeed share common ground with the concept of IPC.

The dimensions of climate for work group innovation

Participative safety

Participative safety is a dimension of the four-factor theory of climate for work group innovation that refers to the range of team members' abilities to engage in the decision-making process. Participative safety requires that the environment is not perceived as hostile or threatening (West, 1990) and depends on confidence in a supportive interpersonal atmosphere. This follows from a positive evaluation of team members' skills and intentions (West & Richter, 2011). If team members participate more fully in the decision-making process (e.g. through interaction or information sharing), they may invest more in the decisions taken, give their support for

improvement in teamwork (West, 1990) and feel able to suggest innovations (West & Richter, 2011).

Interaction and communication between team members, regarded as essentials for IPC (e.g. Fox & Reeves, 2015; Orchard et al., 2010; Suter et al., 2009; World Health Organization, 2010) are also aspects of participative safety. Shared accountability, some mutual influence between team members, and shared information are relevant aspects both for team climate and IPC. However, the theory of climate for work group innovation focuses on the behaviours of team members, whereas in IPC the idea of shared identity as "team members" is less important (Reeves et al., 2010).

Collaborative approaches are often accompanied by the idea of putting patients as participants 'at the centre' of care teams (World Health Organization, 2010; D'Amour, Goulet, Labadie, Martín-Rodriguez, & Pineault, 2008; Orchard et al., 2010). From this perspective, in IPC there is an expectation that patients should be included as partners in interprofessional work, and that there is a responsibility upon professionals to expand the space for dialogue to support the participation of patients, families, and communities in the team. Expanding space for dialogue between patients and teams represents a patient-centred approach. Orientation of teams towards patient-centred care is regarded as one of the competencies of IPC (Orchard et al., 2010) and also an expected means of ensuring the participative safety of patients in team decision making. However, the efforts to put patients at the centre of the team can be more of an aspiration than reality. This is partly because stakeholders may ignore some of the underlying principles of "collaborative patient-centred" approaches, including equitable social, political, and economic conditions in which healthcare providers work, and make the assumption that patients want and are able to take on the responsibilities that come with a participative role (Fox & Reeves, 2015).

Common objectives

In the four-factor theory of climate for work group innovation, the dimension of common objectives focuses attention on the accessibility of team objectives, and the values related to them, as key elements in the integration of knowledge and diversity of skills in job performance (West & Richter, 2011). According to the literature on team climate, clarity of objectives is a predictor of effectiveness in a team (Borrill et al., 2000; Bower et al., 2003; West & Lyubovnikova, 2013). Team objectives are critical because they give team members the incentive to combine their efforts and work collaboratively (West, 2012). According to West (2012), successful achievement of objectives is one of the main components of team effectiveness. Then, in order to improve effectiveness, objectives should be built with the involvement of the entire team, shared and understood by all team members (West, 2012).

The dimension of common objectives refers to the existence of shared goals, which requires team clarity, commitment, and agreement regarding their priorities. These underlying aspects of the common objectives around which collective work is organised are areas that team climate and IPC have in common.

From the perspective of IPC, shared objectives are seen as a dimension of collaboration and maybe an indicator of collaboration related to professional values, with particular reference to the consensual nature of objectives (D'Amour et al., 2008). Clearly identifying and sharing common objectives is considered an essential starting point for collaborative action because shared objectives may provide a central direction on which everyone can agree (D'Amour et al., 2008). Setting patient-centred care as a collective objective is a way of bringing different stakeholders together, as it is both a way of meeting healthcare needs and providing a convergent point upon which different professionals and services can agree (D'Amour et al., 2008; Interprofessional Education Collaborative Expert Panel, 2011; Orchard et al., 2010). However, at the same time that healthcare professionals set out in their work to promote more effective healthcare, by focusing on patients, they also have their own interests and want to retain some degree of autonomy (D'Amour et al., 2008).

The daily work of the healthcare team has a complex structure of competing interests that requires adjustments and negotiations to take place. In the same way, 'centrality' within teams may be a reflection of IPC, and demonstrates the need for clear direction from those in authority in healthcare in building consensus (D'Amour et al., 2008). Centrality, in the words of D'Amour et al. (2008): "refers to the existence of clear and explicit direction that is meant to guide action, in this case, towards collaboration. [...] Senior managers can exert significant influence on interorganizational collaboration, particularly through agreements they reach with the managers of other facilities to make the collaboration official" (p. 5).

Like common objectives, centrality is a means of bringing different stakeholders together in pursuit of collaborative actions. When team objectives are not negotiated successfully, there is a risk that personal interests will emerge, resulting in behaviours that do not focus on patient need or support IPC. In the same way, a lack of centrality can result in non-explicit common direction to guide interprofessional actions (D'Amour et al., 2008).

In healthcare, work takes place in the context of a network of reciprocal processes that converge around the central point of patient need (Peduzzi, 2001). This notion of a central point of convergence around patient need suggests a common ground between team climate and IPC.

Task orientation

Task orientation (orientation towards agreed team tasks) is a dimension of the four-factor theory of climate for work group innovation that refers to individual and team responsibility and a commitment to perform tasks to a high standard. It includes identifying sources of support for improvements in team policies, processes and methods that will facilitate task performance (Anderson & West, 1998). Task orientation is characterised by team evaluations, critical analysis, and other forms of control, reflection, and analysis of task performance (Anderson & West, 1998). The responsibility for performing

work to a high standard is an area that team climate and IPC have in common.

“Reflection” is important in IPC because it facilitates integrated care and continuous team development and learning, and a team’s reflective processes can stimulate additional reflective capacity about complex cases (Wilhelmsson et al., 2012). Task orientation in the four-factor theory also focuses attention on the capacity of teams for reflexivity and clarity of role definition between team members, and on organisational and internal team support for improving team processes. In the four-factor theory, these factors are often interpreted as being linked to the way teams approach the division of labour and operationalisation of tasks: either through a fragmentation of work or through collaboration among professionals and a focus on excellence.

A positive team climate occurs when team members use reflective processes to appraise potential weaknesses, monitor colleagues work performance, and share a belief in interdependence as a way of developing an integrated approach to action based on cooperation. This is also the aim of IPC.

Support for innovation

Support for innovation is a dimension of the four-factor theory of climate for work group innovation that refers to the expectation that each team member, and the team as a whole, will strive to introduce new practices or improvements in performance in the workplace (Anderson & West, 1998), and to the expectation that approval and practical support will be provided in response to this.

Innovation is an area that team climate and IPC may have in common. Innovation is understood as the development, or the adaptation of an idea, which is, at time of adoption, new to the organisation (Damanpour & Schneider, 2006; Fay, Shipton, West, & Patterson, 2015). Innovation is also considered a particular category of change, because it is intentional and designed to deliver benefits by implementing new ideas, processes, products, or procedures to a team or organisation (West & Farr, 1990).

In IPC, support for innovation may be an indicator of effective collaboration (D’Amour et al., 2008). The highest level of collaboration may be found in teams that use their expertise to promote the introduction of innovation and collaboration, and use formal tools such as collective agreements and rules designed to support this (D’Amour et al., 2008).

The processes that foster collaborative practices may also be seen as supporting the development and implementation of innovations. As D’Amour et al. (2008) point out: “because collaboration leads to new activities or because it involves dividing responsibilities differently between professionals and between institutions, it necessarily entails changes in clinical practices and in the sharing of responsibilities between partners” (p. 5).

The link between innovation and collaboration is also described by Huxham and Vangen (2000), Vangen and Huxham (2013) and Hean (2015), who argue that collaboration has an important role in building social innovative practice.

Although the transition to collaborative practice is widely seen as a necessity, some professionals do not see the improvement of interprofessional relations and cooperation as a priority. However, implementing innovative ways of working between different organisations and teams is a requirement of the development of methods through which professionals can work together and promote better patient outcomes despite resource constraints (Hean, 2015).

In this context, collaboration and team climate are components for innovation and this is possibly the main way in which they are linked in their essential role of promoting innovation in working practices.

Concluding comments

Critical analysis of relevant theoretical models is helpful to refine our understanding of key concepts in healthcare such as IPC. We have argued in this article that the four-factor theory of climate for work group innovation is an example of a theoretical model that can help us to grasp and elucidate the underlying structure of IPC more effectively. Refining our understanding of IPC through theory-building requires both theoretical sensitivity, and an awareness of which theoretical variables from one existing body of theory (e.g. team climate) may have most relevance and ‘fit’ to another (e.g. IPC).

Detailed consideration of the common ground between the four dimensions of climate for work group innovation and IPC suggests that theoretical aspects of team climate have a positive contribution to make as a theoretical lens for understanding IPC. The concept of team climate brings to our understanding of IPC a set of useful relational and process-oriented principles, which have been grouped to highlight overlapping areas.

These areas are: (1) interaction and communication between team members; (2) common objectives around which collective work is organised; (3) responsibility for performing work to a high standard; and (4) promoting innovation in working practices. These areas of overlap reflect common characteristics that could form elements of a novel framework for considering the contribution of team climate to collaborative working.

There are also limitations to the potential contribution of aspects of team climate to our understanding of IPC, which are highlighted by the differences between them. Whilst team climate focuses on the micro context of teams, IPC tends to focus on macro-level aspects of practice.

In this article, we have highlighted four key concepts from the four-factor theory of climate for work group innovation for inclusion in an integrated approach to IPC. We also discussed that team climate is about teamwork whilst IPC is a different type of interprofessional interaction. However, we have argued that an integrated approach to team climate and IPC is preferable to applying them in isolation. This approach may also have benefits for day-to-day practice (e.g. as a framework for evaluating the quality of IPC, or facilitating IPC by identifying areas for further development and support). Finally, in light of the conceptual relationship between team climate and IPC that we have set out here, and because the TCI has been shown to have good reliability and psychometric validity, future research could include an exploration

of the role of the TCI as a measure that may be useful in the evaluation of some aspects of IPC. This could add to our understanding of the measurement of IPC, and may provide an additional approach to measuring quality in this context, to complement the role of other measures.

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the writing and content of this article.

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