SKILL-BASED PERFORMANCE MANAGEMENT AND ITS EFFECTS ON EMPLOYEE ATTITUDES: A FIELD STUDY

by

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ABSTRACT

Significant research over the last 30 years has focused on the impact of traditional appraisal-driven performance management systems. However, research on novel performance management systems that incorporate a bundle of human resource management practices has been limited. This study fills this void by examining the impact of a bundle that emphasizes skills enrichment and managerial coaching, called skill-based performance management (SBPM). Its impact on the organization has been viewed as being akin to a black box, with researchers suggesting the existence of intervening variables. This study draws upon the abilities, motivation, and opportunities (AMO) framework to hypothesize that SBPM would have a positive impact on intervening variables around employees' skill-seeking orientation, connectedness to goals, career satisfaction, and the organizational climate for performance. The research design consisted of a field experiment at a company where a group of employees were subject to an SBPM intervention while a second group (control) was not. A longitudinal survey of employee attitudinal sentiments was conducted for 360 employees over two years using custom survey scales that were verified for comparability to published scales. A MANOVA was conducted with time (before and after intervention) and group type (intervention vs. control) as the independent variables and the attitudinal variables as the dependent variables. The results provided evidence that employee attitudes toward skill-seeking behavior were enduringly impacted. This study provides a prescription for operationalizing a bundle of HRM practices utilizing the AMO framework to influence organizational outcomes. Moreover, it provides credence to the addition of skills-related human resource practices to achieve improved employee outcomes.

Keywords: HRM, skill-based performance management, employee attitudes, AMO

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 Phenomenon and Problem Statement

Businesses have been searching persistently for new tactics and initiatives to meet their goals associated with organizational performance and have been looking at both conceptual and empirical approaches in this regard (Kazlauskaitė & Bučiūnienė, 2008). This pursuit of organizational performance has developed even greater urgency in the last two decades due to an increasingly dynamic and complex business environment (Rimita et al., 2020). Business has become more global, creating more demand, and ushering in new competitors. Product lifecycles are shorter than ever due to the advent of technology and rapidly changing customer demands. Workforces are more global and diverse and span multiple generations – Gen Z, millennials through baby boomers (Schroth, 2016). Today's workforce is also much more dynamic, with employees moving among roles, sometimes taking on more than one role at a time, and constantly experimenting (Buckingham, 2016; Cappelli & Tavis, 2018; Cunningham & McGregor, 2015). All these changes have added greater complexity regarding attaining goals associated with organizational performance.

There are many approaches to help attain organizational performance goals, such as increasing productivity, developing organizational capabilities, expanding into global markets, developing and implementing new technologies, attracting and retaining high-performing and flexible workforce, and introducing and managing relevant organizational change (Burke, 2005; Saridakis et al., 2017). One specific resource recognized as helping attain organizational goals is the human resources of the firm. A significant stream of research extending across three decades has been directed at understanding the nexus between Human Resource Management (HRM)

practices and organizational performance (e.g., Delery & Doty, 1996; Huselid, 1995; Kim et al., 2018; MacDuffie, 1995; Messersmith et al., 2011).

HRM can be defined as a set of managerial activities and tasks concerned with developing and maintaining a qualified workforce in ways that contribute to organizational effectiveness (Denis & Griffin, 2005). HRM has also been defined as a set of managerial practices and tasks that businesses use to ensure that they have a qualified and effective workforce in place to meet their operational needs (Alam & Mukherjee, 2014). In general, researchers have not agreed on a single unified definition of HRM, and there is considerable variation regarding what practices constitute HRM (Savaneviciene & Stankeviciute, 2011). Such variations are due to the differences in the context of each study, the strategies implemented in the organization, government regulations, and other factors (Ahmad & Schroeder, 2003).

The prescription of ideal HRM practices and activities for an organization is considered one of the theoretical challenges that requires further attention (Wright & Gardner, 2003). There has been a wide gamut of HR practices suggested in the literature. Boselie et al. (2005) conducted a meta-analysis of 104 articles and concluded that 26 different HRM practices were used in different studies. However, Boselie et al. (2005) have also mentioned that although there are 26 different HRM practices, they can be grouped into four main categories. These categories include training and development, compensation, recruitment and selection, and performance management (including appraisal). As a framework, Paauwe (2009) outlined the four practices that reflect the bulk of HRM initiatives as “identify and recruit strong performers, provide them with the skills and confidence to work effectively, monitor their progress towards the required performance targets, and reward staff well for meeting or exceeding them” (p. 136). The author

summarized that the bulk of these practices were connected to the notion of performance management and enriching workers with skills.

There is indeed broad evidence in the literature that performance management can aid in dealing with team performance and employee attitudes (Kaagari et al., 2010; Kinicki et al., 2012; Pfeffer & Veiga, 1999). Prior studies indicate that organizations using performance management outperform organizations without such a system (e.g., Armstrong & Baron, 2005; Kinicki et al., 2012; Pulakos, 2009). The selection of a suitable performance management model greatly influences employee attitudes, and a positive relationship exists between performance management practices and employee attitudes (Aguinis, 2009; Almutawa et al., 2015; Cardy, 2004; Cascio, 2006; Jiang & Messersmith, 2018; Lewicka & Pec, 2018; Paauwe & Boon, 2018; Pulakos, 2009; Savanevičienė & Stankevičiūtė, 2011). Given the broad endorsements about the effectiveness of performance management systems, today's workplaces have widely adopted performance management systems (Cappelli & Tavis, 2016).

While selecting performance management systems, business leaders have been turning away from the age-old performance management practices that traditionally inspired dread in employees – the annual performance appraisal/review process, in favor of a skill-based performance management process (Derven, 2017). The main issue with traditional performance management practices is that they focus on weeding out people by holding them accountable for past behavior instead of focusing on improving current or future performance (Cappelli & Travis, 2018). An article in the Harvard Business Review indicated that in a public survey conducted by Deloitte, 58% of executives believed that they needed to move away from traditional reactive performance reviews to cope with the demands of a significantly more dynamic world (Buckingham & Goodall, 2015).

The corporate objectives of performance management have shifted away from a philosophy that emphasizes the management of people using performance reviews and instead moved towards the management of people through proactive employee development (Cappelli & Travis, 2018). Such development would facilitate deeper reinforcement of desired employee attitudes, greater retention, and, ultimately, better organizational performance (Chun et al., 2018). Global leaders such as Adobe, Dell, Microsoft, IBM, GE, and Deloitte have been among the trailblazers looking to revamp and transform their HRM practices, with the centerpiece being enhanced performance management processes (Bort, 2016; Cappelli & Travis, 2018; Vara, 2015). These companies recognize human capital as their greatest asset and, therefore, invest in employee development. When companies decide to switch the focus of their performance management practices from dictating what employees should do at work to helping them develop their skills as individuals, employees feel empowered to grow and become better at their jobs (Cappelli & Travis, 2016).

Prior articles and studies have made a clear case for a stronger performance management system and practices (Buckingham & Goodall, 2015; Cappelli & Tavis, 2016; Crush, 2015; Levy et al., 2017). Regarding these practices, there is considerable support in academia and in industry for more than one facet, that is, a "bundle" of human resource (HR) practices around performance management to help drive individual performance (MacDuffie, 1995, p. 197). Such a bundle could be comprised of (a) skills development; (b) traditional assessments; and (c) goal-oriented professional development opportunities (Becker & Gerhart, 1996; Delaney & Huselid, 1996; Kehoe & Collins, 2017; Subramony, 2009). The notion of a bundle is, thus, a combination of performance management practices rather than individual practices that shape the pattern of interactions between and among managers and employees (Cutcher-Gershenfeld, 1991).

There is support for such a bundle of performance management practices characterized as Skill-Based Performance Management (SBPM) by researchers such as Purcell (2003). The basis for this support revolves around the abilities, motivations, and opportunities (AMO) framework (Boselie, 2010; Boxall et al., 2016; Jiang et al., 2012; Paauwe, 2009). Per these studies, this framework supports an HRM system encompassing three buckets of performance management practices that respectively map to the enhancement of abilities, motivations, and opportunities for employees. The first bucket consists of skill-enhancing performance management practices (training and improvement) that influence employees' ability to work. The second bucket entails a collection of motivation-enhancing practices (compensation, career goal setting, and promotion) influencing employees' attitudes. Finally, the third bucket constitutes a system of empowerment-enhancing practices (job design, managerial involvement) that influences employees' behaviors (Bartel, 2004; Harney & Jordan, 2008; Purcell et al., 2003). While there is support for each of these practices individually around their impact on employees and organizational performance, there is minimal research on the impact of a bundle of these practices (Buchan, 2004; Gooderham et al., 2008; Huselid, 1995; Jiang et al., 2012a; Macduffie, 1995). As such, the overarching challenge is to characterize the impact of different performance management practices, especially those that consist of a bundle of practices that include skills enrichment, managerial coaching, and career pathing.

1.2 Background Research and Research Questions

The impact of a bundle of performance management practices that constitutes SBPM and includes skills enrichment, managerial coaching, and career pathing on employees and their organizations is not well covered in the literature. Within this bundle, the impact of some of these individual practices in isolation has seen some research coverage. In particular, the area of

employee skills enrichment has received the most significant research attention both in terms of the modalities and its performance implications (e.g., Johnson & Ray, 1993; Knouse, 1995; Lawler & Ledford, 1987; Murray & Gerhart, 1998; Shareef, 1994; Shenberger, 1995). The other areas of skills-based performance management, namely managerial coaching and career pathing have received only limited attention in the literature. The importance of managerial coaching has been demonstrated by two studies (Har, 2008; Park et al., 2008), while others have provided anecdotal perspectives on the importance of career pathing (Armstrong & Baron, 2005; Arnold, 2002; Krauss & Synder, 2009). More significantly, there are limited to no studies on a bundle of these practices on employees, and this gap in literature provides an opportunity for additional research.

Before we can attempt to characterize the true impact of a bundle of performance management practices, it is essential first to characterize the impact of HRM practices on organizational performance, which is an area that has received significant attention. Many business experts and leading corporations perceive HRM systems and practices and performance management systems, in particular, as the critical lever for driving greater employee and company success (Cappelli & Travis, 2018). Numerous academic scholars have utilized empirical studies to opine a positive linkage between HRM practices and different organizational metrics (e.g., Becker & Gerhart, 1996; Combs et al., 2006; Huselid, 1995).

Notwithstanding the positive relationship reported by many of these studies, a deeper study of the literature revealed that this relationship has not been unequivocally characterized as strong and positive, especially by recent researchers. Studies pointed to varying sample characteristics, poor research designs, insufficient exploration of intervening or proximal variables, and inadequate performance measures as factors due to which extant findings varied

dramatically, which then made the size of the overall effect challenging to estimate (Boselie et al., 2005; Combs, 2006; Wall & Wood, 2005; Wright & Gardner, 2003). These authors concluded that implementing improved HRM practices to improve organizational performance was not a single silver bullet or a panacea because different sets of HRM practices had different effects on organizational performance.

Given all this ambiguity around these linkages, researchers have called for rigorous research-based consensus or empirical evidence that clarifies the nature of a direct relationship between HRM, of which SBPM is a subset, and organizational performance (Becker & Gerhart, 1996; Becker & Huselid, 2006; Guest, 2011, Jiang et al., 2013; Paauwe, 2009; Saridakis et al., 2017). Researchers have described this relationship between HRM systems and organizational performance to be akin to a "black box" (Almutawa et al., 2015; Becker & Huselid, 2006; Harney & Jordan, 2008; Kehoe & Wright, 2013; Messersmith et al., 2011; Truss et al., 2013). Paauwe (2009) and Guest (2011) stressed the need for more theory-driven research to unpack this black box to address challenges in three areas (a) the meaning of HRM and means to operationalize it; (b) the type of performance we are seeking to measure and at which level of analysis; and (c) and the need for theory concerning a "black box" linkage between the two.

The area of black-box linkage has attracted the most significant research attention. In this regard, multiple models and support have been discussed for unpacking this black-box linkage, which involves incorporating intervening variables between HRM practices and organizational performance (Alfes et al., 2013; Almutawa et al., 2015; Boselie et al., 2005; Huselid, 1995; Katou, 2012; Nishii et al., 2008; Savanevičienė & Stankevičiūtė, 2011; Wright, 2007; Wright et al., 2003). Researchers have suggested that in order to "open the black box," the intervening effects of the more proximal variables (such as employee attitudes and behaviors) on the more

distal ones (organizational performance) must be examined (Jiang et al., 2012). A variety of intervening variables with mediating characteristics have been proposed in prior literature involving employees' attitudes, for example, satisfaction, commitment, and engagement (Alfes et al., 2013; Boselie et al., 2005; Petrescu & Simons, 2008; Wright et al., 2003), and employees' behaviors (Boselie et al., 2005; Huselid, 1995). Way and Johnson (2005), in this regard, proposed a theoretical model in which the impact of HRM practices on organizational outcomes was influenced by the organizational climate. However, researchers lament that most of these models have not been tested empirically, and research designs aimed at revealing causality have not had sufficient methodological rigor (Wright et al., 2005).

In summary, there are numerous gaps and questions posed by literature as one looks to obtain an empirical or more rigorous characterization of the impact of a bundle of HR practices and SBPM in particular, on organizational performance. More broadly, there is a lot of skepticism and equivocation on the true linkage between HRM practices and organizational performance. While the linkage between the two has been surmised as a black box with the presence of intervening variables that influence the dependency, research that attempts to characterize these intervening variables better has been met with skepticism because it has been deemed as lacking methodological rigor or empirical justification. Thus, the gap in research exists around the nature of these intervening variables, a theory-based justification for the same, and whether these relationships should be deemed mediating or moderating in nature. There has been plenty of support in research that these intervening variables include employee attitudes and the organizational climate. These intervening variables are also deemed to be proximal in nature as opposed to the distal outcomes around organizational outcomes. With these gaps and prior

research as context, the purpose of this study is to determine the impact the implementation of SBPM has on employee attitudes and the organizational climate for performance.

1.3 Current Study

This study was motivated by the challenges and initiatives at a company that owns and manages multiple sites. The genesis and impetus for understanding the determinants of organizational outcomes was when the company noticed a gradual deterioration of performance across many of the regional teams, which manifested in their missing sales targets and receiving poor customer survey scores. Many of these teams were also characterized by high employee attrition and weak Glassdoor ratings. The company's executive leadership decided to implement a comprehensive skill-based performance management program based on best practices in the industry and literature to overcome the issues with employee attitudes and, ultimately, team performance. These actions at the company provided an excellent crucible to research the relationship between a bundle of HRM practices for a comprehensive skills-based performance management system and individual attitudes.

To tackle this research challenge, this study proposes three steps in line with the recommendations of Paauwe (2009) and Guest (2011). As the first step, the study draws upon the AMO framework to operationalize the notion of HRM practices. The AMO framework, which stands for ability (A), motivation (M), and opportunity to participate (O), is perhaps one of the most researched models to characterize how HRM can be operationalized to ultimately drive performance (Boselie et al., 2005). This framework predicts that employees will perform well in a job when (a) they possess the knowledge and skills required to undertake their jobs (abilities); (b) they are adequately interested and incentivized to work (motivation); and (c) they are provided support and given opportunities to express themselves in the workplace (opportunity).

HRM practices that incorporate enabling each of these AMO dimensions can be delivered as a "bundle" of HR practices, as it has been proven that a bundle of HRM practices may have a more significant effect than the sum of isolated HR practices (Huselid, 1995; Jiang et al., 2012; MacDuffie, 1995). The ingredients of such a bundle would map to the practices outlined under SBPM. As such, the AMO framework provides the theoretical underpinnings for operationalizing HRM practices in the form of SBPM.

The next step in explaining the linkage between HRM practices and organizational performance is to get to the right characterization of organizational performance, especially in the context of HRM practices and deployment of SBPM systems. Dyer and Reeves (1995) enumerated the performance outcomes of HR systems as financial, operational, or HR-related outcomes. Paauwe (2009) and Guest (1997) made a strong case that the linkage between HR practices and financial and operational indicators is distant and potentially subject to exogenous interventions. They recommended that HR-related outcomes and employee attitudes are more relevant for characterizing the performance outcomes of HR systems. This study focuses on employee attitudes as an indicator of organizational performance.

The final step in the study was to demystify the true nature of the "black box" linkage between HRM practices, operationalized as an SBPM bundle, and the appropriate measures that represent performance at employee, team, and organizational levels. Numerous researchers have argued that the relationship between HRM practices and performance at an organizational or team level is not a direct relationship; instead, it is viewed as an indirect relationship that has mediating proximal variables (Almutawa et al., 2015, 2016; Guest, 2011; Savaneviciene & Stankeviciute, 2010; Wright & Gardner, 2000). In other words, in order to understand how HRM practices affect performance at a broader organizational or team level, one should first

understand the effects of these HRM practices on the more proximal outcomes (employee-related individual outcomes), which are in turn supposed to have their own effects on the more distal organizational or team outcomes (Wright et al., 2003). As such, at a fundamental level, this study looks to characterize the impact of HRM practices on appropriate proximal variables around employee attitudes and sentiments.

The first set of proximal attitudinal variables in this linkage, consistent with the conjectures of prior researchers, consists of a measurement of employee perceptions of their abilities, motivations, and opportunities. The rationale for this is as follows. If an organization delivers SBPM based on the AMO framework, the organization endows employees with the benefits of ability, motivation, and opportunity to do their jobs. Employees react commensurately around their perceptions of the abilities, motivations, and opportunities that they have been endowed with from those initiatives (Jiang et al., 2012). As such, three different proximal variables that correspond to three distinct employee attitudes or sentiments have been conceived here.

The first attitude measures employees' skill-seeking orientation, which targets employee perceptions of the benefits they receive from abilities enrichment. Skill-seeking behaviors are the desired outcomes of a skill-based intervention (Lee et al., 1999), and the first proximal variable measures an employee's perception of their abilities and desire to acquire new skills. By prioritizing skill-based attributes (knowledge, skills, and abilities) of individuals, organizations hope to direct the attention of their employees to developmental opportunities and to encourage skill-seeking behavior (Murray & Gerhart, 1998). Thus, the first variable measures an employee's perception of the organization's emphasis on enriching the employee with new abilities and skills.

The second attitude measures employees' connectedness to their goals, which targets employees' motivation to align with organizational goals and priorities. Organizational activities that target enhancing employee motivation in this regard include developmental appraisal, equitable compensation review, and managerial training and development. All of these activities are expected to lead to employees' ability to connect better with organizational goals and values (Ichniowski et al., 1997; MacDuffie, 1995). Measuring how employees identify and connect with their organization provides an indication of employees' attitudes toward such activities. Managers enable employees to see how their individual tasks connect to the organization's larger mission, reinforcing employees' motivation (Paarlberg et al., 2008). Employees with a high level of fit reciprocate the support and fairness shown to them by the organizations by paying back in the form of positive work behaviors (Afsar & Badir, 2017). Thus, the second variable that equates to motivation-related sentiments measures an employee's perception of their connectedness to their organization's goals.

The third attitude measures an employee's career satisfaction, which targets employees' perception of the opportunities available in their organization (Babalola & Bruning, 2015). Tu et al. (2016) stated that the effect of HRM practices and the level of organizational performance is mediated by career satisfaction, or in other words, career satisfaction positively influences the impact of HRM practices on organizational performance. An emphasis on career pathing should lead to an employee's satisfaction with their career trajectory (Greenhouse et al., 1990), and so the opportunities presented by the organization and managers can be measured by an employee's career satisfaction. By prioritizing career development behavior and career management of individuals, organizations hope to drive greater employee perceptions around career satisfaction and, ultimately, organizational performance (Babalola & Bruning, 2015). Thus, the third

proximal variable is related to opportunities and measures an employee's perception of career satisfaction.

A second type of proximal variable emerges from employees' perception of the organization in general – referred to as organizational climate. At a macro level, climate is an attribute of an organization and refers to the collection of attitudes, behaviors, and feelings that emerge within an organizational environment (Guerci et al., 2015). There is sufficient empirical evidence suggesting that the performance of individuals in organizations is associated with organizational climate (Batt, 2002; Delaney & Huselid, 1996; Huselid, 1995; Wright et al., 2005). As a result, numerous studies have adequately documented organizational climate as a determining factor of organizational results. A multitude of studies have proposed a theoretical model in which the impact of HRM practices on organizational outcomes is impacted by organizational climates (Guerci et al., 2015; Li et al., 2011; Rogg et al., 2001; Sanders et al., 2008; Zohar & Luria, 2005). Other studies have posited that organizational climate has a mediating influence (e.g., Bowen & Ostroff, 2004; Boselie, 2010). Thus, the final proximal variable is related to an employee's perception of the organizational climate, specifically around managerial effectiveness and a manager's role in nurturing a climate for performance.

In this study, the research design consisted of a field experiment that investigated the effects of a skill-based performance management program on employee attitudes. As discussed previously, this program consisted of skills gap analysis, skills enrichment and performance management, and active managerial coaching. Participants in this study were the 200 full-time, non-managerial, knowledge workers at the company. They worked in teams throughout the United States and reported to centralized managers. These managers were responsible for the delivery of the SBPM program and had an impact on the organizational climate. The design of

the study followed the general protocol for a longitudinal evaluation of program implementation. It employed surveys to obtain measures of employee attitudes both before and after the SBPM intervention. Statistical methods were used to study the relevance of SBPM on the proximal variables.

1.4 Contributions of the Study

This study makes contributions across a wide gamut, from operationalizing HRM practices in the form of SBPM to prescriptive guidance around the characterization of organizational performance in the form of employee attitudes and organizational climate.

The overarching challenge this study tackles is to provide an in-depth characterization of how performance management practices, particularly skill-based performance management, impact employee attitudes. It accomplishes that by unpacking the black box linkage between SBPM and proximal outcomes associated with employee sentiments in an organization. With that as context, the first contribution of the study is around a prescription of how HRM practices can be operationalized utilizing the AMO framework. While numerous studies have talked about HRM practices, they have been vague about how the practices could be operationalized, which is particularly relevant for managers and industry practitioners.

The second contribution revolves around the use of employee attitude-related measures as being relevant for characterizing organizational performance. In this regard, the study utilizes the AMO framework to posit three employee attitudes and the organizational climate to serve as these proximal variables. Business practitioners can utilize these measures of employee attitudes and the organizational climate to better assess the results of different strategic and operational initiatives on organizational performance.

1.5 Dissertation Structure

The structure of the dissertation is a literature review followed by the research design and methodology. The next chapter systematically reviews the relevant literature on HRM, skill-based performance management, and organizational performance. The literature review provides a basis for developing the conceptual model and hypotheses regarding the relationship between skill-based performance management practices, employee attitudes, and organizational climate. In the third chapter, the research design and methodology are described. The results of data analysis are presented in chapter four, followed by the discussion of results in chapter five.

CHAPTER 2

LITERATURE REVIEW

There has been extensive research on the phenomenon of performance management regarding the extent to which it impacts employee performance at all levels of the organization. The types of performance management practices, the nature of outcomes possible, and the causes or rationale for their dependency are well-researched topics (DeNisi & Smith, 2014). There is also a fair degree of disagreement and even laments around a lack of methodological rigor in the studies, and as a result, the nature of this linkage is far from settled, which is compounded by how broad and expansive this topic is (Brown et al., 2019).

The goal of this literature review is to add some structure to characterize this broad subject. To accomplish this structured characterization, I draw upon the well-understood input-process-output (IPO) framework, wherein performance management serves as the input, the types of performance outcomes as the output, and a collection of intervening variables as the process machinery that influences the linkage between the inputs and outputs. This approach has enabled me to define a bundle of HR management practices as Skill-Based Performance Management (SBPM) and its impact on attitudinal variables around employee attitudes and the climate for performance. As such, the research question that I am studying is whether SBPM has an impact on proximal outcomes around employee attitudes and organizational climate.

To explain these linkages, this chapter consists of four sections that outline the search methodology, a summary of findings, a detailed literature review, and the conceptual model. The first section lays out a systematic search protocol and methodology to uncover prior work spanning the gamut of HRM practices and measures of organizational performance and their interdependencies. This section concludes with a summary of findings and lists the major gaps

that arise from this investigation. In the following section, I utilize the IPO framework to capture prior research and perspectives around performance management inputs, outcomes, and the intervening variables that influence the linkage between them. This framework development informs the conceptual model and basis for the hypotheses examined in this study.

2.1. Method

I began the literature review by setting up a systematic search protocol to review the best available research concerning human resource management practices, skill-based performance management, organizational and team performance, and frameworks that explained the inter-dependency between HR systems and performance outcomes. The goal of the systematic review protocol was to utilize a structured search process to identify as much as possible all prior literature relevant to the research question and a process that could be replicated for future studies.

2.1.1 Database and Filters

The systematic search was conducted in four leading academic databases: Academic Search Complete, Business Source Complete, APA PsycInfo, and ABI/INFORM of the Cowan-Blakely Memorial Library online at the University of Dallas in Irving, Texas. Filters were set up to require the returned search to be published in academic peer-reviewed journals within the last 50 years.

2.1.2 Search Keywords

The search started with using the following terms or combinations of terms to find relevant articles in the databases: human resource management, performance management, skills, human resource bundles, organizational performance, and team performance.

The approach for the search began with a review of papers on HRM and performance management and organizational and team performance. While examining studies that characterized their linkage, I came across the notion of a black box that was used to describe this relationship. Further review of research studies to understand this black box led me to the notion of intervening variables that were likely part of the black box. Studies that further expounded on the nature of the black box drew me to explore frameworks to operationalize performance management. A study around operationalizing performance management provided the segue into the concept of incorporating a bundle of skills into performance management delivery and the relevance of the abilities, motivation, and opportunities (AMO) framework for the same. While examining studies that elaborated on the impact of bundles of HRM practices, I uncovered the notion of proximal variables around employee attitudes in this relationship. Finally, I used the inputs, processes, and outputs (IPO) framework to organize the literature search. The search strings utilized along this journey of discovery are outlined in Table 2.1.

Table 2.1

The Search Strings Used in This Study

No.	Academic Search Complete, APA PsycInfo, Business Source Complete- Criteria	Number of Articles
1	(SU HRM OR SU "human resource management" OR SU "high-performance work practices" OR SU HPWP) AND AB "organizational performance"	270
2	((SU HRM OR SU "human resource management" OR SU "high-performance work practices" OR SU HPWP) AND AB "team performance"	29
3	((SU HRM OR SU "human resource management" OR SU "high-performance work practices" OR SU HPWP) AND TX ("organizational performance" OR "team performance") AND TX "black box"	6

Table 2.1 cont.

No.	Academic Search Complete, APA PsycInfo, Business Source Complete- Criteria	Number of Articles
4	(SU HRM OR SU "human resource management" OR SU "high-performance work practices" OR SU HPWP) AND AB "bundles" AND TX ("organizational performance" OR "team performance") AND TX (abilities motivation opportunities OR "AMO")	76
5	(((SU "PM" OR SU "performance management") AND AB "bundles" AND TX ("organizational performance" OR "team performance") AND TX (abilities motivation opportunities OR "AMO")) NOT "climatology"	92
6	((SU HRM OR SU "human resource management" OR SU "high-performance work practices" OR SU HPWP) AND AB "bundles" AND TX ("organizational performance" OR "team performance") AND TX ("organizational climate") AND TX ("employee attitudes")	97
7	((SU HRM OR SU "human resource management" OR SU "high-performance work practices" OR SU HPWP) AND TX ("organizational performance" OR "team performance") AND TX ("intervening variables")	97
8	((SU "PM" OR TX "performance management") AND TX ("organizational performance" OR "team performance") AND TX ("intervening variables")	47
9	((SU HRM OR SU "human resource management" OR SU "high-performance work practices" OR SU HPWP) AND TX ("organizational performance" OR "team performance") AND TX ("proximal variables")	76
10	((SU "PM" OR TX "performance management") AND TX ("organizational performance" OR "team performance") AND TX ("proximal variables")	9
11	(TX (“Human Resource Management" OR HRM) AND TX "Organizational performance" AND TX moderating variables) AND employee attitudes	82
12	(((SU "PM" OR TX "performance management") AND AB "bundles" AND TX ("skills")	26
13	(((SU "PM" OR TX "performance management") AND AB "bundles" AND TX ("skills") AND (TX "abilities motivation opportunities" OR TX "AMO")	6
14	((TX "performance management") AND TX "organizational performance" OR TX "team performance") AND (TX "black box") AND (TX "input process output") OR (TX "IPO"))) AND bundles	150

2.1.3 Inclusion Criteria

The criteria for inclusion were peer-reviewed articles written in English published in the last 50 years (i.e., after 1970) in the field of human resource management. In the initial stages of the literature review, the search was conducted with the specific objective of finding articles about human resource management bundles with a specific focus on practices associated with performance management and organizational performance and the mechanisms that characterize their relationship. As such, the inclusion criteria of this review were as follows:

- peer-reviewed papers in journals published in Academic Search Complete, Business Source Complete, APA Psych Info, and ABI/INFORM;
- articles or reviews published from the year 1970 to date in the field of Business and Psychology;
- articles written in English;
- articles that referred to organizational and team performance as a dependent variable and involved HRM practices – these typically contained HRM practices as independent variables;
- articles that outlined mechanisms or frameworks that characterized their dependency;
- research related to frameworks to explain the relationships among human resource management practices, skill-based performance management, and organizational performance; and
- research related to IPO frameworks.

Papers pertaining to human resource management unrelated to measuring performance outcomes and research related to AMO framework or IPO framework for explaining phenomena other than HR practices were excluded from the study. For example, a paper titled “Consumer-

computer interaction and in-store smart technology (IST) in the retail industry: The role of motivation**,** opportunity**,** and ability" by Roy et al. (2020), which pertained to the role of AMO in marketing, was excluded from the search.

Once the initial set of articles was obtained, the title and abstracts were reviewed to ensure that they met the inclusion criteria. The full text of articles that met the inclusion criteria were stored in RefWorks and downloaded for further review. Folders were used to organize the articles based on the topics they pertained to. Duplicate papers from the different searches were removed. The papers were then read in full and were further excluded if they did not meet the inclusion criteria. From this review, 195 were selected, which were used to populate the systematic review template in Excel. The next section outlines the summary of findings that emerged from this systematic search methodology.

2.2 Summary of Findings

2.2.1 Sample Descriptive Statistics

After conducting the systematic literature search, a total of 1,063 articles were examined to determine if they met the inclusion criteria, and my final sample was 195 articles. Most of the articles were published in the last 20 years. The top publications for the articles are shown in Table 2.2.

Table 2.2

Top Ten Journals for the Sample

Name of Publication	Percentage of Articles
Human Resource Management Journal	8
The International Journal of Human Resource Management	8
Academy of Management Journal	5
Journal of Management	5
Personnel Review	5

Table 2.2 cont.

Name of Publication	Percentage of Articles
Journal of Applied Psychology	4
Human Resource Management Review	3
Academy of Management Perspectives	2
Business Horizons	2
Human Resource Development Review	1

The other journals the articles were published in were the *Journal of Organizational Behavior, Journal of Human Research Management, Personnel Psychology, Research in Personnel and Human Research Management, and Harvard Business Review*.

2.2.2 Definitions-Conceptualizations and Measures of Performance Management

The most adopted definition of performance management is that it is a process consisting of managerial behaviors aimed at "identifying, measuring, and developing the performance of employees and teams and aligning performance with the strategic goals of the organization" (Aguinis, 2009, p. 5). Most researchers agreed that the basic steps involved in the process consisted of defining performance, evaluating performance, reviewing, and providing consequences (Kinicki et al., 2012). The goal of performance management is to enhance employee performance with the ultimate purpose of improving organizational performance (DeNisi & Pritchard, 2006).

The process of performance management involves managing employee efforts based on measured performance outcomes (den Hartog et al., 2004). Several studies have used evaluations and performance appraisals (PA) to measure employee performance. PA is an "evaluation process where quantitative scores are often assigned based on the judged level of the employee's job performance on the dimensions or criteria used" (DeNisi & Pritchard, 2006, p. 254) and as a system of review of an individual's (or team's) performance (Mondy et al., 2002). These scores

help determine what constitutes good performance, and the determination of what drives high performers can be utilized to influence the design of effective performance management practices (den Hartog et al., 2004).

Performance management practices are considered to be closely aligned with HRM initiatives (Brown et al., 2019). The four "core purposes" of HRM at the individual, group, and organizational level have been defined by Hamlin and Stewart (2011) as "improving individual or group effectiveness and performance, improving organizational effectiveness and performance, developing knowledge, skills, and competencies, and enhancing human potential and personal growth" (p. 211). This definition underscores the alignment between performance management practices and HRM initiatives (Brown et al., 2019). The bulk of HRM initiatives are connected to the notion of performance management and enriching workers with skills (Paauwe, 2009). Several studies have recommended "bundling" complementary HR practices, which have been shown to deliver positive desired outcomes (e.g., Delery & Doty, 1996; Guthrie, 2001; Huselid, 1995; MacDuffie, 1995).

There is a great degree of research that links HRM initiatives broadly to organizational performance (e.g., Boselie et al., 2001). Taking a performance management approach involves aligning HRM practices in such a way that they maximize current as well as future employee performance, which in turn is expected to affect organizational performance (den Hartog et al., 2004).

2.2.3 Correlates of Performance Management

Numerous measures of outcomes have been correlated to HRM practices by researchers, including customer satisfaction, customer retention, sales revenues, quality defects, scrap, productivity, downtime, labor costs, etc., and ultimately, the selection of which one to focus on

in a study or corporate initiative should depend on whatever is relevant for that organization (Wright & Gardner, 2000). These outcomes of HR and performance management systems can be grouped into (a) financial outcomes (e.g., profits, sales, market share); (b) organizational outcomes (e.g., operational measures such as productivity, quality, efficiency); and (c) HR-related outcomes (e.g., employees' attitudinal impacts such as engagement, satisfaction, commitment, intention to quit; Dyer & Reeves, 1995). These outcomes of performance manifest at different levels in a company (individual, team, organization), which makes performance a multi-level construct (den Hartog et al., 2004). As such, correlates of performance management in a company can be characterized at each of these levels, as described in the following sections.

2.2.3.1 Individual Outcomes. As an essential causal chain, HRM practices such as performance management must impact individual performance before a company can see an impact on organizational, financial, or market-based outcomes (Dyer & Reeves, 1995). Increased employee performance can be considered a distal outcome of the process, while the more proximal outcomes include an "employee's cognitive, attitudinal, and impulsive reactions that precede changes in employee performance" (Gruman & Saks, 2011, p. 124). Different variables have been proposed in prior literature to measure such proximal outcomes. These proximal outcomes include employees' attitudes (satisfaction, commitment, and engagement; Alfes et al., 2013; Boselie et al., 2005; Petrescu & Simons, 2008; Wright et al., 2003) and employees' behaviors (Boselie et al., 2005; Huselid, 1995).

2.2.3.2 Team Outcomes. Prior literature suggests that teams have become pervasive across almost all firms and in every industry, and to get the most out of teams, performance management systems should incorporate the notion of how teams function (Aguinis et al., 2013; Cascio & Aguinis, 2008). Well-designed performance management systems should incorporate

measures of performance based on behaviors and results at both the individual and collective level (e.g., team, department, unit; Aguinis et al., 2012c). Suboptimal performance at the team level usually occurs because organizations fail to design and implement a performance management system that considers both individual and team performance issues (Hackman, 2002). Scott and Tiessen (1999) have stated that as employees become more involved in working in teams, the need for team performance measurement for both planning and evaluation purposes becomes more critical.

Significant research has been conducted on the characterization of team outcomes, and researchers have summarized that multiple and varied measures are required to best characterize team performance (Scott & Tiessen, 1999). There are broadly two forms of team performance outcomes. The first is tangible outcomes such as reduction of costs, productivity, efficiency, work quality, retention, and creativity (Cohen et al., 1960; Hausknecht et al., 2009; Maier & Hoffman, 1960; Pepinsky et al., 1959; Wiest et al., 1961). The second is softer outcomes, such as team members' attitudes and reactions such as, job satisfaction, work attitudes, turnover intentions, and depression (Chen et al., 2011; Mathieu & Gilson, 2012; Parker, 2003; Pritchard et al., 1988).

2.2.3.3 Organizational Outcomes. The definitive relationship between HRM systems and organizational outcomes has been considered the fundamental and defining research question in HRM (Becker & Gerhart, 1996). While it has been researched empirically, much work still needs to be done (Jackson et al., 2014; Wright & Gardner, 2000). At a macro level, on a cross-company or cross-industry basis, there have been attempts to demonstrate a quantitative impact of HRM practices on organizational performance (Combs et al., 2006; Huselid & Becker, 2000). Several studies have shown a positive relationship between the implementation of HRM

practices and organizational performance outcomes (e.g., Becker & Huselid, 1998; Delery & Doty, 1996; Gerhart et al., 2000; Guest et al., 2004; Guthrie, 2001; Wright et al., 2003). Notwithstanding the positive relationship espoused by so many studies, the emergence of organizational outcomes as a result of performance management-related inputs has not been characterized as a strong and positive one on an unequivocal basis, especially by other researchers (Combs, 2006). They point to varying sample characteristics, poor research designs, insufficient exploration of intervening or proximal variables, and inadequate performance measures as factors due to which extant findings vary dramatically, which then makes the size of the overall effect challenging to estimate (Boselie et al., 2005; Combs, 2006; Wall & Wood, 2005; Wright & Gardner, 2003).

As such, many researchers have called for improved studies that clarify the nature of the relationship between HRM and organizational performance. Numerous researchers have described this relationship between HRM systems and organizational performance to be akin to a "black box" (Almutawa et al., 2015; Becker & Huselid, 2006; Harney & Jordan, 2008; Kehoe & Wright, 2013; Messersmith et al., 2011; Truss et al., 2013). In this study, I focus more on individual outcomes rather than on the team or organizational outcomes.

2.2.4 Models and Theories of Performance Management

Models and theories have been provided in literature both with regard to the definition of performance management as well as with the intervening variables that influence the outcomes from performance management practices. In line with Aguinis's (2009) definition of performance management, several researchers have developed models of performance management practices (e.g., Aguinis, 2013; Asare et al., 2020; Cardy, 2004; Cascio, 2006; Kinicki et al., 2013; Pulakos, 2009). While these models share clear commonalities, they differ in terms of (a) the process,

which refers to the number of steps and the nature of participation of managers and employees; and (b) how it is operationalized concerning the level of complexity and specificity in each step (Kinicki et al., 2013).

With regard to the process flow, Kinicki et al. (2013) have proposed a well-cited depiction of the performance management process based on an integration of existing models. The basic steps in the process include (a) defining performance and setting goals; (b) evaluating performance; (c) reviewing performance and providing feedback and coaching to employees; and (d) providing performance consequences to reinforce and reward employee behavior.

Regarding the operationalization of performance management practices, there are multiple theories or frameworks that have been used in prior literature (Alagaraja, 2012). The most popular are the contingent framework, the resource-based view (RBV), and the abilities, motivation, and opportunities (AMO) frameworks. The contingent framework suggests that organizational contextual factors like the firm's strategy influence the rollout of HR practices (Alagaraja, 2012). The resource-based view (RBV) states that HRM influences performance according to the human and social capital held by the organization (Barney, 1995). The AMO framework is one of the most researched models to operationalize HRM and performance management and, in particular, has an emphasis on driving performance (Boselie et al., 2005).

Numerous researchers have theorized the notion that intervening variables and processes influence the outcomes as a result of performance management practices (Almutawa et al., 2015; Becker & Huselid, 2006; Harney & Jordan, 2008; Kehoe & Wright, 2013; Messersmith et al., 2011; Truss et al., 2013). These researchers characterize these processes as akin to a "black box" and a linkage that has not been adequately analyzed. The determination of the key intervening variables and processes is the key to explaining the link between performance management

practices and policies on the one hand and the performance of employees, teams, and the firm on the other hand (Guest, 2011; Paauwe, 2009; Savaneviciene & Stankeviciute, 2010; Wright & Gardner, 2000). Intervening variables proposed include those around employees' attitudes and behaviors (Jiang et al., 2012), which are also considered proximal outcomes resulting from performance management inputs.

In addition to the intervening variables around employee attitudes and behaviors, research shows that one more set of intervening variables could materially impact this linkage. This perspective emerges from the notion that employees within an organization may perceive HRM practices differently, and such perceptions, especially if they are negative, can undermine the impact on their attitudes towards them and ultimately on performance (Bowen & Ostroff, 2004; Nishii & Wright, 2007). Perception of the organization in general by employees and the collection of attitudes, feelings, and behaviors that emerge daily within an organizational context are broadly referred to in the literature as organizational climate (Guerci et al., 2015; Suandi et al., 2014). Numerous studies have shown that organizational climate in the context of performance has an impact on a variety of performance outcomes (Batt, 2002; Delaney & Huselid, 1996; Huselid, 1995; Schneider, 2000; Veldhoven, 2005; Wright et al., 2005). Studies have stated that the nature of climate that needs to be studied depends upon the purpose of the study (Schneider, 1975), and it is meaningless to apply the concept of climate without a particular referent or context (Schneider & Reichers, 1983). As such, numerous types of climates have been proposed in the literature, including service climate (Schneider, 1990), safety climate (Hofmann & Stetzer, 1996; Zohar, 2000), team innovation climate (Anderson & West, 1998), change climate (Schneider et al., 1996), risk orientation climate (Lawler et al., 1974), trust climate (Gavin & Howe, 1975), climate for updating (Kaufman, 1974), and employee relations

climate (Haines III & St-Onge, 2012). Drawing on similar analogies where motivation and performance inputs are assumed to result in a climate for performance (Curran et al., 2015), the climate in the context of employee performance management is also referred to as the climate for performance.

2.2.5 Research Designs for Performance Management Studies

Research methods utilized in the sample were in one of the four categories (a) empirical studies; (b) meta-analyses; (c) literature reviews; or (d) model development. A list of these studies in HRM and performance management, broken down by each of the four categories, is provided in Table 2.3. These studies are referred to in the rest of the literature review to provide an assessment of the gaps and theoretical underpinnings for this study.

Table 2.3

Research Design Methodologies Used in Prior Studies

Type of Study	Studies	Topic
Empirical Study	Kalleberg and Moody, 1994.Ichniowski, C., Delaney, J., & Lewin, D. (1989)	HRM policies
	Becker, B. E., & Huselid, M. A. (1998), Boselie, P. (2010), Huselid, M. A. (1995), Kalleberg and Moody (1994), Boselie, P. (2010)	High performance work practices and organization measures
	Guthrie, J. P. (2001).	High involvement work practices and organization measures
	MacDuffie, J. P. (1995)	HRM bundles and manufacturing performance
	Delaney, J. T., & Huselid, M. A. (1996)	Employee skills, training, motivation, and organizational outcomes
	Delery, J. E., & Doty, D. H. (1996)	HR practices based on theoretically derived employment systems
	Youndt, M. A., Snell, S. A., Dean, J. J. W., & Lepak, D. P. (1996)	Human-Capital-Enhancing Human Resource Practices and operational performance

Table 2.3 cont.

Type of Study	Studies	Topic
Empirical Study	Koch, M. J., & McGrath, R. G. (1996)	HRM planning sophistication and firm performance outcomes
	Wright, P. M., Gardner, T. M., & Moynihan, L. M. (2003).	HRM practices and business unit performance
	Bayo-Moriones, A., & de Cerio, J. M. (2002)	High commitment HRM practices
	Aguinis, (2009). Almutawa et al., 2015; Asare, E. K., Whittington, J. L., & Walsh, R. (2020), Cardy, 2004; Cascio, 2006; Jiang & Messersmith, 2018; Kaagari et al., 2010; Lewicka & Pec, 2018; Paauwe & Boon, 2018; Pfeffer & Veiga, 1999; Pulakos, 2009; Savanevičienė & Stankevičiūtė, 2011). DeNisi and Pritchard	Performance management and Organizational outcomes
Literature Review	Alam, A., & Mukherjee, U. (2014)	Human Resource Management
	Becker, B., & Gerhart, B. (1996), Boselie, P., Dietz, G., & Boon, C. (2005), Gerhart, B. (2005), Guest, D. E. (1997), Paauwe, J., & Boselie, P. (2005)	Human Resource Management and Performance
	Ferris, G. R., Hall, A. T., Royle, M. T., & Martocchio, J. J. (2004)	Theoretical development in HRM
	Hagen, M. S. (2012).	Managerial coaching
	Paauwe, J., & Boon, C. (2018), Paauwe, J., & Richardson, R. (1997)	Strategic HRM
	Brown, K., Mazumdar, & McCracken (2019). DeNisi and Murphy (2017), DeNisi and Smith (2014), Kinicki, A. J., Jacobson, K. L., Peterson, S. J., & Prussia, G. E. (2013), Schleicher, D. J., Baumann, H. M., Sullivan, D. W., & Yim, J. (2019)	Performance management
Meta-Analysis	Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006)	High-performance work practices and Organizational Performance
	Hesketh, A., & Fleetwood, S. (2006). Saridakis G., Yanqing L. and Cooper L. (2017)	Human resources management and organizational performance
	Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012a), Jiang, K., & Messersmith, J. (2018a)	Human Resources management and Organizational outcomes
	Kurtessis, J. N., Eisenberger, R., Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S. (2017)	Perceived Organizational Support:
	Subramony, M. (2009).	HRM bundles and firm performance
	Ng, T. W., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005)	Career success

Table 2.3 cont.

Type of Study	Studies	Topic
Theoretical Model development	Asare, E. K., Whittington, J. L., & Walsh, R. (2020)	Enhanced performance management model
	Alfes, K., Shantz, A. D., Truss, C., & Soane, E. C. (2013)	Human resource management practices and employee behavior:
	Bunning, R. L. (1992).	Skill-based pay
	den Hartog, Boselie and Paauwe (2004), DeNisi and Pritchard (2006), DeNisi and Smith (2014)	Performance Management
	Fei, L. K., Tunku, U., Rahman, A., Campus, S. L., & Cheras, M. (2019)	Human Resource Management Bundles and performance

Overall, the research designs varied significantly, which made it challenging to generate a consensus across them. For example, the HR practices being compared differed across studies, and as Becker and Gerhart (1996) stated, there was little consensus on what entailed an HR practice. Some studies referred to HR practices as bundles (MacDuffie, 1995), others as high-performance practices (Becker & Huselid, 1998; Boselie, 2010), some as high-involvement work practices (Guthrie, 2001) and high-commitment work practices (Bayo-Moriones & de Cerio, 2002) and a few as HR or PM practices (Asare et al., 2020; Cardy, 2004; Cascio, 2006; Jiang & Messersmith, 2018). Second, even if the HR practices had some commonality, as Combs et al. (2006) stated, context matters in the choice of both the practices and the strategic outcomes, and it cannot be one-size-fits-all across all industries, multiple exogenous factors, varied HR practices, and disparate performance outcomes to derive conclusions. Third, researchers have devoted significant effort to empirical studies and relevant statistics to drive conclusions, and there is a startling lack of qualitative methods to drive many of the results. Fourth, while many studies pointed to the gamut of broad HR practices, very few dove deeper into performance management practices as the centerpiece of the inputs into their research. As a result, there was a

paucity of studies that characterized the effects of such performance management inputs on outcomes. Finally, as will be expounded in greater detail later in this literature review, a vast number of these studies did not provide sufficient discourse on the nature of proximal outcomes or intervening variables that explained the linkage between HR practices and performance outcomes.

In summary, while there is growing evidence that HR practices affect organizational performance, varying sample characteristics, research designs, practices examined, and organizational performance measures used have led extant findings to vary dramatically, making the size of the overall effect challenging to estimate (Combs et al., 2006). This review elaborates on these shortcomings in detail.

2.2.6 Limitations, Unresolved Issues, and Gaps

There are multiple limitations that have been outlined in prior studies. Researchers have argued that while prior studies provided some support for the notion of a bundle of HRM practices as defined by the phenomenon of SBPM, they did not provide any empirical or rigorous characterization of its impact on organizational performance. In fact, there is a lot of skepticism and equivocation on the true linkage between HRM practices and organizational performance. Researchers have stressed the need for more theory-driven research to better characterize this linkage in three areas (a) the meaning of HRM and the means to operationalize it; (b) the type of performance we are seeking to measure and at which level of analysis; and (c) and the need for theory with respect to a “black box” linkage between the two.

Researchers have also posited that this black box linkage involves the presence of intervening variables that influence dependency (e.g., Becker & Huselid, 2006). Research attempts to characterize these intervening variables better have been met with skepticism as they

have been deemed lacking methodological rigor or empirical justification (e.g., Wright et al., 2005).

With these perspectives as context, there are three specific overarching unresolved gaps and issues in prior literature gaps that this study looks to address. These fall into the categories of operationalization of performance management inputs, the nature of intervening variables with a theory-based justification for the same, and whether these should be deemed as mediating or moderating in nature. The first unresolved issue is around the notion of operationalization of performance management practices, or in other words, the nature of performance management inputs or practices to enable an impact on performance at different levels of the company. The second unresolved issue concerns the purported black box relationship and the nature of potential proximal outcomes in the relationship between performance management inputs and outcomes at multiple levels. The final unresolved gap is around the nature of how these proximal outcomes impact the linkages between performance management inputs and performance outputs.

With these shortcomings and research gaps as context, in the next section, I will draw upon the IPO framework to systematically organize the study and form the basis for the conceptual model.

2.3. Input Process Output (IPO) Framework

The study draws upon the input-process-output (IPO) model of team effectiveness developed by McGrath (1964) as the organizing framework. This model described a set of inputs, processes, and outputs relevant to a team and was created to explain outcomes based on the interplay between individual team members and the team as a single functional entity (Gaboury et al., 2009). The IPO model suggests that inputs from the individual level, group level, and the larger organizational environment level combine to influence interaction processes

and thereby impact outcomes, such as group effectiveness and members' reactions (Mathieu et al., 2018).

Inputs are attributes relevant to individuals or employees in a team and include characteristics such as knowledge, skills, and abilities (KSAs), demographics, the team (e.g., size, power structure), and the environment (e.g., external stressors, reward conditions) that enhance or constrain a team's capabilities (Kozlowski et al., 2015). In the context of this study, inputs correspond to performance management practices, which are antecedent to employees' KSAs and enable a team performance climate. Outcomes reflect the cumulative results of a team's efforts, which may be performance-related (e.g., operational key performance indicators), ability-related (changes in relevant abilities and skills), or sentiment-related (commitment to team and teammates; Kozlowski et al., 2015). These outcomes of performance manifest at different levels in a company (individual, team, organization), which makes performance a multi-level construct (den Hartog et al., 2004). Processes are phenomena that correspond to team members' personal cognition, motivation, attitudes, and behaviors resulting from their interactions, which then influence the team's outcomes (Kozlowski, 2017). In the context of this study, the processes aspect of the IPO model refers to the mechanics that influence the causation or the relationship between the performance management inputs and outcomes described earlier. These processes consist of intervening variables that could be of a proximal or distal nature.

2.3.1. Performance Management Inputs

2.3.1.1. Definition and Alignment with HRM Initiatives. Broadly, performance management has been defined as a process consisting of managerial behaviors aimed at defining, measuring, motivating, and developing the desired performance of employees and aligning performance with the strategic goals of the organization (Aguinis, 2012; Kinicki et al., 2012) and

is the definition adopted in this study. Performance management practices have been theorized as being closely aligned with HRM practices (Brown et al., 2019). The four core purposes of HRM are “improving individual or group effectiveness and performance,” “improving organizational effectiveness and performance,” “developing knowledge, skills, and competencies,” and “enhancing human potential and personal growth” (Hamlin & Stewart, 2011, p. 211). This definition helps explain the close alignment between performance management practices and HRM initiatives (Brown et al., 2019). Another perspective to explain this alignment has been provided by Paauwe (2009). The four practices that reflect the bulk of HRM initiatives have been defined as “identify and recruit strong performers, provide them with the skills and confidence to work effectively, monitor their progress towards the required performance targets, and reward staff well for meeting or exceeding them” (Paauwe, 2009, p. 136). The author summarized that the bulk of these practices were connected to the notion of performance management and enriching workers with skills. The performance management process also offers an opportunity to integrate all HR strategies (Armstrong & Baron, 2000). As such, the focus of this study revolves around performance management as the input for the IPO framework.

Performance management exists at every company, some more formally than others, as it is an essential element of how work at a firm gets accomplished. It is how organizations communicate expectations and drive behavior to achieve important goals; it is also how organizations identify ineffective performers for development programs or other personnel actions (Pulakos, 2009). Done correctly, performance management communicates what is important to the organization, drives employees to achieve important goals, and implements the organization’s strategy (Pulakos, 2009). Several models of performance management have been proposed in the literature, each differing in levels of complexity (Aguinis, 2009; Asare et al.,

2020; Cardy, 2004; Cascio, 2006; Pulakos, 2009). The basic steps involved in the process consist of defining performance, evaluating performance, reviewing, and providing consequences. These steps share clear commonalities in terms of the managerial behaviors involved in executing an effective performance management process (Kinicki et al., 2012).

2.3.1.2. Benefits of Performance Management Systems. There is evidence in the literature that performance management can aid in dealing with organizational performance and employee attitudes (Kaagari et al., 2010; Kinicki et al., 2012; Pfeffer & Veiga, 1999). Other studies indicate that organizations using performance management outperform organizations without such a system (Armstrong & Baron, 2005). The selection of a suitable performance management model can significantly influence employee attitudes, and a positive relationship exists between performance management practices and employee attitudes (Aguinis, 2009; Almutawa et al., 2015; Cardy, 2004; Cascio, 2006; Jiang & Messersmith, 2018; Kaagari et al., 2010; Lewicka & Pec, 2018; Paauwe & Boon, 2018; Pfeffer & Veiga, 1999; Pulakos, 2009; Savanevičienė & Stankevičiūtė, 2011). DeNisi and Pritchard (2006) explained that performance management systems influence employee attitudes because they communicate to employees expectations about the skills, knowledge, motivations, attitudes, norms, values, and behaviors expected within their organization. From these communications, shared perceptions emerge about the behaviors, values, and norms that are important to an organization's functioning. Given the broad endorsements about the effectiveness of performance management systems, today's workplaces have widely adopted performance management systems (Cappelli & Tavis, 2016). Aguinis et al. (2011) summarized the importance of performance management as one of the top two most important human resource management functions in an organization.

2.3.1.3. Factors Limiting Benefits of Performance Management Systems. The benefits of performance management systems in organizations are not universal, especially in instances where employees, and hence organizations, do not gain the intended benefits from their performance management processes (Kinicki et al., 2013). Only 30% of workers reported that their company's performance management process helped them improve their performance, and less than 40% said their systems provided clear goals and honest feedback (Pulakos, 2009). There could be several explanations for this dissatisfaction, but the most likely reason suggested in past studies is that managers are ineffective at executing the performance management process – in other words, they are not clear on exactly what to do, or they simply do not take the time to perform performance management behaviors (Mumford, 2009; Pulakos, 2004; Rachman-Moore & Kenett, 2006). Pulakos et al. (2015) stated that managers who conduct performance management ineffectively not only fail to realize its benefits but demotivate employees and adversely affect their attitudes. The results could be serious problems that are expensive, distracting, and damaging to an organization's reputation and performance.

Buckingham & Goodall (2015) suggested in an article in *Harvard Business Review* that the reason for the dissatisfaction with the performance management process was that it had been based on performance appraisals. Performance appraisals (PA) have been defined as "the system whereby an organization assigns some 'score' to indicate the level of performance of a target person or group" (DeNisi, 2000, p. 121) and as a system of review and evaluation of an individual's (or team's) performance (Mondy et al., 2002). The scores that emerge from PA are viewed as measures during an employee performance management process and help determine what constitutes good performance. Determining the drivers of high performance can be utilized

to influence the design of an effective performance management process (den Hartog et al., 2004).

Performance appraisal scores can be utilized to measure employee performance; however, performance appraisals on a standalone basis are considered reactive because they focus on weeding out underperformers and cannot meet the needs of the modern workplace (Buckingham & Goodall, 2015). As a result, 70% of multinational companies are moving away from traditional performance reviews. A Deloitte manager referred to the traditional review process as "an investment of 1.8 million hours across the firm that did not fit our business needs anymore." (Cappelli & Tavis, 2016, p. 2). In a public survey, Deloitte conducted, more than half the executives (58%) believed that their current performance management approach, based on traditional reviews and performance management, drove neither employee engagement nor high performance (Buckingham & Goodall, 2015).

In response to the general dissatisfaction around traditional performance management approaches, global leaders such as Adobe, Dell, Microsoft, IBM, GE, and Deloitte reported that they have been revamping and transforming their performance management processes (Cappelli & Travis, 2016). The cited study stated that these companies recognized human capital as their greatest asset and, therefore, invested in employee development. It also suggests that when companies switched their focus from dictating what employees should do at work to helping them develop their skills as individuals, employees felt empowered to grow and became even better at their jobs. Given the variances associated with the benefits realized for employees and their organizations from performance management practices, numerous studies have made a clear case for revised and enhanced performance management systems and practices (Asare et

al., 2020; Buckingham & Goodall, 2015; Cappelli & Tavis, 2016; Crush, 2015; Levy et al., 2017).

In summary, there are numerous types of HRM practices and performance management systems. There is also a great degree of variability in how they are implemented, which suggests that an a priori poor selection of performance management practices can have little to no, or worse, a negative impact on employees and their organizations. As such, more work is needed to characterize the nature of desired performance management outcomes and inputs to achieve the same.

2.3.2. Performance Management Related Outcomes

Performance measures consist of key performance indicators (KPIs) and outcomes that are relevant to a specific organization (Wright & Gardner, 2000). These KPIs can fall into three buckets (a) financial outcomes (e.g., profits, sales, market share); (b) operational outcomes (e.g., operational measures such as productivity, quality, and efficiency); and (c) HR-related outcomes (e.g., employees' attitudinal impacts such as engagement, satisfaction, commitment, intention to quit; Dyer & Reeves, 1995). Paauwe (2009) argued that financial and operational indicators could be influenced by a range of internal and external factors that might have nothing to do with employees and the company's HR practices. Guest (1997) also argued that the distance between HR interventions and these financial and operational performance indicators was simply too large and potentially subject to exogenous interventions such as research and development activities and marketing strategies.

These performance measures can also impact outcomes across different organizational levels and can be deemed inherently multilevel (Schleicher et al., 2019). For example, performance management processes might affect team-level attributes (Barrick et al., 2015) or

employee-level attributes (Messersmith et al., 2011). With these outcomes across these organizational levels as context, the types of outcomes can be broken up as impacting individuals, a group of individuals (team), or the organizational level.

2.3.2.1. Individual Outcomes. Outcomes related to individuals are considered the more immediate impact of performance management practices before an impact can be seen on organizational, financial, and market-based outcomes (Dyer & Reeves, 1995). A similar perspective was provided by Macky and Boxall (2007) that the scientific literature assumed a relationship between HRM practices and broader organizational performance via the responses of employees. A causal link flowing from HRM practices to organizational performance via the responses of employees has also been assumed by other researchers (Katou, 2012; Nishii & Wright, 2007).

Within individual outcomes of performance management, while employee performance is often viewed as a key objective, it is considered a distal outcome of the process. The more proximal outcomes include the cognitive, attitudinal, and impulsive outcomes, and these are considered to precede changes in employee performance (Gruman & Saks, 2011). Many other studies make a similar argument. For example, a study showed that the relationship between a performance management input such as developmental goal setting and feedback and employee performance was mediated by the employee's motivation (Kuvaas, 2007). In another study, an employee's response to performance feedback was mediated by a set of cognitive variables, which, in turn, predicted performance (Kinicki et al., 2004). Norris-Watts and Levy (2004) demonstrated that the relationship between the performance feedback environment and employee performance was partially mediated by employee attitudes. In summary, these studies concluded that delivering employee performance outcomes from performance management inputs requires

achieving intermediary (proximal) outcomes that precede enhanced performance. Thus, producing these more proximal outcomes is a vital step in the performance management process, and performance management inputs need to be geared toward creating such intermediary outcomes (Brown et al., 2019; VerWeire & Van Den Berghe, 2004). A variety of studies in prior literature have posited the presence of different variables to measure these intermediary outcomes, which include employees' attitudes (satisfaction, commitment, and engagement; Alfes et al., 2013; Boselie et al., 2005; Petrescu & Simons, 2008; Wright et al., 2003) and behaviors (Boselie et al., 2005; Huselid, 1995).

Other researchers have made an even stronger case that individual performance outcomes, while distal, are not the ultimate outputs of a performance management input. In fact, they are a part of the processes that ultimately explain outcomes related to organization or team outcomes.

2.3.2.2. Team Level Outcomes: Team outcomes can be grouped into two categories, namely tangible outcomes (e.g., reduction of costs) and team members' attitudes/reactions (e.g., job satisfaction; Mathieu & Gilson, 2012). The distinction is not clear-cut, but by tangible, it means that the outcome can be measured by objective or external measures.

Tangible outcomes outlined by researchers include productivity (e.g., Pepinsky et al., 1959), efficiency (e.g., Wiest et al., 1961), work quality (e.g., Maier & Hoffman, 1960), retention (e.g., Hausknecht et al., 2009), and creative outcomes (e.g., Cohen et al., 1960). Intangible outcomes addressed by researchers include work attitudes (e.g., Pritchard et al., 1988), turnover intentions (e.g., Chen et al., 2011), and depression (e.g., Parker, 2003). Intangible outcomes are represented by individual attitudes. Tangible team outcomes should be chosen to be aligned with the organizational goals of the company (Aguinis et al., 2013; Scott & Tiessen, 1999), and as

such, these will include KPIs that are relevant for the scope of a specific business and to areas that map to the sphere of influence managed by the team.

2.3.2.3. Organizational Level Outcomes. The impact of HRM practices on organizational outcomes has been considered the fundamental and defining research question in strategic HRM (Delery & Doty, 1996; Guthrie, 2001; Huselid, 1995; Jackson et al., 2014; Kazlauskaite & Buciuniene, 2008). Within the spectrum of HRM practices, organizations have emphasized using employee performance management to enhance organizational performance (Blackman et al., 2017). Several researchers have looked to characterize the broader linkages relevant to HRM practices and performance management practices as outlined in the next sub-sections.

2.3.2.3.1 Support for Direct and Positive Linkage for a Broader Set of HRM Practices. At a macro level, on a cross-company or cross-industry basis, there have been attempts to demonstrate a quantitative impact of HRM practices more broadly on organizational performance. Huselid and Becker (2000) attempted to quantify the change in market value for a quantifiable change in HR system quality. Combs et al. (2006) also found a positive analysis of this effect from a meta-analysis of 92 studies on HRM to organizational performance relationship by concluding a quantifiable increase in return on assets and a decrease in turnover with a measurable increase in the use of high-performance work practices.

One of the first articles that provided support for the positive effect of HR practices on organizational performance was a publication by Guest (1987), describing HRM as a new approach to people management that could lead to a wide range of positive organizational outcomes. The first set of systematic empirical studies of the HRM-performance link tested combinations of human resource activities that led to higher manufacturing performance (Arthur,

1994). Becker and Gerhart (1996) conducted a special research forum for the *Academy of Management* with the intention to help advance research on the link between HRM and organizational performance and create a better understanding of the role of human resource decisions in creating and sustaining organizational performance and competitive advantage. They reported that studies included in the forum supported the strategic impact of HR on key performance outcomes. Several studies followed this forum in the area of HRM and performance (Becker & Huselid, 1998; Delery & Doty, 1996; Gerhart et al., 2000; Guthrie, 2001; Koch & McGrath, 1996; Wright et al., 2003). These studies typically used samples across firms and measured firm-level data in a fashion similar to Huselid's (1995) study and targeted surveys of senior human resources professionals at each firm. The studies, for the most part, showed a positive relationship between the implementation of HRM practices and organizational performance outcomes.

2.3.2.3.2 Support for Opaqueness and Resulting Skepticism in the Relationship with HRM Practices. Notwithstanding the positive relationship demonstrated by so many studies, the emergence of organizational outcomes resulting from performance management-related inputs has not been characterized as a strong and positive one on an unequivocal basis (Combs, 2006). Multiple studies point to varying sample characteristics, poor research designs, insufficient exploration of intervening or proximal variables, and inadequate performance measures as factors due to which extant findings vary dramatically, which then makes the size of the overall effect difficult to estimate (Boselie et al., 2005; Combs, 2006; Wall & Wood, 2005; Wright & Gardner, 2003). Paauwe (2009) summarized that many studies have been mixed and cautious with their conclusions over the past few years.

Acknowledging the broad spectrum of inferences on how HR practices impact performance, Harney and Jordan (2008) summarized that researchers have firmly acknowledged that extant literature has failed to address this relationship conclusively. As such, many researchers have called for improved studies that clarify the nature of the relationship between HRM and organizational performance. Combs (2006) also pointed to the wide variance among extant findings for additional efforts to understand the general relationship between HRM practices and organizational performance. Gerhart (2004) called for an explanation of why coherent and consistent HRM systems or bundles automatically lead to higher performance. Boselie et al. (2005) pointed to a more fundamental problem that no consistent picture existed of what HRM was or even what it was supposed to do. Becker and Huselid (2006) and Guest (2011) called for a study that outlined the true mechanics or rationale behind this relationship. Numerous researchers have described this relationship between HRM systems and organizational performance as not explainable in a straightforward fashion but more like a "black box" (Almutawa et al., 2015; Becker & Huselid, 2006; Harney & Jordan, 2008; Kehoe & Wright, 2013; Messersmith et al., 2011; Truss et al., 2013).

2.3.2.4 Impact of Performance Management Inputs on Outcomes. Several research studies suggest that performance management has a positive impact on performance outcomes at individual, team, and organizational levels (Aguinis, 2013; Asare et al., 2020; Bragger et al., 2013; Chang & Chen, 2011; Gruman & Saks, 2011; O'Boyle & Aguinis, 2012; Pulakos, 2009; Seiden & Sowa, 2011; Whittington et al., 2017). Notwithstanding these positive characterizations, there are also numerous studies that point to critical gaps in characterizing their full and accurate linkage.

First, the positive linkage between performance management inputs and outcomes is not universal. Numerous studies point to the strong dependency between the process, ingredients, and the implementation thereof on the ultimate results, and as a result, in practice, the reality faced by practitioners may be very different (Aguinis et al., 2011; Bragger et al., 2014). These studies point out that poorly constructed or implemented systems have had adverse consequences on performance in general, as they have undermined true employee performance development and eroded their confidence in the company and their relationship with their managers (Bragger et al., 2014). Hence, while research shows that performance management ought to lead to strong outcomes, the actual state of affairs reported by managers, employees, and researchers reflects that these systems often do not fulfill these promises (Hantula, 2011; Pulakos & O'Leary, 2011). The implication is that the nature of the operationalization of performance management processes has significant consequences on their ultimate effectiveness.

Second, the causal mechanisms between performance management processes and outcomes spanning multiple levels are not well understood. At the employee level, prior studies have demonstrated positive relationships between well-implemented performance management systems and employees' attitudes, behaviors, and performance (Aguinis, 2013; Asare et al., 2020; Pulakos, 2009). However, there is a greater deal of uncertainty in moving from the level of employee-level performance that emerges from these performance management processes to firm-level performance. DeNisi and Smith (2014) make the point that although there is plenty of evidence around driving individual performance through appraisal and performance management programs, there is no evidence to show that improving individual-level performance will eventually lead to improvements in firm-level performance. Paauwe (2009) and Guest (1997) point to concerns that the linkage between HR practices and firm-level indicators is potentially

subject to exogenous factors, which render challenges with establishing causality. Wright et al. (2005) have stressed the importance of research designs with sufficient methodological rigor to establish multi-level causality. These studies imply that establishing causal mechanisms at the team or firm level needs significant extra care in research design to ensure that exogenous factors and multi-level causal mechanisms are considered.

To summarize, first, it is apparent that while HRM practices are related to firm performance and performance management processes are related to employee attitudes and performance, evidence has mounted that the nature of the relationship between these practices and performance outcomes at different levels of the organization is opaque and not direct. That evidence forms the basis of the next sub-section around intervening processes to explain the relationship. Second, greater care must be taken to operationalize performance management processes and HRM practices, as that will have an outsized impact on the outcomes. As such, any study that looks to characterize the nature of organizational-level outcomes of performance management inputs needs to have a multi-level analysis with emphasis on the specific evaluative criteria at each level, factor out exogenous factors, and pay deeper attention to the mechanics that would explain the linkages between the inputs and the outcomes.

2.3.3 Performance Management Intervening Processes

There are multiple intervening processes that are required to explain the linkage between performance management inputs, HRM practices more broadly, and outcomes at different levels of the organization. Such intervening processes explain multiple linkages, namely, the impact of such inputs on employee attitudes and behaviors, the resulting role of such employee-related sentiments on performance at multiple levels spanning employee, team, and organizational

levels, and finally, the nature of operationalization of such inputs to achieve the desired outcomes ultimately.

The notion of intervening processes that characterize the relationship between performance management and HRM inputs and outcomes has been theorized by numerous researchers and characterized as a “black box” (Almutawa et al., 2015; Becker & Huselid, 2006; Harney & Jordan, 2008; Kehoe & Wright, 2013; Messersmith et al., 2011; Truss et al., 2013). Becker et al. (1998) pointed to a lack of research evidence on this causation and have, in fact, identified the “black box as the most pressing theoretical challenge” facing strategic human resource management (p. 915). As such, while there are indeed models and processes proposed for unpacking the black-box linkage between performance management inputs and employee performance and a broader collection of HRM practices and organizational performance, researchers point to issues around the lack of empirical testing for most of these models, and a lack of sufficient methodological rigor for research designs to establish multi-level causality (Wright et al., 2005). Given these observations, the nature of the intervening processes block in the IPO model requires deeper examination.

The determination of the key intervening variables and processes is the key to explaining the link between performance management practices and policies on the one hand and the performance of the firm on the other hand (Paauwe, 2009). Other researchers argued that the relationship between HRM practices broadly and performance is no longer seen as a direct relationship but instead is viewed as an indirect relationship that has mediating variables (Guest, 2011; Savaneviciene & Stankeviciute, 2010; Wright & Gardner, 2000). The indirect relationship that these studies espouse traces back to the seminal argument made by Dyer and Reeves (1995), as mentioned in the previous section 2.3.2.3, which indicated that linking HRM practices directly

to performance outcomes is questionable if one does not consider the intervening variables that could have a significant effect on the ultimate outcome.

Intervening variables proposed include those around employees' attitudes and behaviors (Jiang et al., 2012), which are also considered proximal outcomes as a result of performance management inputs. In order to understand how HRM practices affect performance outcomes, one should first understand the effects of these HRM practices on the more proximal outcomes (employee-related individual outcomes), which are supposed to, in turn, have their own effects on the more distal outcomes (organizational outcomes; Wright et al., 2003). Based on these recommendations, individual outcomes are the intervening variables or the elements of the black box that will be deemed to belong to the process block of the IPO model and not output, as they are indeed relevant to explaining the nature of outcomes that arise from performance management inputs.

In addition to intervening variables around employee attitudes and behaviors, there is also research that one more set of intervening variables could materially impact this linkage and be part of the black box linkage. This perspective emerges from the notion that employees within an organization may perceive HRM practices differently, and such perceptions, especially if they are negative, can undermine the impact on their attitudes towards them and ultimately on performance (Bowen & Ostroff, 2004; Nishii & Wright, 2007). This employees' perception of the organization in general is broadly referred to in the literature as organizational climate.

Organizational climate is considered an attribute of an organization and refers to the collection of attitudes, feelings, and behaviors that emerge daily within an organizational context (Guerci et al., 2015; Suandi et al., 2014). Climates also reflect the shared employee perceptions of policies, practices, and procedures and the likelihood of certain behaviors "paying off" in the

sense that the action will be reinforced by the organization's reward structure (Schneider & Reichers, 1983, p. 20).

Numerous studies have shown that organizational climate impacts various performance outcomes (Batt, 2002; Delaney & Huselid, 1996; Huselid, 1995; Wright et al., 2005). Way and Johnson (2005) proposed a theoretical model in which the impact of HRM practices on organizational outcomes was mediated by organizational climate (Guerci et al., 2015). HRM systems influence employee performance through employee perceptions of the organizational climate (Ferris et al., 1998). Given these assertions, there is a strong argument for the inclusion of organizational climate as an intervening variable.

The considerable debate is whether climate has a mediating or moderating influence on the relationship between HRM practices and employee, team, or organizational performance. The case for climate as a mediating variable was made by Bowen and Ostroff (2004), who argued that a robust HRM system should lead to a strong climate. A similar argument was embraced by Boselie (2010), who explained that employees make inferences about the organization's intentions by interpreting its practices. If these practices were consistent with employee development, employees might feel obligated to reciprocate with positive work attitudes and behaviors.

However, there is some skepticism that sound HRM practices always and automatically lead to a strong organizational climate. Nishii et al. (2008) argued that few empirical studies investigated the validity of such a theoretical argument. Others, such as Liao et al. (2009), have called for future research that empirically tests the validity of the Bowen and Ostroff (2004) strong climate model. The fundamental argument is that employees within an organization may

perceive organizational practices differently, and such perceptions if they are negative, can undermine the impact on performance (Nishii & Wright, 2007).

On the strength of these theories, an additional intervening process in the relationship between HRM practices and performance is related to an employee's perception of the organizational climate and is part of the black box. There are numerous recommendations to characterize climate depending upon the purpose of the study (Schneider, 1975). Conversely, it is meaningless to apply the concept of climate without a particular referent or context (Schneider & Reichers, 1983). Several types of climates have been proposed in literature spanning diverse areas such as service, safety, team innovation, change, risk orientation, trust, and employee relations (Anderson & West, 1998; Gavin & Howe, 1975; Haines III & St-Onge, 2012; Hofmann & Stetzer, 1996; Lawler et al., 1974; Schneider, 1990; Zohar, 2003). Drawing on similar concepts, the climate in the context of employee performance management is referred to as the climate for performance.

2.4. Conceptual Framework

The conceptual framework that forms the basis of this study is outlined in Figure 2.1. This framework was derived from the literature review around the input, processes, and output framework summarized in section 2.3.

Figure 2.1

Conceptual Framework

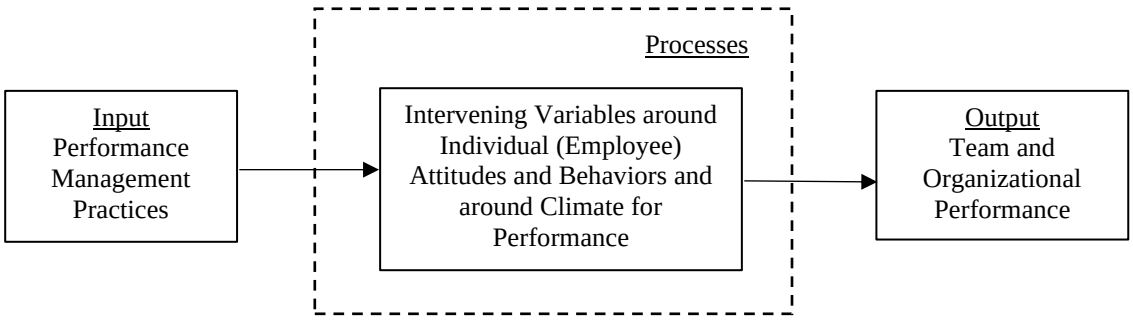


Figure 2.1 is an application of the IPO framework to characterize the impact of performance management practice inputs on outcomes related to individual, team, and organizational outcomes, along with the processes consisting of intervening variables that explain this linkage. The rest of this section outlines the details of each of these components. The first sub-section provides additional descriptions of a type of performance management practice called skill-based performance management (SBPM). The next sub-section spotlights the two sets of intervening variables – the first set of variables captures the impact of employee attitudes, and the second incorporates the relevance of climate for performance and the relevant hypotheses that describe their relevance in the linkage between SBPM and performance outcomes.

2.4.1. Input

Models and theories have been provided in the literature both with regard to the definition of performance management and the intervening variables that influence the outcomes of performance management practices. In line with Aguinis's (2009) definition, several researchers have developed models of performance management (e.g., Aguinis, 2013; Asare et al., 2020; Cardy, 2004; Cascio, 2006; Kinicki et al., 2013; Pulakos, 2009). While these models share clear commonalities, they differ in terms of the process, which refers to the number of steps and the nature of participation of managers and employees, and in terms of the level of complexity and specificity of each step around their operationalization (Kinicki et al., 2013).

With regard to the process, Kinicki et al. (2013) proposed a well-cited depiction of the performance management process based on an integration of existing models. The process spans the performance management lifecycle. It begins with the definition of practices around performance and goal setting, followed by periodic performance evaluations, then employee

feedback and coaching, and finally, the creation of incentives and consequences to reinforce and reward employee behavior.

In this study, I have focused more on the nature of the performance inputs than the process flow associated with the implementation of the performance management system. For this purpose, I have drawn upon multiple theories and frameworks outlined in prior studies to suggest a bundle of practices called skill-based performance management, which I elaborate on in further detail in the next subsection.

2.4.1.1 Theoretical Basis for SBPM. There are many frameworks that we can draw upon to guide us in the operationalization of performance management practices. One such framework is the contingent framework, which suggests that organizational contextual factors like the firm's strategy should influence the operationalization of human resource practices (Alagaraja, 2012). In other words, performance management practices must be cognizant of and thus incorporate a firm's strategy in its formulation.

Another popular framework is one based on a resource-based view (RBV), which posits that human and social capital held by the organization influences how HRM practices influence performance (Barney, 1995). As such, in the pursuit of organizational performance, HRM practices need to emphasize and develop human capital resources and social resources in an organization (Marin-Garcia & Martinez, 2016), which in turn enhance organizational performance (Boxall & Steeneveld, 1999, as cited in Katou & Budhwar, 2010). Practices that develop human capital are those that look to develop employees' abilities, and practices that develop social resources are those that focus on motivating employees. Applying the RBV perspective to operationalize performance management practices would thus imply conceiving

practices that impact employee motivation and abilities as a pathway to ultimately impacting organizational and team outcomes.

One of the most researched models to operationalize HRM and performance management with an emphasis on conceiving practices that impact employee motivation and abilities is the AMO framework, which stands for ability, motivation, and opportunity to participate (Boselie et al., 2005). Given the similarities that RBV and AMO emphasize, that is, employee abilities and social factors around motivation, some authors consider the AMO framework an extension of the RBV model (Ruzic, 2015) because it adds the opportunity dimension to the ability and motivation.

The AMO framework was initially proposed by Bailey (1993) and revolved around the core set of beliefs that an employee's discretionary effort needed three components: employees had to have the necessary skills, they needed appropriate motivation, and employers had to offer them the opportunity to participate. Appelbaum et al. (2000) proposed another set of HR practices, referred to as high-performance work practices, to suggest that employees would perform well in a job when (a) they possessed the knowledge and skills required to undertake their jobs (i.e., abilities); (b) they were adequately interested and incentivized to work (i.e., motivation); and (c) they were provided support and given opportunities to develop themselves in the workplace (i.e., opportunity). Thus, there is strong support around these three dimensions to target employee abilities and social dimensions and to eventually target performance outcomes. Given this support and relevance to performance outcomes, I have addressed the operationalization of performance management practices utilizing the AMO framework.

The ability dimension is also synonymous with the KSA acronym (i.e., knowledge, skills, and abilities; Fu et al., 2013). Ability-enhancing practices aim to improve these three

components (KSA) using methods involving skills enrichment and formal training that influence employees' ability to conduct their work successfully (Kroon et al., 2013; Raidén et al., 2006).

The motivation dimension deals with an employee's desire to perform, which can be enhanced by extrinsic or intrinsic motivation. Examples of motivation-enhancing practices are compensation systems, incentives, performance management practices, internal promotion, and job stability, which ultimately influence employees' attitudes (Appelbaum et al., 2000; Jiang et al., 2012b).

The final element of the AMO model deals with the opportunity dimension. This dimension incorporates practices that aid with an individual's career and incorporates elements of career pathing in the context of their current and future roles. Practices that aid in such areas can be determined based on job design theories (Hackman & Oldham, 1980; Kroon et al., 2013) or empowerment literature (Gerhart, 2005; Kroon et al., 2013). These practices consist of a collection of empowerment-enhancing practices such as job design and managerial involvement that influence their behaviors (Bartel, 2004; Harney & Jordan, 2008; Purcell et al., 2003).

A collection of performance practices that incorporate the enablement of these AMO dimensions can be delivered as a "bundle." I refer to such a bundle, which enriches employees with AMO elements, as a skill-based performance management practice or SBPM.

2.4.1.2 Ingredients of SBPM. I posit a bundle of four practices within SBPM that map to the AMO framework. The first practice in the bundle maps to abilities and consists of training around specific skills and knowledge that also adapts to the changes and requirements of roles. A prioritization of skills and abilities enrichment as posited in this practice is in line with what companies such as Deloitte are doing – they are utilizing data analysis to identify the skills required for specific jobs and then suggesting to individual employees, given their experience

and interests, the training that makes sense for them for job success, advancement, and future opportunities (Cappelli & Tavis, 2018).

The second practice in the SBPM bundle maps to the motivation element of the AMO framework and consists of assessment, not in the traditional model of appraising an employee, but more around the format of assessing performance around their skills, behaviors, and knowledge applications for their respective roles. Incentives and raises are also delivered as a part of these performance assessments. According to Cappelli and Tavis (2018), assessments are critical to making the most of learning and development activities. If assessments that provide a feedback loop for employees on the gaps in their skills and behaviors are not executed, it is a bit like "giving a student the key to a library and telling her to figure out what she must know and then learn it" (Cappelli & Tavis, 2018, p. 52).

The third practice in the SBPM bundle corresponds to opportunities – the final element of the AMO framework – and consists of efforts to enhance an employee's ability to perform their duties and responsibilities, portraying future career opportunities for employees (Blazovich, 2013). Rather than simply evaluate people against goals, new performance management models need to help move people into roles where they can succeed (Sloan & Tsuchida, 2015). This practice focuses on an individual's continuing career enhancement and facilitates their personal development over time (Lawrence et al., 2015) and thus enables an employee to career-path both within and outside the company.

Finally, an augmentation of the AMO framework is a fourth practice in the SBPM bundle. This practice consists of a formal manager-driven mentor program that incorporates consistent and active coaching for the employee. Companies need to focus on redesigning their performance management process with an emphasis on regular feedback, coaching, and

development (Sigala, 2019) and focus more on helping managers coach people to succeed (Sloan & Tsuchida, 2015). Kinicki et al. (2013), in their study on the performance management behavior questionnaire, defined the "whole" bundle of performance management as consisting of leadership behaviors that included coaching. In addition, they advocated for a separate measure of a performance management construct that incorporated elements of coaching managers. The study theorized that capturing elements of coaching may, in fact, account for variance in outcomes above and beyond other aspects of leadership.

2.4.1.3 Benefits of SBPM Practices. There is support in the literature for many of the practices that comprise the AMO framework (Boselie, 2010; Boxall et al., 2016; Jiang et al., 2012; Paauwe, 2009; Purcell, 2003), and given the correspondence of SBPM to the three dimensions of AMO, we can conclude that there is indirect support for SBPM. Other papers theorize the positive association of a bundle of practices enhancing abilities, motivation, and opportunities with firms' outcomes, such as higher productivity (MacDuffie, 1995) and financial performance (Huselid, 1995; Jiang et al., 2012). Overall, there is significant research evidence on the impact of the individual elements of SBPM, although there is minimal research on the impact of a bundle on employees' performance (Buchan, 2004; Gooderham et al., 2008; Huselid, 1995; Jiang et al., 2012; Macduffie, 1995).

The next sub-sections outline the nature of the impact of each of the elements of the bundle on performance outcomes. There is also a note of caution in the literature that research that focuses on the impact of individual HR practices on performance may produce misleading results when viewed as a bundle, with a single practice capturing the effect of the entire HR system (Ichniowski et al., 1993). As such, the mechanics of the impact of a bundle such as SBPM on performance outcomes is still relatively uncharacterized.

2.4.1.3.1 Impact of Skills within a Bundle of HRM Practices. Some facets of the bundle characterized as SBPM have received more research attention than others. In particular, the area of employee skills enrichment has received the most significant research attention both in terms of the modalities and the performance implications of the same (Johnson & Ray, 1993; Knouse, 1995; Lawler & Ledford, 1987; Murray & Gerhart, 1998; Shareef, 1994; Shenberger, 1995). Shenberger (1995) made the case for skills-based performance management under the premise that the nature of work has changed over time. The author argued that people needed to continuously evolve their skills to perform a wide variety of tasks, learn new tasks, respond to change, collaborate effectively with colleagues, and demonstrate autonomy and empowerment. As such, the author advocated for a system that empowered employees with a broad set of skills and capabilities that enriched their work experience.

Skill-based performance management and compensation are two means of ensuring a multi-skilled, flexible workforce for continuous organizational improvement efforts (Knouse, 1995) that motivate employees to learn needed organizational skills (Shareef, 1994). A skill-based pay study conducted at the McDonnell Douglas Helicopter Company showed significant organizational productivity gains (Johnson & Ray, 1993). Similarly, using time series data to study productivity and labor cost outcomes over 37 months, Murray and Gerhart (1998) showed a significant improvement in performance outcomes from skills enhancement.

Lawler and Ledford (1987) stated that organizations have recognized the need to have multi-skilled individuals, especially in the context of manufacturing operations, and described the manifold benefits that accrue to organizations from the same. Multi-skilled employees increase workforce flexibility (Bunning, 1989). Employees can rotate into other jobs and fill in for absent employees (Recardo & Pricone, 1996). The advantage of multi-skilling is that

employees gain a broader perspective, which enables them to solve multi-disciplinary problems, which then enables the organization to become more agile and flexible, which is a crucial trait needed in a dynamic world. Finally, skills enrichment leads to employees having the knowledge and skills to self-manage, which leads to greater autonomy and employee delight (Lawler & Ledford, 1987). Together, these studies provide strong support for the positive impact of skills enrichment on organizational performance.

2.4.1.3.2 Impact of Managerial Coaching within a Bundle of HRM Practices. Outside of skills and performance management, the other elements of skills-based performance management, namely managerial coaching and career pathing, have received limited attention in the literature. As early as 1989, Evered and Selman suggested that managers focused on coaching would have the best performance results (Evered & Selman, 1989). Several researchers have found a link between managerial coaching and improved employee performance, leading to better organizational performance (Hagen, 2010; Har, 2008; Liu & Batt, 2010; Park et al., 2008). Managerial coaching as a means of improving organizational performance through the facilitation of employee upskilling has limited empirical evidence of its impact on the workplace overall, and several researchers have called for more research in the area (Hagen, 2012). Evered and Selman (1989) suggested that managers who also focus on employee upskilling would see better results from their employees. Studies within the UK have suggested that managers in workplaces have focused their attention on coaching and have placed coaching in the top 25% of learning interventions that take place in organizations (Kranz, 2008).

2.4.1.3.3 Impact of Career Pathing within a Bundle of HRM Practices. There are limited studies on the impact of career pathing on employee and organizational performance. One of the earliest papers that discussed career pathing was by Edgar Schein (1990). He

suggested that organizations needed better processes to match skills and people over time so that individuals could better manage their career paths and career development. Armstrong and Baron (2005) mentioned how organizations benefited from career pathing when implemented as part of a performance management process. An important purpose of a performance management system is to provide developmental feedback to employees for both immediate short-term use and long-term career planning (Krauss & Synder, 2009). A career path and a long-term developmental plan are critical for an employee to remain motivated in their role and committed to the organization (Arnold, 2002). Outside of these anecdotal perspectives, academic studies appear really limited, suggesting that determining the impact of career pathing on performance outcomes is a fertile arena for future study, especially with any empirical basis.

2.4.1.3.4 Impact of Career Management within a Bundle of HRM Practices. While there is minimal research on the notion of career pathing, there is prior research in the arena of performance management that incorporates employee career management and satisfaction. Career satisfaction has been defined in the literature as an attitude where an employee's needs throughout a long-term career match the actual outcome experienced during employment (Blazovich, 2013). Career satisfaction has also been defined as an internal state conveyed through emotions and cognitive means of evaluating an employment period with some level of likes or dislikes (Babalola & Bruning, 2015; Hee et al., 2016).

Over the last 25 years, focusing on individuals' continuing career enhancement and satisfaction and facilitating their personal development over time has been a major initiative of concern (Lawrence et al., 2015). Riska et al. (2015) found that career satisfaction was enhanced when workers were satisfied with the company's performance management system. Performance management is positively related to career satisfaction in the long run (Blazovich, 2013) and

conversely negatively related to turnover rate (Clarke, 2015). Human resource management practices that helped employees improve their skills and competencies were also perceived as crucial factors that influenced career satisfaction in a study of banks in Malaysia (Hee et al., 2016). In summary, a distinct positive relationship exists between performance management practices and career satisfaction. Extending that dependence further, career satisfaction has been hypothesized to have a mediating influence on the relationship between HRM practices and organization performance (Tu et al., 2016, as cited in Hee et al., 2016).

In summary, as outlined in this section, each of the facets comprising a skills-based performance management system has been studied for their impact on the employees and the organization—some like skills enrichment more than others, such as career pathing/management or managerial coaching. Using the conceptual framework outlined earlier, I posit that the bundle of these practices that I have christened as SBPM has an impact on performance outcomes. The next sections outline the impact of SBPM on outcomes at different levels of the organization.

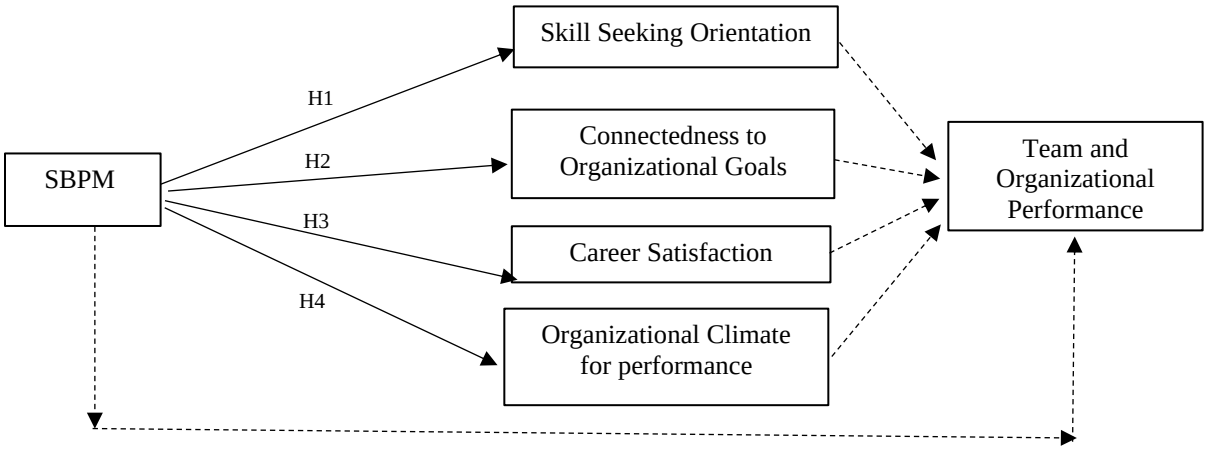
2.4.2 Processes

As discussed in previous sections, outcomes of performance management practices such as SBPM at the individual level are the proximal outcomes, unlike at a team or organizational level, which are distal outcomes. I have posited that the proximal variables of relevance here are related to employee attitudes and behaviors and the employee's perception of the organizational climate. Determination of the nature of these variables follows similar conclusions that these will be based on employee attitudes. To determine the nature of the variables associated with employee attitudes and behaviors, I draw upon the notion that SBPM practices are based on the AMO framework and constitute the input block of the IPO-based conceptual framework. Accordingly, employee attitudes in response to these practices will be related to their perceived

benefits of abilities, motivations, and opportunities endowed in them through the implementation of SBPM-based inputs. Such a response related to employee attitudes follows the logic that humans' perceptions of efforts by the organization to support them become the driver of their willingness to reciprocate with increased effort, which, in turn, results in higher performance (Jiang et al., 2012). This logic forms a pivotal argument to explain the nature of the proximal variables in the process block of the IPO framework. Based on this logic, the hypothesized model that forms the basis of this study is outlined in Figure 2.2 below.

Figure 2.2

Hypothesized Model



Note. The relationship between skill-seeking orientation, connectedness to organizational goals, career satisfaction, and organizational climate for performance and team performance is not being tested in this study. The link between SBPM and team and organizational performance is not being statistically tested in this study.

To summarize, the first set of proximal variables in this linkage, consistent with the conjectures of many researchers, consists of a measurement of employee perceptions of their abilities, motivations, and opportunities. These variables provide a means of empirical measurement of employee perceptions after the delivery of SBPM. A positive impact on these proximal employee attitudes as a result of SBPM thus entails the first set of research hypotheses in this study. The nature of these proximal variables corresponds to each of the elements of the

AMO framework, namely, abilities, motivation, and opportunity. As such, these proximal variables constitute the process machinery of the IPO-based conceptual framework and influence the relationship between SBPM-based inputs and eventual organizational outcomes.

2.4.2.1 Proximal Variable to Measure Employee Attitudes Around Abilities. Prior research has shown that when HRM practices focus on increasing workforce skills, organizations have seen a wide variety of performance improvements (Murray & Gerhart, 1998). I posit that employee perceptions resulting from their skills enhancements are the first proximal variable impacted by SBPM practices.

The premise for this assertion in this study arises from the notion that when employees receive abilities and skills enrichment from SBPM, their perceptions associated with such enrichments would be a proximal outcome of SBPM. A measure of employees' perception of their skills enrichment is thus one of the proximal outcomes of skill-based HRM practices and performance outcomes. As discussed earlier, this notion draws support from Jiang et al. (2012), which posits that employees' perception of their skills enrichment will lead to commensurate effort put into their jobs and corresponding performance outcomes. By prioritizing skill-based attributes (knowledge, skills, and abilities) of individuals, organizations "hope to direct the attention of their employees to developmental opportunities and to encourage skill-seeking behavior" (Murray & Gerhart, 1998, p. 68). Employees' perception of their skills enrichment is characterized by the skill-seeking orientation in the organization, as summarized by Lee et al. (1999), which suggests that skill-seeking behaviors are the desired outcomes of a skill-based intervention.

Thus, the first proximal variable measures an employee's perception of their abilities and desire to acquire new skills. The research hypothesis resulting from this assertion is that SBPM will result in the proximal variable around skill-seeking orientation.

Hypothesis 1: The mean employee skill-seeking orientation will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

2.4.2.2 Proximal Variable to Measure Employee Attitudes Around Motivation. As conceived in this study, SBPM practices that contribute to motivation enhancements span a range of actions executed by managers. It includes periodic appraisals and compensation, discussions around an employee's training and development, and helping employees see the relevance of their jobs and linking it to the larger mission and goals of the organization. Such motivational activities driven by managers enable employees to see how their individual tasks connect to the larger mission of the organization, which again reinforces the employee's motivation (Paarlberg et al., 2008). Hackman and Oldman (1976) also made a point that when an individual was able to connect their work to the mission of the organization, the meaningfulness of that work was usually enhanced.

In a similar vein, other studies suggest that managerial actions that involve SBPM help employees see how their jobs and the tasks they perform are meaningful in a larger company or organizational context and result in an employee connecting better with their organization and its goals and values (Ichniowski et al., 1997; MacDuffie, 1995). Afsar and Badir (2017) add support by suggesting that employees with a high level of motivation resulting from the support and fairness shown to them by their managers and their organizations then reciprocated by paying back in the form of positive work behaviors. These perspectives imply that the SBPM interventions associated with motivation result in an employee's ability to connect with the

organization and what it is doing, which I characterize as a measure of organizational connectedness.

Organizational connectedness, which is a subset of organizational identification, is defined as “the perception of belongingness to, or oneness with an organization, where the employee defines himself in terms of the organization in which he or she is a member" (Mael & Ashforth, 1992, p. 104). The importance of employee connectedness to the organization and its impact on organizational outcomes has also been theorized in numerous studies (Riketta, 2005). Connectedness to the organization provides employee-organizational cohesion, is a crucial catalyst for achieving the organization’s objectives (Arthur & Rousseau, 1996; Ashforth & Mael, 1989; Epitropaki, 2013), and delivers benefits for organizations and employees (Sharma, 2021). As such, I posit that SBPM practices that enhance employee motivation will lead to proximal attitudes around an employee’s connectedness to the organization and its goals, which have been shown to be relevant to organizational outcomes.

Employees’ perception of motivation-enhancing activities is characterized by the connectedness they feel towards their respective organizations, which implies that connectedness-maximizing behaviors are a proximal outcome of motivation-enhancing performance management practices. As such, the second proximal variable measures an employee’s perception of their connectedness to their organization’s goals.

Hypothesis 2: The mean employee connectedness to goals will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

2.4.2.3 Proximal Variable to Measure Employee Attitudes Around Opportunity. As conceived in this study, SBPM practices that contribute to enhanced employee opportunities include practices and programs that aid with an individual’s career and incorporate elements of

career pathing in the context of their current and future roles. Such programs and practices, given that they enable managers and companies to endow employees with career-related opportunities, can be considered to belong in the paradigm of organizational support for career development or OSCD – this paradigm refers to the programs offered by organizations to support and enhance their employees' career success (Ng et al., 2005; Orpen, 1994).

Numerous studies suggest that programs such as SBPM that prioritize employee career development opportunities result in employees' career satisfaction. OSCD-based programs, in general, lead to career satisfaction of employees by enhancing employees' participation in career management behaviors (Barnett & Bradley, 2007). As outlined in the previous paragraph, SBPM interventions exemplify OSCD-based programs and thus should lead to career satisfaction. Other studies have shown that practices, such as SBPM, that enhance employees' ability to perform their duties and envision future career paths positively influence career satisfaction (e.g., Blazovich, 2013; Hee et al., 2016; Riska et al., 2015). By prioritizing career development behavior and career management of individuals, organizations can drive greater employee perceptions around career satisfaction and, eventually, organizational performance (Babalola, 2015).

In summary, there is significant support in the literature across multiple studies that have demonstrated a distinct positive relationship between practices, such as SBPM, that emphasize manager-driven career coaching, development, and career pathing and an employee's career satisfaction. Based on this evidence, I posit that employee perception around their satisfaction with their career is the next proximal variable to characterize in the conceptual framework and the linkage between performance management practices and performance outcomes. This assertion drives the next hypothesis.

Hypothesis 3: The mean employee career satisfaction will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

2.4.2.4 Proximal Variable to Measure Employee Attitudes Around Perceptions of Organizational Climate. Several researchers have suggested that a key intervening process that determines distal outcomes of SBPM is influenced by an employee's perception of the organization (e.g., Bowen & Ostroff, 2004; Nishii & Wright, 2007). I posit that such perceptions will manifest in the form of a climate variable that can be measured and will thus serve as the final proximal variable to explain this relationship between SBPM and outcomes. The notion of climate has been characterized in the literature as an intervening variable between the context of an organization and the behavior of its members, thereby helping to understand how employees experience their organizations (Patterson et al., 2005). The climate of an organization could thus be thought of as the "sum of the perceptions of individuals working in that organization" (Sims & Lafollette, 1975, p. 22).

The motivation to include the notion of climate in this study is that prior researchers have suggested that it is associated with various outcomes at the individual, group, and organizational levels (Patterson et al., 2005). Such climate perceptions could be an organization-wide construct leading to organizational-level outcomes. For example, perceptions of a motivating and involving organizational climate have been shown to be positively related to supervisory ratings of performance (Brown & Leigh, 1996). Alternatively, domain-specific climate perceptions have also been linked with several work outcomes. For example, climate perceptions associated with safety have been linked with safety behaviors (Hofmann & Stetzer, 1996) and safety compliance in the health sector (Murphy et al., 1996). Similarly, climate perceptions associated with innovation have been linked to innovative behavior in health care (West & Anderson, 1996).

To better characterize the nature of this proximal variable in the context of this study, I draw upon the definition of organizational climate as the representation of employees' shared perceptions of organizational events, practices, and procedures (Schneider & Reichers, 1983). It is also summarized by Schneider (2000) as representing employee perceptions of specific things that happen to employees in an organization. Based on these definitions, rather than perceiving climate as a general multidimensional measure that spans multiple organizational mores and practices, I have embraced a facet-specific climate approach where climate has a focus and is tied to something of interest, as Schneider (2000) argued. In other words, the nature of the climate variable depends upon the purpose of the study (e.g., Schneider, 1975) or the specific organizational practice or phenomenon being studied. For example, organizational climate could be studied in the context of creativity, innovation, safety, or service and will be represented by employees' perceptions of organizational policies, practices, and procedures and subsequent patterns of interactions and behaviors in relation to supporting creativity, innovation, safety, or service in the organization.

Applying this framework of specific facet-driven organizational climate in the context of this study will thus involve characterizing a climate that represents employee perceptions and attitudes as a result of SBPM, which is a specialized type of performance management process. Of note, SBPM delivers abilities, motivation, and opportunities to employees in the context of a performance management process, which is ultimately intended to drive key outcomes around individual, team, and, ultimately, organizational performance. With that as context, I propose that the climate variable should capture employee perceptions that emerge from them being recipients of a set of practices that target performance at different levels, and as such, I would

call it the “climate for performance.” This proximal variable is also the final intervening process in better explaining the relationship between SBPM and performance outcomes.

To further characterize this climate for performance, I draw upon the notion that SBPM practices are intended to target performance outcomes at multiple levels of the company explicitly. By fostering a climate for performance, the skills of individual employees are amplified through the influence of these HRM work practices that can lead to performance benefits realizable at the organizational level (Rondeau, 2018). DeNisi and Smith (2014) proposed a model where HR practice bundles triggered a climate for performance and eventually improved firm-level performance. In summary, the climate variable provides a measure of the organizational climate that has been created. Given that SBPM practices are geared towards processes and systems that target performance in the context of this study, this variable is referred to as the climate for performance. This variable is distinct, and I posit that it will have an intervening influence on performance.

In summary, I posit that employee perception of organizational climate is the final proximal variable to characterize in the conceptual framework and, hence, in the linkage between performance management practices and performance outcomes. This assertion drives the next hypothesis.

Hypothesis 4: The mean employee perceptions of organizational climate for performance will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

The next section will amplify the approach to characterize the study's variables and describe the survey instruments and the methodology utilized in the study.

CHAPTER 3

METHODOLOGY

3.1 Overview

In this chapter, I present the methodology used to conduct the study. This chapter includes a description of the research design, an overview of the population and sample, and a review of the design of the survey and measures used for the same. The adapted scales, as well as the published scales used to measure the proximal variables in the study – skill-seeking orientation, career satisfaction, connectedness to goal, and organizational climate for performance, are described in detail. Techniques used to gather data and the method utilized for data analysis are also discussed.

3.2 Research Design

This study looks to characterize the impact of skill-based performance management (SBPM) on organizational performance as well as proximal variables around employee attitudes and the organizational climate for performance. In Chapter 2, utilizing the IPO framework, I hypothesized that SBPM (inputs) would impact proximal variables associated with employee attitudes and the climate for performance. I also hypothesized that these employee attitudes included employees' skill-seeking orientation, connectedness to organizational goals, and career satisfaction. In the rest of this section, I describe the research study setting to test these hypotheses and provide additional details on the SBPM interventions applied in the field. I also provide the longitudinal measurement events and the actual measurement data collected to assess the impact of these interventions and, finally, summarize the experimental design to execute this study.

3.2.1 Research Study Setting

For this study, a quasi-experiment in a field setting with nonequivalent groups was conducted to investigate the effects of a skill-based performance management program on employee attitudes and team performance. The company provides managed services across 60 communities in 32 states across the United States. The company employs over 1,000 employees who are the participants in this research study.

The employees work in teams all over the United States and report to a group of centralized managers. Each site is essentially a team managed by a team lead who reports to a centralized corporate department. The company has a relatively flat organizational structure and comprises primarily millennials (about 46%).

The company's purpose statement indicates a commitment to motivate employees, with a mission statement emphasizing providing fulfilling career practices. The company's operating manual stresses the importance of proper training, support, and coaching and emphasizes that effort put in by a supervisor will help to build the path towards the success of the individual, the team, and the company.

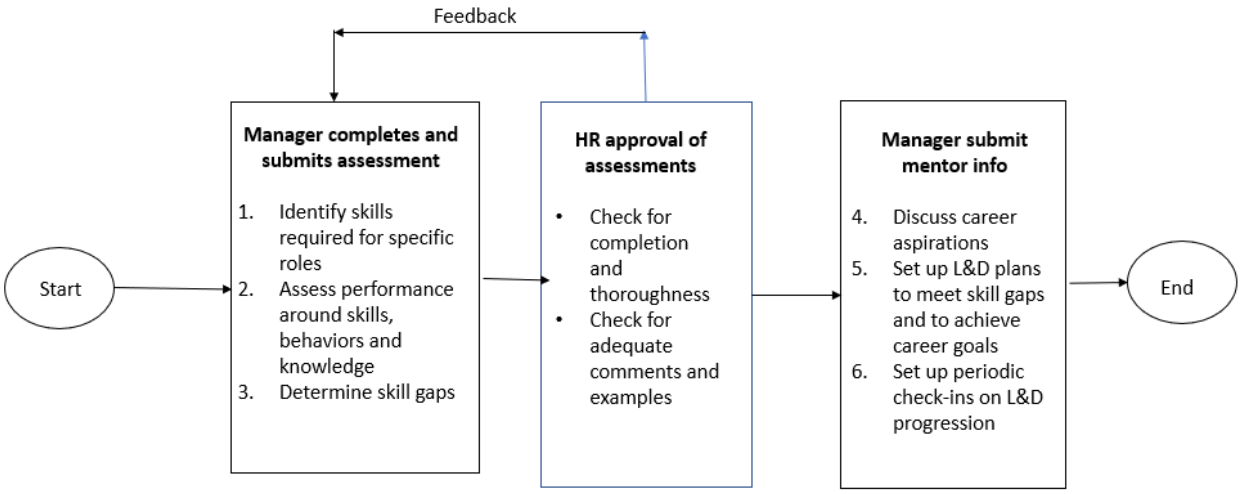
A few years ago, the company began to experience weakening financial and operational performance. General feedback revealed poor employee engagement, morale, attitudes, and perceived skill gaps across the organization. Given the importance placed on employees, management chose to double down on enhanced HR practices as a mechanism to reverse these declines. In particular, the company decided to implement interventions consisting of SBPM practices to impact performance, upskilling, and employee attitudes and perceptions**.**

3.2.2 SBPM Intervention

The SBPM intervention in the field consisted of a bundle of HR practices, including skills assessment, training, performance assessment, compensation incentives, and career pathing. All of these were conducted by managers and thus involved managerial coaching and mentoring. Figure 3.1 below illustrates the specific process associated with the intervention. The intervention was utilized by managers and HR professionals and consisted of three macro steps.

Figure 3.1

SBPM Intervention Implementation Process



The first step consisted of managers completing and submitting their assessments. During this step, the manager completed three types of interventions:

a) Identification of skills required for specific roles: The manager updated the skills required for the employee's role. While the learning and development (L&D) team created the role definition and skills required for a role, the manager had the authority to tweak the description and the skills required. Manager authority to tweak the skills required was

permitted so that the role and the skills could be adapted to the specific needs of the team and the local circumstances.

b) Assessment of performance around skills, behaviors, and knowledge: In this step, the manager carried out the formal aspects of performance assessment. Besides assessing the employee's performance, the manager compared the specific skills, behavior, and knowledge required for the role and evaluated the employee's competencies. As such, the evaluation was wholesome. It was beyond a performance appraisal and outlined the employee's performance around the dimensions of skills, behaviors, and knowledge.

c) Determination of skill gaps: As the final step, the manager outlined the specific areas to improve performance as well as critical gaps the employee had around skills. This outline formed the basis for a later step in the process around employee development.

The next step involved the HR department of the company. The manager's HR partner assessed the exercise's fidelity to sign off on the first set of outputs from the performance assessment. Here, the fidelity check established the completeness and thoroughness of the manager's assessment of the employee. In addition, the manager developed skill and behavior enhancement plans for the employee, which were shared with the employee in the next phase.

In the final step, the manager worked with the employee on interventions associated with a developmental plan that was derived from the assessment in the first step. The interventions involved in this step were as follows:

a) Discussion of career aspirations: Here, the manager discussed with the employee their career aspirations for two, five, and ten years. Working with HR, the manager developed a list of skills that would help them be successful in meeting these career aspirations.

b) Setting up learning and development plans to meet skill gaps and achieve career goals: In this step, the manager set up L&D plans to help the employee close the skills gaps in their current role. These were in the form of behavioral improvement content, certifications to be pursued to augment their knowledge, classes to attend online, etc.

c) Setting up periodic check-ins on L&D progression: In the final step, the manager set up periodic (typically quarterly) check-ins with the employee to discuss the progression the employee had made around their learning and developmental goals. These also often took the form of light touch, off-cycle performance assessment discussions and would help reinforce the direction around skills, behavior, and knowledge augmentation for the employee.

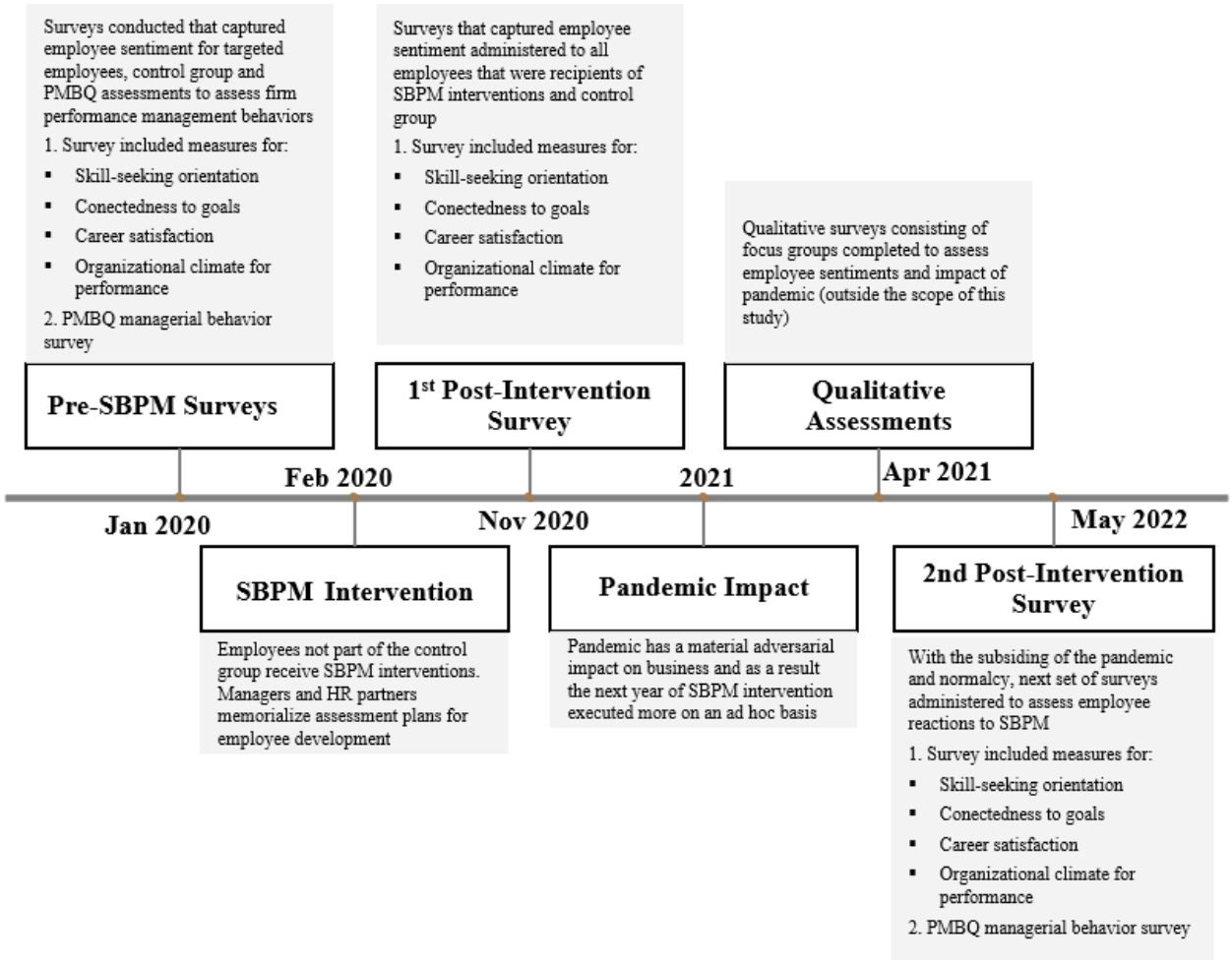
Each of the steps of the process consisted of a series of Excel workbooks that were all integrated and part of a workflow and had due dates associated with each item. Summary dashboards provided executives and the HR team visibility to each step's completion status. Screenshots to illustrate further are provided in the figures in Appendix A.

3.2.3 Longitudinal Measurement Events

The intervention and the longitudinal measurement events associated with assessing the impact began in January 2020. Prior to the start of this study, the intended timeline was different as the arrival and the adverse impact of the pandemic was unforeseen. The pandemic altered the deployment, and as such, the actual timeline associated with the interventions and longitudinal measurements is illustrated in Figure 3.2.

Figure 3.2

Timeline of Interventions and Longitudinal Measurements



As shown, the process for implementation began in January 2020. It was kicked off with surveys that captured employee sentiments in advance of the implementation of SBPM practices. Right at the outset, the plan for the company was to implement this process in phases, with the first phase that included only the general manager, assistant manager, and sales manager roles from each team. The reason for prioritizing this group was that the assessments and associated skill training were complete just for these roles at the time of the planned rollout date of January 2020. The implementation for the other roles was intended to begin 6 to 8 months later,

sometime in the second half of 2020. The survey was administered to all employees. Employees within a team not intended to receive the SBPM interventions effectively served as the control group. In addition to surveys that captured employee sentiments, manager behavioral surveys that captured manager effectiveness were also administered.

The next step occurred immediately following the surveys in February 2020 with the administration of the first phase of SBPM-related intervention to the three roles outlined earlier. The others were targeted to receive these interventions later in 2020. As described earlier, those who received SBPM underwent all the steps involving their managers and HR personnel.

Immediately following the implementation of the first tranche of interventions, the COVID-19 pandemic hit, and operations at the company were adversely affected. Operations were initially only disrupted and then came to a grinding halt for a brief period of time. This became a time of great uncertainty for employees as the pandemic drastically changed how they worked and interfaced, given the travel bans, remote work, and social distancing norms. Many began to feel disconnected from their colleagues, their workplace, and the company at large. That had obvious implications on how employees perceived the stability of their jobs and longer-term careers at the company. Ensuring the availability of sanitizing tools and protection gear to keep residents and employees safe became the priority. With the backdrop of employee and family safety, an emphasis on skills and performance took a backseat. Helping and supporting employees as they navigated more challenging family circumstances, work-from-home, and personal health concerns amidst the general concern around economic stability became the priority. As such, the traditional mores associated with SBPM practices were dropped in favor of over-indexing on employee empathy and support. The notable absence of a formal SBPM

follow-up in 2021 or even an expansion of SBPM to the members of the control group was reflective of these challenges.

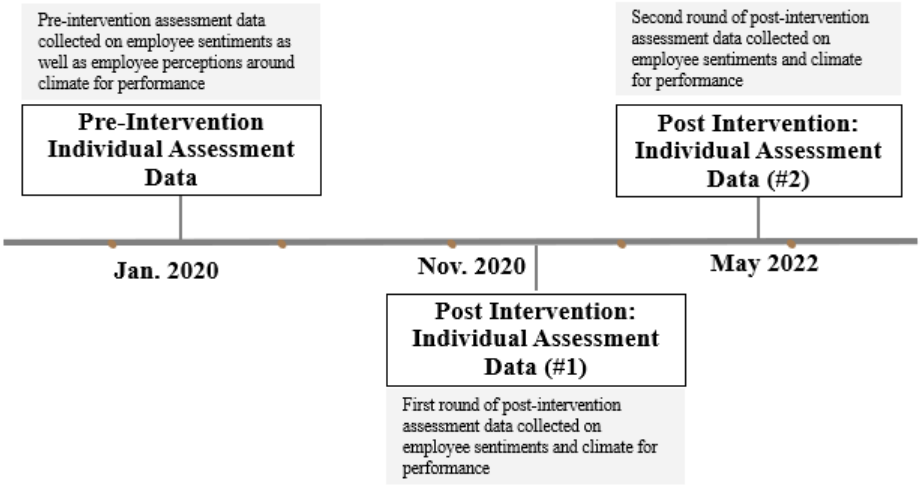
Notwithstanding the lack of progress associated with delivering the intervention to the rest of the team, I was able to administer surveys to employees who were the beneficiaries of SBPM-related interventions in the 4th quarter of 2020. In addition, the broader employee base was surveyed to get qualitative sentiments regarding the individual's personal well-being and the impact they were feeling from the pandemic. This qualitative study provided some valuable takeaways but is not within the scope of this study.

3.2.4 Individual Assessment Data Collection

The surveys outlined in the previous subsections generated the individual assessment data. The timelines associated with each data collection are illustrated in Figure 3.3.

Figure 3.3

Timeline of Collection of Data from Individual Assessments



Individual assessment data was collected from the pre-intervention surveys in January 2020. As discussed previously, these surveys provided the baseline for employee sentiments before implementing the SBPM intervention. Subsequently, two discrete points associated with post-intervention individual assessment data were generated from the two sets of surveys described previously, which were administered in November 2020 and May 2022. These two surveys provided the outputs associated with the SBPM-related intervention inputs.

3.2.5 Summary of Experimental Design

As discussed earlier, the company witnessed a decline in operational performance as well as weakening employee engagement and general perceptions of skill gaps across the organization. Consistent with the company's mission statement to prioritize employee development, management embarked on implementing SBPM interventions to stem these declines. The company's goals from these interventions were to improve team performance and general perceptions of improved employee morale. However, given the long temporal arc associated with the impact of such interventions, the company did not have specific, quantifiable goals around team performances or employee sentiments associated with them. Instead, it broadly believed that such interventions ought to be minimal table stakes consistent with best practices in the industry. As such, this study and the experimental design for the same were intended to establish the nature of a tangible, quantifiable impact, if any, of these interventions on both individual and team performance outcomes. In order to assess whether these skill-based performance management interventions had an impact on the organization, I conducted a quasi-experiment in a field setting.

A field study was chosen as the research approach as this study was motivated by a real issue at a company, and such a design would maximize contextual realism (McGrath, 1982). The

actions taken by the organization provided an excellent crucible to research the relationship between the variables of interest, namely the bundle of practice for a comprehensive SBPM system and its impact on team performance. A field experiment enabled employee attitudes and behaviors to be measured in a real organization, but the research design required judgment calls based on the requirements of the organization (McGrath et al., 1982). Prior studies (e.g., Asare, 2018) have successfully used a similar field study technique to research performance management practices and employee attitudes and behaviors in an organizational context.

The principal advantage of this study was that it followed the general protocol for a longitudinal evaluation review of program implementation, employing pre-implementation and post-implementation measures of employee attitudes using a survey**.** As such, the methods employed to address this research question were all quantitative in nature.

The principal limitation of this study is generalizability. The conclusions drawn from multiple observation periods for this company might not be applicable to other industries and the general population. Industry structure, worker sentiments, or the forces that influence the competitive landscape might all have a bearing on the outcome of this study.

More details on the survey measures are provided in the next section. Before the survey was administered, institutional review board (IRB) approval was obtained from the University of Dallas. The IRB approval is listed in Appendix B.

3.3 Sample

3.3.1 Sample Characteristics

To assess the impact of SBPM interventions and to test the hypotheses of this study, a quasi-field experiment with nonequivalent groups was conducted at the company. The population of interest for this study was a mix of knowledge workers in individual contributor

roles and managers of a location in consumer services industries. Skill enrichment is significant for individual knowledge workers in the services sector as it is the critical enabler of career development and progress (Boxall, 2003).

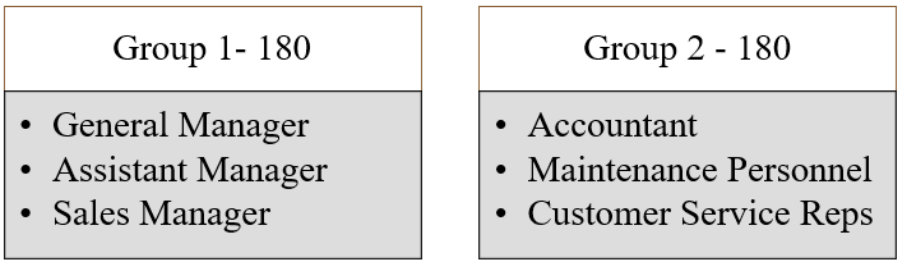
The accessible sample, also called the sample frame, for this study were the employees of the company who were non-managerial, knowledge workers. As such, it included individual contributors who worked in each of the properties and managed the facilities. The sample for this study consisted of the employees within the company who were the initial recipients of the SBPM intervention and a second group of employees who served as a control group as their SBPM interventions were delayed. These employees worked in teams all over the United States and reported to a group of centralized managers. The team consisted of three types of individuals (a) those who either managed others; (b) operational roles in individual contributor capacity such as assistant manager and the sales manager (these manage functions but do not manage people); or (c) those who served in functional support roles, again in an individual contributor capacity, such as sales, accounting, maintenance, and customer service. Of note, although two operational roles had “manager” in their titles, they were non-managerial, given that they managed functions and not people. All these employees had exempt status, implying that they were salaried employees and, as such, were exempt from regulations governing minimum wage or overtime pay. Three manager roles were prioritized to serve as the first cohort for the delivery of SBPM interventions. The reason for prioritizing this group was that the assessments and associated skill training were complete only for these roles at the time of the planned rollout date of January 2020. The plan was to deliver SBPM interventions to the other roles within 3 to 6 months of the first cohort. However, due to the onset of the COVID-19 pandemic, the delivery of such interventions was delayed, and individuals in these roles inadvertently functioned as the control

group for this study.

The group that received the SBPM interventions is referred to as group 1, and the control group is referred to as group 2 henceforth. As such, individuals in groups 1 and 2 represent a convenience sample of employees. Prior literature states that the most typical convenience sample found in organizational management journals involves a single organization with which the researcher has some prior relationship (Landers & Behrend, 2015). The composition of groups 1 and 2 is shown in Figure 3.4.

Figure 3.4

Group Members



To compare the groups, the age, gender, tenure, and demographics of each sample group were determined. The demographic for the overall company consisted of 60% Caucasian, 18% African American, 6% Asian, and 16% Hispanic. The employee base consisted of 60% female workers.

3.3.2 Power Analysis

G*Power was used to calculate the sample size required to compare group 1 and group 2 with a 95% confidence level and a 5% margin of error. G*Power is a power analysis software program for statistical tests frequently used in social, behavioral, and medical research (Faul et al., 2007). G*Power uses the formula suggested by Cohen (1988) as the analysis method for

calculating the sample size given effect size, α levels, and power values (a priori power analyses; Erdfelder et al., 1996) as shown in Table 3.1.

Table 3.1

*G*Power Test for MANOVA Repeated Measures*

Test	Test Family	Null Hypothesis	Effect Size	Other Parameters	Noncentrality Parameter and Degrees of Freedom
MANOVA: repeated measures between effects	*F* tests	CMA=0 Means matrix M Between contrast matrix C Within contrast matrix A	Effect size f_{null} depends on the test statistics: Wilks's U, Hotelling T1, Hotelling T2, Pillai's V, Muller & Peterson (1984), O'Brien & Shieh (1999)	Levels of between factor k Levels of repeated measures factor m	Noncentrality parameter and degrees of freedom depend on the test statistic and algorithm used

Note. Adapted from "G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences," by F. Faul, E. Erdfelder, A. Land & A. Buchner, 2007, Behavior Research Methods, 39(2), 184.

A-priori power analysis for a MANOVA for repeated measures between factors test was conducted for the acceptable alpha (Type I error) and beta (Type II error) levels and the size of the effect that I would like to detect. I chose alpha to be 0.05 and beta to be 0.2. The power level would be 0.8 (1- β), which is the probability of accurately rejecting a false null hypothesis (Field, 2013). The size of the effect that I expected to find based on previous studies that reported effect sizes for a similar population is 0.25, which represents a large effect as it is above the threshold effect size value of over 0.14 for MANOVA (Cohen, 1992).

Based on the input parameters, G*Power provided results that 66 respondents would be the minimum sample size necessary to achieve the desired power to conduct a MANOVA test to compare groups 1 and 2 on pre- and post-measures. The results from G*Power implied that with

66 participants, there was an 80% chance of correctly rejecting the null hypothesis when the null hypothesis was false. The input parameters to conduct the analysis are shown in Table 3.2. Hence, the response rate for my study needed to be at least 18% for each group (33 respondents).

Table 3.2

*G*Power Analysis Parameters for MANOVA*

Input and Output Parameters	Value
Effect size (input)	0.25
Alpha error probability (input)	0.05
Power (input)	0.8
Number of groups (input)	2
Number of measurements (input)	2
Correlation among rep measures (input)	0
Non-centrality parameter (output)	8.25
Critical *F* (output)	3.99
Numerator *df* (output)	1
Denominator *df* (output)	64
Total sample size (output)	66
Actual power (output)	0.8

Note. Test Family is *F* test, and the type of power analysis is a-priori compute required sample size given alpha, power & effect size.

3.4 Measures

The employee attitudinal data and managerial behaviors data were collected through a survey sent to the participants via an online survey platform. The survey consisted of 18 items composed of 5-point Likert-type agreement scales. The survey consisted of four categories of measures representing employee attitudes - skill-seeking orientation, connectedness to organizational goals, career satisfaction, and organizational climate for performance. The

determination of the items for the survey instrument was driven by a delicate tradeoff between what the company wanted, driven by efficacy and sensitivity, versus what I wanted to examine based on sound theoretical underpinnings. The company wanted to ask questions that would not be deemed too sensitive in terms of employees potentially wondering why they did not have these practices and, as such, feeling disgruntled even more than before. The company also wanted to keep the survey instrument short. Both issues proved challenging initially, but I ultimately struck a good middle ground around what would be acceptable for the company and satisfy theoretically driven research requirements. Eventually, the choice of the items in the survey was based on a compromise between what I wanted to research and what the company was willing to ask. Some items for the survey were adapted from published and validated instruments in the fields of industrial psychology and management. More details on the survey items are provided in the sections below.

3.4.1 Skill-Seeking Orientation

In conjunction with the learning and development team, I created a custom scale to measure skill-seeking orientation in line with the broad objectives of the study and the values of the corporation. A similar scale from published literature is the general training climate scale (GTCS; Tracey, 1998; Tracey et al., 1995, 2001), which links perceptions about the work environment to skill learning opportunities available at a company. SBPM endows employees with skills and abilities; hence, it engenders similar attitudes and perceptions about the work environment as characterized by the general training climate scale. The scale for training climate proposed by Tracey and Tews (2005) consists of three dimensions, which are managerial support, job support, and organizational support. The organizational support dimension captures three types of phenomena in an organization. First, the scale captures employee perceptions of

organizational support for helping employees acquire new knowledge and skills from formal and informal training and development activities. Second, the scale captures whether an organization's performance evaluation procedures motivate employees to acquire knowledge. Finally, it also characterizes employee perceptions of reward systems and incentives to acquire and apply learned skills. Cronbach's alpha was shown to be .87 for the organizational support dimension of this scale (Tracey & Tews, 2005).

The custom scale that was optimal for the company's needs in this study was different from the organizational support dimension of the scale proposed by Tracey and Tews (2005), as this study attempts to characterize employee awareness, motivation, and excitement for knowledge and skills acquisition but not incorporate any of the monetary rewards or incentive systems associated with it. As such, the company's custom scale did not refer to rewards and incentives for acquiring or using newly acquired knowledge and skills.

The custom scale to measure employee attitudes towards skill-seeking attitudes for my study consists of three questions. The questions were "I am aware of what training I need in order to improve my skills," "I am motivated to seek training to improve my skills," and "I am excited about the training opportunities available." Each item was scored on a 5-point Likert-type scale ranging from "strongly disagree" to "strongly agree." Both the Tracey and Tews (2005) scale and the custom scale for my study are shown in Appendix C.

3.4.2 Connectedness to Organizational Goals

In conjunction with the learning and development team, I created a custom scale to measure the connectedness to the goals of the company in line with the broad objectives and values of the corporation. A similar scale from published literature was created by Taormina (1997) to measure employees' "understanding of goals and objectives," which included a

measurement of whether employees gained a complete understanding not only of their jobs and roles but also of the organization, including its culture, structure, and people, and is shown in Appendix D. Taormina (1997) developed a 7-point Likert type scale (ranging from strongly disagree to strongly agree). This scale has been shown to have high reliability, with a Cronbach alpha value of over 0.76 for all subscales and .90 for the overall scale (Taormina, 2004). It has been used in numerous studies (Duignan & Yoshida, 2006; Lee, 2013; Massie, 2013). Duignan and Yoshida (2006) employed the understanding items of this scale for a study on employee attitudes related to training, understanding of company goals and objectives, and career growth in Japan.

The custom scale optimized for the company's needs differed from Taormina (1997) in the following ways. First, unlike in Taormina (1997), the questions in the custom scale were personalized. Second, the custom scale assessed employees' understanding of the bigger picture elements of what the company stood for, namely its goals, mission, and vision. Third, rather than assessing whether employees believed they understood how the organization operated or how things got done, which was considered more tactical, the company chose to determine if employees believed they could characterize the impact their contribution was having on the operations of the organization. Next, given the importance the company placed on the role of managers, the questions also looked to determine if employees believed that managers could help employees contribute to the company's performance and achieve its vision and objectives. The items were scored on a 5-point Likert scale ranging from "strongly disagree to "strongly agree."

As such, the scale to measure employee attitude towards connectedness to goals for my study consists of four questions and is outlined in Appendix D. The questions were "I know the goals, mission, and vision of the company," "I see how my goals contribute to achieving the

company's goals and vision," "I can approach the organization supervisors, managers, or leaders for guidance in helping me contribute to the organization's goals and vision" and "I receive regular feedback and coaching from my manager that guides me to see how I can change my actions to contribute to the company's performance goals." Each item was scored on a 5-point Likert-type scale ranging from "strongly disagree" to "strongly agree."

3.4.3 Career Satisfaction

I created a custom scale to measure career satisfaction, which was slightly modified from a career satisfaction scale developed by Greenhaus et al. (1990). The 5-point Likert scale developed by Greenhaus et al. (1990) has been applied in more than 240 prior studies (Hofmans et al., 2008) and is considered the best measure available in the literature for career satisfaction (Judge et al., 1995; Spurk et al., 2015). It measures career success in a one-dimensional way (Arthur et al., 2005), and its coefficient alpha ranges from .83 to .89 (Aryee et al., 1994).

The Greenhaus et al. (1990) 5-item scale was used with one question removed for this study. A question that pertained to income satisfaction was removed as the organization did not want to indicate that this survey was linked to compensation changes. The scale is shown in Appendix E. The employees were instructed to indicate to what extent they agreed or disagreed with statements like "I am satisfied with the success I have achieved in my career" and "I am satisfied with the progress I have made towards meeting my overall career goals." The items were scored on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree."

3.4.4 Organizational Climate for Performance

In conjunction with the learning and development team, I created a custom scale to measure the organizational climate for performance in line with the broad objectives and values of the corporation. To establish rigorous underpinnings for this custom scale, I sought to

establish equivalence by comparing it with instruments that have been previously published in the literature. In this regard, I first examined Litwin and Stringer's (1968) Organizational Climate Questionnaire (OCQ), which was one of the most popular scales to measure organizational climate and used most frequently in business organizations (Toulson & Smith, 1994). However, subsequent researchers have deemed that the OCQ lacked validity and was not a consistent measurement device (Patterson et al., 2005). In contrast, Patterson et al. (2005) have developed an improved scale called the Organizational Climate Measure© (OCM) that has gained strong academic support and has many dimensions corresponding to the custom scale I developed for this study.

As background on OCM, it consists of 82 items divided into 17 scales, which are grouped into four quadrants: human relations, internal process, open systems, and rational goal. Each of the four quadrants has multiple dimensions. For example, the human relations quadrant consists of six climate dimensions or scales corresponding to involvement, autonomy, welfare, training, integration, and supervisory support. The items are scored on a 4-point Likert scale ranging from "definitely false" to "definitely true." The instrument has sound psychometric properties and provides researchers with a robust means for assessing 17 dimensions of employee perceptions of their work environments (Patterson et al., 2005). The Cronbach's alpha values of the 17 scales are at or above 0.73, except for the autonomy scale. The scale is shown in Appendix F.

The developers of the OCM scale (Patterson et al., 2005) recommend that researchers utilize the questions relevant to their domain or facet of interest and use the instrument in a more refined manner by selecting scales most applicable to the research questions being posed. As such, to establish some validation and basis, I compared the items in the custom scale to the most applicable research items in the OCM scale. More specifically, in the custom scale, I worked

with management to create six questions mapped to supervisory support within the human relations quadrant and the innovation and flexibility dimension within the open systems quadrant in the OCM scale.

In the custom scale for this study, the employees were instructed to indicate to what extent they agreed or disagreed with statements like “The company values employees as a key resource contributing to its well-being” and “The company places importance on helping employees perform their jobs to the best of their abilities.” The items were scored on a 5-point Likert scale ranging from “strongly disagree to “strongly agree.” The scale is shown in Appendix F.

3.4.5 Managerial Behaviors

Managerial behaviors, which are the manipulation check for the study, were measured using the Performance Management Behavior Questionnaire (PMBQ), a scale originally suggested by Kinicki et al. (2013) to study performance management behaviors. The premise for this scale is that managerial behavior in connection with employee performance management is a theoretically distinct concept from other leadership behaviors and may account for variations in employee performance outcomes beyond other leadership behaviors. Kinicki et al. (2013) further stated that managerial behavior in connection with employee performance management is also positively associated with employees’ job attitudes and other positive outcomes, such as decreased turnover, increased employee engagement, organizational citizenship behavior, and individual and unit performance.

The PMBQ scale is a validated and reliable instrument (Kinicki et al., 2013). It is comprised of 27 items, which are scored on a 7-point Likert-type scale ranging from “rarely or never” to “very frequently or always.” The PMBQ questionnaire consists of six dimensions,

which include goal setting (5 items), communication (3 items), feedback (5 items), coaching (5 items), providing consequences (3 items), and monitoring performance expectations (5 items). Prior studies have shown that the Cronbach alpha coefficient for the overall scale is between 0.70 and 0.82 (Ivan, 2018; Keikavoosi-Arani & Salehi, 2021; Kinicki et al., 2013). This scale was used in my study without any modification. It is shown in Appendix G.

3.4.6 Survey Design

The survey was designed in conjunction with the learning and development (L&D) team of the company using the company account of the online survey tool SurveyMonkey. The purpose of the design was to motivate the respondents and make them eager to participate (Fanning, 2005). Per recommendations of Dillman (2000), to gain the respondent's trust and create a feeling of connectedness, the survey began with an introductory note informing the participants of the intended academic research purpose behind the survey and that their participation was voluntary. The first page was an informed consent that required participants to "agree" to participate in the survey. The participants were assured of the confidentiality of their responses to the survey questions. The survey introduction is shown in Appendix H.

The L&D team of the company was closely involved in the design and implementation of the survey, which imposed limitations on the survey construction. For example, I could not insert demographic questions as the L&D team felt it would make the survey too long. The survey also did not require employees to provide any personal information that could be traced directly back to the employee (e.g., name, phone number, and email address) except the name of their manager. The survey did not include any instructional manipulation checks as the company did not want to add to the time employees might take to complete the survey. The survey started with two questions on the company's mission, vision, and goals. This structure for a survey was in

line with recommendations by Peterson (2000), who suggested using a funneling procedure, which entailed a logical progression from general to specific questions. The question order in the survey was randomized after the two initial questions on mission and vision (Kline et al., 2000). No counterbalancing techniques were used. I took extra care to ensure that the survey questions related to career satisfaction were not placed together since they were worded relatively similarly (Kline et al., 2000).

The survey template was personalized with the company logo and brand to ensure that the employees understood that it was sponsored by the organization (Dillman, 2000). Company sponsorship would reduce the nonresponse bias (Fanning, 2005). Nonresponse bias refers to the impact on the survey results when the opinions of the people who complete the survey differ significantly from those who do not (Phillips & Phillips, 2016). Nonresponse bias was addressed in my study by ensuring that the company communicated its sponsorship and the importance of this project for its long-term success adequately to all employees (Vicente & Reis, 2010). Topic salience refers to the relevance of the survey to an individual and can impact the response rate (Groves et al., 2000). A personal connection between the sponsor and respondents using personalized communication has been shown to improve response rates (Edwards et al., 2002). In line with the Edwards et al. (2002) recommendation, communication in team meetings and repeated email communication on the project were used to convey the salience of the project to the employees. Response rates grouped by manager were checked to ensure that the response rate was not low for one or a subset of managers. The time taken to complete the survey was checked to ensure that there were no outliers (Field, 2018). Nonresponse bias is important as the number of people who do not respond and the characteristics of those who do not respond can impact the accuracy of survey results (Phillips & Phillips, 2016).

3.4.7 Assessment of the Instrument of this Study

To assess the comparability of my scales to established scales, I administered the two sets of survey scales to a large, diverse, and heterogenous population – one survey comprised questions that have been published in the literature that provided the theoretical basis for the company's survey questions and the second set comprised the set of survey questions that the company had configured for its internal usage from these published surveys. The organization's name was removed from the company survey questions to preserve anonymity. Then, by comparing how this population responded to these two sets of surveys, I established the magnitude of the correlation of the two sets of scales. A high correlation factor implied that the company's survey instrument might also be supported by the same theoretical underpinnings that the published scales rest upon.

To administer both sets of surveys, I utilized a cloud-based platform called Qualtrics®. I chose to use Qualtrics® for creating and distributing the survey because it was a versatile and powerful online survey creation tool. Survey Monkey, the other standard for online surveying, is what the company utilized for its surveying needs. The choice of a different platform helped me create a partition between what the company would typically utilize and, as such, everyone in the leadership team had access to versus what was needed for the scope of this dissertation. Qualtrics® also had options to include graphics and create attention checks and bot check questions to ensure that the responses were legitimate, and the data was high quality.

The participants in the survey were recruited via the online survey distribution platform MTurk®. MTurk® is a website run by Amazon that allows researchers to access the desired population of participants, typically large, diverse, and heterogeneous, for research studies

(Aguinis et al., 2021). Over the last decade, there has been a significant proliferation of usage of MTurk® for testing research hypotheses at scale (Agley et al., 2022).

Despite this proliferation, many researchers have been quite negative and have categorically stated that their results strongly suggested that most of the data from MTurk® were invalid. As such, they called into question the results of other recently published MTurk® based studies (Burnette et al., 2022). Moeck et al. (2022) countered these conclusions by suggesting that Burnette et al. (2022) missed essential screening procedures to obtain quality MTurk® data, including those to prevent participants from using commercial data centers to complete multiple surveys for financial gain. Moeck et al. (2022) and Aguinis et al. (2021) expressed caution to ensure the quality of the data and provided prescriptive recommendations to obtain robust and trustworthy MTurk® data. In this study, I have incorporated best-practice recommendations from these studies. The suggestions provided by Aguinis et al. (2021) are organized around the three typical stages of an empirical study, namely planning, implementation, and reporting results.

In the planning stage, the recommendations included (a) collecting detailed sample characteristics; (b) formulating appropriate screening and compensation rules; (c) establishing the required sample size; (d) building checks to counter web robots, self-misrepresentation, and MTurker inattention; and (e) providing a detailed description of the study in the job posting that will be seen by MTurkers. In the implementation stage, the recommendations included (a) monitoring the responses and responding to concerns; (b) screening the data; and (c) approving or denying compensation for completed responses. In the reporting stage, the principal recommendation was to report details to ensure transparency. Despite the skepticism expressed by researchers on the validity of MTurk® data (e.g., Burnette et al., 2022), I believed that MTurk® was a minimally acceptable choice for this portion of my study as I followed the

recommendations and best practice suggestions provided in the literature to conduct robust, reproducible, and trustworthy MTurk®-based research (Aguinis et al., 2021).

Every survey posted on MTurk® was called a HIT (Human Intelligence Task). Every HIT required the submitter to include detailed directions on how to complete the survey, the amount of payment offered, and the qualifications needed for respondents. An earlier study stated that $0.50 was the customary payment for survey takers solicited on M-Turk® for completing a 10-minute survey (Buhrmester et al., 2016). Adjusting for inflation, the participants in my study were paid $2.50 to complete my survey. I required my participants to be at least 18 years of age, working in the United States, and employed full-time (more than 35 hours) at a company.

The survey included 44 items from the combination of the published scales and the scale utilized for this study. Based on the number of factors in the measurement scales, a minimum ratio of 10:1 is the required sample size for a structural equation modeling (SEM) study (Jackson, 2003, as cited in Kline, 1998). Per this suggestion, a minimum sample size of 440 was required for this study (skill-seeking orientation (8 items, n=80), connectedness to goals (9 items, n=90), career satisfaction (9 items, n=90) and organizational climate for performance (17 items, n=170). A recommended best practice to establish the required sample size was to collect data from at least 15% to 30% of additional participants (Aguinis et al., 2021). The rationale for this over-collection was to create some redundancy if some of the responses collected were unusable due to participants failing the attention checks (questions to test if the participant was completing the survey in a thoughtful manner). Also, many responses could be lost after data cleaning, which could lead to an insufficient sample size. To overcompensate for such lost responses, I collected data from about 40% more respondents, which meant a minimum sample size of 700 for the study.

For the survey design, an introduction and the purpose of the survey were provided to the respondents, followed by a consent question (Dillman, 2000). The informed consent question conveyed to the participants that their participation was voluntary and that their responses would be anonymous. Participants who did not consent were directed to the end of the survey. Then, the respondents were asked screening questions before taking the survey. The screening questions included a BOT check that prevented responses from non-human bots. If this check had not been done, the data quality would have been poor (Rouse, 2015). The screening question also contained a question to confirm that the respondent met the worker's requirements. Failure to pass the screening questions resulted in the participant being directed to the end of the survey page.

Next, the questions for each construct were placed together but intermixed (Kline et al., 2000). The survey included two attention checks in addition to the 44 survey questions to ensure that the respondents completed the survey in a thoughtful manner. Demographic questions were presented at the end of the survey as per recommendations of Bourque and Fielder (2003), who stated that asking demographic details may be off-putting at the start of the questionnaire and may discourage respondents.

At the end of the survey, participants were thanked for their time. Table 3.3 depicts the order of the survey instrument, and the survey is shown in Appendix I. Prior to the survey being administered, institutional review board (IRB) approval had been obtained from the University of Dallas. The IRB approval is listed in Appendix J.

Table 3.3

Survey Instrument Order

Order	Instrument
1	Informed consent
2	Screening questions
3	BOT check
4	Instructions for completing the survey and company information
5	Dependent variable: Connectedness to goals
6	IMC1
7	Dependent variable: Organizational climate for performance
8	IMC2
9	Dependent variable: Skill-seeking
10	Dependent variable: Career satisfaction
11	Marker Variable
12	PMBQ
13	Demographic items

After the number of responses required was met (total quota size of 700 to meet the minimum sample size of 440), the data was retrieved and cleaned. The data was reviewed, and survey responses were eliminated if they did not meet the following criteria (a) qualifications to participate; (b) consent; (c) passed BOT check; and (d) passed attention checks. The time taken to complete the survey was examined, and extremely short completion times and extremely long times were excluded as these were indicative of poor respondent engagement (Rouse, 2015). The average time to complete the survey was used to determine the thresholds for short and long completion times. The responses from the respondents who failed the attention checks were not included (though they were still paid) as they were deemed lower quality.

After the data was cleaned, descriptive statistics of the sample were analyzed. Then, a test was conducted using the IBM® SPSS® AMOS 28 software package to check if the items of both scales (company and published) loaded onto one combined factor. The two sets of survey

responses (i.e., company and published scales) were analyzed using the CFA technique. Pattern and structure coefficients were assessed to determine whether the construct variable correlated most highly with its corresponding factor (Graham et al., 2003). Additional statistics that were examined were the factor loadings, the composite reliability (CR), the average variance extracted (AVE), and the square root of the AVE. Composite reliability scores were checked against the recommended .6 threshold to demonstrate reliability (Bagozzi & Yi, 1988). All average variance extracted (AVE) values were checked to ensure that they met the recommended .5 threshold required to demonstrate convergent validity, and factor loadings of the items were examined as an additional measure of convergent validity (Bagozzi & Yi, 1988).

3.4.7.1 Common Method Variance. When all scale items are measured utilizing a single questionnaire survey at the same time, it is possible that the relationships among the constructs might be distorted by the effect of common method variance (Spector et al., 2019). Common-method variance (CMV) is the spurious variance attributable to the measurement method rather than the constructs the measures are assumed to represent (Podsakoff et al., 2003).

3.4.7.1.1 Survey Design Measures to Limit the Issue of CMV. The placement of the survey questions was done deliberately to control for common method bias since all variables were obtained from the same source (Podsakoff et al., 2003). Common method biases could also result from the context in which the items on a questionnaire are placed. (Podsakoff et al., 2003). To limit the issue of CMV, the scales were placed together, but the questions were intermixed, and attention check questions were placed strategically between the sets of different construct question sections (Kline et al., 2000).

3.4.7.1.2 CMV Assessment. For this study, an examination of common method variance was initially conducted via Harman's single-factor test (Podsakoff et al., 2003). To conduct Harman's test, a model was created in which all items are loaded onto one factor and analyzed.

Since Harman's single-factor test is not very sensitive, Podsakoff et al. (2003) suggested conducting a second step of CMV analysis with the CFA marker technique to test for a broader range of CMV issues and added rigor. A marker variable is theoretically unrelated to the research variables of interest in the study but shares the same method of being measured from the same source as the other variables (Williams et al., 2010). The choice of variable used to represent the marker plays an important role in the ability to find the true nature and prevalence of CMV in the data (Simmering et al., 2015). This study used the seven-item "attitude towards the color blue" scale, which is considered the ideal marker variable (Miller & Simmering, 2022). Examples of the questions that were asked of the respondents were "blue is a beautiful color" and "I like the color blue." The measured variable items were anchored on a 7-point Likert-type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). To assess the presence and influence of common method variance, a series of models were tested following the recommendations of Williams et al. (2010).

The results of the CFA informed us of the comparability of the company scale and the published scales. In the next section, I describe the details of the measurement model and hypotheses testing using the survey data.

3.5 Data Analysis

The data analysis process consisted of a series of steps after the data collection was completed. The survey data was retrieved from the survey platform, and data sets were named to match the time frame in which they were collected (in the "YYYY-Mon" format) and the group

from whom the survey was collected (intervention vs. control). As such, the data sets corresponding to the employee surveys to capture their sentiments were labeled 2020 Jan Interventions, 2020 Jan Control, 2020 Nov Interventions, 2020 Nov Control, 2022 May Interventions, and 2022 May Control.

The next set of steps involved cleaning the data, analyzing the statistical assumptions, and assessing the reliability and validity of the scales. Ultimately, the data was analyzed to test the hypotheses of the study. Details of steps taken in this regard are provided below.

3.5.1 Data Cleaning

Each data set was first cleaned and tested for missing data and outliers. The survey data was first visually inspected for missing data for data cleaning. Next, a check for missing data was performed by running a descriptive statistics analysis in SPSS. Responses with missing data were omitted from the analysis. The data was then examined for outliers using the squared Mahalanobis distance test (D2; Kline, 2016). Straight-lining check was not conducted for the data set. Straight-lining refers to a respondent selecting the same response for all survey items, resulting in poor data quality (Cole et al., 2012). For this survey, since there were no negatively worded items, straight-lining would not necessarily indicate poor data quality as respondents may answer thoughtfully and provide an identical response to every question (Schonlau & Toepoel, 2015).

3.5.2 Descriptive Statistics and Correlations

The next step after completing data cleaning was to examine the descriptive statistics and correlation matrices for the data. The descriptive statistics included the minimum, maximum, statistical mean, standard deviation, skewness, and kurtosis (Hair et al., 2018). The correlation matrix listed all the study variables with their means, standard deviations, number of

respondents, and inter-correlations among the measures. The reliabilities for each variable were listed on the diagonal of the correlation matrix.

3.5.3 Statistical Assumptions

The next step was to identify and assess the statistical assumptions for the data. The data was tested for normality, homoscedasticity, and linearity. For the analysis, the statistical software packages IBM® SPSS® Statistics 28.0.0.0 and IBM® SPSS® AMOS 28.0.0.0 were used.

There are numerous recommendations in the literature for the sample size determination when conducting a Confirmatory Factor Analysis (CFA). The sample sizes in such studies depend on factors such as the normality of data and parameter estimation methods, which rely on the number of variables in a study (Schumacker & Lomax, 2004). At a minimum, sample sizes for CFA should be at least 200 observations to obtain trustworthy estimates (Garver & Mentzer, 1999, p. 47). Hair et al. (2018) have suggested a minimum sample size of 100 for models containing five or fewer constructs, each with more than three items (p. 633). The sample for this study consisted of the employees within the company who were the initial recipients of the SBPM intervention and a second group of employees who served as a control group. Since the number of raw data responses for both groups was 180 each, with some reduction for data cleaning, I had a sufficient sample to conduct a CFA analysis for the measurement scales.

The default estimation method in SEM is the maximum likelihood estimation method, which assumes multivariate normality for data. Kline (2016) provided recommendations and procedures to assess the multivariate normality of data. The first recommendation is to employ significance tests such as the Mardia test to detect violations of multivariate normality. A significant result of the Mardia statistic and a critical ratio higher than 5.0 indicates a departure from multivariate normality (Byrne, 2010; Kankainen et al., 2004). If multivariate normality is

not met, Kline (2016) suggested a 2,000-case bootstrapping procedure at the 95% confidence level for the raw data with the appropriate Mardia statistic and critical ratio. Bootstrapping tests resample the dataset multiple times to create simulated sample sets to determine the sample distribution.

3.5.4 Measurement Model

A pilot study was conducted at the company with a small group of individuals to determine the face validity of the scales used. Conducting pilot studies on new programs and surveys to gain early feedback is a standard operating procedure at the company. As such, the individuals chosen were typically tenured company employees with two to four years of experience. The pilot group consisted of 10 individuals. Their demographic represented the company's demographic – it had equal representation of men and women, about 50% representation of millennials, with job functions including operational and support functions, and participation from at least five teams. The survey questions were sent to the pilot participants via SurveyMonkey, and they then participated in a call to provide their feedback. The pilot participants assessed the survey questions and provided feedback on the readability, consistency of style, and formatting of questions. The feedback provided affirmation on all these dimensions and the clarity of the questions and also indicated positive alignment with the stated vision and values of the company. The pilot study occurred the month before the pre-intervention survey and took place in the fourth quarter of 2019.

Reliabilities of the four scales used in the study – skill-seeking orientation, connectedness to goals, career satisfaction, and organizational climate for performance, were estimated, with Cronbach’s alphas calculated for each scale. The model was estimated to ensure all factor loadings were above the 50% (0.50) threshold (Hair et al., 2009). Before testing the hypotheses

of the study, a CFA was conducted to assess the goodness of fit of the model to the data (Kline, 2016). Commonly used fit indices were compared to evaluate the model fit of several measurement models. The goodness of fit for the measurement model was determined based on the following cut-off criteria (a) the root mean squared error of approximation (RMSEA) ≤ .08; (b) the standardized root mean square residuals (SRMRs) ≤ .08; (c) the comparative fit index (CFI) ≥ .90; (d) the smallest value of the Akaike information criterion (AIC); (e) the Bayes information criterion (BIC); and (f) the absolute correlation residuals (ACR) ≤ .10 (Kline, 2016).

Pattern and structure coefficients were assessed to determine whether the construct variable correlated most highly with its corresponding factor (Graham et al., 2003). Additional statistics that were examined were the factor loadings, the composite reliability (CR; threshold value of 0.6), the average variance extracted (AVE; threshold value of 0.5), and the square root of the AVE (greater than the inter-construct correlations) to evaluate convergent and discriminant validity (Bagozzi & Yi, 1988). Composite reliability (a measure of scale reliability usually calculated in conjunction with structural equation modeling) is an alternative to Cronbach's alpha, and studies show that there is no significant difference between Cronbach's alpha and composite reliability values, and they might be used interchangeably (Peterson & Kim, 2013).

When all scale items are measured by a single questionnaire survey, the relationships among the constructs might be distorted by the effect of common method variance (Spector et al., 2019). For this study, an examination of common method variance was conducted via Harman's single factor test and the unmeasured latent method factor test (Podsakoff et al., 2003).

3.5.5 Hypotheses Testing

To test the effect of the SBPM intervention on employee attitudes, the following hypotheses were tested:

Hypothesis 1: The mean employee skill-seeking orientation will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

Hypothesis 2: The mean employee connectedness to goals will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

Hypothesis 3: The mean employee career satisfaction will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

Hypothesis 4: The mean organizational climate for performance will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group.

To test the hypotheses above, a multivariate analysis of variance (MANOVA) test for repeated measures analysis was conducted with each of employee attitudes- skill-seeking orientation, connectedness to goals, career satisfaction, and organizational climate for performance as the dependent variables and SBPM as the independent variable. This statistical test measures the differences between the levels of a single independent variable on a set of multiple dependent variables (Hair et al., 2018). A repeated measurements design involves measuring subjects at successive times or under several experimental conditions (O'Brien & Kaiser, 1985). The main effect testing in a MANOVA is essentially a vector of the combined dependent variables (Torres-Jacquez, 2021).

In order to use the MANOVA test, certain data assumptions must be met (Field, 2018). The assumptions are (a) each dependent variable must have an interval measurement; (b) the

independent variable must consist of two or more categorical, independent groups; (c) independence of observations must exist; (d) there must be an absence of outliers in the data; (e) data must be multivariate normal; (f) there must be an absence of multicollinearity; (g) there must a linear relationship between the dependent variables for each group of the independent variable; (h) adequate sample size must be present; (i) there must be homogeneity of variance-covariance matrices; and (j) there must be homogeneity of variances (Tabachnick & Fidell, 2006).

The data was checked first to ensure that the assumptions for applying MANOVA were satisfied. The first two assumptions were met as the independent variable (SBPM) was categorical, and the four dependent variables (skill-seeking orientation, connectedness to goals, career satisfaction, and organizational climate for performance) were measured at the interval level. The observations were independent because no respondent could be in more than one SBPM group, and data was collected independently for the intervention and control groups. Multivariate outliers were assessed using the squared Mahalanobis distance test (D2; Kline, 2016). The data was for multivariate normality by computing the Shapiro-Wilk statistic (Kankainen et al., 2004). Multivariate normality "can be violated to a significant degree without seriously affecting the validity of the p values or the powers of the MANOVA tests" (O'Brien & Kaiser, 1985, p. 331). Blanca et al. (2017) have indicated that the analysis of variance tests is robust in all instances of non-normality (up to skewness = 2 and kurtosis = 6). The presence of linear relationships between each pair of the dependent variables (skill-seeking orientation, connectedness to goals, career satisfaction, and organizational climate for performance) for each group (intervention and control) was evaluated using scatterplots (Ntumi, 2021). Box's *M* test was conducted to test the homogeneity of variance-covariance matrices (Fujikoshi, 2002).

Usually, the significance of this test is determined at $\alpha = .001$ because this test is considered highly sensitive (Ntumi, 2021). Not having homogeneity of variances and correlations is problematic if the sample sizes of the independent groups are unequal, but for equal or nearly equal group sizes, MANOVA is acceptably robust to this assumption (O'Brien & Kaiser, 1985).

There are four alternative MANOVA test statistics, namely (a) Pillai's Trace; (b) Wilk's Lambda; (c) Hotelling's Trace; and (d) Roy's Largest Root (Hair et al., 2018). These tests have somewhat different characteristics in terms of power and sensitivity to the violation of assumptions required for MANOVA, and none of these statistics is uniformly better than the others (O'Brien & Kaiser, 1985). Tabachnick and Fidell (2006) support reporting the Wilks' Lambda. Olsen (1974) recommends the Pillai-Bartlett trace test as the most robust of the tests, with adequate power to detect true differences in various situations and robust to many violations of the assumptions of MANOVA. Roy's Largest Root statistic has the most power when dependent variables are highly correlated, and the other three have more power for disparate variables (Huberty & Oljenik, 2006). The results from the four statistical tests are often the same (O'Brien & Kaiser, 1985). All four can be converted to an *F*-statistic, which can then be used to calculate a *p*-value (Warne, 2014). In reporting results in MANOVA, partial eta square (η_p^2) is often used to show how much variance is explained by the independent variable and used as the effect size for the MANOVA model (Todorov & Filzmoser, 2010).

To compare the relationship between the groups of variables, Wilks's lambda multivariate test statistic was reported, and the overall *F*-statistic for the interaction effect was tested for significance (Tabachnick & Fidell, 2006). The main effects of each independent variable were examined when no interaction effect was present (Ntumi, 2021). Post hoc tests were conducted to aid in better interpretation of the data for the statistically significant interaction effects (Field,

2013). The Tukey's test is the most commonly reported post hoc test (Warne et al., 2012). For the statistically significant variables, Tukey's test was conducted for the time periods.

3.6 Limitations

No research design is entirely perfect and free from explicit and implicit biases, and all studies have limitations (Ross & Zaidi, 2019). Recognizing the limitations of a study creates opportunities for future research, and methods should be employed to minimize and counter the impact of the limitations (Connelly, 2013). With these guiding factors as context, in this sub-section, I will describe the potential limitations of the study, explain their implication, describe steps taken to mitigate the limitations and suggest areas for future research.

The first limitation is related to the sample selection of the study. As discussed in the sampling methodology section, I have used convenience sampling. Simon (2011) points out that the use of a convenience sampling method rather than random sampling provides a threat to external validity, which can lead to difficulties generalizing to larger populations. Some limitations cannot be controlled or minimized by the researcher, as they occur when the researcher tries to balance scientific rigor with realism (Connelly, 2013). The field study method used in this research allowed me to ensure contextual realism despite the limitation of being a convenience sample by evaluating the impact of a skills-based intervention on full-time employees in their workplace. I believe that the threat of limited generalizability to larger populations is somewhat mitigated because the demographic of the sample in my company is two-thirds non-managerial, knowledge workers, which is comparable to the demographics across the managed services industry. As such, the attitudes and sentiments can be extrapolated to the broader managed services industry. In the future, this study can be repeated with other

participants in different organizations, which will provide a more substantial basis for the external validity of my study's findings.

A second limitation common to quantitative research studies is a lack of literature for providing an empirical or theoretical basis for some of the variables analyzed in the study (Connelly, 2013). I encountered this issue as some of the employee attitudes, namely, skill-seeking orientation and connectedness to organizational goals, do not have sufficient theoretical basis in prior research. In these instances, I drew from the theoretical basis established by closely related concepts – research on skill-based pay as a basis for skill-seeking orientation and organizational identification (the degree to which an employee identifies with the goals and mission of the organization) for connectedness to organizational goals. Similarly, for climate for performance, I drew upon the theoretical basis around perceived organizational support to apply it to the scope of this study. Future studies can focus on well-established variables such as employee engagement, which has a significant theoretical basis in prior literature, to generate stronger empirical underpinnings for the results.

Another limitation arose from the survey measures used in my study. In my study, the choice of variables and the respective survey instruments was dictated by the nature of attitudes the company wanted to measure, the tone they wished to set with the questions, and finally, the size and scope of the survey questions. To mitigate this limitation, I used MTurk® to establish that the scales were from the same construct space as published scales with previously demonstrated reliability and validity. Future studies could focus on established employee attitudinal outcomes and use published scales to replicate this study.

Self-reported data not verified through other sources could have possible limitations on the study (Connelly, 2013). When all scale items are measured using a single questionnaire

survey at the same time, it is possible that the relationships among the constructs might be distorted by the effect of common method variance (Spector et al., 2019). Self-report measures also suffer from the potential of being influenced by social desirability biases when participants do not respond truthfully to the survey items (Bagozzi & Yi, 1988). Since my study utilized self-report measures, the presence of common method variance (CMV) and social desirability bias was a limitation. Steps were taken to limit the issue of CMV by incorporating appropriate survey design measures (Podsakoff et al., 2003). The magnitude common method variance was examined via Harman's single factor test and the unmeasured latent methods factor test (Podsakoff et al., 2003).

Another limitation could arise if treatment fidelity is not maintained (Sanetti et al., 2021). Treatment fidelity refers to the extent to which an intervention is delivered according to plan (Collier-Meek et al., 2013). To maintain treatment fidelity, the company ensured that the interventions administered were consistent and standardized across all the participants administered to and over time across the study duration. In my study, the SBPM interventions implementation process possessed multiple mechanisms to minimize risks associated with treatment fidelity. First, all the managers who were the administrators of the interventions were trained in the methodology associated with delivering them and were expected to follow a consistent and tightly scripted process. Second, the HR business managers were involved in quality checks upon completion of each of the performance management interventions. These quality checks ensured that every manager consistently delivered these interventions. The combination of managerial training for consistently delivering these interventions and quality control ensured by HR business managers minimized the risk of loss of treatment fidelity.

Finally, a common significant limitation to studies arises from challenges to internal validity (Ross & Zaidi, 2019). Threats to internal validity are those factors that have the potential to provide alternate explanations for the observed effects (Christ, 2007). The common factors that create challenges associated with internal validity are (a) history; (b) maturation; (c) testing; (d) instrumentation; (e) statistical regression; (f) attrition; and (g) diffusion of treatment (Campbell & Stanley, 2015).

History refers to events that can potentially influence the variables of interest; in intervention studies, history can have an unintended effect (Polit & Beck, 2014). A significant event that took place during the study was the COVID-19 pandemic, which impacted the nature of interventions administered to the research group and the control group. The pandemic caused a general deterioration of employee attitudes more broadly as employees worried about its impact on the macro economy, the world, and the health of their families. This general deterioration likely occurred equally for the treatment and control groups. As a result, the net impact on the treatment group vis-à-vis the control group is likely unchanged. Due to the pandemic, the second round of interventions could not be administered for the research group in 2021, which likely muted their impact on the target group. However, the pandemic also postponed the delivery of interventions on the control group, which enabled me to preserve the notion of a control group longer in this study. This event also posed maturation-related issues and impacted key measurement variables in this study, which is addressed in the next paragraph.

The next threat to internal validity, maturation, refers to the change in participant behavior that is extraneous to their response to manipulations and regardless of treatment, especially if the project lasts a long period of time (Onwuegbuize, 2000). Maturation further compounds the impact of independent variables in the presence of historical events (Flannelly et

al., 2018). Given that this longitudinal study lasted over two years and the pandemic occurred in the midst of it, the results are subject to issues associated with the phenomenon of maturation in various ways. First, given that the control group could not receive interventions for a more extended period of time, the study was the inadvertent beneficiary of being able to witness the impact of sustained interventions on the experimental group vis-à-vis the lack of interventions for the control group. In that sense, the study perhaps benefitted from the confluence of the pandemic event and the study duration, as I got the opportunity to study the implications of the interventions on the experimental group for an extended period of time. Second, given the presence of a control group, the issues related to maturation are expected to manifest similarly in both the experimental and control groups, and I can discount the common maturation trends in both groups (Tucker-Drob, 2011).

The third threat to internal validity occurred from the testing process, especially if repeated several times (Christ, 2007). This threat occurred because the test may signal to the participants what the researchers were interested in (Dunbar-Jacob, 2018). Researchers believe that one approach to mitigate this threat is by using a control group (Kaya, 2015). In this company, the interventions are simply part of the HR processes and, as such, do not signal to employees that they are part of a test or an experiment. The same applies to the surveying instruments. The company has a history of surveying employees, and I ensured that the survey questions did not refer to any of the SBPM interventions. One testing risk is that employees could be prone to repeating their previous answers without giving updated consideration each time they are surveyed. However, given that the surveys were administered after 6 to 12 months, this risk of repetition might have been low, but this remains a limitation of the study.

The fourth threat to internal validity arose from instrumentation, which can be caused by inconsistencies inherent in the measurement devices used for data collection in a study. The most significant source of threat from instrumentation arises when the measure does not have adequate reliability (Dunbar-Jacob, 2018). Reliability levels generally accepted for a study are between 0.8 and 0.9 (Anastasi, 1988). For this study, the reliability of each scale was assessed, and the equivalence of the instrument was established across the time periods of the study.

The next threat to internal validity arose from statistical regression, which refers to the condition that extreme values or observations tend to trend toward more typical levels over repeated assessments (Christ, 2007). Methods to reduce the potential threat of regression include randomizing subjects and taking multiple initial measurements as a baseline (Dunbar-Jacob, 2018). Because these interventions are part of a field study, neither mitigating steps were possible. Regression effects were examined by comparing the number of outliers between the time periods and the results were similar.

The sixth threat to internal validity arose from material attrition, which refers to the loss of study participants during the course of the research (Flannelly et al., 2018). To assess this threat, I compared the attrition rates of the treatment and comparison groups and determined that they were similar.

The final threat to internal validity occurred from diffusion, which is a phenomenon that occurs when the intervention administered to the research group spreads from the group to the control group, which could happen when there is interaction between the two groups (Christ, 2007). The diffusion phenomenon is a relevant area of concern as some team members received the intervention while others who were members of the same team did not due to the delays imposed by the pandemic. From the outside, it is conceivable that the members who did not

receive the intervention felt bitter about the company as they were not endowed with the benefits of SBPM, which could impact their attitudes towards the company – a phenomenon researchers refer to as resentful demoralization. It is possible that the control group experienced that phenomenon, which is a limitation of the study. An additional element of the intervention, related to diffusion amid the pandemic, consisted of management providing support and counseling to all employees to help them navigate the challenging aspects of coping with the pandemic. These support and counseling interventions were administered in the early months of the pandemic. As such, I did not expect it to have a material impact on this study, especially given that the control and the intervention group received the same treatments outside the scope of SBPM.

In summary, this study has numerous limitations, primarily due to issues pertaining to internal validity. Some are unique to this study – namely, the occurrence of a historical event such as the pandemic and the resulting challenges around maturation and diffusion. Also, because these interventions were part of a field study, several factors (like the choice of survey questions) were not entirely in my control. However, I was also the inadvertent beneficiary of preserving a control group for a longer duration, and many of the threats to internal validity, such as effects of maturation and attrition, were subdued as they had the same effect on the experimental and control groups. Nevertheless, it is hard to estimate the full ramifications of this unprecedented event, as many of the sentiments we measured could have been impacted in unfathomable ways.

CHAPTER 4

RESULTS

4.1 Overview

In this chapter, I present the results of the study. This study was designed to characterize the impact of skill-based performance management (SBPM) on proximal variables around employee attitudes and the organizational climate for performance. This chapter is organized into two parts. First, I present the results of the scale validation study. Next, I present the results of the hypotheses testing. This includes information on the data collected at the company, data cleaning, descriptive statistics, statistical assumptions, and MANOVA test results.

4.2. Scale Validation Study

The scale validation study aimed to assess the comparability of my survey scales to established survey scales. My survey scales comprised the set of questions that the company had optimized for its internal usage. These scales were compared to similar scales from published literature, providing a theoretical basis for the company's survey questions. I administered the two sets of survey scales utilizing the online survey platform Qualtrics® to an MTurk® population. The collection occurred between January 30, 2023, and February 4, 2023. After the collected data was retrieved from Qualtrics®, it was cleaned in order to prepare for data analysis.

4.2.1 Population and Sample

The population for this survey consisted of full-time individuals employed in the U.S. Out of a total of 700 respondents, four did not consent, and 39 failed the bot check. The 13 responses that did not meet the employment criteria to participate in the study and the 165 responses that failed the instructional manipulation check were removed. Next, the time taken to complete the survey was examined, and extremely short completion times (3 minutes or less) were excluded.

None of the responses had extremely long completion times (the longest was 40 minutes). Next, the difference between the minimum and maximum scores between the responses of each scale was checked. Responses that showed a significant difference in values for a scale were excluded. The final sample after data cleaning consisted of 380 responses.

The valid sample consisted of 47.1% females and 52.9% males. The largest age group was between 25 and 34 years, comprising 67.1% of all respondents. This was followed by the age group of 35 to 44 years, consisting of 18.6% of the sample. Of the respondents, 89.5% were Caucasian or White, 1.6% were African American, 5% were Asians or Pacific Islanders, 1.5% were Hispanic, 1.3% were American Indian and 0.3% belonged to other ethnic groups. 28.4% of the respondents were employed in the manufacturing, construction, and mining sector, 24.6% in the information technology sector, 15.8% in healthcare, 8.2% in education, 7.6 % in professional services, and 5.3% in the hospitality sector. Of the respondents, 67.6% had a 4-year degree, 17.6% had a masters/professional degree, and 7.9% were high school graduates. 52.4% of respondents had worked in their organization for 3 to 5 years, and 20.8% for 6 to 8 years. 50% of the participants were employed at firms with 500 to 5,000 employees, while 36.8% were employed at firms with over 5,000 employees. 87% of the respondents managed employees, while 13% did not. The detailed demographics of the sample are provided in Table 4.1.

Table 4.1

Demographics of the MTurk® Sample

Factor	Frequency
Gender	
Male	52.9%
Female	47.1%

Table 4.1 cont.

Factor	Frequency
18-24	3.7%
25-34	67.1%
35-44	18.7%
45-54	5.8%
55-64	4.2%
Above 64	0.5%
Race/Ethnicity	
African American or Black	2.3%
American Indian	1.7%
Asian or Pacific Islander	4.7%
Caucasian or White (other than Hispanic)	89.8%
Hispanic	1.3%
Other	0.2%
Education	
Less than high school	0.2%
High school graduate or equivalent	10.4%
Some college credit but no degree	4.2%
2-year degree: Associate degree	3.8%
4-year degree: Bachelor's degree	63.1%
Master's/Professional degree	18.2%
Tenure (in years)	
0 -2	6.6%
3 - 5	53.6%
6 - 8	20.1%
9 - 11	9.7%
12 - 14	4.4%
More than 15	5.5%
Industry	
Agricultural, forestry, fishing and hunting	2.3%
Education	7.6%
Healthcare	20.1%
Hospitality and Restaurants	45.3%
Information Technology related	24.6%

Table 4.1 cont.

Factor	Frequency
1 - 50	0.6%
50 - 500	5.1%
500 -5000	20.6%
More than 5000	43.6%

4.2.2 Data Analysis

To begin data analysis, composite scores were created for the study variables using the company and published scales. These were designated as (a) skill seeking (SS_Study and SS_Published); (b) connectedness to goals (CG_Study and CG_Published); (c) career satisfaction (CS_Study and CS_Published); and organizational climate for performance (OCP_Study and OCP_Published). The IBM® SPSS® 29.0.0.0 statistical software package was used to examine the descriptive statistics, which included the statistical mean, standard deviation, skewness, and kurtosis statistics. These metrics are presented in Table 4.2. The means of the two sets of scales were very close. The mean divided by the maximum value and the standard deviation divided by the maximum value were almost identical for each pair of scales. The values of skewness (less than 2) and kurtosis (less than 7) suggested a normal distribution of the data for each scale (Hair et al., 2010).

Table 4.2

Descriptive Statistics of the MTurk® Sample

	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
Variable						Statistic	Std. Error	Statistic	Std. Error
SS_Study	380	2.33	5.00	4.00	0.52	-0.81	0.13	0.66	0.25
SS_Published	380	2.00	4.80	3.97	0.52	-0.97	0.13	1.07	0.25

Table 4.2 cont.

Variable	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
CG_Published	380	3.00	7.00	5.61	0.72	-0.74	0.13	0.68	0.25
CS_Study	380	1.00	5.00	3.99	0.61	-1.59	0.13	4.70	0.25
CS_Published	380	1.00	5.00	4.00	0.59	-1.43	0.13	4.16	0.25
OCP_Study	380	1.33	5.00	3.94	0.51	-0.89	0.13	1.81	0.25
OCP_Published	380	1.18	3.91	3.25	0.33	-1.55	0.13	5.58	0.25

Note. N = 380. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance.

Next, the reliability of the scales was examined. The results are shown in Table 4.3. The reliability of the study scales for career satisfaction, connectedness to goals, and organizational climate for performance were slightly lower than the reliability of the published scales. The reliability of the study scales for skill-seeking orientation was significantly lower than the reliability of the published scales. In prior research studies, the reliabilities of the published scales for skill seeking ranged between 0.87 to 0.95, connectedness to goals ranged between 0.76 to 0.90, career satisfaction between 0.83 and 0.89, and organizational climate for performance between 0.86 and 0.88 (Tracey & Tews, 2005; Taormina, 1997; Greenhaus et al., 2005; Patterson et al., 2005). The reliabilities of the company scales were lower in this study; however, the reliabilities of the published scales were also lower for this data set than in prior research studies. The reliability of the skill-seeking company scale was particularly low. The number of items in this scale was only three, which can contribute to a low value of Cronbach's alpha (Hair et al., 2009). Prior literature has shown that the higher the number of items in a scale, the more the scale reliability increases (Abdelmoula et al., 2015). The recommended number of scale items in order to make a scale reliable is six (Carifero, 2007). The skill-seeking company scale was further investigated by looking at the inter-item correlation matrix. The correlation between the

first item and the other two items was 0.21 and the correlation between item two and three was 0.24 which were between the recommended values of 0.2 and 0.4 (Cohen & Swerdlik, 2005). The three items in this scale correspond to an individual's awareness of skills to acquire ("I am aware of what training I need in order to improve my skills"), their motivations to acquire these skills ("I am motivated to seek training to improve my skills"), and the opportunities at their respective companies to enrich them with these skills ("I am excited about the training opportunities available at the company"). It is conceivable that the respondents were in situations where, even if they had an awareness of skills they needed to acquire, they did not have the motivation for skills acquisition, or their employers placed no emphasis on skills enrichment. As a result, these three items could have garnered responses that were independent of each other, resulting in a low reliability value.

Table 4.3

Reliability Statistics

Variable	Cronbach's Alpha	No. of Items
SS_Study	0.46	3
SS_Published	0.70	5
CG_Study	0.64	5
CG_Published	0.74	5
CS_Study	0.74	4
CS_Published	0.76	5
OCP_Study	0.73	6
OCP_Published	0.77	11

Note. N = 380. SS = Skill Seeking. CG = Connectedness to Goals.
CS = Career Satisfaction. OCP = Organizational Climate for Performance.

Following the reliability analysis, partial correlations were calculated using SPSS® 29.0.0.0 to examine the association of each pair of scales for each variable. When all scale items are measured by a single questionnaire survey at one time, the relationships among the constructs

might be distorted by the effect of common method variance (Podsakoff et al., 2003). In order to avoid the influence of common method variance on the observed pair of scales, partial correlation coefficients were calculated, controlling for the effects of the common method variance marker. The results of the analysis are shown in Table 4.4. Partial correlation tests showed a significant relationship between SS_Study and SS_Published ($r = 0.89$ and $p < .001$), CG_Study and CG_Published ($r = 0.80$ and $p < .001$), CS_Study and CS_Published ($r = 0.84$ and $p < .001$), and OCP_Study and OCP_Published ($r = 0.78$ and $p < .001$). The results of these tests suggest that there are strong positive and significant correlations between the pairs of scales for each variable.

Table 4.4

Partial Correlation between Study and Published Scales

Control Variable	Variable	CS_ Published	SS_ Published	CG_ Published	OCP_ Published	*df*	Significance (2-tailed)
CMV	CS_Study	0.84				377	< .001
	SS_Study	-	0.89			378	< .001
	CG_Study	-	-	0.80		378	< .001
	OCP_Study	-	-	-	0.78	377	< .001

Note. N = 380. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance. CMV = Common Method Variance.

The association between scales was further explored using structural equations modeling (SEM). The IBM® SPSS® AMOS 29.0.0.0 statistical software package was used to test the fit indices of the structural model for each variable with both scales (study and published) loading onto one factor versus the two scales loading on two different factors. Two models were tested for each scale, one being a 1-factor model of combined study and published scales and the other being a 2-factor model with study and published scales loading onto separate factors. Eight models (Model 1-Model 8) were tested; the results are shown in Table 4.5. The goodness of fit

for the measurement models was determined based on the following cut-off criteria (a) the root mean squared error of approximation (RMSEA) ≤ .08; (b) the standardized root mean square residuals (SRMRs) ≤ .08; (c) the comparative fit index (CFI) ≥ .90; (d) the smallest value of the Akaike information criterion (AIC); (e) the Bayes information criterion (BIC); and (f) the absolute correlation residuals (ACR) ≤ .10 (Kline, 2016).

For the skill-seeking scale, the two models (Model 1 and Model 2) that were compared are shown in Appendix K (Figure K1 and Figure K2). Between the structural models Model 1 and Model 2, Model 1 resulted in a decreased fit compared to Model 2 ($\Delta\chi^2[1] = 221.01$, $p < .001$). The two models (Model 3 and Model 4) that were compared for the connectedness to goals scale are shown in Appendix K (Figure K3 and Figure K4). Model 3 resulted in a decreased fit compared to Model 4 ($\Delta\chi^2[1] = 68.58$, $p < .001$). Model 5 and Model 6 were compared for the career satisfaction scale. These models are shown in Figure K5 and Figure K6 in Appendix K. Model 5 resulted in a decreased fit compared to Model 6 ($\Delta\chi^2[1] = 64.6$, $p < .001$). Finally, Model 7 and Model 8 (Figure K7 and Figure K8) were compared for the organizational climate for performance scale. Model 7 resulted in a decreased fit compared to Model 8 ($\Delta\chi^2[1] = 16.4$, $p < .001$).

The above analysis suggests that the 2-factor models M2, M4, M6, and M8 resulted in a greater fit than 1-factor models M1, M3, M5, and M7, respectively. Before drawing any conclusions from these results, I decided to focus on the discriminant validity of these factors, as examining discriminant validity is one of the key building blocks of SEM evaluation (Hair et al., 2010). A measure of discriminant validity demonstrates the extent to which factors are distinct and uncorrelated (Hair et al., 2014). Establishing discriminant validity requires that a

scale not correlate too highly with measures from which it is supposed to differ (Campbell, 1960).

Fornell and Larcker (1981) developed a statistical test of discriminant validity for the two-construct model, which indicated that "for any two constructs, A and B, the square root of Average Variance Extracted (AVE) for A and the square root of AVE for B both need to be larger than the correlation between A and B" (pp. 45–46). Using this technique, for discriminant validity to be supported, a comparison of the square root of AVE to the correlation between variables was made, and the results are illustrated in Table 4.6. These results indicate that the constructs corresponding to the study scales do not possess discriminant validity compared to the published scales. The square root of AVE values for the study scale and the published scale for skill seeking (0.47 and 0.56) are significantly lower than the correlation value between the study and published scale (1.56). A similar phenomenon can be seen when making a comparison of the square root of AVE and correlation for the published and study scales of connectedness to goals, career satisfaction, and organizational climate for performance measures (0.22 and 0.60, 0.75 and 0.72, 0.56 and 0.48 respectively) which are lower than the correlation value between the study and published scales (1.22, 1.16, 1.09 respectively). The value of implied correlation between the factors of the 2-factor models (M2, M4, M6, and M8) being above one may be viewed as an indication of a misspecification of the models (Can et al., 2015; Farrar & Glauber, 1967). The high correlation between the factors of the 2-factor models indicates that the factors are very similar and that the models are inadmissible for further analysis (Grewal et al., 2004).

In conclusion, the lack of discriminant validity and the inadmissibility of the 2-factor models implies that the measures representing study scales are not empirically unique compared

to published scales, and therefore, the study scales capture measures in a structural equation model that correspond to published scales (Hair et al., 2010).

Table 4.5

SEM Model Fit Indices for Models

Model (M)	χ^2	*df*	RMSEA (90% CI)	SRMR	CFI	AIC	BIC	ACR	LR of $\Delta\chi^2$	Model comparison
M1: 1-factor-Combined scales (Skill seeking)	235.11	20	.16 (.14 - .18)	0.06	0.76	267.11	267.89	5		
M2: 2-factors-study & published scales (Skill seeking)	14.10	19	.00 (.00 - .03)	0.02	1	48.06	115.04	0	221.01, *df* = 1, *p* = 0.00	vs. M1
M3: 1-factor-Combined scales (Connectedness to goals)	160	35	.09 (.08 - .11)	0.05	0.88	199.97	278.78	21		
M4: 2-factors-study & published scales ((Connectedness to goals)	91.42	34	.06 (.05- .08)	0.04	0.94	133.42	216.16	4	68.58, *df* = 1, *p* = 0.00	vs. M3
M5: 1-factor-Combined scales (Career satisfaction)	102.90	27	.08 (.06 - .10)	0.03	0.93	138.88	209.81	0		
M6: 2-factors-study & published scales (Career satisfaction)	38.29	26	.03 (.00 - .08)	0.02	0.99	76.29	151.1	0	64.6, *df* = 1, *p* = 0.00	vs. M5

Table 4.5 (continued)

Model (M)	χ^2	*df*	RMSEA (90% CI)	SRMR	CFI	AIC	BIC	ACR	LR of $\Delta\chi^2$	Model comparison
M7: 1-factor-Combined scales (Org. climate)	201.90	119	.04 (.03 - .05)	.04	.94	269.86	403.83	5		
M8: 2-factors-study & published scales (Org. climate)	185.50	118	.03 (.02 - .04)	.04	.95	255.53	393.44	4	16.4, *df* = 1, *p* = 0.00	vs. M7
M9: 4 factor Model	1581.60	896	.04 (.04 - .04)	.04	.88	1769.61	2139.99	156		
M10: Harman's single-factor Model	2062.60	902	.05 (.05 - .06)	.05	.79	2238.56	2585.29	605	487.9, *df* = 9, *p* = 0.00	vs. M9
M11: CFA Model with marker variable	2286.30	1215	.04 (.04 - .05)	.06	.87	2508.27	2863.41	-		
M12: Baseline Model	2305.70	1233	.04 (.04 - .05)	.06	.86	2499.70	2897.47	-	66.5, *df* = 1, *p* = 0.00	vs. M13
M13: Method-C Model	2402.90	1232	.04 (.04 - .05)	.07	.85	2590.87	2876.30	-		

Note. *df* = degrees of freedom. RMSEA = root mean square error of approximation. SRMR = standardized root mean square residual. CFI = comparative fit index. AIC = Akaike information criterion. BIC = Bayes Information Criterion. ACR = absolute correlation residuals. LR = likelihood ratio test. CFA = confirmatory factor analysis. C = common.

Table 4.6

Implied Correlations, Average Variance Extracted (AVE), Composite Reliability (CR), and square root of AVE for Models 2, 4, 6, and 8

Variable	SS_ Study	SS_ Published	CG_ Study	CG_ Published	CS_ Study	CS_ Published	OCP_ Study	OCP_ Published
SS_Study	0.47							
SS_Published	1.56	0.56						
CG_Study	-	-	0.22					
CG_Published	-	-	1.22	0.60				
CS_Study	-	-	-	-	0.75			
CS_Published	-	-	-	-	1.16	0.72		
OCP_Study	-	-	-	-	-	-	0.56	
OCP_Published	-	-	-	-	-	-	1.09	0.48
CR	0.46	0.70	0.89	0.74	0.83	0.84	0.73	0.77
AVE	0.47	0.56	0.05	0.36	0.56	0.52	0.32	0.23

Note. Square root of AVE along the diagonal. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance.

Common-method variance (CMV) is the spurious variance that is attributable to the measurement method rather than to the constructs the measures are assumed to represent (Podsakoff et al., 2003). In this scale validation study, there was a potential for common method variance because the data were self-reported and collected through a single questionnaire during the same period. An examination of CMV was first conducted via Harman's single-factor test. To conduct the Harman's single factor test, a measurement model was created in which all items from the study and published scales for each of the four variables (skill seeking, connectedness to goals, career satisfaction, and organizational climate for performance) were loaded onto one factor. This Harman model (Model 10) with all the items for the scales- SS_Study,

SS_Published, CG_Study, CG_Published**,** CS_Study, CS_Published**,** OCP_Study, and OCP_Published loading onto a single factor is shown in Figure 4.2. The Harman single-factor model was compared to a model with all scales loading on their respective factors (Model 9 shown in Figure 4.1). Model 10 did not fit the data well and resulted in a decreased fit compared to Model 9 ($\Delta\chi^2[9] = 497.9$, $p < .001$), indicating that common method variance was not an issue. For added rigor and to test for a broader range of CMV issues, Podsakoff et al. (2003) suggested conducting a second step of CMV analysis with the CFA marker technique. This study used the seven-item "attitude towards the color blue" scale, which is considered the ideal marker variable (Miller & Simmering, 2022). To assess the presence and influence of common method variance, a series of models were tested following the recommendations of Williams et al. (2010). First, a CFA model with the marker variable was tested. The CFA marker model provided the correlations between the study variables and the marker variable. Second, a baseline model where the correlations between the marker and substantive latent variables were set to 0, and the unstandardized regression weights and variances for the marker variable were fixed to the values obtained from the initial CFA marker model was tested. Third, a constrained model (Method-C) was created where the 44-factor loadings from the latent marker variable were constrained to be equal. The constrained model (Method-C) did not offer a better fit than the baseline model ($\Delta\chi^2[1] = 66.5$, $p = 0.00$), proving that there was no shared CMV between the indicators of the substantive variables and the latent marker variable (Williams et al., 2010). The results are shown in Table 4.6.

Figure 4.1

Model 4-SPSS AMOS Diagram for Four-factor Model

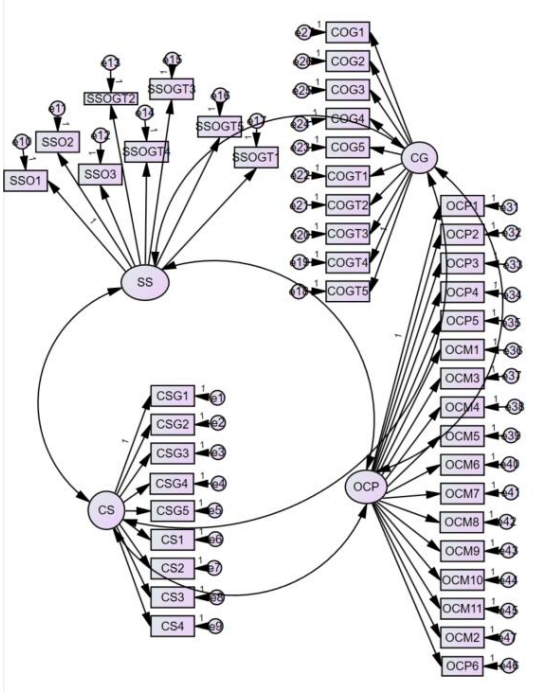
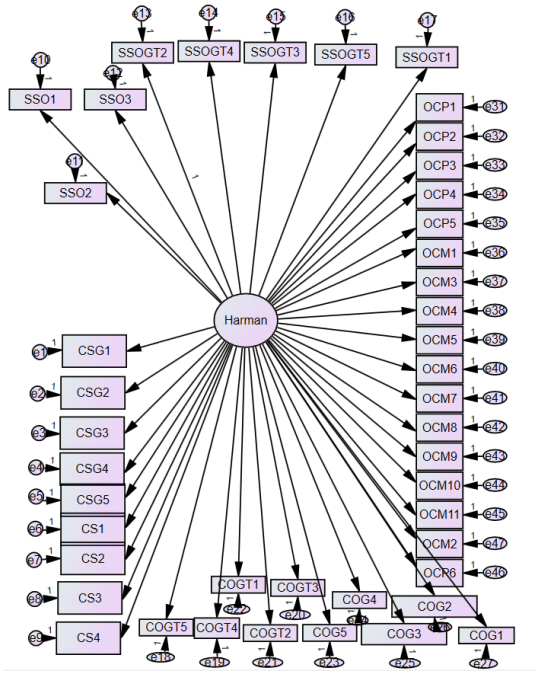


Figure 4.2

Model 5-SPSS AMOS Diagram for Harman Model



In summary, the results of the partial correlation tests and the structural equation models demonstrated the comparability of the company scale used in the study to published scales. The results prove that the company's survey instrument is supported by the same theoretical underpinnings that the published scales rest upon. In the next section, I present the results of the hypotheses testing.

4.3 Data Analysis

In this section, I present a description of the sample, data cleaning, descriptive statistics, measurement model, and hypotheses testing. To test the hypotheses of this study, a quasi-experiment field study with nonequivalent groups was conducted at the company. A questionnaire was used to collect responses from the employees in an effort to investigate the effects of a skill-based performance management program on employee attitudes and organizational climate for performance. Data was collected between January 2020 and May 2022.

4.3.1 Sample Characteristics

The population for this survey consisted of full-time individuals employed at a company who were the initial recipients of the SBPM intervention (group 1) and a second group of employees who served as a control group as their SBPM interventions were delayed (group 2). For the purpose of comparing the groups, the demographic information of each sample group was examined. No demographic information was collected from the respondents, so this data was obtained from the company's human resources department.

The intervention group comprised 62% females and 38% males, and the control group comprised 60% females and 40% males. In the two sample groups, the largest age group was between 18 and 24 years and comprised 45% and 47% of all respondents, respectively. The next

largest age group was the 25 to 34 years one, consisting of 23% of the sample in both groups. The most frequent tenure was between 3 to 5 years in both sample groups and constituted 65% and 60% of the participants, and that was followed by tenure durations of 0 to 2 years. The race information was not available by group, but the overall company consisted of 60% Caucasian, 18% African American, 6% Asian, 15% Hispanic, and 1% other. The characteristics of each group in terms of gender distribution, age distribution, and tenure was similar. These demographics summarized by sample group are shown in Table 4.7.

Table 4.7

Demographics of Groups Including Non-respondents

Factor		Intervention Group Frequency	Control Group Frequency
Gender			
	Male	38.0%	40.0%
	Female	62.0%	60.0%
Age Group (years)			
	18-24	45.0%	47.0%
	25-34	23.0%	23.0%
	35-44	13.0%	17.0%
	45-54	10.0%	9.5%
	55-64	7.0%	3.0%
	Above 64	2.0%	0.5%
Tenure (in years)			
	0 - 2	20.0%	25.0%
	3 - 5	65.0%	60.0%
	More than 5	15.0%	15.0%

4.3.2 Data Cleaning

As the first step, the survey responses were collated into data sets that were labeled appropriately to reflect the timeframe of the collection and the group they belonged to. Each data set consisted of the survey responses by anonymized employees for the 18 scale items corresponding to the four categories of employee attitudes being studied. The collection timeframe corresponded to three discrete points of time: January 2020, November 2020, and May 2022. The group the survey responses belonged to was either Intervention or Control and as such, the data sets were named (a) 2020 Jan Intervention; (b) 2020 Jan Control; (c) 2020 Nov Intervention; (d) 2020 Nov Control; (e) 2022 May Intervention; and (f) 2022 May Control.

Within each data set, the individual scale items were labeled with a designation for the type of scale response (skill seeking, connectedness to goals, career satisfaction, and organizational climate for performance), a number corresponding to the number of scale items (1, 2, 3), a designation of the sample group they belonged to (Int, Con), and time when they were recorded (T1, T2, T3). For example, within each data set, the three items associated with skill-seeking scales (SS1, SS2, and SS3) for the group for which interventions (Int) were administered, and data collected during times T1, T2, and T3 were labeled SS1-Int-T1, SS2-Int-T1, SS3-Int-T1, SS1-Int-T2, SS2-Int-T2, SS3-Int-T2, SS1-Int-T3, SS2-Int-T3, and SS3-Int-T3, respectively.

The three individual scale item values corresponding to each sample group and collection period (e.g., SS1-Int-T1, SS2-Int-T1, SS3-Int-T1) were utilized to create a composite score within every data set. These composite scores were mapped to the associated variable name called SS-Int-Time1. The variable names corresponded to the composite scores for the responses associated with (a) each of the four scale types (SS, CD, CS, and OCP); (b) the two sample

groups (Int and Con); and c) the three time periods for collection (Time1, Time2, and Time3). The combinations from four scale types, two sample groups, and three collection periods resulted in 24 variable labels. The names of the variables and the assigned variable number are shown in Table 4.8. Subsequent tables will illustrate results using the variable numbers.

As the next step in the data cleaning process, each data set's responses were checked to ensure the respondents acknowledged that they understood the instructions and provided informed consent to participate in the study. Next, each data set was tested for missing data and outliers. A check for missing data was performed visually, and the data was examined for outliers using the Mahalanobis distance test (Kline, 2016). SPSS® 29.0.0.0 was used to calculate the Mahalanobis distance and the chi-square value based on the number of variables in the data set. The analysis was conducted for each group across the three time periods. The chi-square values were then compared for significance at the .001 level. ($p < .001$). The results of the analysis showed only four outliers, and these are shown in Table 4.8. These outliers were visually inspected and deemed as fitting a normal response profile. As such, these outliers were retained in the data set for analysis. The final sample size of the intervention group for Time 1, 2, and 3 were 166, 151, and 148, respectively, and for the control group for Time 1, 2, and 3 were 154, 147, and 155, respectively.

Table 4.8

Mahalanobis Test

Group	Response Number	Mahalanobis Distance	Chi-Square Value
Int- Time2	88	23.93	0.00
Con- Time2	99	19.74	0.00
Int- Time3	109	19.00	0.00
Con- Time3	11	18.17	0.00

4.3.3 Descriptive Statistics

The next step after completing data cleaning was to examine the descriptive statistics of the data. The descriptive statistics examined included the minimum, maximum, mean, standard deviation, skewness, and kurtosis (Hair et al., 2018). The descriptives are shown in Table 4.9.

Table 4.9

Descriptive Statistics

Variable	*N*	Min.	Max.	Mean	Std. Deviation	Skewness Statistic	Kurtosis Statistic
SS-Int - Time1	166	1.00	5.00	3.64	0.94	-0.48	-0.50
CG-Int - Time1	166	1.20	5.00	3.72	0.87	-0.82	0.25
CS-Int - Time1	166	1.25	5.00	3.75	0.86	-0.85	0.41
OCP-Int - Time1	166	1.00	4.83	3.56	0.93	-0.56	-0.31
SS-Con - Time1	154	1.00	5.00	3.65	0.89	-0.76	0.45
CG-Con - Time1	154	1.20	5.00	3.73	0.86	-0.56	-0.18
CS-Con - Time1	154	1.25	5.00	3.78	0.80	-0.59	-0.02
OCP-Con - Time1	154	1.17	5.00	3.65	0.92	-0.80	0.32
SS-Int - Time2	151	2.33	5.00	4.14	0.60	-0.67	0.03
CG-Int - Time2	151	1.40	5.00	3.94	0.69	-0.67	0.15
CS-Int - Time2	151	1.00	5.00	3.96	0.70	-0.77	0.96
OCP-Int - Time2	151	1.40	5.00	3.94	0.69	-0.67	0.15
SS-Con- Time2	147	1.00	5.00	3.78	0.90	-0.71	0.05
CG-Con- Time2	147	1.40	5.00	3.91	0.77	-0.85	0.65
CS-Con- Time2	147	1.00	5.00	3.82	0.85	-0.76	0.36
OCP-Con- Time2	147	1.17	5.00	3.88	0.81	-0.95	0.84
SS-Int- Time3	148	1.33	5.00	3.87	0.85	-0.94	0.62
CG-Int- Time3	148	1.33	5.00	4.06	0.65	-0.97	0.98
CS-Int- Time3	148	1.67	5.00	3.96	0.76	-0.92	0.17
OCP-Int- Time3	148	1.50	5.00	4.07	0.71	-0.75	0.18
SS-Con- Time3	155	1.00	5.00	3.81	0.85	-0.73	0.38
CG-Con- Time3	155	1.17	5.00	3.95	0.71	-0.88	1.02
CS-Con- Time3	155	1.33	5.00	3.78	0.82	-0.65	0.02
OCP-Con- Time3	155	1.25	5.00	3.86	0.78	-0.94	1.08

Note. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance.

The descriptive statistics were first visually examined to compare the means within each type of scale response and between the two groups before being tested statistically. The visual graph is shown in Appendix L. For the intervention group, SS registered an increase from T1 (3.64) to T2 (4.14) and then dropped in T3 (3.87). For the control group, SS increased slightly and then remained largely flat from T1 (3.65) to T2 (3.78) and T3 (3.81). For the intervention group, CG registered an increase from T1 (3.72) to T2 (3.94) and continued to increase in T3 (4.06). For the control group, CG made a more modest increase from T1 (3.73) to T2 (3.91) and T3 (3.95). CS registered a modest increase from T1 (3.75) to T2 (3.96) and then stayed flat in T3 (3.96) for the intervention group. For the control group, CS stayed flat from T1 (3.78) to T2 (3.82) to T3 (3.78). Finally, OCP registered a strong increase from T1 (3.56) to T2 (3.94) and increased further in T3 (4.07). However, for the control group, OCP made a more modest increase from T1 (3.65) to T2 (3.88) to T3 (3.86).

4.3.4 Reliability and Correlations

The next step was to assess the reliability of the scale responses for the 24 variables. Cronbach's alpha was calculated for each scale and is shown along the diagonal in Table 4.10. The reliability values for skill-seeking (Table 4.10 variable numbers 1, 5, 9, 13, 17, and 21) range between 0.70 to 0.77. Similarly, the reliability values for connectedness to goals (Table 4.10 variable numbers 2, 6, 10, 14, 18, and 22) range between 0.77 to 0.82. The reliability values for career satisfaction (Table 4.10 variable numbers 3,7,11,15,19, and 23) range between 0.70 and 0.78, and the ones for organizational climate for performance (Table 4.10 variable numbers 4, 8, 12, 16, 20, and 24) range between .79 and 0.88. Cronbach's alpha values for all scales were consistent across the time periods and exceeded the value of .70, which suggested good scale reliability for all the instruments used in the study (Hair et al., 2011).

The correlations among variables are presented in Table 4.10. Skill seeking, connectedness to goals, career satisfaction, and organizational climate for performance for the intervention group for Time 1 show a high correlation. This correlation may be due to the possibility that an employee with a particular set of employee attitudes around skill-seeking will have similar attitudes around the other three groups of scale responses for the same data collection period. Similarly, skill seeking, connectedness to goals, career satisfaction, and organizational climate for performance for the control group for Times 1, 2, and 3 show high correlations between the clusters. By contrast, correlations outside these clusters are non-existent. Since we anonymized the data, employee number 1 in one data set is distinct from employee number 1 for a different data set. Given that they are distinct employees, the correlation between them is non-existent.

Table 4.10

Correlation Table

	1	2	3	4	5	6	7	8	9	10	11	12
1. SS-Int - Time1	.77											
2. CG-Int - Time1	.71*	.84										
3. CS-Int - Time1	.72*	.82*	.78									
4. OCP-Int - Time1	.80*	.75*	.73*	.88								
5. SS-Con - Time1	-.14	-.03	-.08	-.02	.72							
6. CG-Con - Time1	-.12	-.04	-.12	-.08	.78*	.82						
7. CS-Con - Time1	-.12	-.09	-.12	-.07	.63*	.66*	.74					
8. OCP-Con - Time1	-.13	-.06	-.07	-.08	.74*	.85*	.67*	.88				
9. SS-Int - Time2	-.06	-.07	.00	-.01	.12	.07	.16*	.01	.70			
10. CG-Int - Time2	-.11	-.07	-.01	.03	.15	.10	.25*	.07	.55*	.80		
11. CS-Int - Time2	-.10	-.13	-.07	.02	.12	.08	.21*	.07	.54*	.72*	.70	
12. OCP-Int - Time2	-.11	-.07	-.01	.03	.15	.10	.25*	.07	.55*	.90	.72*	.80
13. SS-Con- Time2	.13	.09	.12	.14	-.02	.01	.01	.03	.14	.15	.15	.15
14. CG-Con- Time2	.04	.02	.05	.07	.09	.03	.01	.04	.04	.03	.05	.03
15. CS-Con- Time2	-.04	-.09	-.03	.01	.11	.13	.14	.14	.17*	.10	.15	.10
16. OCP-Con- Time2	.00	-.04	.01	.06	.12	.08	.10	.11	.13	.11	.17*	.11
17. SS-Int- Time3	-.03	-.17	-.13	-.15	.07	-.03	-.09	.03	-.04	-.02	-.06	-.02
18. CG-Int- Time3	.05	.11	.04	.16*	-.04	-.05	-.05	-.07	-.02	.05	.07	.05
19. CS-Int- Time3	.12	.10	.06	.22*	-.03	.02	.03	.00	-.01	.07	.08	.07
20. OCP-Int- Time3	.06	.11	.03	.17*	.03	.06	.06	.07	.04	.11	.09	.11
21. SS-Con- Time3	.00	-.17	-.10	-.14	-.01	-.07	-.13	.01	-.05	.01	-.04	.01
22. CG-Con- Time3	-.14	-.09	-.14	-.08	.05	.07	.10	.10	-.12	-.09	-.06	-.09
23. CS-Con- Time3	.01	.06	.02	.05	.16*	.13	.12	.17*	-.12	-.05	-.04	-.05
24. OCP-Con- Time3	.02	.04	-.02	-.01	-.02	-.01	.01	.10	-.11	-.06	-.08	-.06

Table 4.10 cont.

	13	14	15	16	17	18	19	20	21	22	23	24
13. SS-Con- Time2	.74											
14. CG-Con- Time2	.71*	.80										
15. CS-Con- Time2	.78*	.78*	.79									
16. OCP-Con- Time2	.77*	.76*	.86*	.86								
17. SS-Int- Time3	-.05	.06	.03	-.05	.77							
18. CG-Int- Time3	-.02	-.09	-.03	-.10	-.11	.81						
19. CS-Int- Time3	-.04	-.15	-.10	-.11	-.15	.64*	.78					
20. OCP-Int- Time3	.01	-.04	.03	-.09	-.02	.77*	.59*	.78				
21. SS-Con- Time3	-.05	.06	.03	-.05	.90	-.11	-.15	-.02	.70			
22. CG-Con- Time3	-.07	-.08	-.07	-.08	-.03	-.11	-.07	-.14	.00	.77		
23. CS-Con- Time3	-.01	-.07	-.04	-.01	-.02	-.14	-.13	-.17	.00	.66*	.72	
24. OCP-Con- Time3	.06	-.05	.24*	.25*	.07	-.17	-.20	-.22	.10	.64*	.72*	.79

Note. * Correlation is significant at the $p < .05$ level two tailed. Cronbach's Alphas are reported along the diagonal. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance.

4.3.5 Measurement Model

Next, data was loaded into AMOS, and a four-factor correlated model was created and analyzed. The model is shown in Figure 4.3. Time 1 combined data for both groups was used to calculate the estimates for the model. I used the data from Time 1 as the two groups were homogenous at this point and not impacted by the intervention. The output data "assessment of normality" was examined for the kurtosis and critical value of the items. Multivariate normality was not met for the raw data with a Mardia statistic of 5.4 and a critical ratio of 1.8 ($p < .05$). Therefore, a 2,000-case bootstrapping procedure at the 95% confidence level was performed (Kline, 2016). The results indicated that non-bootstrapped estimates were not substantively different compared to bootstrapped estimates. Consequently, data were considered to be multivariate normal, and non-bootstrapped estimates were reported (Kline, 2016).

The goodness of fit for the measurement model was determined based on the following cut-off criteria: (a) the root mean squared error of approximation (RMSEA) ≤ .08; (b) the standardized root mean square residuals (SRMR) ≤ .08; and (c) the comparative fit index (CFI) ≥ .90 (Kline, 2016). The four-factor correlated model (M1) provided an adequate fit for the data (RMSEA = .012, SRMR = .0259, CFI = .997). For model 1, the composite reliability scores (CR; .73 - .90) were above the recommended .6 threshold, demonstrating reliability (Bagozzi & Yi, 1988; see Table 4.12). As a further assessment of the measurement model fit of model 1, the factor loadings of all items were evaluated. Factor loadings of all items should be above the minimum threshold of 0.5 to indicate convergent validity (Kline, 2016). For model 1, the factor loadings were close to but below the 0.5 value, indicating that convergent validity was an issue. Several correlations between the factors were lower than the square root of the AVE for individual factors, indicating an issue with discriminant validity (Bagozzi & Yi, 1988).

Additionally, several of the correlation coefficients between variables were above 0.8, suggesting the presence of multicollinearity (Graham et al., 2003).

Two additional models were run to test for common method variance (Podsakoff et al., 2003). First, a model with all items loading onto one factor called the Harman model (M2) was created. The Harman model is shown in Figure 4.4. This model did not fit the data well and resulted in a decreased fit compared to Model 1 ($\Delta\chi^2[6] = 41.3$, $p < .001$). The better fit of model 1 versus the Harman model indicated that common method variance was not an issue (Podsakoff et al., 2003). Next, a model was created with an unmeasured latent variable added to model 1. All items were loaded onto an additional, unmeasured latent factor construct, and the 18-factor loadings from the latent marker variable to the substantive variables were constrained to be equal. The unmeasured latent factor model (M3) is shown in Figure 4.5. A better fit of the unmeasured latent method factor model over the model without the latent construct would signify the presence of common method variance (Richardson et al., 2009). M3 did not result in a better fit compared to M1 ($\Delta\chi^2[1] = 4.5$, $p = .03$), which provided support for the notion that the common method variance was not an issue.

Figure 4.3

Model 1-SPSS AMOS Diagram for Four-factor Model

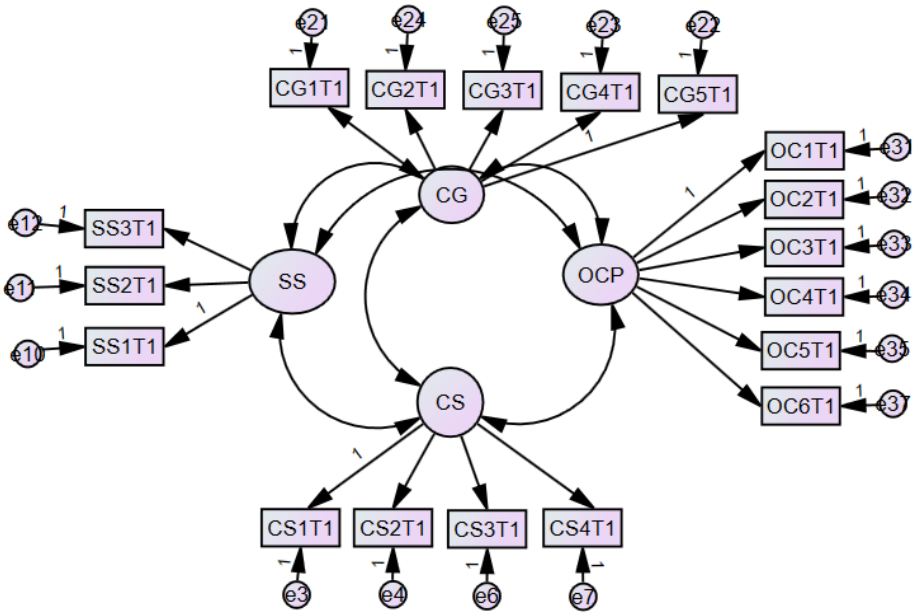


Figure 4.4

Model 2-SPSS AMOS Diagram for Harman Model

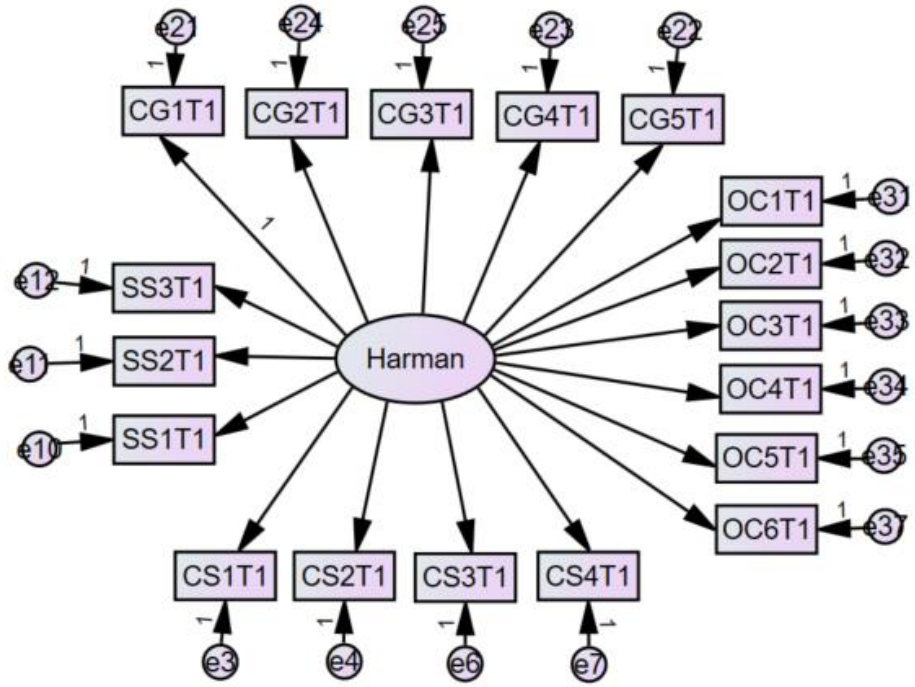


Figure 4.5

Model 3-SPSS AMOS Diagram for Unmeasured Latent Factor Model

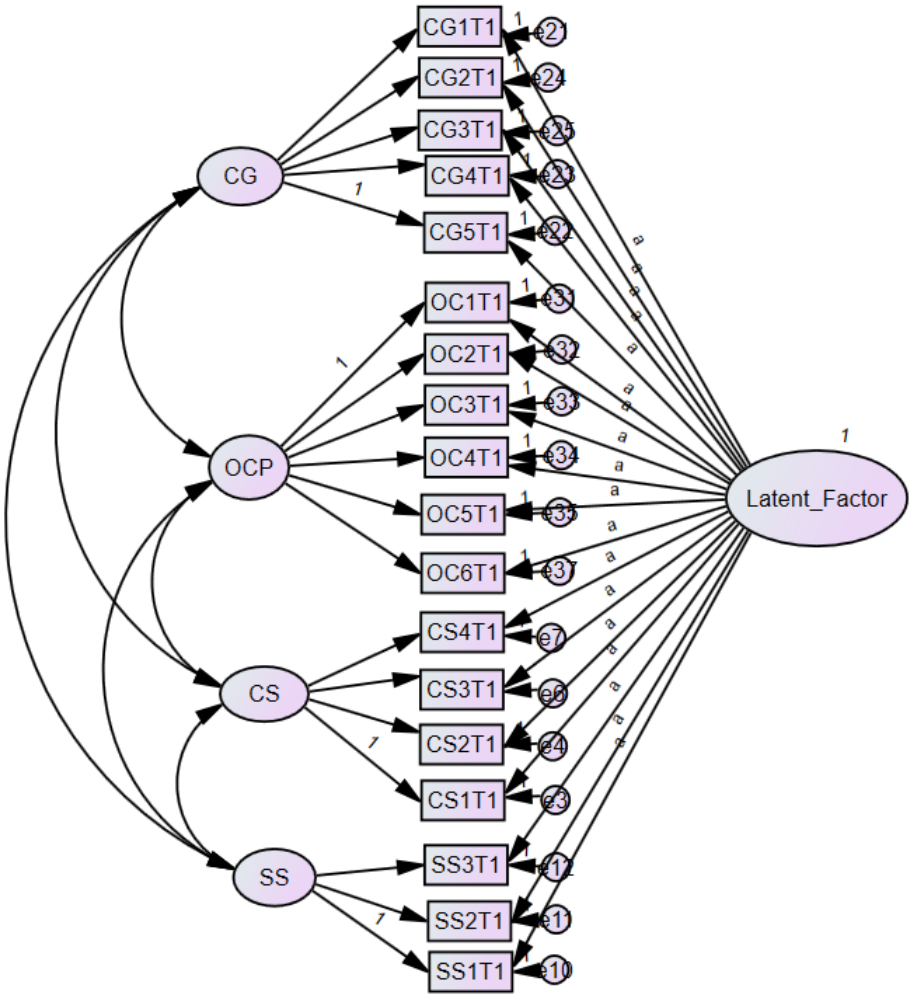


Table 4.11

SEM Model Fit Indices for Models 1, 2, and 3

Model (M)	χ^2	*df*	RMSEA (90% CI)	SRMR	CFI	AIC	BIC	ACR	LR of $\Delta\chi^2$	Model comp.
M1: 4-factor Model	135.30	129	.01 (.00 - .03)	0.02	0.99	219.30	377.60	0	41.3, *df* = 6, *p* = 0.00	vs. M2
M2: Harman's single-factor Model	176.60	135	.03 (.01 - .04)	0.03	0.98	248.60	384.30	0		
M3: Unmeasured latent factor Model	139.80	128	.01 (.00 - .03)	0.03	0.99	221.82	383.85	0	4.50, *df* = 1, *p* = 0.03	vs. M1

Note. *df* = degrees of freedom. RMSEA = root mean square error of approximation. SRMR = standardized root mean square residual. CFI = comparative fit index. AIC = Akaike information criterion. BIC = Bayes Information Criterion. ACR = absolute correlation residuals. LR = likelihood ratio test.

Table 4.12

Implied Correlations, Average Variance Extracted (AVE), and Composite Reliability (CR) for M1

Variable	SS	CG	CS	OCP
SS	0.69			
CG	0.95	0.80		
CS	0.91	0.95	0.66	
OCP	0.96	0.93	0.87	0.74
CR	0.74	0.90	0.75	0.85
AVE	0.48	0.49	0.43	0.54

Note. Square root of AVE along the diagonal. SS = Skill Seeking.
CG = Connectedness to Goals. CS = Career Satisfaction.
OCP = Organizational Climate for Performance.

Given the high level of multicollinearity between the variables of the measurement model, the next step in the data analysis process was to create one combined variable using the four dependent variables and compare the value for the three time periods. The details are provided in the next section.

4.3.6 ANOVA Analysis

A repeated measure analysis of variance (ANOVA) was conducted to compare the effects of SBPM at Time 1, 2, and 3. For the analysis, a single combined dependent variable was created using the four dependent variables (skill seeking, connectedness to goals, career satisfaction, and organizational climate for performance). The results of the ANOVA are presented in Table 4.13. The results show a statistically significant difference in the combined variable for Time 1 (3.68), Time 2 (3.92), and Time 3 (3.91; $F = 11.24$, $df = 2$, $p = .00$).

Table 4.13

ANOVA Results for the Combined Variable

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	11.68	2	5.84	11.24	0.00
Within Groups	477.00	918	0.52		
Total	488.68	920			

The result suggests that the mean score for the combined attitudinal variable changed significantly over time. In order to identify the source of the significant difference in the combined variable, post hoc tests were utilized. A MANOVA was conducted as a follow-up test to the ANOVA. The details are presented in section 4.3.8.

4.3.7 MANOVA Requirements and Assumptions Testing

In order to use the MANOVA test, assumptions regarding the data must be verified (Field, 2018). The assumptions are (a) there must be two or more continuous dependent variables; (b) the independent variable must consist of two or more categorical, independent groups; (c) independence of observations must exist; (d) adequate sample size must be present; (e) data must be multivariate normal for each of the independent variable groups; (f) there must be an absence of multicollinearity; (g) there must a linear relationship between the dependent variables for each group of the independent variable; (h) there must be an absence of outliers in the data for each dependent variable; and (i) there must be homogeneity of variance-covariance matrices (Tabachnick & Fidell, 2006). Before conducting the multivariate analysis of variance tests, these assumptions for using MANOVA were investigated. Some assumptions were examined with general observation, while others were investigated using SPSS® Statistics 29.0.0.0. The results of the assumptions testing are as follows:

1. Continuous Dependent Variables- MANOVA assumes two or more continuous dependent variables. This assumption is met, as the four dependent variables in this study are measured at the interval level. These are the skill-seeking orientation, connectedness to goals, career satisfaction, and organizational climate for performance survey scores measured pre-intervention and post-intervention.
2. Categorical Independent Variables- This assumption is satisfied as the independent variables in this study (SBPM and time) are categorical. For SBPM, the categorical groups are intervention and control, and for time, the groups are Time 1, Time 2, and Time 3.
3. Independence of Observations- The observations are independent because no respondent is included in the intervention and control groups. In other words, every respondent is either in the intervention or control groups but never in both.
4. Adequate Sample Size- For a multivariate analysis of variance to be viable, there must be an adequate sample size. G*Power was used to calculate the sample size required to compare the two groups with a 95% confidence level and a 5% margin of error. The analysis showed that 66 respondents would be the minimum sample size necessary to achieve the desired power to conduct a MANOVA test to compare the two groups on pre- and post-measures. For the study, the sample size of the intervention group for Time 1, 2, and 3 were 166, 151, and 148, respectively, and the sample size for the control group for Time 1, 2, and 3 were 154, 147, and 155, respectively. Hence, the sample size was adequate, and this assumption is met.
5. Lack of Univariate Outliers- The data was tested to determine if each group was free of univariate outliers. To determine if there were univariate outliers associated with the intervention group and the control group, the data was examined using the Mahalanobis

distance test for each dependent variable (Kline, 2016). SPSS® 29.0.0.0 was used to calculate the Mahalanobis distance and the associated chi-square value. The analysis results showed only four outliers, which are displayed in Table 4.8. These outliers were visually inspected and deemed as fitting a normal respondent profile. Thus, it was determined that the outlier scores were likely accurate and should be kept rather than deleted.

6. Multivariate Normality- The data was tested for multivariate normality by conducting the Shapiro-Wilk Test of normality. Table 4.14 shows the Shapiro-Wilk statistic for each variable for the intervention and control groups. Based on the analysis, all the variables violated the assumption of normality with a significance level less than .05 ($p < .05$). However, the descriptive statistics of the data (Table 4.9) show the skewness and kurtosis values for the majority of the variables to be between -1 and 1. The values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal distribution (George & Mallery, 2010). Multivariate normality "can be violated to a significant degree without seriously affecting the validity of the *p v*alues or the powers of the MANOVA tests" (O'Brien & Kaiser, 1985, p. 331). Based on these results, this assumption is satisfied for this data.

Table 4.14

Shapiro-Wilk Summary of Normality

Variable	Shapiro Wilkes Statistic	*df*	Sig.
SS-Int- Time1	0.93	173	<.001
CG-Int- Time1	0.94	173	<.001
CS-Int- Time1	0.93	173	<.001
OCP-Int- Time1	0.94	173	<.001
SS-Con- Time1	0.95	160	<.001
CG-Con- Time1	0.93	160	<.001
CS-Con- Time1	0.94	160	<.001

Table 4.14 cont.

Variable	Shapiro Wilkes Statistic	*df*	Sig.
OCP-Con- Time1	0.93	160	<.001
SS-Int- Time2	0.94	161	<.001
CG-Int- Time2	0.92	161	<.001
CS-Int- Time2	0.94	161	<.001
OCP-Int- Time2	0.92	161	<.001
SS-Con- Time2	0.93	156	<.001
CG-Con- Time2	0.93	156	<.001
CS-Con- Time2	0.93	156	<.001
OCP-Con- Time2	0.93	156	<.001
SS-Int- Time3	0.91	148	<.001
CG-Int- Time3	0.93	148	<.001
CS-Int- Time3	0.90	148	<.001
OCP-Int- Time3	0.95	148	<.001
SS-Con- Time3	0.92	155	<.001
CG-Con- Time3	0.93	155	<.001
CS-Con- Time3	0.94	155	<.001
OCP-Con- Time3	0.95	155	<.001

Note. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance.

7. Linearity- The presence of linear relationships between each pair of the dependent variable (skill-seeking orientation, connectedness to goals, career satisfaction, and organizational climate for performance) for each group (intervention and control) was evaluated through the creation and analysis of scatterplot matrices (Ntumi, 2021). Each pair of dependent variables was compared using a scatterplot with a line of best fit for each pair of variables. In general, linearity is present if the data points move along the continuum with the line of best fit. If the dependent variables are not linear, a MANOVA test can be conducted. However, the power of the test is reduced. For this data set, the variables were quite linear, with minimal data points far removed from the line of best fit. Overall, each set of dependent variables showed a linear relationship, which could be acceptable for MANOVA.

8. Multicollinearity- For a MANOVA test to work well, the dependent variables must be correlated but not too closely related. Moderate correlations to stronger correlations not exceeding 0.90 are desirable (Laerd Statistics, 2023). In order to test this assumption, correlations were run in SPSS® 29.0.0.0. The results of this analysis are shown in Table 4.12 and reveal strong correlations for all dependent variables. Based on these results, there are violations related to multicollinearity with this data. An ANOVA analysis was conducted with a combined dependent variable to overcome this violation. As presented in Table 4.13, the results of the repeated ANOVA test indicated significant differences in the combined dependent variable.
9. Homogeneity of Variance-Covariance- This test examines whether the variables studied are similar for the intervention and control groups. Box's *M* test was conducted to test the homogeneity of variance-covariance matrices (Fujikoshi, 2002). This test is considered highly sensitive; hence, the significance of this test is determined at the $\alpha = .001$ level (Ntumi, 2021). The results of the Box's *M* test are shown in Table 4.15. The analyses revealed no variance-covariance homogeneity for the MANOVA data set as assessed by Box's *M* ($p < .001$). Not having homogeneity of variances and correlations is problematic if the sample sizes of the independent groups are unequal, but for equal or nearly equal group sizes, MANOVA is acceptably robust to this assumption (O'Brien & Kaiser, 1985). In my study, the group sizes are nearly equal; hence, this issue of non-homogeneity of variances and correlations would not be a relevant concern.

Table 4.15

Box's M Test of Equality of Covariance Matrices

	Analysis	Box's *M* Statistic	Sig.
Box's *M*	Between Time periods	2528.66	<.001
	Between Int and Con	3641.42	<.001

After the MANOVA assumptions were tested, the data set was deemed acceptable for analysis. A multivariate analysis of variance was then run in SPSS® Statistics 29.0.0.0 to address the study's hypotheses. The results are presented in the next section.

4.3.8 Hypothesis Testing

Before testing the hypotheses, I verified whether there were any significant differences between the intervention group and control group regarding the mean scores on the study variables at Time 1. The summary of descriptive statistics of the study variables for MANOVA can be found in Table 4.16. The table shows that each variable's mean scores at Time 1 are similar (skill seeking- 3.64 and 3.65, connectedness to goals-3.72 and 3.73, career satisfaction-3.75 and 3.78, and organizational climate for performance- 3.56 and 3.65).

Table 4.16

Summary of Descriptive Statistics for MANOVA

Dependent Variable	Group	Time	Mean	Std. deviation	*N*
SS	1	1	3.64	0.94	166
		2	4.14	0.60	151

Table 4.16 cont.

Dependent Variable	Group	Time	Mean	Std. deviation	*N*
		3	3.87	0.85	148
	2	1	3.65	0.89	154
		2	3.78	0.9	147
		3	3.81	0.85	155
CG	1	1	3.72	0.87	166
		2	3.94	0.68	151
		3	4.06	0.65	148
	2	1	3.73	0.86	154
		2	3.91	0.77	147
		3	3.95	0.71	155
CS	1	1	3.75	0.86	166
		2	3.96	0.70	151
		3	3.96	0.76	148
	2	1	3.78	0.80	154
		2	3.82	0.85	147
		3	3.78	0.82	155
OCP	1	1	3.56	0.93	166
		2	3.94	0.68	151
		3	4.07	0.71	148
	2	1	3.65	0.92	154
		2	3.88	0.81	147
		3	3.86	0.78	155

Note. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance

To test the hypotheses of the study, I conducted a one-way repeated measures MANOVA with time (Time1, Time 2, and Time 3) and group type (control and intervention) as the independent variables and the four employee attitudes- skill-seeking orientation, connectedness to goals, career satisfaction and organizational climate for performance as the dependent variables. The results of this analysis are shown in Table 4.17. The main effect was assessed with the Wilks' lambda statistic. The results show a multivariate significant effect of time, Wilk's

Lamda F (8, 1824) = 8.05, $p < .001$, partial $\eta^2 = 0.03$, and time and group interaction, Wilk's Lamda F (8, 1824) = 3.41, $p < .001$, partial $\eta^2 = 0.02$ indicating that the combined employee attitudes became more robust over time. A partial η^2 value of 0.01 is small, 0.06 is medium, and 0.14 is large (Cohen, 1988). Therefore, the effect size of 0.02 is small.

Table 4.17

Main and Interaction Effects of Group and Time

Effect	Source	*F*	*df*	Sig.	Partial η^2	Observed Power
Between-participants	Group	1.84	4	0.118	0.00	0.56
Within participants	Time	8.05	8	<.001	0.03	1.00
	Group * Time	3.41	8	<.001	0.02	0.98

The results of the hypotheses testing are shown in Table 4.18. The first hypothesis (H1) posited that the mean employee skill-seeking orientation would be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group. The results from the univariate test indicated that skill seeking was significant F (2, 915) = 3.86, p = .02, partial η^2 = .08. Hence, H1 is supported. The second hypothesis (H2) postulated that the mean employee connectedness to goals would be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group. The univariate test for employee connectedness to goals, F (2, 915) = 0.51, p = .59, partial η^2 = .01, was nonsignificant, hence H2 is not supported. The third hypothesis (H3) suggested that the mean employee career satisfaction will be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group. The results from the univariate test showed non-significance (F (2, 915) = 1.48, p = .23, partial η^2 = .03) and hence H3 is not supported. The fourth hypothesis (H4) posited that the mean employee perceptions of organizational climate for performance would be

higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group. The univariate tests F (2, 915) = 2.71, p = .06, partial η^2 = .06 bordered on but did not achieve significance; hence H4 is not supported.

Table 4.18

Interaction Effect on Each Dependent Variable

Effect	Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial η^2	Observed Power
Group * Time	SS	5.51	2	2.75	3.86	0.02	0.08	0.70
	CG	0.60	2	0.30	0.51	0.59	0.01	0.13
	CS	1.88	2	0.94	1.46	0.23	0.03	0.34
	OCP	3.59	2	1.79	2.71	0.06	0.06	0.53

Note. SS = Skill Seeking. CG = Connectedness to Goals. CS = Career Satisfaction. OCP = Organizational Climate for Performance

Given the significant MANOVA result of the skill-seeking variable, Tukey's HSD multiple comparisons test was performed. Post hoc comparisons, using Tukey's HSD test for the intervention group, showed that the means of the skill-seeking variable for Time 1, Time 2, and Time 3 were significantly different. This result suggests that the implementation of SBPM had a positive impact on employees' skill-seeking attitude initially and then dipped slightly. For the control group, the means of the skill-seeking variable for Time 1 and Time 2 and Time 1 and 3 were significantly different. This indicates that for the control group, too, the skill-seeking attitude increased even though they were not the direct beneficiaries of the program. Post hoc comparisons for the intervention and control groups combined indicated that the means of the skill-seeking variable for Time 1 and Time 2 and Time 1 and 3 were significantly different. This result suggests that the implementation of SBPM had a positive impact on employees' skill-

seeking attitude over the time period. There was no significant decrease between Time 2 and Time 3, but the attitude was stable. These results are shown in Tables 4.19, 4.20, and 4.21 below.

Table 4.19

Tukey's Post Hoc Analysis for Skill Seeking for the Intervention and Control Groups Combined

Dependent Variable	Time Frame	Mean Difference	Std, Error	Sig.
SS	Time 1 -Time 2	0.32	0.06	0.00
	Time 1-Time 3	0.19	0.06	0.01
	Time 2-Time 3	0.12	0.06	0.19

Note. SS = Skill Seeking.

Table 4.20

Tukey's Post hoc Analysis for Skill Seeking for the Intervention Group

Dependent Variable	Time Frame	Mean Difference	Std, Error	Sig.
SS	Time 1 -Time 2	0.49	0.09	0.00
	Time 1-Time 3	0.23	0.09	0.03
	Time 2-Time 3	-0.26	0.09	0.01

Note. SS = Skill Seeking.

Table 4.21

Tukey's Post Hoc Analysis for Skill Seeking for the Control Group

Dependent Variable	Time Frame	Mean Difference	Std, Error	Sig.
SS	Time 1 -Time 2	0.31	0.08	0.00
	Time 1-Time 3	0.19	0.08	0.05
	Time 2-Time 3	0.12	0.07	0.17

Note. SS = Skill Seeking.

4.3.9 Manipulation Check

For my study, a manipulation check was conducted using a managerial behavior measurement. The Performance Management Behavior Questionnaire (PMBQ) scale was administered to the employees before (January 2020) and after (May 2022) the intervention. The PMBQ questionnaire was administered to all employees, which spanned both the intervention and control groups. The PMBQ questionnaire consisted of six dimensions: goal setting, communication, feedback, coaching, providing consequences, and monitoring performance expectations. Cronbach's alpha values for all dimensions were calculated for the pre-intervention (Time 1) and post-intervention (Time 2) responses. The Cronbach's alpha values for goal setting, communication, feedback, coaching, providing consequences, and monitoring performance expectations, respectively, for pre-intervention (0.83, .086, 0.83, 0.81, 0.69, 0.76) and post-intervention (0.83, .082, 0.84, 0.79, 0.68, 0.77) were consistent.

After the data was retrieved, it was checked for consent and cleaned. A one-way ANOVA was conducted to compare whether SBPM interventions by managers could be associated with changes in perceptions of managerial behaviors at the two time periods. The results of the ANOVA are presented in Table 4.22. The results show a statistically significant difference in the mean PMBQ value ($F = 2.17$, $p = .01$) from Time 1 to Time 2. The result suggests that even though the sample included both intervention and control group employees since the mean score increased for both groups on average, we can infer that the performance management behavior of the managers changed between the two time periods. It is possible that managerial behaviors improved across all employees due to managerial coaching associated with delivering the SBPM intervention. Such improved managerial behavior permeated across interactions with employees in both groups. Higher PMBQ values for both groups are likely because of diffusion – the

managerial coaching provided to managers to deliver SBPM for the intervention group also resulted in better managerial behaviors with employees in the control group. It is possible that a spillover of behaviors resulted in a contaminated effect on the control group as they received residual benefits from the managers even if they were not the intended direct beneficiaries of SBPM. This contamination could result in masking the differences in outcomes between the control and treatment groups and pose a threat to internal validity.

Table 4.22

ANOVA Results for the Performance Management Behavior Questionnaire

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	2.17	1	2.17	7.26	0.01
Within Groups	9.57	32	0.29		
Total	11.74	33			

Next, descriptive statistics were tested, and histograms of the Time 1 and Time 2 responses were created to examine the frequency distribution of responses. The descriptive statistics are shown in Table 4.23. The mean value increased from Time 1 (3.62) to Time 2 (4.12). The histograms of the Time 1 and Time 2 scores are shown in Figure 4.6 and Figure 4.7, respectively. A chi-square goodness of fit test is traditionally used to test if a sample belongs to a normal distribution (Lemeshko, 2015). The chi-square goodness-of-fit test on the Time 1 response showed that the response distribution was consistent with a normal distribution. (χ^2 = 3.30; *df* = 5; *p* = .65). For the Time 2 responses, even though visually, the histogram looks non-normal due to the negative skew, the *p*-value for the Chi-square goodness-of-fit results was slightly higher than .05 (χ^2 = 10.14; *df* = 5; *p* = .07) indicating that the distribution was normal.

Comparing the two graphs, it is evident that the respondents made an upward shift that hit the top of the scale. This again illustrates the possibility of improved managerial behaviors associated with the performance management intervention.

Table 4.23

Descriptive Statistics of PMBQ

Variable	Mean	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Time 1	3.62	0.94	0.06	0.38	0.60	0.75
Time 2	4.12	0.60	-0.48	0.35	-0.47	0.69

Note. Time 1 = January 2020 time frame. Time 2 = May 2022 time frame

Figure 4.6

Histogram of Time 1 Responses

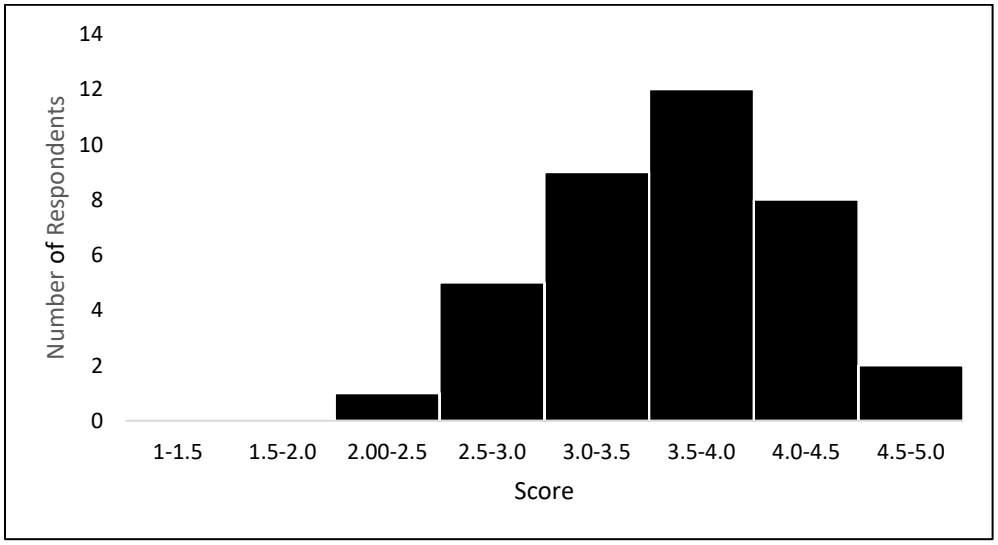
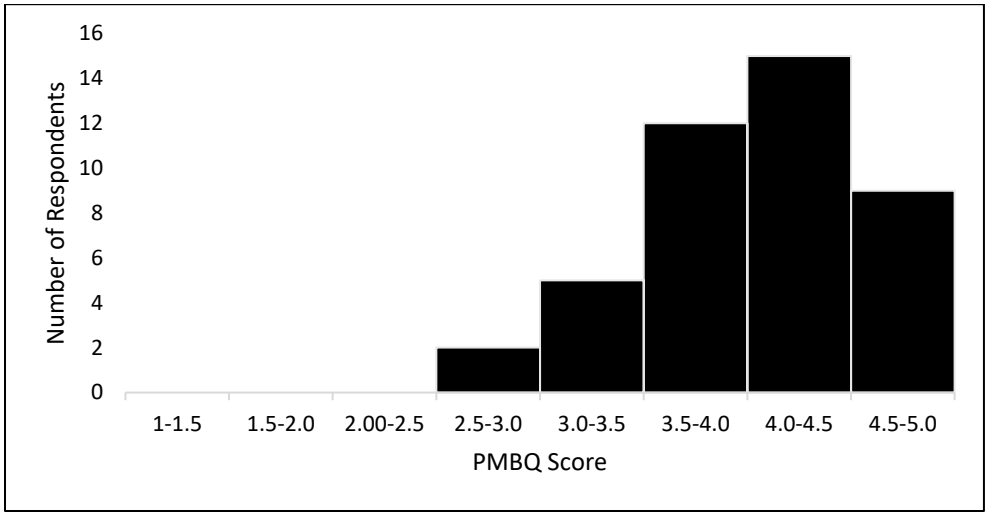


Figure 4.7

Histogram of Time 2 Responses



Post hoc tests of the sub-scales of the PMBQ indicated that communication, feedback, coaching, providing consequences, and establishing/monitoring performance expectations were significant. These results are shown in Table 4.24. These results further emphasize that the respondents made an upward shift in their assessment of managerial behaviors across the time periods.

Table 4.24

Post hoc Results for Subscales of the Performance Management Behavior Questionnaire

Variable	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial η^2
Goal Setting	5.22	1	5.22	7.89	0.06	0.08
Communication	5.53	1	5.53	5.53	0.03	0.10
Feedback	4.73	1	4.73	4.73	0.02	0.14
Coaching	8.38	1	8.38	8.38	0.01	0.21
Providing Consequences	3.83	1	3.83	3.83	0.05	0.09
Establishing/Monitoring performance expectations	6.34	1	6.34	6.34	0.01	0.18

4.3.10 Additional Post Hoc Testing

Since the significance of the organizational climate for performance was at a borderline level, a relaxed post hoc Tukey's test at a 0.1 level was conducted. Results for the intervention group, control group, and both groups combined indicated that the mean values for Time 1 and Time 2 and Time 1 and Time 3 were significantly different, while the value was stable between Time 2 and 3. These results are shown in Tables 4.25, 4.26, and 4.27 below.

Table 4.25

Tukey's Post Hoc Analysis for Organizational Climate for Performance for the Intervention and Control Groups Combined

Dependent Variable	Time Frame	Mean Difference	Std, Error	Sig.
OCP	Time 1 -Time 2	0.30	0.06	<.001
	Time 1-Time 3	0.36	0.06	<.001
	Time 2-Time 3	0.05	0.06	0.71

Note. OCP = Organizational Climate for Performance

Table 4.26

Tukey's Post Hoc Analysis for Organizational Climate for Performance for the Intervention Group

Dependent Variable	Time Frame	Mean Difference	Std, Error	Sig.
OCP	Time 1 -Time 2	0.38	0.08	<.001
	Time 1-Time 3	0.51	0.08	<.001
	Time 2-Time 3	0.12	0.08	0.34

Note. OCP = Organizational Climate for Performance

Table 4.27

Tukey's Post Hoc Analysis for Organizational Climate for Performance for the Control Group

Dependent Variable	Time Frame	Mean Difference	Std, Error	Sig.
OCP	Time 1 -Time 2	0.25	0.08	<.001
	Time 1-Time 3	0.30	0.08	0.05
	Time 2-Time 3	0.12	0.08	0.17

Note. OCP = Organizational Climate for Performance

In summary, the results showed that the skill-seeking variable was the only one impacted by the SBPM intervention, and H1 was the only hypothesis supported. In chapter five, a discussion of the results, implications to research and industry, as well as limitations and future research ideas, will be discussed.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

In this chapter, I present the discussion and implications of the results of my study. The primary purpose of this study was to determine the impact of skill-based performance management (SBPM) on proximal variables around employee attitudes and the organizational climate for performance. This chapter is organized into four sections. The results from the data analysis shown in Chapter 4, along with their association with relevant literature, are presented first. Next, the limitations of the study and suggestions for future research are proposed. Then, the implications for research and practice are discussed, followed by concluding remarks.

5.1 Summary of Results

The purpose of this quasi-experiment in a field setting was to determine if the implementation of skill-based performance management had any effect on employee attitudes and the organizational climate for performance. The SBPM intervention was administered to one group, with the remaining set of employees serving as the control group. I surveyed both groups of employees on three employee attitudes and the organizational climate for performance before and after the intervention.

The survey I utilized comprised questions that the company had optimized for their internal usage. The scales in the survey were compared to similar scales from published literature to establish a theoretical basis. I administered the two sets of survey scales utilizing the online survey platform Qualtrics® to an MTurk® population. Statistical tests demonstrated the comparability of the company scale to published scales.

A multivariate analysis of variance was conducted with time (before and after intervention) and group type (intervention vs. control) as the independent variables and the employee attitudes: skill-seeking orientation, connectedness to goals, career satisfaction, and organizational climate for performance as the dependent variables. The results indicated a significant difference between the groups on the combined dependent variable. This result aligns with prior research on employee attitudes, given performance management processes as inputs (Alfes et al., 2013; Boselie et al., 2005; Brown et al., 2019; Petrescu & Simons, 2008; Wright et al., 2003). Additional tests were done to examine which dependent variable had the most effect on the overall significance. Employee attitudes around skill-seeking orientation showed a significant difference between the groups, while the other two attitudes, as well as the organizational climate for performance, did not show a significant difference between the groups. These results will be discussed in the next sections.

5.1.1 Hypothesis 1

The first hypothesis (H1) posited that the mean employee skill-seeking orientation would be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group. The results from the MANOVA testing indicated that the skill-based performance management intervention led to a significant improvement in employee attitudes toward skill-seeking behavior.

There is a strong theoretical basis for why employee attitudes towards skill-seeking orientation may be higher after the intervention associated with skill-based performance management. Skill-based programs often result in employees understanding what skill attributes are essential for their roles and how they contribute to organizational success, and as such, they are more motivated to seek out opportunities to develop and improve those skills (Murray &

Gerhart, 1998). Second, as a part of SBPM, managers can pinpoint employees' skill gaps to meet the evolving skill needs for jobs in the organization, which further helps reduce skill gaps and accomplishes person-skill fit (Chalutz-Ben Gal, 2023). Such an effort by managers and organizations encourages employees to engage in skill-seeking behaviors. Finally, skill-based performance management is linked to career development and advancement opportunities, as skill-based performance management emphasizes continuous learning and development. Employees recognize that developing new skills can open doors to promotions and more significant responsibilities, further motivating them to seek skill enhancement. Benefits around skill growth for individuals offer potentially better pay opportunities, leading to positive attitudes toward skill development (Lee et al., 1999).

Post hoc comparisons indicated that the implementation of SBPM positively impacted employees' skill-seeking attitudes between January 2020 and November 2020. While the control group registered an increase, the intervention group registered an even greater increase in average skill-seeking attitudes than the control group. This indicates that the skills intervention did register an improvement in skill-seeking attitudes immediately for the intervention group compared to the control group.

While attitudes were greater in May 2022 compared to measurements before the introduction of interventions in January 2020, this change in attitudes was not monotonic. Between November 2020 and May 2022, there was, in fact, a decrease in employees' skill-seeking attitudes for the intervention group. One possible explanation for this decline in skill-seeking attitudes is that the company chose to not prioritize skills-related elements of SBPM, given that it was focused on navigating through the pandemic during this period. Despite this decrease, the skill-seeking attitudes in May 2022 were superior to where they began in January

2020, which suggests a more positive takeaway – that improvements in these attitudes are indeed a stable, enduring response for almost two and a half years even with just one round of SBPM treatment administered in January 2020. Even this one intervention, perhaps, sets up employees for potentially improving their flexibility and capabilities due to broader and deeper skill development and hopefully for a career that leverages their skill-seeking orientation. Skills enrichment was indeed the principal focus of the modified performance management philosophy, and it was reassuring to see this make an enduring impact over the course of this study.

5.1.2 Hypotheses 2, 3, and 4

The second hypothesis (H2) posited that the mean employee connectedness to goals would be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group. Hypotheses 3 (H3) stated that mean career satisfaction would be higher post-implementation of a bundle of SBPM compared to pre-intervention relative to the comparison group, and Hypothesis 4 (H4) postulated that the mean organizational climate for performance would be higher post-implementation of a bundle of SBPM compared to the comparison group. The results from the MANOVA testing indicated that there was no significant difference in these attitudes between the two groups, and hence, H2, H3, and H4 were not supported. A possible reason why SBPM interventions did not register a meaningful increase in attitudes around connectedness to goals, career satisfaction, and organizational climate for performance could be the onset of the COVID pandemic. A second reason is the possible spillover effects of improved managerial behaviors and its positive benefits on not just the intervention group but also on the employees in the control group that reported to the same managers. This spillover effect likely resulted in improved attitudes within the control group

even though they were not recipients of the formal SBPM intervention, which then masked the magnitude of the differences in employee attitudes between the two groups.

With regards to H2, the onset of the pandemic caused distractions at the workplace and on the personal front for employees. Due to the pandemic's dynamic environment right after the intervention, employees might not have received the necessary support to apply their new skills toward achieving organizational goals. The organization's goal was employee safety and business survival, and as such, the skills emphasis toward larger organizational goals might have been diluted. This could have led to a disconnect between the tasks and skills they acquired in the larger organizational context (Asmundson & Taylor, 2020). There is support for this sentiment from other studies, which suggest that if managerial actions help employees see how their jobs and the tasks they perform are meaningful in a larger organizational context, it will lead to employees connecting better with their organizational goals and values (Ichniowski et al., 1997; MacDuffie, 1995). A second reason for not witnessing a significant difference between the groups is that, after the pandemic, managers demonstrated improved behaviors to all employees regardless of whether they received SBPM. As a result, both groups saw a difference in their connectedness to organizational goals. In a related vein, Afsar and Badir (2017) suggest that if employees perceive support and fairness shown to them by their managers and their organizations, they reciprocate by paying back through positive work behaviors and organizational connectivity.

With respect to Hypothesis 3, the onset of the pandemic created an unprecedented level of occupational uncertainty. Even if individuals mastered new skills, the broader market conditions and layoffs in peer group companies meant there might not have been opportunities to leverage those skills or get recognized, leading to depressed career satisfaction. The sudden shift

to remote work changed the dynamics of how work was done. Remote work can sometimes blur the lines between personal and professional life, leading to burnout and reduced career satisfaction. The pandemic also evolved or changed many job roles. For example, in this organization's industry, a great emphasis was placed on sanitization of facilities, which led to the evolution or even redundancy of some job roles. Individuals might have found that the skills they focused on were no longer as relevant or in demand. In summary, employees' ability to envision future career opportunities or participate with conviction in career management behaviors was stunted due to the dynamics of the pandemic, leading to reduced career satisfaction. This phenomenon is consistent with previous research studies that suggest that programs such as SBPM lead to career satisfaction of employees by enhancing employees' participation in career management behaviors (Barnett & Bradley, 2007) or by envisioning future career paths (Blazovich, 2013; Hee et al., 2016; Riska et al., 2015).

With respect to Hypothesis 4, the pandemic emphasized keeping the business afloat under modified operating rules and ensuring employee safety, often overshadowing longer-term goals like fostering a positive organizational climate. The shift to remote work also limited social interaction through organizational events and team cohesion - vital components driving organizational climate. In addition, SBPM relies on regular face-to-face evaluations and feedback, which were challenging to implement effectively in remote settings. In summary, the dynamism of the pandemic suddenly altered perceptions of organizational expectations and mores, which are the critical underpinnings of enabling organizational climate. As such, this phenomenon I observed is consistent with previous research studies that suggest that programs such as SBPM lead to organizational climate for performance if they enhance employees' shared perceptions of organizational events, practices, and procedures (Schneider & Reichers, 1983).

5.2 Limitations and Future Research Ideas

In interpreting the results presented in the previous section, it is vital to recognize the limitations of this study. Many limitations were mitigated through design approaches or by establishing a basis from previously published work, but they are certainly avenues for future study and extensions to research.

The limitations around methodology have been well characterized in Chapter 3. To summarize, the first limitation around methodology pertains to sample selection. Convenience sampling may hinder the external validity and generalizability of findings, although efforts were made to ensure contextual realism through field study methods. The study acknowledges a lack of empirical or theoretical basis for certain variables, relying on related concepts for measurement. Self-reported data poses a risk of common method variance, which was mitigated through appropriate survey design measures. Future research could include replication in another setting or industry to mitigate these limitations.

Next, my study only examines four sets of employee attitudinal effects. These four attitudinal measures are somewhat limiting as there is a broader spectrum of employee-related measures I could have studied to obtain a more comprehensive understanding of employee impact. The most significant of them likely is actual job performance. While that might be hard to characterize and normalize across managers, that might demonstrate how SBPM indeed translated to employee performance outcomes. There are perhaps other measures, such as employee engagement or employee well-being. While it is difficult to get genuinely comprehensive or holistic around employee measures, there are undoubtedly other facets of employee performance, experiences, and attitudes that I have not covered adequately, given the

choices of employee attitudinal measures I have chosen for this study. In the future, this study can be repeated with a different set of employee attitudinal measures.

In addition to the limited choice of employee attitudes, this study does not extend the impact to a broader set of organization-related measures. Most notable amongst them is organizational performance, which can encompass a wide range of financial metrics around revenues and profitability or other quantitative metrics such as quality or completion speed, as well as softer measures around customer satisfaction scores. I could also have studied measures around organizational productivity to understand how efficiently human resources are used to achieve such organizational outcomes. Extensions of employee attitudes to establish an association with organizational outcomes on a longitudinal basis and perhaps even establish causation are fertile areas of future research.

Finally, the analysis of the performance management behavior questionnaire responses showed that there were likely limitations posed on the study conclusions from the spillover effects of improved managerial behaviors that positively impacted employees not just in the intervention group but also those in the control group. Some of the attitudes of employees in the control group registered an improvement even if they were not subject to the interventions, which ultimately reduced the observed differences in attitudes between the two groups. In the future, this study can be replicated under circumstances where the control group reports to a set of managers who do not receive managerial coaching associated with a performance management intervention.

5.3 Implications and Ideas for Future Study

5.3.1 Implications for Practice

This research offers insights and actionable recommendations that have the potential to enhance both employee and organizational outcomes. As such, the findings provide managers with a prescriptive guide to improve their HR practices in the context of performance management. These suggestions encompass a set of prescribed treatments incorporating a skill basis for performance management. The study demonstrates that such interventions can be useful for improving skill-seeking attitudes and potentially improving the flexibility or capability of the workforce due to broader or deeper skill development. Thus, this research serves as a valuable addition to the existing arsenal of HR practices, equipping managers with evidence-based tools to achieve improved employee outcomes.

Second, this research recommends practices incorporating key trends around employee reskilling and upskilling. In today's rapidly evolving business landscape, the importance of imparting skills to employees cannot be overstated due to technology and a dynamic market environment. This research recommends practices that effectively incorporate these trends into HR strategies. Recognizing that the skills required for success are continuously evolving, the research suggests that organizations should adopt an approach that incorporates elements of reskilling and upskilling into performance management practices. By embracing these recommendations, organizations can equip their employees with the necessary competencies and ensure long-term success in an increasingly competitive and dynamic business environment. Ultimately, incorporating key trends around employee skill enhancements becomes an essential aspect of future-proofing the workforce and driving sustainable organizational growth.

Finally, this research prescribes a set of attitudinal measures and scales to help assess the impact of different strategic and operational initiatives. By utilizing these scales, managers can gather valuable data on employee sentiments toward their organizational connectedness, career satisfaction, organizational climate, and skills enrichment. These measures, more broadly, can serve as quantifiable indicators of the success and effectiveness of different organizational interventions, allowing managers to make data-driven decisions and refine their strategies accordingly. Additionally, the recommended attitudinal measures provide a standardized framework for conducting comparative analyses across different initiatives, departments, or time periods, fostering a deeper understanding of what works and what needs improvement. By incorporating these measures into their evaluation processes, I believe that organizations can gain valuable insights into the impact of their efforts, which can enable them to optimize their strategic and operational initiatives for better overall outcomes and increased employee-related outcomes.

5.3.2 Implications for Research

The first implication emerges from the phenomenon that this research is conducted as a natural field study, adopting a quasi-experimental format. By employing a quasi-experimental design, this study leverages real-world settings and conditions to observe and analyze the impact of the intervention on the attitudinal variables. In this context, this research aims to investigate the effects of the intervention on employees and organizational outcomes within their natural work environment. This approach provides a unique opportunity to examine the phenomenon in an authentic context and allows for an understanding of the real-world implications. By combining the benefits of natural field study and quasi-experimental design, this research contributes to a more comprehensive understanding of the phenomenon under investigation.

The second implication emerged from a proposed adaptation of the Abilities-Motivation-Opportunities (AMO) framework to operationalize performance management practices. The study refers to such practices as Skill-based Performance Management. By incorporating the AMO framework within the context of performance management, this research provides a structured approach to improving employee attitudes. It recognizes that effective performance management goes beyond setting targets and evaluating outcomes; it involves aligning employees' abilities, motivations, and opportunities to unlock their full potential.

The third implication of the positing of employee attitudes, such as skill-seeking orientation, connectedness to organizational goals, career satisfaction, and organizational climate for performance as the proximal outcomes of AMO-based performance management interventions, has profound implications for academic research in the fields of organizational behavior, human resource management, and performance improvement. This theoretical framework opens up exciting avenues for research, providing researchers with a comprehensive lens to study the dynamics between employee attitudes and performance management strategies. The inclusion of employee attitudes as proximal outcomes in AMO-based performance management interventions presents a conceptual framework for researchers to explore the relationships between individual and organizational factors. Researchers can further explore how the nuances of attitudes interact and influence one another. This framework enables academics to propose and test hypotheses about the underlying causal mechanisms that drive performance outcomes within organizations. Furthermore, it will allow researchers to investigate theories around potential mediating and moderating variables that link these employee attitudes to performance outcomes. For example, researchers may explore how leadership styles mediate or moderate the relationship between these attitudes and overall employee performance. Such

investigations can provide deeper insights into the interplay of factors that contribute to employee effectiveness. Other extensions include the examination of how AMO-based performance management interventions and the associated employee attitudes manifest in different cultural contexts or other diverse settings. Such studies can help lead to more contextually relevant performance management strategies.

Overall, this study offers researchers an approach for studying employee attitudes as an outcome of a skill-based performance management program and specifically determines that skill-seeking attitudes are an enduring result of a skill-based performance management intervention. This framework demystifies the notion of the black-box nature of the linkage between performance management and employee outcomes, a topic heralded as a critical area of research by a vast number of research practitioners. As such, it provides scholars with additional pointers to explore the interplay between individual attitudes and organizational contexts. By addressing the complexity of employee attitudes and their relationship to performance outcomes, academic research can contribute valuable insights to the field of organizational behavior and human resource management.

5.4 Conclusion

The purpose of this quasi-experiment in a field setting was to determine if the implementation of skill-based performance management had any effect on three types of employee attitudes and the organizational climate for performance. Despite the unexpected incidence of a pandemic and the unpredictable effects on these attitudes, I demonstrated that SBPM has a material effect on employee attitudes related to skill-seeking orientation. This finding is an exciting result, given that skills development was the centerpiece of the performance management initiative at the company. While the other attitudes showed directional

improvements, and there is a wealth of prior work that supports this dependency, they were deemed to be statistically insignificant. It is possible that the confounding and unpredictable effect of the pandemic, as well as the spillover effects of improved managerial behaviors, reduced the observed differences in attitudes between the groups of employees. Additional research should be pursued to study the impact of these attitudes, and perhaps additional attitudinal and performance-related variables can also be considered.

An unforeseen noteworthy result was the employee perceptions of improved managerial performance associated with the delivery of an SBPM intervention. These improvements were observed by employees both in the targeted and control groups. Perhaps managerial coaching to help deliver SBPM had the additional effect of improving overall managerial and leadership abilities. As such, companies desirous of improving managerial competencies could pursue the implementation of an employee benefit such as SBPM and get the associated benefits at the managerial levels as well. Additional research should be pursued to establish a more robust theoretical and empirical basis for the same.

Overall, this study provides interesting implications and takeaways for both practitioners and researchers. At a time when there is tremendous dynamism in the workplace, this study provides a timely perspective with a theoretical basis on a skill-based initiative that can contribute to employee and organizational success.

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Appendix A

Examples of the Skill-based Performance Management Workbook

Figure A1

Screenshot of the Application Interface of the Assessment Workbooks

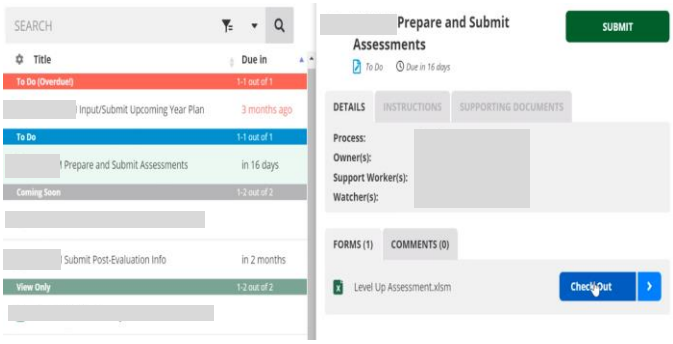


Figure A2

Screenshot of Workbook to Enter Skill Competency Level for Employee Assessment

PERFORMANCE ASSESSMENT			
Please complete Employee Information section below, then click on the BEGIN ASSESSMENT button to format page.			
EMPLOYEE INFORMATION			
Employee Name	John Smith	**Current Level**	Level 5 – Mastering
Current Location		**Assessed By**	Raka Sandell
Current Position		**Assessment Date**	2/12/2020
Please complete Assessment Sections below – hover over assessment title for more information if applicable.			
PROCESS SKILLS REVIEW			
Process Skill		**Competency Level**	
Planning			
Planning process		Full Competency	
Understanding Budget templates		Full Competency	
Client Relations & Communication management		Full Competency	
Sales and Customer Delivery			
Processing requests		In Progress	
Customer Service		Full Competency	
Accounting			
General Accounting Education		In Progress	

Appendix B

Institutional Review Board Approval

UNIVERSITY OF DALLAS Institutional Review Board

IRB00007703 FWA 00016247 IORG0006409

October 30, 2019

Raka Sandell
Brian Murray, Ph.D
University of Dallas
Irving, TX 75062

RE: IRB expedited review of proposal # 2019101

Dear Investigators:

Thank you for submitting your request for exempt review for prior approval by the Institutional Review Board (IRB). Your proposal was reviewed under the procedure for expedited review, as it poses minimal risk for participants in administering surveys to adults. You indicate that steps will be taken to obtain informed consent and protect participants' identities in all public presentations. The reviewer(s) recommended approval of your request to complete the project described in your proposal under the conditions described in your application.

As you complete your research, please keep in mind that substantive changes to the research method or participant population will require IRB review, and that any participant injuries or complaints must be reported to the IRB at the time they occur. The IRB policies require that you provide an annual report of the progress of this research project, or a report upon completion, whichever occurs first.

On behalf of the members of the IRB, I wish you success in this project.

Sincerely,

Gilbert Garza, Ph.D.
Chair, IRB

Appendix C

Skill-Seeking Orientation Scales

Items of the General Training Climate Scale by Tracey and Tews (2005):

1. There is a performance appraisal system that ties financial rewards to use of newly acquired knowledge and skills.
2. This organization offers excellent training programs.
3. Employees are provided with resources necessary to acquire and use new knowledge and skills.
4. There are rewards and incentives for acquiring and using new knowledge and skills in one's job.
5. This organization rewards employees for using newly acquired knowledge and skills on the job.

Each of the items scored on a 5-point Likert-type scale ranging from "strongly disagree", to "strongly agree".

Items to measure employee attitude towards the skill-seeking attitudes for this study:

1. I am aware of what training I need in order to improve my skills.
2. I am motivated to seek training to improve my skills.
3. I am excited about the training opportunities available at the company.

Each of the items scored on a 5-point Likert-type scale ranging from "strongly disagree", to "strongly agree".

Appendix D

Connectedness to Organizational Goals Scales

Items of the organizational socialization inventory by Robert J. Taormina (1997):

1. I know very well how to get things done in this organization.
2. I have a full understanding of my duties in this organization.
3. The goals of this organization have been made very explicit.
4. I have a good knowledge of the way this organization operates.
5. This organization's objectives are understood by almost everyone who works here.

Each of the items scored on a 7-point Likert-type scale ranging from "strongly disagree", to "strongly agree".

The items for my study were:

1. I know the goals, mission, and vision of the organization.
2. I see how my goals contribute to achieving the company's goals and vision.
3. I can approach organization supervisors, managers, or leaders for guidance in helping me contribute to the company's goals and vision.
4. I receive regular feedback and coaching from my manager that guides me to see how I can change my actions to contribute to the company's performance goals.
5. I see the company's core values in action in the business.

Each of the items scored on a 5-point Likert-type scale ranging from "strongly disagree", to "strongly agree".

Appendix E

Career Satisfaction Scales

The items of the career satisfaction scale by Greenhaus et al. (1990):

1. I am satisfied with the success I have achieved in my career.

2. I am satisfied with the progress I have made toward meeting my overall career goals.

3. I am satisfied with the progress I have made toward meeting my goals for income.

4. I am satisfied with the progress I have made toward meeting my goals for advancement.

5. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.

Each of the items scored on a 5-point Likert-type scale ranging from “strongly disagree”, to “strongly agree”.

The questions for my study were:

1. I am satisfied with the success I have achieved in my career.

2. I am satisfied with the progress I have made toward meeting my overall career goals.

3. I am satisfied with the progress I have made toward meeting my goals for advancement.

4. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.

Each of the items scored on a 5-point Likert-type scale ranging from “strongly disagree”, to “strongly agree”.

Appendix F

Organizational Climate for Performance Scales

Items of the Organizational Climate Measure©:

Supervisory Support

1. Supervisors here are really good at understanding peoples' problems.
2. Supervisors show that they have confidence in those they manage.
3. Supervisors here are friendly and easy to approach.
4. Supervisors can be relied upon to give good guidance to people.
5. Supervisors show an understanding of the people who work for them.

Innovation & Flexibility

1. New ideas are readily accepted here.
2. This company is quick to respond when changes need to be made.
3. Management here are quick to spot the need to do things differently.
4. This organization is very flexible; it can quickly change procedures to meet new conditions and solve problems as they arise.
5. Assistance in developing new ideas is readily available.
6. People in this organization are always searching for new ways of looking at problems.

Each of the items scored on a 5-point Likert-type scale ranging from "strongly disagree", to "strongly agree".

The questions for my study were:

1. The company values employees as a key resource contributing to its well-being.
2. The company fosters an environment where diverse individuals can work together effectively.
3. The company encourages creativity.
4. The company places importance on helping employees perform their jobs to the best of their abilities.
5. The company supports employees' freedom to put their ideas into action in their jobs
6. The company recognizes employees who demonstrate high performance.

Items scored on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree."

Appendix G

PMBQ Survey by Kinicki et al. (2013)

1. Ensures that performance goals are linked to the strategic or operational goals of the company
2. Participatively sets goals
3. Assists others in setting specific and measurable performance objectives
4. Assists others in developing action plans that support performance goals
5. Encourages others to set challenging yet attainable goals
6. Has a communication style that causes others to become defensive. (R)
7. Is a good listener
8. Is approachable and available to talk with others
9. Provides more positive than negative feedback
10. Gives others timely feedback about their performance
11. Gives others specific feedback about what is good and bad about performance
12. Assists others in their career planning
13. Gives honest feedback
14. Explains how someone's behavior affects him/her and the work group when providing feedback
15. Shows others how to complete difficult assignments and tasks
16. Provides the resources needed to get the job done
17. Helps identify solutions to overcome performance roadblocks
18. Helps people to develop their skills
19. Provides direction when it is needed
20. Gives special recognition for exceptional performance
21. Rewards good performance
22. Links recognition and/or rewards to performance
23. Checks work for accuracy and/or quality
24. Keeps people informed about changes, deadlines, or problems
25. Communicates expectations relating to quality
26. Monitors his/her own work performance
27. Prioritizes tasks and goals

Note. Respondents were given the following instructions. "After reading each statement, please rate the person you are evaluating in terms of how frequently he/she engages in the behavior. Indicate your answer by selecting the description that best represents your observations or experience. The descriptions range from rarely/never, once in a while, sometimes, fairly often, and very frequently/always. There are no right or wrong answers. The correct answer is the answer which expresses your honest observations or experience."
(R) represents a reflected item.

Appendix H

Survey Instrument

We're conducting a survey and your input would be appreciated. The company is in the process of launching a performance management process. Your responses to the survey questions will help us better understand the effectiveness of this program.

Additionally, the company is supporting academic research and the professional development of one of our team members. You are invited to join in supporting your colleague who is studying performance management outcomes based on our program. In the attached survey, you will be asked whether your responses may anonymously be included in a study of how our performance management system relates to job and career outcomes. You are not required to share your input with the academic study, and you will be asked in the survey to opt in or out. In any case, your individual responses are anonymous. The responses from the study will be used by the team member in her academic program and may be included in summary format in presentations or publications on performance management. A summary report of her findings will be reported to the company to inform improvements in the performance management program.

Click the button below to start the survey. Thank you for your participation!

☐ Yes

☐ No

Please rate the following questions on a scale of 0 (Strongly Disagree) to 5 (Strongly agree).

1. I know the goals, mission, and vision of this company.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
◯	◯	◯	◯	◯

2. I can see how my goals contribute to achieving the company's goals and vision.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
◯	◯	◯	◯	◯

3. I see the company's core values in action in the business

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
◯	◯	◯	◯	◯

Appendix H (Continued)

4. I can approach organization supervisors, managers, or leaders for guidance in helping me contribute to the company's goals and vision.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

5. I receive regular feedback and coaching from my manager that guides me to see how I can change my actions to contribute to the company's performance goals.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

6. The company values employees as a key resource contributing to its well-being.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

7. The company fosters an environment where diverse individuals can work together effectively.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

8. The company encourages creativity.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

9. The company places importance on helping employees perform their jobs to the best of their abilities.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

10. The company supports employees' freedom to put their ideas into action in their jobs.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

Appendix H (Continued)

11. The company recognizes employees who demonstrate high performance.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

12. I am satisfied with the success I have achieved in my career.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

13. I am satisfied with the progress I have made toward meeting my overall career goals.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

14. I am satisfied with the progress I have made toward meeting my goals for advancement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

15. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

16. I am aware of what training I need in order to improve my skills.

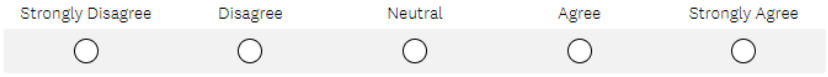
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

17. I am motivated to seek training to improve my skills.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

Appendix H (Continued)

18. I am excited about the training opportunities available at the company.



Appendix I

Qualtrics® Scale Comparability Survey

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

University of Dallas

TITLE OF PROJECT: Scale validation study

Below is a description of the research procedures and an explanation of your rights as a research participant. In accordance with the policies of the University of Dallas, you are asked to read this information carefully.

The purpose of this study is to measure your perceptions of your job and of the organization for which you are an employee. Your participation is completely voluntary, and if you begin participation and choose to not complete it, you are free to not continue without any adverse consequences.

You are eligible to participate in this study if you are at least 18 years of age, live in the United States of America and work for a company full-time (more than 35 hours).

If you agree to be in this study, you are asked to do the following things:

- Confirm that you are at least 18 years of age.
- Confirm that you live in the United States of America.
- Confirm that you work for a company full-time (more than 35 hours).
- Confirm that you voluntarily agree to complete an online multiple choice survey.
- Be willing to take approximately 15-20 minutes to answer all questions honestly as there are no right or wrong answers.
- Select the button that best corresponds to your response after reading each question or statement.
- Scroll down the page to answer all the questions if needed and select NEXT to continue after each page.

There are no known risks to this study, other than becoming a little tired of answering the questions. If this happens, you are free to take a break (you have up to one hour to complete the survey) and return to the survey to finish it, or, you can discontinue participation without any problems. Potential benefits to this study are: contributing to the research on employee perceptions towards their career, supervisor and their organization.

Because you will not be providing any clues to your identity, you can be assured that all your provided responses to the questions are anonymous. After completion of the survey, you will be assigned a completion code which will be kept confidential and secure and will only be used to process your payment. The code will not be linked back to survey data and will be deleted after

Appendix I (Continued)

payment is processed. If you need to ask questions about this study, you can contact the principal researcher, Raka Sandell (at rsandell@udallas.edu) or, if you have any questions about your rights as a participant, you may contact the Chair of the University of Dallas IRB, Dr. Gilbert Garza at (972) 721-5366 or garza@udallas.edu.

I have read and understood what has been explained to me.
If I choose to participate in this study, I will click "Yes" in the box below and proceed to the survey. If I choose to not participate, I will click "No" in the box.

- ○ Yes, I choose to participate in this study
- ○ No, I choose to not participate in this study.

Are you currently living in the United States?

- ○ Yes
- ○ No

In addition to your work for Amazon MTurk®, are you employed full-time (more than 35 hours) at a company or non-profit organization in a regular employee position?

- ○ Yes
- ○ No

What is the fifth word in this sentence: "What is 2 plus two"

- ○ two
- ○ Four
- ○ 4
- ○ +

Appendix I (Continued)

Important instructions for completing the survey:

When you answer the questions in this survey, please focus on a single company for which you work full-time (more than 35 hours). Reflect only on your job and the interactions you have with your supervisor or peers in that organization in answering the questions.

What best describes the industry sector that you work in?

- ○ Agriculture, Forestry, Fishing and Hunting
- ○ Education
- ○ Healthcare
- ○ Hospitality and Restaurants
- ○ Information technology related
- ○ Manufacturing, Construction and Mining
- ○ Professional Services (accounting, finance, consulting, legal, etc.)
- ○ Real estate (property management)
- ○ Real estate (other than property management)
- ○ Retail
- ○ Transportation, Logistics and Warehousing
- ○ Other

What is the size of the company in terms of the number of employees?

- ○ 1-50 employees
- ○ 50 - 500 employees
- ○ 500 - 5000 employees
- ○ 5000 or more employees

Appendix I (Continued)

The following statements are about your feelings about the connectedness to the goals of the organization for which you are a full-time employee. Please read each statement carefully and indicate how much you agree with each statement. Be honest as there are no right or wrong answers. Often, the best approach is to select the first response that comes to your mind.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I know the goals, mission, and vision of my company	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I see how my goals contribute to achieving my company's goals and vision	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I can approach organization supervisors, managers, or leaders for guidance in helping me contribute to my company's goals and vision	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I receive regular feedback and coaching from my manager that guides me to see how I can change my actions to contribute to my company's performance goals	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I see CA's core values in action in the business	○	○	○	○	○

Appendix I (Continued)

The following are more statements about your feelings towards the connectedness to the goals of the organization for which you are a full-time employee. Please read each statement carefully and indicate how much you agree with each statement.
Please note the additional answer choices.

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
I know very well how to get things done in this organization	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
This organization's objectives are understood by almost everyone who works here.	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
I have a full understanding of my duties in this organization.	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
I have a good knowledge of the way this organization operates.	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
The goals of this organization have been made very explicit.	○	○	○	○	○	○	○

Appendix I (Continued)

This is an attention check. Please click on the picture of the star below:




The following statements are about your feelings about the organization at which you are employed full-time. Please read each statement carefully and indicate how much you agree with each statement. Be honest as there are no right or wrong answers. Often, the best approach is to select the first response that comes to your mind.

Appendix I (Continued)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This company encourages creativity	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This company fosters an environment where diverse individuals can work together effectively	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This company supports employees' freedom to put their ideas into action in their jobs	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This company values employees as a key resource contributing to its well-being	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This company places importance on helping employees perform their jobs to the best of their abilities	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This company recognizes employees who demonstrate high performance.	○	○	○	○	○

Appendix I (Continued)

The following are more statements related to your feelings about the organization at which you are employed full-time. Please read each statement carefully and indicate how much you agree with each statement.
Please note the change in answer choices.

	Definitely False	False	True	Definitely True
This company is quick to respond when changes need to be made	○	○	○	○
	Definitely False	False	True	Definitely True
Assistance in developing new ideas is readily available	○	○	○	○
	Definitely False	False	True	Definitely True
This organization is very flexible; it can quickly change procedures to meet new conditions and solve problems as they arise	○	○	○	○
	Definitely False	False	True	Definitely True
New ideas are readily accepted here	○	○	○	○
	Definitely False	False	True	Definitely True
People in this organization are always searching for new ways of looking at problems	○	○	○	○
	Definitely False	False	True	Definitely True
Management here are quick to spot the need to do things differently	○	○	○	○

Appendix I (Continued)

The following are more statements related to your feelings about the organization at which you are employed full-time. Please read each statement carefully and indicate how much you agree with each statement.

	Definitely False	False	True	Definitely True
Supervisors here are really good at understanding peoples' problems	○	○	○	○
Supervisors here are friendly and easy to approach	○	○	○	○
Supervisors show an understanding of the people who work for them	○	○	○	○
Supervisors show that they have confidence in those they manage	○	○	○	○
Supervisors can be relied upon to give good guidance to people	○	○	○	○

This is an attention check. Please indicate your response to the following statement:

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
Please choose "Strongly Agree"	○	○	○	○	○	○	○

Appendix I (Continued)

The following statements are about your feelings about training and acquiring skills in the organization at which you are employed full-time. Please read each statement carefully and indicate how much you agree with each statement. Be honest as there are no right or wrong answers. Often, the best approach is to select the first response that comes to your mind.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am excited about the training opportunities available at my company	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am motivated to seek training to improve my skills	○	○	○	○	○
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am aware of what training I need in order to improve my skills	○	○	○	○	○

Appendix I (Continued)

The following are more statements about your feelings about training and acquiring skills in the organization at which you are employed full-time. Please read each statement carefully and indicate how much you agree with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This organization rewards employees for using newly acquired knowledge and skills on the job.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
There are rewards and incentives for acquiring and using new knowledge and skills in one's job.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
There is a performance appraisal system that ties financial rewards to use of newly acquired knowledge and skills.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This organization offers excellent training programs.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Employees are provided with resources necessary to acquire and use new knowledge and skills.	○	○	○	○	○

Appendix I (Continued)

The following statements are about your feelings about your career satisfaction at the organization at which you are employed full-time. Please read each statement carefully and indicate how much you agree with each statement. Please be honest as there are no right or wrong answers. Often, the best approach is to select the first response that comes to your mind.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the success I have achieved in my career.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the progress I have made toward meeting my goals for the development of new skills.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the progress I have made toward meeting my goals for advancement.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the progress I have made toward meeting my goals for income.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the progress I have made toward meeting my overall career goals.	○	○	○	○	○

Appendix I (Continued)

The following are more statements about your career satisfaction in the organization at which you are employed full-time. Please read each statement carefully and indicate how much you agree with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the success I have achieved in my career.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the progress I have made toward meeting my goals for advancement.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the progress I have made toward meeting my overall career goals.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the progress I have made toward meeting my goals for the development of new skills.	○	○	○	○	○

Appendix I (Continued)

Please read each statement carefully and indicate how much you agree with each statement. Please be honest as there are no right or wrong answers. Often, the best approach is to select the first response that comes to your mind.

Thinking about yourself and how you normally feel, to what extent do you generally feel:

	Never	Rarely	Sometimes	Often	Always
Hostile	○	○	○	○	○
Nervous	○	○	○	○	○
Afraid	○	○	○	○	○

Appendix I (Continued)

Please reflect on traits and qualities of your direct supervisor at the company for which you work full-time (35 hours or more) and provide your evaluation of him or her as you read the statements below and on the following two pages.

After reading each statement, please rate your direct supervisor at the company for which you work full-time in terms of how frequently he or she engages in the behavior. Indicate your answer by selecting the description that best represents your observations or experience. The descriptions range from rarely/never, once in a while, sometimes, fairly often, and very frequently/always. There are no right or wrong answers. The correct answer is the answer which expresses your honest observations or experience.

My supervisor...

	Rarely/Never	Once in a while	Sometimes	Fairly often	Very frequently/Always
Ensures that performance goals are linked to the strategic or operational goals of the company	○	○	○	○	○
Participatively sets goals	○	○	○	○	○
Assists others in setting specific and measurable performance objectives	○	○	○	○	○
Assists others in developing action plans that support performance goals	○	○	○	○	○
Encourages others to set challenging yet attainable goals	○	○	○	○	○
Has a communication style that causes others to become defensive.	○	○	○	○	○
Is a good listener	○	○	○	○	○

Appendix I

Is approachable and available to talk with others	○	○	○	○	○
Provides more positive than negative feedback	○	○	○	○	○

Appendix I (Continued)

My supervisor...

	Rarely/Never	Once in a while	Sometimes	Fairly often	Very frequently/Always
Gives others timely feedback about their performance	○	○	○	○	○
Gives others specific feedback about what is good and bad about performance	○	○	○	○	○
Assists others in their career planning	○	○	○	○	○
Gives honest feedback	○	○	○	○	○
Explains how someone's behavior affects him/her and the work group when providing feedback	○	○	○	○	○
Shows others how to complete difficult assignments and tasks	○	○	○	○	○
Provides the resources needed to get the job done	○	○	○	○	○
Helps identify solutions to overcome performance roadblocks	○	○	○	○	○
Helps people to develop their skills	○	○	○	○	○

Appendix I (Continued)

My supervisor...

	Rarely/Never	Once in a while	Sometimes	Fairly often	Very frequently/Always
Provides direction when it is needed	○	○	○	○	○
Gives special recognition for exceptional performance	○	○	○	○	○
Rewards good performance	○	○	○	○	○
Links recognition and/or rewards to performance	○	○	○	○	○
Checks work for accuracy and/or quality	○	○	○	○	○
Keeps people informed about changes, deadlines, or problems	○	○	○	○	○
Communicates expectations relating to quality	○	○	○	○	○
Monitors his/her own work performance	○	○	○	○	○
Prioritizes tasks and goals	○	○	○	○	○

Appendix I (Continued)

Please answer the following general questions about yourself. Remember, none of this information is tied to your identity and all answers will be kept confidential.

What is your gender?

- ○ Male
- ○ Female
- ○ Other/Prefer not to say

What is your age range?

- ○ 18 - 24
- ○ 25- 34
- ○ 35 - 44
- ○ 45 - 54
- ○ 54 - 64
- ○ Above 64

What best describes your job level within your company?

- ○ Do not manage employees
- ○ Supervisor or Manager

Which best describes your race/ethnicity?

- ○ African American or Black
- ○ American Indian/Other Native American
- ○ Asian or Pacific Islander
- ○ Caucasian or White (other than Hispanic)
- ○ Hispanic
- ○ Other

Appendix I (Continued)

What is the highest degree or training that you have completed?

- ○ Less than high school
- ○ High school graduate or equivalent (e.g., GED)
- ○ Some college credit but no degree
- ○ 2-year degree: Associate's degree (e.g., AA,AS)
- ○ 4-year degree: Bachelor's degree (e.g., BA, BS, BBA)
- ○ Master's/Professional degree (e.g., MBA, MEd.)
- ○ Doctorate (e.g., PhD, EdD)

How many years have you worked full-time at your company?

- ○ 0 -2 years
- ○ 3 -5 years
- ○ 6 -8 years
- ○ 9 -11 years
- ○ 12 -14 years
- ○ 15 + years

Appendix J

Scale Comparability Study Institutional Review Board Approval

UNIVERSITY OF DALLAS Institutional Review Board

IRB00007703 FWA 00016247 IORG0006409

October 3, 2022

Raka Sandell
Satish & Yasmin Gupta College of Business
University of Dallas
Irving, TX 75062

RE: IRB approval of proposal # 2022041

Dear investigator:

Thank you for submitting your research proposal for prior approval by the Institutional Review Board (IRB). Your proposal was reviewed under the procedure for expedited review, as it poses minimal risk for participants using surveys with adults. You indicate that steps will be taken to procure informed consent and protect participants' identities. The reviewer(s) recommended approval of your request to complete the research described in your proposal under the conditions stated above.

As you complete your research, please keep in mind that substantive changes to the research method, participant population or project end date will require IRB review, and that any participant injuries or complaints must be reported to the IRB at the time they occur. The IRB policies require that you provide an annual report of the progress of this research project, or a report upon completion, whichever occurs first.

On behalf of the members of the IRB, I wish you success in this project.

Gilbert Garza, Ph.D.
IRB Chair

Appendix K

Figure K1

Model 1-SPSS AMOS Diagram for One-factor Model for Skill-seeking

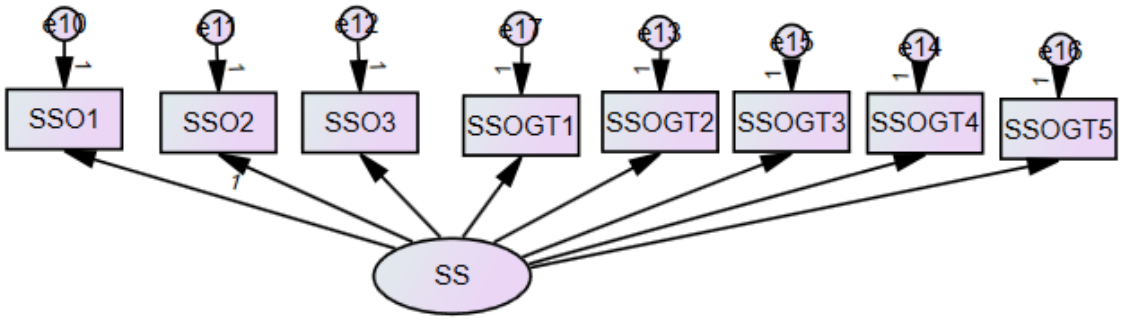


Figure K2

Model 3- SPSS AMOS Diagram for Two-factor Model for Skill-seeking

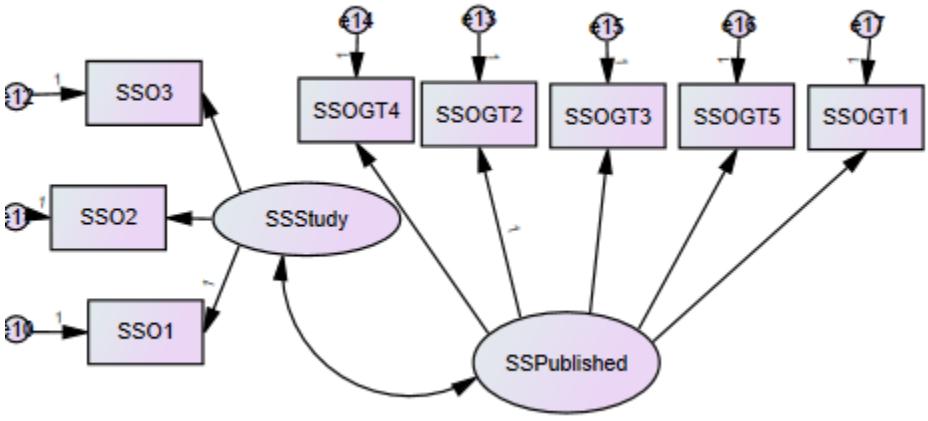


Figure K3

Model 3 - SPSS AMOS Diagram for One-factor Model for Connectedness to Goals

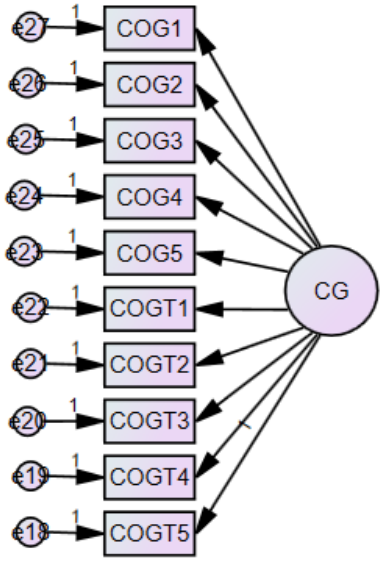


Figure K4

Model 4- SPSS AMOS Diagram for Two-factor Model for Connectedness to Goals

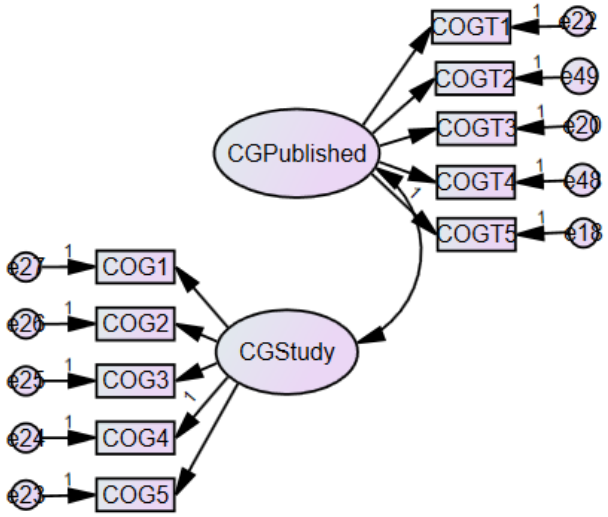


Figure K5

Model 5- SPSS AMOS Diagram for One-factor Model for Career Satisfaction

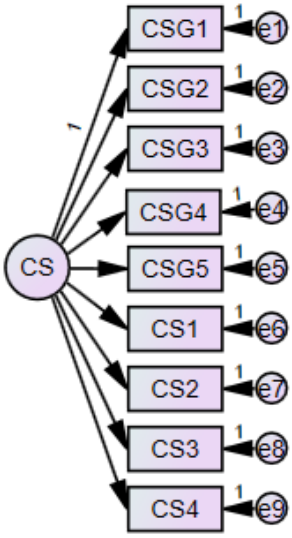


Figure K6

Model 6- SPSS AMOS Diagram for Two-factor Model for Career Satisfaction

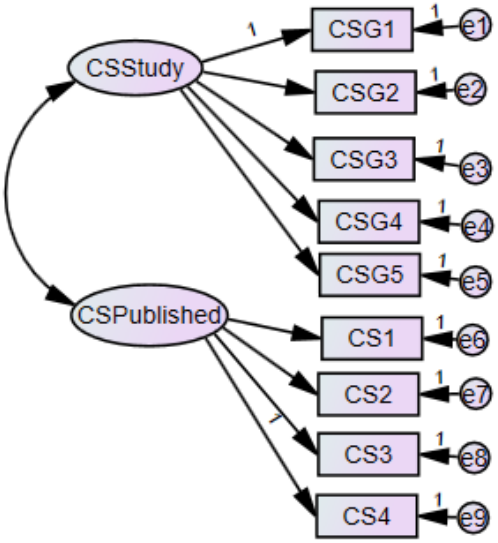


Figure K7

Model 7- SPSS AMOS Diagram for One-factor Model for Organizational Climate for Performance

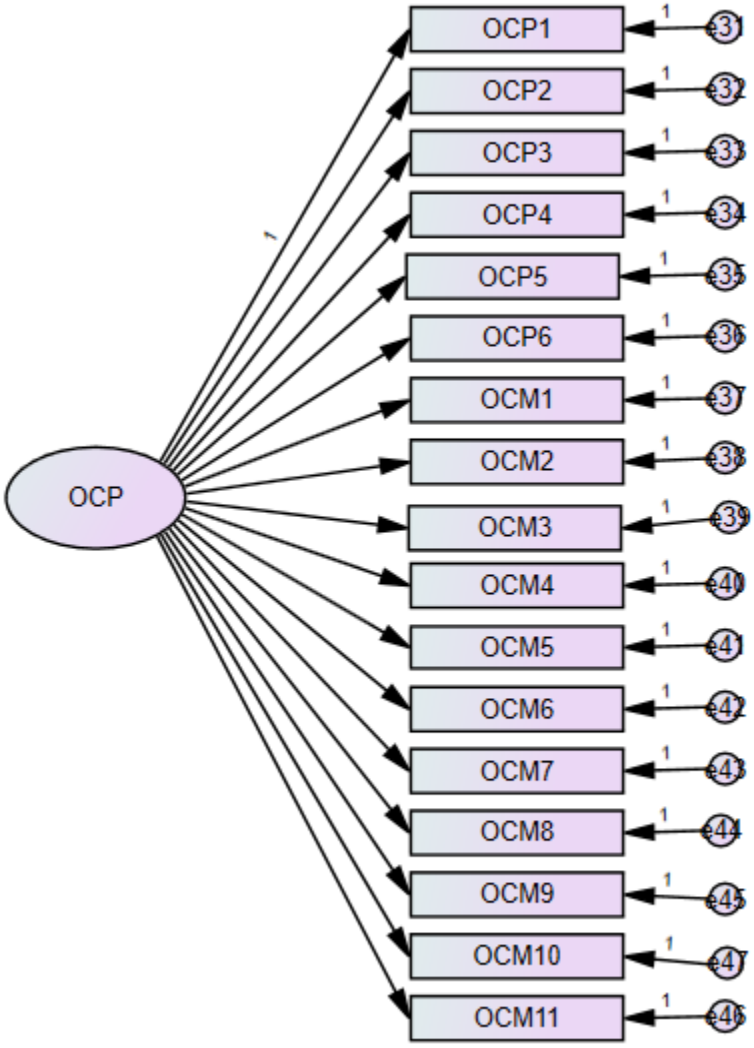
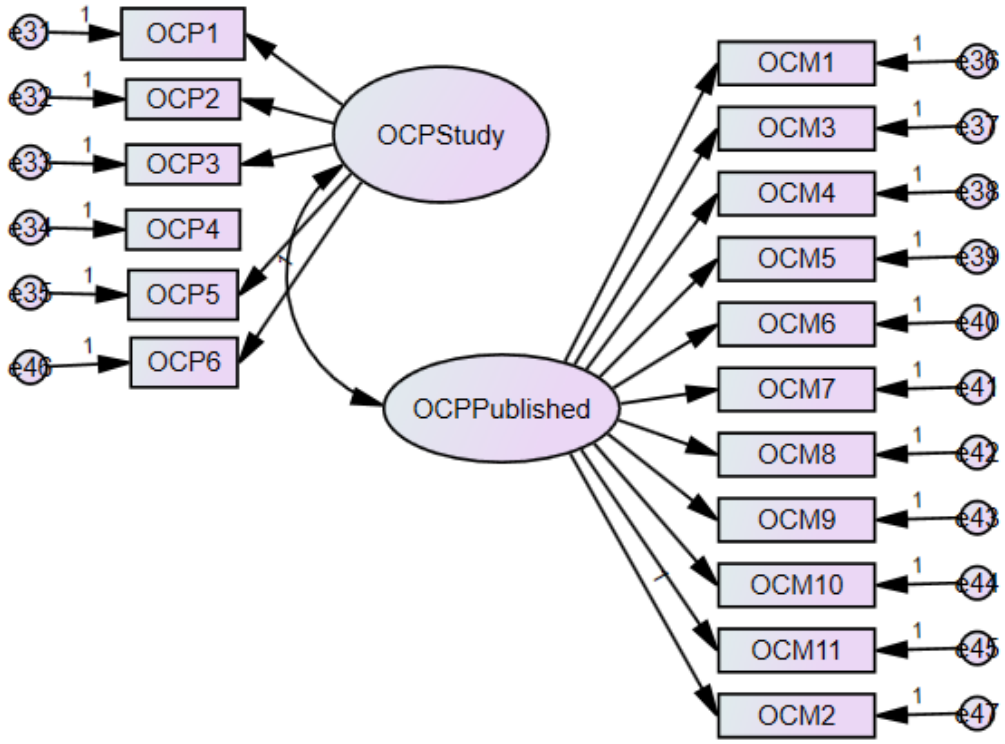


Figure K8

Model 8- SPSS AMOS Diagram for Two-factor Model for Organizational Climate for Performance



Appendix L

Figure L1

Graph of Mean Values of Variables for Time 1, Time 2, and Time 3