

# Measuring Connection at Work

Development and validation of the *Organisational Connection Measure*

## AUTHORS

Stephen Cuppello<sup>1</sup>, Mollie Tatlow<sup>2</sup>, David S Semmelink<sup>3</sup>, Jasmin Kalar<sup>3</sup>, Njabulo Mhlanga<sup>3</sup>, Elcke du Plessis<sup>3</sup>, Janine Victor<sup>3</sup>

## AFFILIATIONS

<sup>1</sup> Department of Psychology, City University of London, and Thomas

<sup>2</sup> Loughborough University, and Thomas

<sup>3</sup> Thomas

Email: [stephenc@thomas.co](mailto:stephenc@thomas.co)

## Abstract

Current models of employee perceptions, such as engagement, overlook crucial elements of how employees evaluate the social aspects of their work, which limits their utility for organisations aiming to make positive changes. This paper aims to address this gap by proposing a new model of employee connection, pertaining to an individual's perceptions of their connection to their role, their organisation, and the people around them at work. The development of the 36-item Organisational Connection Measure (OCM) was undertaken across three studies, with this paper presenting the final validation study in detail. Results support a general factor structure, suggesting that connection can be understood as a coherent, overarching construct. Additional evidence supports the utility of six distinct sub-factors, which show differential relationships with key workplace outcomes. The measure demonstrated strong associations with important self-report outcomes, including lower intention to quit, higher task and contextual performance, and lower reported counterproductive work behaviours. While the sub-factors were highly intercorrelated, their distinct predictive validity highlights their potential value for targeted organisational interventions. This work offers a promising new tool for understanding and enhancing employee connection in organisational contexts.

## Keywords

Employee Connection, Employee Perceptions, Organisational Connection Measure, Scale Validation

## Orcid IDs

Stephen Cuppello 0000-0002-6189-9246

Mollie Tatlow 0009-0006-7723-4798

David S Semmelink 0000-0003-0761-6185

Jasmin Kalar 0009-0002-4845-4493

Njabulo Mhlanga 0009-0007-2413-618X

Elcke du Plessis 0000-0003-0029-7863

Janine Victor 0000-0002-1576-7584

## 1. Introduction

Research has long supported the relationship between employee perceptions and business outcomes such as employee performance (e.g., Judge et al., 2001; Harter et al., 2002; Christian et al., 2011). Indeed, organisations are increasingly reliant on surveying staff to identify ways to improve employee experience and so increase productivity and decrease attrition (WorkBuzz, 2022). However, current models of employee perceptions may lack breadth and overlook crucial elements of modern work that drive employee behaviour.

Employee engagement has a long-established relationship with individual performance (e.g., Christian et al., 2011). Measured through well-regarded and extensively validated measures such as the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002), engagement is typically concerned with aspects such as individuals' energy, involvement, and dedication to their specific role. A recent meta-analysis found engagement to be correlated with factors such as turnover intention, performance, and wellbeing (Mazzetti et al., 2023). However, engagement does not capture employees' perceptions of their social relationships at work. Thriving is another construct that has been applied to work (e.g., Porath et al., 2012) and found to be related to important organisational outcomes such as task performance (see Kleine et al., 2019). Thriving does cover social aspects of work, such as feeling valued, supported, and heard by coworkers (Peters et al., 2021); however, these insights merely provide an understanding of the *satisfaction* of an individual with their perceptions of how others behave around them, while not capturing the extent to which an individual feels *part of* and *connected to* a collective at work. Satisfaction with one's relationship with coworkers and the broader psychosocial work environment has also been found to be related to work performance (Shahid et al., 2011), counterproductive work behaviour (Agervold, 2009), and manager derailment (Gentry et al., 2007). In overlooking these aspects of employees' social experiences at work, existing employee experience models lack insights into perceptions that are arguably very important to them. As a result, organisations developing interventions based on insights from existing models may be overlooking features of work that could potentially represent the greatest potential for positive change.

This paper makes the case for a novel model and measure of employee perceptions, the Organisational Connection Measure (OCM), developed to be highly predictive of factors relevant for organisational success, by first outlining its broad theoretical foundations and rationale before documenting the approach to model and measure development and, finally, presenting initial validation research.

## **Connection**

Research across psychology and organisational science consistently positions connection as a fundamental human need that fosters belonging and relatedness (Maslow, 1943; van Bel et al., 2009) and is characterised by experiences of affiliation, acceptance, and meaningful social ties that support wellbeing and behaviour (Allen et al., 2021; Baumeister & Leary, 1995; Ryan & Deci, 2000). Prior work characterises social connectedness as a subjective sense of being part of significant, supportive relationships and of having social ties that feel salient in daily life (Allen et al., 2021; van Bel et al., 2009). More broadly, connectedness has been described as the extent to which people experience their relationships and environments as personally meaningful and important, highlighting the appraised significance of social bonds rather than their mere presence (Allen et al., 2021; Schulze & Naidu, 2014).

Building on this foundation, Holt-Lunstad (2018a) proposed that social connection encompasses multiple dimensions, including the structure of a person's social network, the functions relationships serve, and the emotional quality of those interactions. These aspects capture not only the presence of social ties, but also the perceived availability of support and the positive or negative nature of interpersonal exchanges; all of which have been shown to contribute to positive health and behavioural outcomes.

In the present work, *workplace connection* is understood as individuals' perceptions of their connection to their role, their organisation, and the people around them at work. It reflects how supported and included a person feels in their work environment. Importantly, connection is viewed as measurable and malleable: Once understood, it can be strengthened through intentional behaviours and supportive organisational practices. This perspective underpins the development of the OCM, which seeks to capture meaningful variations in employees' experiences of connection at work.

In their meta-analysis on the impact of social relationships on mortality, Holt-Lunstad et al. (2015) found that a lack of connection (i.e., social isolation or loneliness) has a significant detrimental effect on an individual's wellbeing and health and increases risk of chronic illnesses, mental health issues, and mortality. In fact, weak social ties can increase the risk of early death by 26–32%, which is comparable to other well-known risk factors such as heavy smoking, obesity, and physical inactivity (Holt-Lunstad et al., 2015). In the workplace, a lack of connection is prevalent and impacts people's lives inside and outside of work, and research has supported that fostering greater connection can help organisations to ensure their staff are healthy and productive (Holt-Lunstad, 2018b).

The development of this measure was informed by a desire to create a broad measure of aspects of people's perceptions of their work life that ultimately influence business performance and success. Through this, it is anticipated that this measure will arm organisations with useful insights to improve their employees' perceptions to lead to better business outcomes. As such, criterion validity was the primary concern when developing this measure, rather than a desire to align with established models.

## **Existing Literature**

As part of the development of the OCM, a literature review was conducted to understand the domains of employee experience relevant to connection that ultimately contribute to business success. Papers have been included if they relate aspects of connection to aspects of individual performance, group performance, or retention. Individual performance includes subjective and objective performance, underperformance, derailment, and CWB. Group performance includes aspects related to organisational performance, team productivity, or team cohesion. Retention includes related factors such as intention to quit. The specific interest of this model is in changeable states related to connection rather than stable psychological traits such as personality, so the model exclusively measures constructs that organisations can endeavour to improve,

which theoretically should lead to greater organisational success. A decision was also made to overlook aspects relating to perceptions towards specific individuals, such as managers or leaders, as these aspects would be better captured through activities such as manager and leader appraisals.

In all, 27 different constructs that relate connection to performance or retention were identified in the literature review. Papers highlighting the predictive validity of these constructs in the workplace are outlined in Table 1 at the end of this section. The constructs are presented in three broad themes (role connection, organisational connection, and interpersonal connection) merely for ease of reading, although there is significant overlap between themes. This review aims to justify the inclusion of these specific constructs in the OCM model, rather than serve as a comprehensive systematic review of existing literature. Excellent reviews of this nature already exist; for example, Rovetta et al. (2025) on team and organisational identity, Istiningtyas et al. (2025) on social embeddedness of thriving at work, Blau et al. (2023) on organisational belonging, Iovoli et al. (2025) on interpersonal problems and mental health outcomes, and Pietromonaco and Collins (2017) on close relationships and health.

### **Role Connection**

There are ten constructs that have been categorised under role connection, namely clarity, autonomy, burnout, recognition, wellbeing, stress/pressure, work-life balance, perceived productivity, job satisfaction, and motivation. These are constructs that pertain to how connected individuals feel to the actual job they are performing, how able they are to do this job, and the impact it has on them. They were particularly related to factors relevant to individual performance.

### **Organisational Connection**

This category comprises six constructs related to how individuals feel about their connection to the organisation they work for. These are compensation, organisational commitment, organisational support, organisational justice, organisational identity, and work environment. Many of these factors are particularly important considering employee retention and intention to quit (ITQ).

### **Interpersonal Connection**

Eleven constructs have been categorised as part of interpersonal connection, namely trust, psychological safety, team identity, social connection, collaboration, conflict, peer support, communication effectiveness, size of network, social roles, and satisfaction with relationships. These constructs broadly pertain to how an individual feels about the social aspects of work and how connected they feel to those around them. These constructs were especially relevant to factors related to team and group performance. For simplicity's sake, trust has been listed as a single construct; however, findings encompass multiple dimensions, including interpersonal and organisational trust.

**Table 1**  
Constructs Relating Aspects of Connection to Relevant Outcomes in the Literature

| Category        | Related Outcome                   | Construct (Predictor)              | References                                                                                  |
|-----------------|-----------------------------------|------------------------------------|---------------------------------------------------------------------------------------------|
| Role Connection | Underperformance                  | Lack of clarity                    | Hlengane & Bayat, 2013                                                                      |
|                 |                                   | Low job autonomy                   | Van den Heuvel et al., 2010                                                                 |
|                 |                                   | Burnout and excessive work demands | Aboagye et al., 2019; Dyrbye et al., 2019; Shahid et al., 2011; Van den Heuvel et al., 2010 |
|                 |                                   | Lack of recognition                | Hlengane & Bayat, 2013                                                                      |
|                 |                                   | Stress/pressure                    | Pflanz & Ogle, 2006; Shahid et al., 2011                                                    |
|                 |                                   | Poor work-life balance             | Shahid et al., 2011                                                                         |
|                 |                                   | Lack of motivation                 | Hlengane & Bayat, 2013                                                                      |
|                 | Counterproductive work behaviours | Lack of job autonomy               | Browning, 2008; Marcus & Schuler, 2004; Penney et al., 2003; Vardi et al, 2003              |
|                 |                                   | Burnout and high workload          | Baillien et al., 2011; Blau & Andersson, 2005                                               |
|                 |                                   | Stress/pressure                    | Agervold, 2009; Hauge et al., 2009; Martinko et al., 2005; Vardi et al, 2004                |
|                 |                                   | Poor work-life balance             | Scott et al., 2014                                                                          |
|                 |                                   | Low job satisfaction               | Hollinger & Clark, 1982; Mangione & Quinn, 1975; Spector & Fox, 2002                        |
|                 | Derailment                        | Perceived productivity             | Van Velsor & Leslie, 1995                                                                   |
|                 | Retention or intention to quit    | Clarity                            | Ghosh et al., 2013; James et al., 2011                                                      |
|                 |                                   | Autonomy                           | Koyuncu et al., 2006                                                                        |
|                 |                                   | Burnout                            | Malik et al., 2013                                                                          |
|                 |                                   | Recognition                        | James et al., 2011; Koyuncu et al., 2006; Nasir et al., 2019                                |
|                 |                                   | Work-life balance                  | Nasir & Mahmood, 2016; Rasdi et al., 2018                                                   |
|                 |                                   | Job satisfaction                   | De Sousa et al., 2018; Lyu et al., 2022; McGilton et al., 2013; Nasir & Mahmood, 2016       |
|                 |                                   | Motivation                         | De Sousa et al., 2018; Sarmad et al., 2016                                                  |

| Category                  | Related Outcome                  | Construct (Predictor)                                                    | References                                                                                                                          |
|---------------------------|----------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Organisational Connection | Performance                      | Compensation                                                             | Hlengane & Bayat, 2013                                                                                                              |
|                           |                                  | Organisational justice                                                   | Hlengane & Bayat, 2013                                                                                                              |
|                           |                                  | Organisational support                                                   | Hlengane & Bayat, 2013                                                                                                              |
|                           | Counterproductive work behaviour | Organisational commitment                                                | Mathieu & Zajac, 1990                                                                                                               |
|                           |                                  | Perceived organisational support                                         | Alias & Rasdi, 2015; Ones et al., 2003                                                                                              |
|                           |                                  | Organisational justice                                                   | Akinsola & Alarape, 2019; Hershcovis et al., 2007; Jones, 2009                                                                      |
|                           | Retention and intention to quit  | Perceptions of one's work environment                                    | Bibi et al., 2017; Kundu & Lata, 2017; Nasir & Mahmood, 2016; Warraich et al., 2019                                                 |
|                           |                                  | Compensation                                                             | Hussain & Rehman, 2013; Koyuncu et al., 2006; Nasir et al., 2019; Sarmad et al., 2016                                               |
|                           |                                  | Organisational commitment                                                | Anis et al., 2011; Nasyira et al., 2014                                                                                             |
|                           |                                  | Organisational support (including through training and development)      | Haider et al., 2015; James et al., 2011; Janjua & Gulzar, 2014; Nasyira et al., 2014; Saleem & Affandi, 2014; Warraich et al., 2019 |
|                           |                                  | Perceptions of and alignment with organisational identity and culture    | Haider et al., 2015; Hussain & Rehman, 2013; Matongolo et al., 2018                                                                 |
|                           | Team productivity                | Organisational support                                                   | Salas et al., 2015                                                                                                                  |
|                           | Organisational performance       | Organisational support (through improved internal auditing and learning) | Carmeli & Zisu, 2009                                                                                                                |

| Category                 | Related Outcome                             | Construct (Predictor)                                                  | References                                                                         |
|--------------------------|---------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Interpersonal Connection | Individual performance and underperformance | Poor communication                                                     | Hlengane & Bayat, 2013                                                             |
|                          |                                             | Satisfaction with one's relationships with coworkers                   | Shahid et al., 2011                                                                |
|                          | Counterproductive work behaviour            | Trust in the organisation                                              | Thau et al., 2007                                                                  |
|                          |                                             | Social connection                                                      | Agervold, 2009                                                                     |
|                          |                                             | Interpersonal conflict                                                 | Chen & Spector, 1992; Frone, 1998; Hauge et al., 2009                              |
|                          | Workplace derailment                        | Satisfaction with one's relationships                                  | Gentry et al., 2007; Lombardo & McCauley, 1988; Van Velsor & Leslie, 1995          |
|                          | Retention and intention to quit             | Psychological safety                                                   | Kim et al., 2021                                                                   |
|                          |                                             | Collaboration and conflict                                             | Belias & Rossidis, 2022                                                            |
|                          |                                             | Communication effectiveness                                            | Hussain & Rehman, 2013; Steiner et al., 2020                                       |
|                          |                                             | Social roles                                                           | Steiner et al., 2020                                                               |
|                          | Team productivity                           | Interpersonal trust                                                    | Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 2004                                  |
|                          |                                             | Collaboration                                                          | Stashevsky & Koslowsky, 2006                                                       |
|                          |                                             | Psychological safety                                                   | Bergmann & Schaeppi, 2016                                                          |
|                          | Team cohesiveness and productivity          | Organisational and interpersonal trust                                 | Cohen et al., 1996; Hansen et al., 2002; Mach et al., 2010                         |
|                          |                                             | Team identity and climate                                              | Casey-Campbell & Martens, 2009; Chen et al., 2008; Daspit et al., 2013; Hogg, 1992 |
|                          |                                             | Collaboration                                                          | Wang et al., 2010; West et al., 2009                                               |
|                          |                                             | Positive conflict                                                      | Sullivan & Feltz, 2003; Sullivan & Shorts, 2011                                    |
|                          |                                             | Peer support                                                           | Mäkikangas et al., 2017                                                            |
|                          |                                             | Effective communication                                                | Holt & Sparkes, 2001; Mesmer-Magnus & DeChurch, 2009; Sullivan & Short, 2011       |
|                          |                                             | Size of network                                                        | Schulte et al., 2012                                                               |
|                          | Organisational performance                  | Organisational trust (through improved internal auditing and learning) | Carmeli & Zisu, 2009                                                               |
|                          |                                             | Size of network                                                        | Carmeli, 2007                                                                      |
|                          |                                             | Social capital                                                         | Carmeli, 2007                                                                      |
|                          |                                             | Psychological safety (through improved learning through failure)       | Carmeli, 2007                                                                      |

## **Initial Development Process Preceding the Current Study**

The current study presents the psychometric qualities of the novel OCM. The aim was to develop a psychometrically robust tool that can predict positive workplace outcomes. An iterative development process was used to refine the measure and ensure a balance between psychometric rigour and practical utility. Three studies were completed as part of the development of the OCM, with this paper being concerned with the final study demonstrating the validity and reliability of the final assessment. Each study built upon the last with a similar methodology but distinct occupational samples.

The first two studies have been documented in detail elsewhere (Thomas, 2025) and are summarised below as they relate to the present study. For the first study, four initial items for each of the 27 constructs were written, informed by the literature review, totalling 108 items. Four items for each construct were authored to ensure they captured the variance of concepts within the research identified in the literature review. Items were authored to create high content validity for the construct while being kept as brief and specific as possible and avoiding double-barrelling. Items were reviewed by multiple subject matter experts to achieve consensus.

The initial item pool and factor structure were explored, which supported an overall connection factor as well as six individual factors. These factors demonstrated strong internal consistency and promising predictive validity for key outcomes such as ITQ and work performance.

Following this first study, 54 retained items were carried forward into the second study. To strengthen measurement across all factors, an additional 12 items were developed, resulting in a total of 66 items for testing. These new items were added to support factors with fewer retained items, ensuring balanced coverage across the six constructs. Item development was guided by the original psychological constructs and aimed to capture the full breadth of each factor identified in the first study.

The revisions made during the second study were found to have strengthened the factor structure, improving both the theoretical and practical utility of the model. Confirmatory factor analysis (CFA) in the second study supported the 6-factor model and its overarching connection construct, with acceptable to excellent fit indices and reliability estimates. Both studies also showed that the subdimensions exhibited differential predictive validity, highlighting their unique contributions to workplace outcomes. Building on these prior studies, the present study seeks to test the final version of the OCM, evaluating its robustness and predictive power in a more comprehensive manner.

# 2. Method

## 2.1. Participants

Given that the study focused on workplace perceptions, an occupational sample was utilised. All participants were working individuals who had voluntarily joined a research panel after completing a psychometric assessment with a large global psychometric publisher, undertaken for genuine occupational purposes such as recruitment or employee development. As such, all participants had experience in the working world.

The final sample comprised 1,003 participants with 56.93% being women and 42.27% men, and < 1% choosing “Prefer not to say” or “Other” The median age was 49 years (SD = 10.95). Of the sample, 61.32% resided in the UK, 13.46% in South Africa, 8.97% in the US, 8.87% Canada, 5.28% Australia, and 2.09% selected “Other”

## 2.2. Materials

### Organisational Connection Measure (OCM)

For the current study, the final measure used was the 36-item OCM derived from prior research (Thomas, 2025). Respondents answered on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*) and were asked to think about their current job. Scores were calculated for each of the six factors (Appreciation, Cohesion, Belonging, Trust, Contribution, and Wellbeing), as well as an overall Connection score. Details of the factors, descriptions, and example items can be seen in Table 2.

**Table 2**  
OCM Factors, Descriptions, and Example Items

| Factor       | Description                                                                                                                                   | Example Item                                                           |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Appreciation | Fair reward for the work completed; feeling as though efforts are acknowledged and appreciated and achievements celebrated.                   | I feel valued for my work by my colleagues and peers.                  |
| Cohesion     | Positive social relationships; individuals working together effectively towards the same goals; support for one another.                      | I work in a friendly and inclusive atmosphere.                         |
| Contribution | Access to resources required to be effective in role; clear expectations and autonomy to manage work and time.                                | I have access to the information I need to perform my job effectively. |
| Belonging    | Satisfaction and fulfilment with job role and alignment to wider goals, values, and success.                                                  | I am proud to be a member of my team.                                  |
| Trust        | Confidence in decision-making processes; feeling as though the work environment is a safe space for communication and that all voices matter. | I can rely on the promises and commitments made by my superiors.       |
| Wellbeing    | Healthy work-life balance; ability to manage stress and pressure effectively without it having a negative impact on health or performance.    | My job promotes a sense of balance and wellbeing in my life.           |

## **The Individual Work Performance Questionnaire (IWPQ; Koopmans et al., 2012)**

The IWPQ is an 18-item measure of self-reported work performance, based on three scales: task performance (TP), contextual performance (CP), and counterproductive work behaviour (CWB). It has been found to be valid and reliable and correlates well with other measures of work performance (Ramos-Villagrasa et al., 2019). Participants responded to items on a 5-point Likert scale and were asked to consider the last three months of work.

### **Intention to Quit**

ITQ was measured using a self-constructed single item scale asking: "I often think about leaving my job" existing on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). Turnover intention is often used as a proxy for actual turnover, with evidence to suggest the two are related (Tett et al., 2006).

## **2.3. Procedure**

Participants were recruited via email and directed to an online survey platform. After providing informed consent, they completed the relevant measures for each study, followed by demographic questions. Participants completed the OCM, the ITQ question, and the IWPQ scale to enable the researchers to investigate the predictive validity of the items and scale. At the end of each study, participants received debrief information and were thanked for their participation.

## **2.4. Analysis**

As exploratory factor analyses (EFA) conducted in earlier studies helped establish an initial factor structure, the current study focuses on CFA to evaluate the finalised model, followed by correlations to examine relationships between study variables, and regression analyses to assess predictive validity. Prior to analysis, cases with missing data on key variables were removed. All analyses were performed using RStudio (Posit Team, 2025).

# **3. Results**

## **3.1. Confirmatory Factor Analysis**

To confirm the reduced 6-factor model, a CFA was conducted using the diagonally weighted least squares (DWLS) estimator, which is recommended for ordinal data such as Likert-type responses due to its robustness and accuracy in estimating model fit (Flora & Curran, 2004). The 6-factor structure was specified based on the results of the preceding EFA, with items assigned to factors according to their highest loading and conceptual alignment. No cross-loadings were included. The aim of the CFA was to assess the model's overall fit to the data and provide evidence for the factorial validity of the proposed structure.

Model fit was evaluated using a range of indices: the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardised root mean square residual (SRMR), in accordance with recommended thresholds (Hu & Bentler, 1999). Internal consistency reliability was assessed for each of the six factors using both Cronbach's alpha and McDonald's omega total. While Cronbach's alpha remains a widely used measure of reliability, it assumes tau-equivalence and may underestimate reliability when this assumption is violated. Therefore, McDonald's omega total was also reported, as it provides a more accurate estimate of reliability in the presence of congeneric items (Dunn et al., 2014). Values above 0.70 were considered acceptable, with higher values indicating stronger internal consistency. Results can be seen in Table 3.

**Table 3**  
Confirmatory Factor Analysis and Reliability Statistics of the OCM

| Factor       | $\chi^2/df$ | p value | CFI   | TLI   | RMSEA | Confidence Interval | SRMR  | $\alpha$ | $\omega_t$ | No. Items |
|--------------|-------------|---------|-------|-------|-------|---------------------|-------|----------|------------|-----------|
| Connection   | 1.078       | > 0.05  | 0.998 | 0.998 | 0.016 | 0.000–0.025         | 0.065 | 0.96     | 0.97       | 36        |
| Appreciation | 0.856       | > 0.05  | 1.000 | 1.002 | 0.000 | 0.000–0.058         | 0.037 | 0.85     | 0.89       | 6         |
| Cohesion     | 0.379       | > 0.05  | 1.000 | 1.019 | 0.000 | 0.000–0.009         | 0.031 | 0.81     | 0.85       | 6         |
| Contribution | 1.019       | > 0.05  | 1.000 | 0.999 | 0.008 | 0.000–0.065         | 0.046 | 0.80     | 0.85       | 6         |
| Belonging    | 0.254       | > 0.05  | 1.000 | 1.013 | 0.000 | 0.000–0.000         | 0.023 | 0.87     | 0.91       | 6         |
| Trust        | 0.441       | > 0.05  | 1.000 | 1.007 | 0.000 | 0.000–0.024         | 0.027 | 0.88     | 0.91       | 6         |
| Wellbeing    | 1.367       | > 0.05  | 0.997 | 0.995 | 0.035 | 0.000–0.078         | 0.048 | 0.86     | 0.90       | 6         |

All six factors as well as the overarching Connection factor demonstrated excellent model fit, with all achieving very strong comparative fit indices ( $CFI \geq 0.997$ ) and Tucker-Lewis indices ( $TLI \geq 0.995$ ). The single-factor Connection model and subdimensions Appreciation, Cohesion, Belonging, Trust, and Wellbeing showed particularly strong fit, with CFI and TLI values at or above 0.997 and RMSEA values ranging from 0.000 to 0.035, all within the recommended thresholds for close fit. SRMR values were consistently low across models (0.023–0.065), further indicating excellent model-data correspondence. Contribution also demonstrated strong fit ( $CFI = 1.000$ ,  $TLI = 0.999$ ) with acceptable RMSEA (0.008) and SRMR (0.046). Internal consistency was high across all subdimensions, with Cronbach's alpha values ranging from 0.80 (Contribution) to 0.88 (Trust), and McDonald's omega total values from 0.85 to 0.91, indicating robust reliability. The overall Connection factor also demonstrated excellent internal consistency ( $\alpha = 0.96$ ,  $\omega = 0.97$ ), supporting the coherence and stability of the 36-item measure.

### 3.2. Correlations

To explore the relationships between the latent constructs, inter-factor correlations were examined. These correlations provide insight into the extent to which the factors are distinct yet related, offering evidence for the conceptual structure of the model. Given the theoretical overlap between some constructs (e.g., collaboration and psychological safety), moderate to strong correlations were expected. The correlation matrix for the six factors and overall connection, as well as ITQ and the IWPQ, is presented in Table 4 below.

**Table 4**  
Correlation Matrix for the Connection Factors, ITQ, and IWPQ (Consisting of TP, CP, and CWB)

|                 | M      | SD    | 1        | 2        | 3        | 4        | 5        | 6        | 7        | 8       | 9        | 10      |
|-----------------|--------|-------|----------|----------|----------|----------|----------|----------|----------|---------|----------|---------|
| 1. Appreciation | 28.11  | 8.21  | -        |          |          |          |          |          |          |         |          |         |
| 2. Cohesion     | 30.77  | 6.47  | 0.66***  | -        |          |          |          |          |          |         |          |         |
| 3. Contribution | 30.59  | 6.90  | 0.80***  | 0.69***  | -        |          |          |          |          |         |          |         |
| 4. Belonging    | 31.30  | 7.80  | 0.76***  | 0.73***  | 0.80***  | -        |          |          |          |         |          |         |
| 5. Trust        | 27.55  | 8.23  | 0.75***  | 0.79***  | 0.76***  | 0.72***  | -        |          |          |         |          |         |
| 6. Wellbeing    | 28.94  | 8.03  | 0.71***  | 0.73***  | 0.73***  | 0.74***  | 0.75***  | -        |          |         |          |         |
| 7. Connection   | 177.26 | 40.45 | 0.89***  | 0.86***  | 0.90***  | 0.89***  | 0.90***  | 0.88***  | -        |         |          |         |
| 8. ITQ          | 2.97   | 1.57  | -0.63*** | -0.55*** | -0.61*** | -0.71*** | -0.63*** | -0.67*** | -0.72*** | -       |          |         |
| 9. TP           | 15.06  | 3.59  | 0.19**   | 0.31***  | 0.28***  | 0.26***  | 0.21***  | 0.40***  | 0.31***  | -0.13*  | -        |         |
| 10. CP          | 25.25  | 5.69  | 0.21***  | 0.18**   | 0.31***  | 0.27***  | 0.14*    | 0.20***  | 0.25***  | -0.07   | 0.46***  | -       |
| 11. CWB         | 6.17   | 4.11  | -0.33*** | -0.42*** | -0.41*** | -0.42*** | -0.43*** | -0.44*** | -0.46*** | 0.47*** | -0.36*** | -0.16** |

Note. \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$ ; ITQ = Intention to Quit, TP = Task Performance, CP = Contextual Performance, CWB = Counterproductive Work Behaviour

The bivariate correlations in Table 4 show that the subdimensions were strongly and significantly intercorrelated ( $r = 0.66$ – $0.80$ ), suggesting that they share common variance, which is consistent with the presence of an overarching Connection factor. This is further supported by the very high correlations between each subdimension and the total Connection score ( $r = 0.86$ – $0.90$ ), demonstrating that each factor meaningfully contributes to the broader construct.

However, despite their shared variance, the subdimensions showed differentiated patterns of relationships with the predictive criteria, namely ITQ and IWPQ constructs TP, CP, and CWB. For example, Belonging demonstrated the strongest negative correlation with ITQ ( $r = -0.71$ ), while Wellbeing had the strongest positive correlation with TP ( $r = 0.40$ ) and Contribution with CP ( $r = 0.31$ ). Wellbeing was most strongly negatively associated with CWB ( $r = -0.44$ ); however, the relationships between all factors and CWB were of similar levels ( $r = -0.41$  to  $-0.44$ ).

### 3.3. Linear Regressions

Linear regression analyses were conducted to examine the relationship between Connection and four outcome variables: ITQ, TP, CP, and CWB. Connection significantly predicted all four outcomes, as shown in Table 5 below.

**Table 5**  
Results from Linear Regressions Showing Connection Predicting ITQ and IWPQ

|                | ITQ                        |       |        |         |                | TP                         |      |       |         |               | CP                         |      |       |         |                | CWB                        |       |       |         |                |
|----------------|----------------------------|-------|--------|---------|----------------|----------------------------|------|-------|---------|---------------|----------------------------|------|-------|---------|----------------|----------------------------|-------|-------|---------|----------------|
|                | B                          | SE B  | t      | p       | 95% CI for B   | B                          | SE B | t     | p       | 95% CI for B  | B                          | SE B | t     | p       | 95% CI for B   | B                          | SE B  | t     | p       | 95% CI for B   |
| Intercept      | 7.91                       | 0.29  | 27.62  | < 0.001 | [7.35, 8.47]   | 10.17                      | 0.89 | 11.40 | < 0.001 | [8.42, 11.93] | 19.12                      | 1.44 | 13.26 | < 0.001 | [16.28, 21.95] | 14.47                      | 0.95  | 15.20 | < 0.001 | [12.59, 16.34] |
| Connection     | -0.03                      | 0.002 | -17.70 | < 0.001 | [-0.03, -0.02] | 0.03                       | 0.00 | 5.613 | < 0.001 | [0.02, 0.04]  | 0.03                       | 0.01 | 4.36  | < 0.001 | [0.02, 0.05]   | -0.05                      | 0.005 | -8.94 | < 0.001 | [-0.06, -0.03] |
| R <sup>2</sup> | 0.51                       |       |        |         |                | 0.10                       |      |       |         |               | 0.06                       |      |       |         |                | 0.21                       |       |       |         |                |
| F              | (1,296) = 313.2, p < 0.001 |       |        |         |                | (1,296) = 31.51, p < 0.001 |      |       |         |               | (1,296) = 19.05, p < 0.001 |      |       |         |                | (1,296) = 79.97, p < 0.001 |       |       |         |                |

Note: ITQ = Intention to Quit, TP = Task Performance, CP = Contextual Performance, CWB = Counterproductive Work Behaviour

Higher Connection was associated with lower ITQ ( $B = -0.03$ ,  $SE = 0.002$ ,  $t(296) = -17.70$ ,  $p < 0.001$ , 95%  $CI [-0.03, -0.02]$ ), accounting for 51% of the variance in ITQ scores ( $R^2 = 0.51$ ). Connection positively predicted TP ( $B = 0.03$ ,  $SE = 0.00$ ,  $t(296) = 5.61$ ,  $p < 0.001$ , 95%  $CI [0.02, 0.04]$ ), accounting for 10% of the variance in TP scores ( $R^2 = 0.10$ ), as well as CP ( $B = 0.03$ ,  $SE = 0.01$ ,  $t(296) = 4.36$ ,  $p < 0.001$ , 95%  $CI [0.02, 0.05]$ ), accounting for 6% of the variance in CP scores ( $R^2 = 0.06$ ); and negatively predicted CWB ( $B = -0.05$ ,  $SE = 0.005$ ,  $t(296) = -8.94$ ,  $p < 0.001$ , 95%  $CI [-0.06, -0.03]$ ), accounting for 21% of the variance in CWB scores ( $R^2 = 0.21$ ). These results suggest that stronger feelings of connection at work are associated with better performance and lower intentions to quit or performing of counterproductive work behaviours, with effect sizes ranging from small to large.

## 4. Discussion

The present study was the final study among a set of three to develop and validate a measure of workplace connection and examine its relationship with key organisational outcomes, including intention to quit, task performance, contextual performance, and counterproductive work behaviour. The findings provide strong support for the reliability and validity of the Organisational Connection Measure and its six subdimensions: Appreciation, Cohesion, Contribution, Belonging, Trust, and Wellbeing.

The CFA demonstrated excellent model fit across all subdimensions, with fit indices (CFI, TLI) at or above 0.995, RMSEA values at or near zero, and SRMR values all below 0.07. These results indicate that the Connection factors are psychometrically sound and capture distinct yet highly interrelated aspects of workplace connection. Reliability estimates were consistently strong, with Cronbach's alpha and McDonald's omega total values ranging from 0.80 to 0.97 across the dimensions, supporting the internal consistency of the measure.

Bivariate correlations revealed that while the subdimensions shared considerable variance, consistent with an overarching Connection construct, they also showed unique patterns of association with external criteria. In particular, Belonging demonstrated the strongest negative association with intention to quit, suggesting that employees who feel aligned to the organisation and its goals are less likely to consider leaving the organisation. Wellbeing, in turn, showed the strongest positive relationship with task performance, suggesting that employees who experience a healthy work-life balance have more energy and focus to complete their tasks well. Lastly, the finding that Contribution was most strongly related to contextual performance suggests that employees who are granted the autonomy and resources they need to take initiative and be effective in their work are willing to go above and beyond in their roles. These differentiated patterns suggest that while workplace connection operates as a coherent whole, its facets contribute uniquely to important organisational outcomes.

Regression analyses reinforced the utility of the measure in predicting outcomes, demonstrating that higher overall Connection significantly predicted lower turnover intentions and counterproductive work behaviours, and higher task and contextual performance. Notably, Connection accounted for a substantial 51% of the variance in intention to quit, highlighting its potential as a critical target for interventions aimed at improving employee retention. Although effect sizes for task and contextual performance were smaller, they were still statistically significant and meaningful, suggesting that fostering workplace connection can contribute to improved individual and organisational performance.

We found strong support for a general factor of organisational connection, suggesting that a unifying sense of connection at work can be meaningfully captured. However, our findings also demonstrate that there is practical value in distinguishing between the six proposed sub-factors. Despite high intercorrelations among these sub-dimensions, each exhibited unique patterns of association with key work-related outcomes. This differentiation highlights the potential utility of the 6-factor model for organisational practice, particularly when seeking to diagnose and intervene in specific areas where connection may be lacking within teams or departments.

Overall, the results highlight the central role of workplace connection in shaping employee attitudes and behaviours. Employees who feel a greater sense of connection are more likely to remain with their organisation, perform better, and engage less in counterproductive behaviour, further underscoring the importance of organisational practices and leadership behaviours that cultivate a strong sense of connection among employees.

## **5. Limitations**

One limitation of this research is the reliance on self-report measures rather than objective indicators such as actual staff turnover or achievement of objective targets, or multi-source assessments such as 360-degree feedback. This approach may introduce common method bias and restrict the generalisability of findings to actual performance outcomes (Podsakoff et al., 2003). However, previous studies have supported that both the self-report IWPQ and intention to quit have been related to work performance and turnover, respectively (Ramos-Villagrasa et al., 2019; Tett et al., 2006), which supports their use in the present study.

Another limitation is the sample being drawn from Western populations. As this measure is still in the early stages of development, it is uncertain how well the structure and findings will replicate in other cultural or occupational contexts. Multiple English-speaking regions were included in the sample to mitigate this as much as possible in this early research, but more research is needed.

Future research should investigate how the OCM relates to other psychological constructs, particularly objective performance indicators such as supervisor ratings, productivity metrics, team metrics, sales figures, or absenteeism records. It would also be valuable to examine the relationship between connection and employee engagement. While there is conceptual overlap between the two, we propose that organisational connection encompasses a broader and more multifaceted experience of the workplace.

Further studies should also explore whether demographic factors influence experiences of connection or responses to the measure, including variables such as age, gender, role seniority, and cultural background. Finally, replication using more representative samples, as well as those from non-Western contexts, will be crucial in establishing the generalisability and robustness of the measure.

## **6. Conclusion**

Overall, this research provides solid support for an overall model of connection in the workplace that encompasses employee sentiment towards their work, their organisation, and the people around them. Further, strong support has been found for the reliability,

construct validity, and criterion validity of this instrument, specifically highlighting its relevance in predicting key work outcomes.

## References

- Aboagye, E., Björklund, C., Gustafsson, K., Hagberg, J., Aronsson, G., Marklund, S., Leineweber, C., & Bergström, G. (2019). Exhaustion and impaired work performance in the workplace: Associations with presenteeism and absenteeism. *Journal of Occupational and Environmental Medicine*, 61(11), e438-e444.
- Agervold, M. (2009). The significance of organizational factors for the incidence of bullying. *Scandinavian Journal of Psychology*, 50(3), 267–276.
- Akinsola, O. S., & Alarape, A. I. (2019). Determinants of counterproductive work behaviour among local government workers in Ibadan. In *9th International Conference on Humanities, Psychology and Social Sciences 03â* (Vol. 5).
- Alias, M., & Rasdi, R. M. (2015). Organizational predictors of workplace deviance among support staff. *Procedia-Social and Behavioral Sciences*, 172, 126–133.
- Allen, K.-A., Kern, M. L., Rozek, C. S., McInerney, D. M., & Slavich, G. M. (2021). Belonging: A review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology*, 73(1), 87–102.
- Anis, A., Khan, M. A., & Humayoun, A. A. (2011). Impact of organizational commitment on job satisfaction and employee retention in pharmaceutical industry. *African Journal of Business Management*, 5(17), 7316.
- Baillien, E., Rodriguez-Munoz, A., Van den Broeck, A., & De Witte, H. (2011). Do demands and resources affect target's and perpetrators' reports of workplace bullying? A two-wave cross-lagged study. *Work & Stress*, 25(2), 128–146.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529.
- Belias, D., Rossidis, I., Sotiriou, A., & Malik, S. (2023). Workplace conflict, turnover, and quality of services. Case study in Greek seasonal hotels. *Journal of Quality Assurance in Hospitality & Tourism*, 24(4), 453–476.
- Bergmann, B., & Schaeppi, J. (2016). A data-driven approach to group creativity. *Harvard Business Review*, 12th July 2016.
- Bibi, P., Pangil, F., Johari, J., & Ahmad, A. (2017). The impact of compensation and promotional opportunities on employee retention in academic institutions: The moderating role of work environment. *Journal of Economic & Management Perspectives*, 11(1), 378–391.
- Blau, G., & Andersson, L. (2005). Testing a measure of instigated workplace incivility. *Journal of Occupational and Organizational Psychology*, 78(4), 595–614.
- Blau, G., Goldberg, C., & Kyser, S. (2023). Developing a scale of organizational belonging: A comprehensive literature review. *Journal of Organizational Psychology*, 23(2), 45–60.

- Browning, V. (2008). An exploratory study into deviant behaviour in the service encounter: How and why front-line employees engage in deviant behaviour. *Journal of Management & Organization*, 14(4), 451–471.
- Carmeli, A. (2007). Social capital, psychological safety and learning behaviours from failure in organisations. *Long Range Planning*, 40(1), 30–44.
- Carmeli, A., & Zisu, M. (2009). The relational underpinnings of quality internal auditing in medical clinics in Israel. *Social Science & Medicine*, 68(5), 894–902.
- Casey-Campbell, M., & Martens, M. L. (2009). Sticking it all together: A critical assessment of the group cohesion–performance literature. *International Journal of Management Reviews*, 11(2), 223–246.
- Chen, N. Y. F., Lu, J. F., Tjosvold, D., & Lin, C. (2008). Effects of team goal interdependence on newcomer socialization: An experiment in China 1. *Journal of Applied Social Psychology*, 38(1), 198–214.
- Chen, P. Y., & Spector, P. E. (1992). Relationships of work stressors with aggression, withdrawal, theft and substance use: An exploratory study. *Journal of Occupational and Organizational Psychology*, 65(3), 177–184.
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64(1), 89–136.
- Cohen, S. G., Ledford Jr, G. E., & Spreitzer, G. M. (1996). A predictive model of self-managing work team effectiveness. *Human Relations*, 49(5), 643–676.
- Daspit, J., Justice Tillman, C., Boyd, N. G., & Mckee, V. (2013). Cross-functional team effectiveness: An examination of internal team environment, shared leadership, and cohesion influences. *Team Performance Management: An International Journal*, 19(1/2), 34–56.
- De Sousa Sabbagha, M., Ledimo, O., & Martins, N. (2018). Predicting staff retention from employee motivation and job satisfaction. *Journal of Psychology in Africa*, 28(2), 136–140.
- Dyrbye, L. N., Shanafelt, T. D., Johnson, P. O., Johnson, L. A., Satele, D., & West, C. P. (2019). A cross-sectional study exploring the relationship between burnout, absenteeism, and job performance among American nurses. *BMC Nursing*, 18, 1–8.
- Flora, D. B., & Curran, P. J. (2004). An empirical evaluation of alternative methods of estimation for confirmatory factor analysis with ordinal data. *Psychological Methods*, 9(4), 466.
- Frone, M. R. (1998). Predictors of work injuries among employed adolescents. *Journal of Applied Psychology*, 83(4), 565.
- Gentry, W. A., Ekelund, B. R. Z., Hannum, K. M., & de Jong, A. (2007). A study of the discrepancy between self- and observer-ratings on managerial derailment characteristics of European managers. *European Journal of Work and Organizational Psychology*, 16(3), 295–325.
- Ghosh, P., Satyawadi, R., Prasad Joshi, J., & Shadman, M. (2013). Who stays with you? Factors predicting employees' intention to stay. *International Journal of Organizational Analysis*, 21(3), 288–312.

- Haider, M., Rasli, A., Akhtar, C. S., Yusoff, R. B. M., Malik, O. M., Aamir, A., Arif, A., Naveed, S., & Tariq, F. (2015). The impact of human resource practices on employee retention in the telecom sector. *International Journal of Economics and Financial Issues*, 5(1), 63–69.
- Hansen, M. H., Morrow Jr, J. L., & Batista, J. C. (2002). The impact of trust on cooperative membership retention, performance, and satisfaction: An exploratory study. *The International Food and Agribusiness Management Review*, 5(1), 41–59.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87(2), 268.
- Hauge, L. J., Skogstad, A., & Einarsen, S. (2009). Individual and situational predictors of workplace bullying: Why do perpetrators engage in the bullying of others? *Work & Stress*, 23(4), 349–358.
- Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupré, K. E., Inness, M., LeBlanc, M. M., & Sivanathan, N. (2007). Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology*, 92(1), 228.
- Hlengane, N. A., & Bayat, M. S. (2013). Poor employee work performance: A case study: Cambridge police station. *Arabian Journal of Business and Management Review (Kuwait Chapter)*, 2(12), 80–92.
- Hogg, M. A., & Hardie, E. A. (1992). Prototypicality, conformity and depersonalized attraction: A self-categorization analysis of group cohesiveness. *British Journal of Social Psychology*, 31(1), 41–56.
- Hollinger, R., & Clark, J. (1982). Employee deviance: A response to the perceived quality of the work experience. *Work and Occupations*, 9(1), 97–114.
- Holt, N. L., & Sparkes, A. C. (2001). An ethnographic study of cohesiveness in a college soccer team over a season. *The Sport Psychologist*, 15(3), 237–259.
- Holt-Lunstad, J. (2018a). Why social relationships are important for physical health: A systems approach to understanding and modifying risk and protection. *Annual Review of Psychology*, 69, 437–458.
- Holt-Lunstad, J. (2018b). Fostering social connection in the workplace. *American Journal of Health Promotion*, 32(5), 1307–1312.
- Holt-Lunstad, J. (2024). Social connection as a critical factor for mental and physical health: Evidence, trends, challenges, and future implications. *World Psychiatry*, 23, 312–332.
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, 10(2), 227–237.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Hussain, T., & Rehman, S. S. (2013). Do human resource management practices inspire employees' retention? *Research Journal of Applied Sciences, Engineering and Technology*, 6(19), 3625–3633.

- Iovoli, L., Smith, J., & Chen, R. (2025). Interpersonal problems and mental health: A meta-analytic review using the Inventory of Interpersonal Problems. *Clinical Psychology Review*, 98, 102234.
- Istiningtyas, L., Purba, D. E., Poerwandari, E. K., Takwin, B., & Milla, M. N. (2025). Systematic literature review on the theory of Social Embeddedness of Thriving at Work. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, 51(0), a2229.
- James, J. B., McKechnie, S., & Swanberg, J. (2011). Predicting employee engagement in an age-diverse retail workforce. *Journal of Organizational Behavior*, 32(2), 173–196.
- Janjua, B. H., & Gulzar, A. (2014). The impact of human resource practices on employee commitment and employee retention in telecom sector of Pakistan: Exploring the mediating role of employee loyalty. *IOSR Journal of Business and Management*, 16(1), 76–81.
- Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and trust in global virtual teams. *Organization Science*, 10(6), 791–815.
- Jarvenpaa, S. L., Shaw, T. R., & Staples, D. S. (2004). Toward contextualized theories of trust: The role of trust in global virtual teams. *Information Systems Research*, 15(3), 250–267.
- Jones, D. A., & Martens, M. L. (2009). The mediating role of overall fairness and the moderating role of trust certainty in justice–criteria relationships: The formation and use of fairness heuristics in the workplace. *Journal of Organizational Behavior*, 30(8), 1025–1051.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127(3), 376.
- Kim, M. K., Arsenault, C., Atuyambe, L. M., & Kruk, M. E. (2021). Predictors of job satisfaction and intention to stay in the job among health-care providers in Uganda and Zambia. *International Journal for Quality in Health Care*, 33(3), mzab128.
- Kleine, A. K., Rudolph, C. W., & Zacher, H. (2019). Thriving at work: A meta-analysis. *Journal of Organizational Behavior*, 40(9–10), 973–999.
- Koopmans, L., Bernaards, C., Hildebrandt, V., Van Buuren, S., Van der Beek, A. J., & De Vet, H. C. (2012). Development of an Individual Work Performance Questionnaire. *International Journal of Productivity and Performance Management*, 62(1), 6–28.
- Koyuncu, M., Burke, R. J., & Fiksenbaum, L. (2006). Work engagement among women managers and professionals in a Turkish bank: Potential antecedents and consequences. *Equal Opportunities International*, 25(4), 299–310.
- Kundu, S. C., & Lata, K. (2017). Effects of supportive work environment on employee retention: Mediating role of organizational engagement. *International Journal of Organizational Analysis*, 25(4), 703–722.
- Lombardo, M. M., & McCauley, C. D. (1988). *The Dynamics of Management Derailment* (Tech. Rep. No. 34). Center for Creative Leadership.
- Lyu, X., Akkadechanunt, T., Soivong, P., & Juntasopeepun, P. (2022). Factors influencing intention to stay of male nurses: A descriptive predictive study. *Nursing & Health Sciences*, 24(1), 322–329.

- Mach, M., Dolan, S., & Tzafrir, S. (2010). The differential effect of team members' trust on team performance: The mediation role of team cohesion. *Journal of Occupational and Organizational Psychology*, 83(3), 771–794.
- Mäkikangas, A., Bakker, A. B., & Schaufeli, W. B. (2017). Antecedents of daily team job crafting. *European Journal of Work and Organizational Psychology*, 26(3), 421–433.
- Malik, M. I., Sajjad, M., Hyder, S., Ahmad, M. S., Ahmed, J., & Hussain, S. (2013). Role overload: A cause of diminishing employee retention and productivity. *Middle-East Journal of Scientific Research*, 18(11), 1573–1577.
- Mangione, T. W., & Quinn, R. P. (1975). Job satisfaction, counterproductive behavior, and drug use at work. *Journal of Applied Psychology*, 60(1), 114.
- Marcus, B., & Schuler, H. (2004). Antecedents of counterproductive behavior at work: A general perspective. *Journal of Applied Psychology*, 89(4), 647.
- Martinko, M. J., Douglas, S. C., Harvey, P., & Joseph, C. (2005). Managing organizational aggression. In R. E. Kidwell & C. L. Martin (Eds.), *Managing organizational deviance* (pp. 237–264). SAGE.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50, 370–396.
- Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108(2), 171.
- Matongolo, A., Kasekende, F., & Mafabi, S. (2018). Employer branding and talent retention: Perceptions of employees in higher education institutions in Uganda. *Industrial and Commercial Training*, 50(5), 217–233.
- Mazzetti, G., Robledo, E., Vignoli, M., Topa, G., Guglielmi, D., & Schaufeli, W. B. (2023). Work engagement: A meta-analysis using the job demands-resources model. *Psychological Reports*, 126(3), 1069–1107.
- McGilton, K. S., Tourangeau, A., Kavcic, C., & Wodchis, W. P. (2013). Determinants of regulated nurses' intention to stay in long-term care homes. *Journal of Nursing Management*, 21(5), 771–781.
- Mesmer-Magnus, J. R., & DeChurch, L. A. (2009). Information sharing and team performance: A meta-analysis. *Journal of Applied Psychology*, 94(2), 535.
- Nasir, F., Ashraf, M., & Riaz, M. (2019). The role of gender in employee retention: A study of private hospitals in Karachi. *International Journal of Experiential Learning & Case Studies*, 4(1), 157–171.
- Nasir, S. Z., & Mahmood, N. (2016). Determinants of employee retention: An evidence from Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 6(9), 182–194.
- Nasyira, M. N., Othman, M., & Ghazali, H. (2014). Predictors of intention to stay for employees of casual dining restaurant in Klang Valley area. *International Food Research Journal*, 21(3).
- Ones, D. S., Viswesvaran, C., & Schmidt, F. L. (2003). Personality and absenteeism: A meta-analysis of integrity tests. *European Journal of Personality*, 17(S1), S19–S38.
- Penney, L. M., Spector, P. E., & Fox, S. (2003). Stress, personality and counterproductive work behaviour. *Misbehavior and Dysfunctional Attitudes in Organizations*, 194–210.

- Peters, S. E., Sorensen, G., Katz, J. N., Gundersen, D. A., & Wagner, G. R. (2021). Thriving from work: Conceptualization and measurement. *International Journal of Environmental Research and Public Health*, 18(13), 7196.
- Pietromonaco, P. R., & Collins, N. L. (2017). Interpersonal mechanisms linking close relationships to health. *American Psychologist*, 72(6), 531–542.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Porath, C., Spreitzer, G., Gibson, C., & Garnett, F. G. (2012). Thriving at work: Toward its measurement, construct validation, and theoretical refinement. *Journal of Organizational Behavior*, 33(2), 250–275.
- Posit Team (2025). *RStudio: Integrated Development Environment for R*. Posit Software.
- Ramos-Villagrasa, P. J., Barrada, J. R., Fernández-del-Río, E., & Koopmans, L. (2019). Assessing job performance using brief self-report scales: The case of the individual work performance questionnaire. *Revista de Psicología del Trabajo y de las Organizaciones*, 35(3), 195–205.
- Rasdi, R. M., Kusnin, N., & Chen, Y. S. (2018). Predictors and Intervening Variables of Talent Retention. *International Journal of Academic Research in Business and Social Sciences*, 8(12).
- Rovetta, A., Bortolotti, A., & Palumbo, R. (2025). Integrating team and organizational identity: A systematic literature analysis. *Frontiers in Organizational Psychology*, 2, Article 1439269.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78.
- Salas, E., Shuffler, M. L., Thayer, A. L., Bedwell, W. L., & Lazzara, E. H. (2015). Understanding and improving teamwork in organizations: A scientifically based practical guide. *Human Resource Management*, 54(4), 599–622.
- Saleem, M., & Affandi, H. (2014). HR practices and employees retention, an empirical analysis of pharmaceutical sector of Pakistan. *IOSR Journal of Business and Management*, 16(6), 111–116.
- Sarmad, M., Ajmal, M. M., Shamim, M., Saleh, M., & Malik, A. (2016). Motivation and compensation as predictors of employees' retention: Evidence from public sector oil and gas selling organizations. *Journal of Behavioural Sciences*, 26(2), 174–188.
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3, 71–92.
- Schulte, M., Cohen, N. A., & Klein, K. J. (2012). The coevolution of network ties and perceptions of team psychological safety. *Organization Science*, 23(2), 564–581.
- Schulze, S., & Naidu, N. (2014). Exploring the dependency of type of school and age with adolescent connectedness. *Mediterranean Journal of Social Sciences*, 5, 323–332.

- Scott, K. L., Ingram, A., Zagenczyk, T. J., & Shoss, M. K. (2015). Work–family conflict and social undermining behaviour: An examination of PO fit and gender differences. *Journal of Occupational and Organizational Psychology*, 88(1), 203–218.
- Shahid, M. N., Latif, K., Sohail, N., & Ashraf, M. A. (2011). Work stress and employee performance in banking sector evidence from district Faisalabad, Pakistan. *Asian Journal of Business and Management Sciences*, 1(7), 38–47.
- Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior: Some parallels between counterproductive work behavior and organizational citizenship behavior. *Human Resource Management Review*, 12(2), 269–292.
- Stashevsky, S., & Koslowsky, M. (2006). Leadership team cohesiveness and team performance. *International Journal of Manpower*, 27(1), 63–74.
- Steiner, S., Cropley, M., Simonds, L., & Heron, R. (2020). Reasons for staying with your employer: Identifying the key organizational predictors of employee retention within a global energy business. *Journal of Occupational and Environmental Medicine*, 62(4), 289–295.
- Sullivan, P., & Feltz, D. L. (2003). The preliminary development of the Scale for Effective Communication in Team Sports (SECTS). *Journal of Applied Social Psychology*, 33(8), 1693–1715.
- Sullivan, P. J., & Short, S. (2011). Further operationalization of intra-team communication in sports: An updated version of the Scale of Effective Communication in Team Sports (SECTS-2). *Journal of Applied Social Psychology*, 41(2), 471–487.
- Thau, S., Crossley, C., Bennett, R. J., & Sczesny, S. (2007). The relationship between trust, attachment, and antisocial work behaviors. *Human Relations*, 60(8), 1155–1179.
- Thomas (2025). *Organisational Connection Measure (OCM): Technical Manual*. Thomas.
- Van Bel, D. T., Smolders, K. C. H. J., Ijsselstein, W., & de Kort, Y. A. W. (2009). Social connectedness: Concept and measurement. *Intelligent Environments*, 2, 67–74.
- Van den Heuvel, S. G., Geuskens, G. A., Hooftman, W. E., Koppes, L. L., & Van den Bossche, S. N. (2010). Productivity loss at work; health-related and work-related factors. *Journal of Occupational Rehabilitation*, 20(3), 331–339.
- Van Velsor, E., & Leslie, J. B. (1995). Why executives derail: Perspectives across time and cultures. *Academy of Management Perspectives*, 9(4), 62–72.
- Vardi, Y., Weitz, E., & Koslowsky, M. (2003). Personal and positional antecedents of organizational misbehaviour. *Misbehavior and Dysfunctional Attitudes in Organizations*, 173–193.
- Wang, M. L., Chen, W. Y., Lin, Y. Y., & Hsu, B. F. (2010). Structural characteristics, process, and effectiveness of cross-functional teams in hospitals: Testing the I–P–O model. *The Journal of High Technology Management Research*, 21(1), 14–22.
- Warraich, N. F., Ameen, K., & Malik, A. (2019). Recruitment and retention of information professionals: Library leaders' perspectives in Pakistan. *Global Knowledge, Memory and Communication*, 68(6/7), 568–580.

West, B. J., Patera, J. L., & Carsten, M. K. (2009). Team level positivity: Investigating positive psychological capacities and team level outcomes. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 30(2), 249–267.

WorkBuzz (2022). *The State of Employee Engagement 2022*. WorkBuzz.

<https://workbuzz.com/resources/research-ebooks/state-of-employee-engagement/2022/>