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RAD Managers: Strategic Coaching for Managers and Leaders

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RAD Managers: Strategic Coaching for Managers and Leaders

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Abstract

Objective: Managerial coaching is a nascent area of research; as such there are few models supported by independent inquiry endorsing their effectiveness in impacting employee outcomes. The purpose of the current investigation was to present a concise, practical model of managerial coaching (RAD: *relationships, accountability, development*) that can be used for teaching and evaluating coaching behaviors. The model was hypothesized to predict ratings of coaching effectiveness (CE), perceptions of supervisor support (PSS), occupational self-efficacy (OSE), and work engagement (WE). Further, each factor of the model was tested in a series of secondary hypotheses to determine which factors were the most influential in predicting each outcome.

Method: Participants consisted of 1477 employees who reported to 439 managers enrolled in managerial coaching workshops belonging to a variety of organizations from over 30 countries. Each employee rated managers on their coaching behaviors, CE, and PSS. They also provided self-ratings about their OSE and WE. This cross-sectional data was used in a series of multi-model regressions using a compositional approach to centering, which allows analysis of individual (L1) and group effects (L2) in addition to cross-level interactions.

Results: The RAD model predicted CE ($\beta_{L1} = 0.66$; $\beta_{L2} = 0.83$), PSS ($\beta_{L1} = 0.42$; $\beta_{L2} = 0.43$; $\beta_{interaction} = -0.17$), OSE ($\beta_{L1} = 0.18$; $\beta_{L2} = 0.15$), and WE ($\beta_{L1} = 0.45$; $\beta_{L2} = 0.39$) with all significance levels at $p < .001$. The L1 effects support the use of coaching with each direct report; the L2 effects suggest that outcomes show additional improvements when managers coach all their employees rather than just some. The cross-level interaction for PSS indicates that when managers coach all their employees, it can act as a buffer effect for employee perceptions

even when managers do not do supportive behaviors for an individual employee. Secondary hypotheses revealed that each factor had differing individual- and group-level effects, suggesting that each factor could be used strategically to intentionally improve the different outcomes. ***Conclusions:*** This study adds to the mounting evidence for the potential effectiveness of managerial coaching across a variety of outcomes. The examination of each factor as a separate predictor provided insights about how managers might leverage strategic coaching, indicating that further research on multi-factored models may consider a similar nested design and statistical approach. Ultimately, the RAD model shows great promise for organizations interested in developing leaders and improving outcomes for employees.

Keywords: managerial coaching, workplace coaching, manager as coach, leadership, coaching effectiveness, perceptions of supervisor support, occupational self-efficacy, work engagement, multilevel analysis

CHAPTER I:

Introduction

Contemporary managers are expected to manage both processes and people, but many are ill-equipped for helping their employees complete tasks and grow professionally. This deficit is caused by a lack of evidence-based training on skills that are required, such as managerial coaching. Without the use of specific training models, organizations lack the ability to assess and measure the behaviors and effectiveness of managers as they coach their employees. The ability to evaluate managerial coaching enables organizations to provide consistent training, tie behaviors to job evaluations, measure the impact coaching has on the organizations, and more.

This study presents a 3-factor managerial coaching model (RAD; *relationships*, *accountability*, *development*) developed with a focus on training managers on coaching behaviors. The primary purpose of this study is to assess the relationship between managerial coaching behaviors as measured by this model and four outcomes: coaching effectiveness ratings, work engagement, occupational self-efficacy, and perceptions of supervisor support. The secondary purpose of this research is to explore how each of the coaching behaviors (*relationships, accountability*, and *development*) are associated with each outcome. This analysis will allow managers to take a tailored approach to their coaching based on the differing outcomes they are targeting.

The data from this study comes from an international sample of managers being trained in managerial coaching from the profit, non-profit, and government sectors. While this non-experimental study uses data from "the real world," rather than a lab-focused experimental design, it does use multi-level modeling to account for the 360-nature of the assessment (i.e., managers rated by their subordinates) – a tactic rarely employed in coaching research. Thus, an

additional benefit of this study will be to demonstrate the importance of such sophisticated analysis by exploring whether between-coach variance should be included in other analyses.

I begin the paper with a literature review covering managerial coaching and the four outcome variables (coaching effectiveness, work engagement, occupational self-efficacy, and perceptions of supervisor support). First, I expand on the importance of managerial coaching in practice and in research. I then define managerial coaching, including a comparison of this activity with similar interventions such as mentoring, therapy, and leadership. I then discuss different approaches to coaching models or theories to finally introduce the coaching model used in this study, the RAD model.

The next section of the literature review focuses on the four outcome variables in this study. Coaching effectiveness is a proximal outcome that assesses how the recipients of the coaching felt about the effectiveness of the experience. Perceptions of supervisor support, occupational self-efficacy, and work engagement are all common but distal outcomes that may be improved through managerial coaching. Each of these are defined and explored in relation to managerial coaching. Specifically, I discuss how the theories that drive each outcome may support each of the three RAD model factors individually as predictors to different extents. Throughout this section I build my hypotheses and then present the complete models for the primary and secondary hypotheses.

The subsequent chapters discuss the measures and study particulars, including the justification for the multi-level modeling (MLM) analysis conducted for this study. Each set of hypotheses are then analyzed in turn. The primary analyses test whether the RAD model, treated as a single variable of "coaching behaviors," predicts each of the four outcome variables in a series of MLM regressions. The secondary analyses parse out the RAD model into three factors,

to see to what extent each individual factor predicts each outcome. Finally, a series of exploratory analyses seek to further refine the model by testing each of the relationships in the secondary analyses with fixed and random slopes, to determine which of the effects are likely to be more or less influenced by within- or between-coach variance.

The paper concludes with a summary of the findings, an analysis of the research limitations, and implications of this study. Threats to validity are discussed with suggestions for further research, specifically focusing on a research design with multiple time points to allow for stronger claims for causality and mediation analyses. Implications for this study for coaching theory include statistical approaches to be considered for other researchers and considerations for practitioners designing models. Suggestions for managers and organizations who may use the RAD model are presented.

CHAPTER II:

Literature Review

Managerial coaching is a relatively new term in the coaching and leadership space; as such, the first half of the literature review is dedicated to understanding what managerial coaching is and what it is not, why it matters, and the model used to assess it in this study specifically. After discussing this as the predictor in the analyses, the literature review focuses on each of the outcome variables before presenting the final hypotheses and models.

Understanding Managerial Coaching

Coaching can be defined as "a collaborative relationship formed between a coach and the coachee for the purpose of attaining professional or personal development outcomes which are valued by the coachee" (Grant, 2013, p. 16). Coaching has been part of the managerial repertoire of tools for many years; as early as the 1950s it has been used for improving employee performance focusing primarily on developing job skills (Evered & Selman, 1989; Feldman & Lanku, 2005). By the 1970s sports coaching techniques were popularized in order to improve coaching skills and improve employee motivation, though the overall approach was still directive (Evered & Selman, 1989). However, since then managerial coaching has evolved into focusing more on facilitating learning, improving strengths and capacity development, and helping employees self-actualize (Bachkirova et al., 2010, Ellinger et al., 2010, Evered & Selman, 1989; Feldman & Lanku, 2005). Modern managerial coaches are now expected to have more expertise in coaching than in technical topics and to engage in coaching conversations regularly, which has created a challenge for managers who have not been trained in these techniques.

Despite these rising expectations, managerial coaching is still not clearly defined in the literature – even the terms used to describe it can be varied (e.g., "manager as coach,"

"workplace coaching," "leader-as-coach model," "coaching manager," "employee coaching"; Anderson, 2013; Gregory & Levy, 2010; McCarty & Milner, 2012; Pousa et al., 2018). Many studies that focus on managerial coaching fail to even provide a concrete definition of the construct, and instead simply describe the role of coaching within a manager's duties or simply uses a definition of general coaching (e.g., Emerson & Loehr, 1967; Hamlin et al., 2006). Those that use the generalized definitions of coaching seem to believe the same skills, behaviors, and aptitudes are required for all coaching types. This was supported by Hamlin et al. (2008), whose examination of different coaching types (i.e., general, executive, business, life) suggested that they were very similar. Following this line of thought, research that applies to other forms of coaching should generally apply to managerial coaching as well.

In contrast, Lawrence's (2017) review of managerial coaching stated that though there is no agreement on the definitions, many researchers do define it as a standalone discipline. These authors often include in their definition specific competencies and goals, such as: "A developmental activity in which an employee works one-on-one with his/her direct manager to improve current job performance and enhance his/her capabilities for future roles and/or challenges, the success of which is based on an effective relationship between the employee and manager, as well as the use of objective information, such as feedback, performance data, or assessments" (Gregory & Levy, 2010, p. 111). Some definitions even specify what coaches should not be doing, such as: "Managerial coaching is a one-on-one developmental interaction between a coach (i.e., the manager) and a coachee (i.e., the employee) and its goal is to help the coachee develop and grow by providing focused feedback and questioning rather than commanding or telling the employee what to do" (Pousa et al., 2018, p. 222).

Given the variety of approaches and lack of unified construct definition in the field, I sought a definition that supported a variety of managerial coaching frameworks and research findings. Grant's (2013, p. 16) definition was adopted for this study with an added caveat of context -- managerial coaching is "a collaborative relationship formed between a [managerial] coach and the coachee [i.e., their direct report] for the purpose of attaining professional or personal development outcomes which are valued by the coachee." This definition was chosen because it aligns well with the coaching model used in this study, described in more detail later, while not being overly-specific about competencies, goals, or behaviors. The emphasis on the collaborative relationship relates to the *relationship* factor of the model; the purpose of the coaching being related to goals and outcomes as well as the emphasis about the goals being valued by the coachee align with *accountability*; and that the outcomes include personal development is supported by the *development* factor.

The Importance of Managerial Coaching

A common narrative in the employee experience is that employees are promoted due to strong technical skills and yet receive very little training in the competencies required to be a leader, including managerial coaching (Mindell, 1995; Orth et al., 1987). This lack of training results in employees failing to receive the support that coaching provides, managers failing in their leadership roles (Dotlich & Cairo, 2003), and reduced effectiveness of the organization (Burt & Talati, 2017). This cycle of untrained managers leads to several issues: future employees lacking role models of managerial coaching; coaching behaviors not being recognized or rewarded – even if included in the job description; managers and employees not being given the extra time needed to coach; and a general lack of coaching climate (Marsh, 1992; Orth et al., 1987). The burden of coaching is often passed to HR, who may have more specialty training in

coaching conversations. However, when managers are not directly involved in training and development, they may be unprepared to follow up with the employee. Without follow-up, there is poor transfer of learning, little motivation for training and development, and ultimately wasted resources (Mindell, 1995).

As a result, companies are increasingly becoming aware that coaching is needed in organizations, and that managerial coaching is essential to learning and growth. For example, when used to supplement training, it can help prevent erosion of learning from training workshops (Schwalbe et al., 2013). A 2017 report by Human Capital Institute and International Coach Federation revealed that coaching skills were rated as the most desirable skill and competency for first-time people managers (Filipkowski et al., 2017). Further, 65% of the surveyed organizations planned to expand the scope of managers using coaching skills within the next five years. This perspective of coaching as a critical role has become ubiquitous to the extent that for many, managerial coaching is now considered to be "the heart of management" (Ellinger et al., 2010, p. 276) and an essential activity of successful managers. In fact, coaching is considered a key tool for managers to employ leadership theories (McCarthy & Milner, 2012). Similarly, organizations are increasingly seeking to build coaching cultures; from 2013 to 2017 the percent of companies meeting this goal increased from 13% to 25% (Filipkowski et al., 2017). These coaching-culture companies have employees and senior leaders who value coaching, leaders and/or internal coaches who receive accredited coach-specific training, dedicated budgeting for coaching, and equal opportunities for employees to receive coaching.

Those companies that implement coaching reap a host of positive outcomes. For example, Grant's (2013) review of coaching efficacy outcome studies included improvements in leadership capability; reduction of waste and absences by front-line workers; and increases in

employee well-being, job performance, and goal attainment. Burt and Talati's (2017) meta-analysis on executive coaching showed similar positive results in four categories of outcomes: attitudes (Test Attitudes Questionnaire and Hope Trait Scale; g = .78), coping (Coping Humor Scale; g = .68), self-regulation (Motivated Strategies for Learning, Private Self-Consciousness Scale, Self-control Schedule, Study Process Questionnaire; g = .43), and well-being (Depression Anxiety Stress Scale, Scales of Psychological Well-being, Workplace Well-being Inventory, g = .41). Thus, it seems that the focus on coaching is well-deserved. However, the positive individual and organizational outcomes of coaching is not widely known. The outcome is that many people are still unclear on what distinguishes managerial coaching from other styles of coaching, mentoring, therapy, leadership, and other interventions.

Differentiating Managerial Coaching from Similar Interventions

Due to the historical development of managerial coaching from sports coaching and then executive coaching, management, and leadership, this sub-type of coaching can sometimes seem confusing and difficult to differentiate from these other research streams. Similarly, it shares techniques from counseling and mentoring, especially in its more modern approach. In fact, managerial coaching is rooted in numerous disciplines that also underlie similar professions: social psychology, adult learning theory, organizational psychology, existential and phenomenological philosophy, and more (Bachkirova et al., 2010). As such, it is important to differentiate managerial coaching from these similar professions.

Managerial Coaching vs Other Types of Coaching. Managerial coaches are often confused with other types of coaches because coaching covers a broad arena of topics outside of work, including life coaching and sports coaching. However, even within the work context, coaches can be differentiated in several ways (International Coach Federation, 2016). Coaches

may be professionals whose exclusive role is to coach or they may have a larger role that includes coaching. For these coach practitioners, their work may be internal or external to the organization – the latter are typically known as executive coaches but may also be known as leadership coaches or by several other names. These coaches are more likely to be professionally trained or accredited. Coaches with other internal roles are typically either within the human resources department or are training specialists within departments; these professions are more likely to be trained from an internal training program than be formally accredited (ICF 2016, Filipkowski et al., 2017). A meta-analysis suggests that internal roles are more effective than those external to their organization (Jones et al., 2016), possibly due to their greater understanding of company culture.

Despite the shared work context, managerial coaches are in a unique position. First, internal and external coach practitioners and HR-led coaching tend to be contracted for a specific length of time, each meeting is conducted as a finite session, and the coach lacks direct insight into employee behavior or performance. In contrast, managerial coaching lacks contracts, engages in coaching conversations daily, offers direct insight into employee behavior, and tends to be more conversational and informal (sometimes called “corridor coaching”; Dixey, 2015; Grant, 2013).

Coach practitioners also do not have direct authority over the employee, which may change the behavior of the coachee (Theeboom et al., 2014). Specifically, employees are more likely to self-regulate their emotional displays and manage their image with supervisors (e.g., inflating knowledge or performance) and they may be less open to feedback (Evered & Selman, 1989; Tepper, 1995). The power dynamic between managers and their direct reports makes this position unique, even if results from other coaching sources are reported to managers, and there

is no distance or protection between the employee and the supervisor who is likely in charge of their performance evaluations.

In addition, the goals of these coach types tend to be very different. Coach practitioner clients tend to be upper-level leaders and topics tend to be centered on leadership skills such as strategic planning, team building, or communication skills – competencies that are difficult to measure, according to Grant (2013). In contrast, managerial coaching targets employees throughout the organization and tends to be aimed at improving specific organizational performance goals (Ellinger et al., 2010). Thus, while sharing the same general tools of coaching behaviors, managerial coaches operate in a very different context than other coaches, even when considering those who deal only with workplaces.

Managerial Coaching and Helping Roles. The helping professions and associated roles – those that focus on nurturing growth, providing education, or solving problems such as counselors, social workers, mentors, and advisors – are often confused with coaching because these roles share the goal of helping people. Counselors (or therapists) and coaches share many techniques and paradigms. For example, motivational interviewing is a well-studied therapeutic intervention for motivating behavior change used by everyone from counselors to doctors and executive coaches (Passmore, 2007). Other common psychology-based approaches to (managerial) coaching includes cognitive-behavioral, gestalt, transpersonal, and positive psychological genres (Bachkirova et al., 2010). However, there are key differences between the two professions. First, counseling typically focuses on causes of personal crises whereas coaching focuses on the work context (Ellinger et al., 2010). Second, therapy often deals with (sometimes diagnosable) emotional distress and coping mechanisms, requiring specialized

training and often licensure whereas coaches focus more on behavior change and may be conducted without formal training or licensure (Feldmen & Lankau, 2005).

Like managerial coaching, mentoring and advising take place in the work context and may be accomplished without specialized training and licensure. However, the latter roles are focused on advice-giving. Mentors are those who are more senior in an organization or profession who use their experience to become acculturated, gain expertise, and more socialized within a group (Burdett, 1998; Feldmen & Lankau, 2005). These are typically long-term relationships, either formal or informal, and may include career development and other life-aspects in addition to specific job or organizational topics. Advisors, on the other hand, tend to be technical experts who share expertise on a specific goal (Feldmen & Lankau, 2005). These relationships are focused and often shorter than mentoring relationships. However, both mentoring and advising may be carried out by colleagues or others within an organization rather than just by managers. Coaches, however, stay away from providing advice and are more focused on removing barriers and helping the employee find their own path as opposed to leading with personal experience. Thus, when managers are explicitly focusing on coaching behaviors, they are directed away from advice giving, though they may need to step into mentoring and advising roles in addition to coaching from time to time.

Managerial Coaching as Leadership. Managerial coaching may also be confused with management and leadership, especially as coaching skills are increasingly demanded from managers and leaders – to the point that it has been incorporated into some management and leadership theories. For example, according to Orth et al. (1987), modern managers are recognized as having three simultaneous roles: manager, evaluator, and coach. As a manager, they must develop and communicate performance goals and expectations; as an evaluator they

conduct performance appraisals based on those goals. As a coach, they help employees not only meet those goals, but also to improve capabilities and performance both daily and over the long term. Likewise, Google's research into management skills through Project Oxygen – an attempt to see if managers could be eliminated entirely – found that not only were managers essential for several key outcomes, but that coaching was rated as the top essential competency for good managers (Garvin, 2013; Harrell & Barbato, 2018). As such, coaching behaviors are just one part of a manager's job.

Similarly, coaching skills can be found embedded with leadership theories. For example, Milner and McCarthy (2016) compared transformational leadership and managerial coaching; though transformational leadership has a greater emphasis in creating change, the leadership style has a lot of overlap with managerial coaching. Transformational Leadership's first dimension, *idealized influence,* includes the managerial coaching concepts of collaboration, trust, high ethical standards, consistency, and providing a vision and mission through goal setting. *Inspirational motivation*, the second dimension, shares the ideas of clear communication of expectations, and making sure that employees are motivated, committed, and have self-efficacy about goal completion. *Intellectual stimulation,* the third dimension, includes the idea of co-finding solutions for challenges, encouraging creative problem solving, and learning from mistakes. The last dimension, *individualized consideration,* involves a supportive learning environment, personalized interactions, and open communication – all of which are critical in managerial coaching.

Given the overlap, Milner and McCarthy (2016) concluded that managerial coaching was an ideal way of making transformational leadership actionable. The primary reason for this is that while transformational leadership often involves large changes with many people,

managerial coaching is typically much smaller in scale, involving just one coachee. A manager can learn and practice leadership skills within this coaching relationship at any level for small changes as well as helping move individuals forward towards larger, organization-wide changes. Thus, coaching helps transformational leadership become scalable to the micro level.

Approaches to Managerial Coaching

Even within managerial coaching, the frameworks for it are as varied as the psychological approaches to therapy. Bono et al. (2009) found that goal setting was the most common approach, followed by process/facilitation orientation and cognitive behavioral. Other approaches they surveyed (in order of popularity) were skill training, behavior modification, psychoanalytic/psychodynamic, and neurolinguistic programming. Abbott and colleagues (Abbott, 2010; Abbott & Rosinski, 2007) also identified positive psychology and solution-focused coaching, action-learning, global coaching, and cross-cultural coaching as common approaches. However, these approaches are generally guided by a general humanistic approach, based on the core belief that clients drive the change. Likewise, most coaches take a strength-based approach, focusing on developing strengths rather than shoring up weaknesses (Abravanel & Gavin, 2017). Thus, despite the variety a core thread of humanistic and strength-based approaches seems to unify managerial coaching approaches.

The models that guide managerial coaching are just as varied as the theories. While most can agree that the embodiment of bad managerial coaching includes behavior such as authoritarian leadership, ineffective communication, abandonment of responsibilities, lack of transparency, and exclusively giving advice (Ellinger et al., 2008; Marsh, 1992), few can agree on exactly how to measure managerial coaching. Some models focus on the competencies or general behaviors of managers whereas others identify specific steps. Table 1 provides several

examples of managerial coaching models across the literature. These models highlight different competencies, behaviors, and processes, but tend to have a lot of overlap such as managing relationships and providing feedback.

In addition, there are many practitioner-based models such as the GROW model (Whitmore, 1992), Stanier's (2016) seven coaching questions, or even the CCL's guide to coaching conversations (Center for Creative Leadership, n.d.). The model this study uses is likewise grounded by the needs of practitioners, though underpinned by research similar to the ones in Table 1.

Table 1

Sample of Managerial Coaching Models from Published Studies

Study	Findings
Coaching Skills (Orth et al., 1987)	• Observational (for monitoring performance) • Analytical (for identifying growth opportunities and when coaching is needed) • Interviewing (asking the right questions) • Providing feedback
Top coaching competencies (Bono et al., 2009)	• Listening • Building relationships • Counseling skills • Business knowledge • Insightful questioning (according to non-psychologists) • Knowledge and understanding of human behavior (according to psychologists)
Coaching behaviors (Ellinger & Bostrom, 1999)	Empowering cluster • Question framing to encourage employees to think through issues • Being a resource—removing obstacles • Transferring ownership to employees • Holding back—not providing the answers Facilitating cluster • Providing feedback to employees • Soliciting feedback from employees • Working it out together—talking it through • Creating and promoting a learning environment • Setting and communicating expectations • Stepping into other roles to shift perspectives • Broadening employees' perspectives—getting them to see things differently • Using analogies, scenarios, and examples • Engaging others to facilitate learning
Coaching behaviors (Beattie, 2002)	• Thinking—reflective or prospective thinking • Informing—sharing knowledge • Empowering—delegation, trust • Assessing—feedback and recognition, identifying developmental needs • Advising—instruction, coaching, guidance, counseling • Being professional—role model, standard setting, planning and preparation

	• Caring—support, encouragement, approachable, reassurance, commitment/involvement, empathy • Developing others • Challenging employees to stretch themselves
Coaching behaviors (McLean et al., 2005)	• Open communication about feelings, opinions, and values • Take a team rather than individual approach to tasks • Value people over tasks by relationship-building • Accept the ambiguous nature of the working environment by risk-taking and seeking constructive conflict.
Steps in coaching (Grant, 2013)	• Identify the desired outcomes • Establish specific goals • Enhance motivation (by identifying strengths and building self-efficacy) • Identify resources and build specific action plans • Monitor and evaluate progress towards the goal • Modify action plans based on [progress] feedback

The Coaching Effectiveness 360 (CE360)

The coaching-behavior model used in this study is from the Center for Creative Leadership, an organization that offers research-based courses and products for leadership development, including managerial coaching. Their coaching model, RACSR, was developed with their leadership process model (*assessment*, *challenge*, and *support*) at the core; the dimensions of *building relationships* and *measuring results* were added to better align with evidence from the general coaching literature that demonstrated the importance of the working alliance and measuring results. The specific items for the accompanying measure were created through research, SME review, and exploratory factor analysis (A. Pascal, personal communication, May 8, 2017). This measure, the Coaching Effectiveness 360 (CE360), divides the questions into nine factors representing nine sets of behavior, which are organized under the umbrella of the five dimensions of the RACSR model.

Subsequent analysis of a different data set revealed that there was high multicollinearity between the factors (Cospito et al., 2019). This suggests that from a statistical perspective, the coaching model should be used as a one-factor model representing all coaching behaviors

covered in the questions. For research purposes, using a one-factor model would be a parsimonious approach for the CE360. However, they utilize the multidimensional model as more useful for training managers – allowing coaches to focus on different sets of behaviors as a framework of thinking – which ultimately is the primary purpose of the CE360 (A. Pascal, personal communication, May 8, 2017). This suggests that using a multidimensional model would likewise be a strategic choice for HR practitioners who wish to train and evaluate managers. As such, Kinase Kolb et al. (2018) and Cospito et al. (2019) sought to further refine the model and investigate whether a multi-factor model with less multicollinearity was possible.

The resulting model was named the RAD model, representing a three-factor solution of *relationships*, *accountability*, and *development* (see Table 2). To differentiate these common words as factors throughout this paper, italics will be used. *Relationships* is primarily supported by the working alliance, a well-studied concept in therapy. *Accountability* is more performance-oriented, founded on goal-setting and feedback, used to help the coachee meet their specified goals. *Development*, on the other hand, is oriented more towards growth and the expansion of different ways of thinking, such as the empowering cluster of Ellinger and Bostrom's (1999) coaching model.

Table 2

Three Dimensions of the RAD Model

Dimension	Description
Relationships	How well the managerial coach forges a bond with the coachee through demonstrating interest and trustworthiness.
Accountability	The extent to which the managerial coach helps employees set goals, provide guidance on progress, and holds coachees accountable for completion.
Development	The extent to which the managerial coach uses techniques to develop the coachee's self-awareness, thinking, and confidence.

Although this statistical refinement of the model reduced the multi-collinearity from the original CE360, the factors remained highly correlated, indicating that the entire survey could still be used to measure the construct of coaching behaviors. Throughout this paper, the total questionnaire used in this manner will be called "the one-factor model." The individual factors of the RAD model, however, were differentiated enough from each other to be justifiably used separately for analysis. As such, the term "three-factor model" will be used when considering them as three separate factors. In the following sections, I describe each of the three factors separately.

Relationships

The relationship between the coach and coachee has long been recognized as a key factor in the success of coaching (e.g., Kilburg, 1996). Originally identified as critical in therapy, Bordin (1979) described all change-inducing relationships as a *working alliance* and posited that it was the strength of this relationship that was the vehicle for success in psychotherapy. These relationships require both the coach and coachee to work together to agree upon goals, to collaborate on tasks, and to develop a shared bond. Recently, Graßmann et al. (2020) conducted a meta-analysis examining the association between the working alliance between clients and coaches in coaching. They found that across a variety of coaching situations and studied outcomes, the working alliance maintained a consistent positive relationship even when coaches were inexperienced. These associations tended to be even stronger when those rating the relationship and outcomes were the client rather than the coach.

Accountability

Goals are a critical foundation for coaching. Not only are strong relationships built around co-writing them, but many coaching engagements and conversations are instigated by the

need to meet performance goals or fixing perceived gaps such as deficiencies in skills or poor behavior (Ellinger, 2003). Though relationships require collaborative thinking on setting goals, it is up to the coach to hold the coachee accountable for meeting them, as well as setting the stage for success. Much of this activity is explained by goal setting theory. According to Locke et al. (1981), goals lead to performance attainment by "directing energy and attention, mobilizing energy expenditure or effort, prolonging effort over time (persistence) and motivating the individual to develop relevant strategies for goal attainment" (p. 145). Goals that are specific in nature, important to the coachee, and that are perceived to be both difficult yet doable are more likely to lead to higher performance outcomes (Locke & Latham, 2002). Specificity helps to clarify expectations; importance leads to commitment; and difficulty creates a challenge (Latham & Locke, 1979; Locke & Latham, 2002). These then (a) direct attention and effort, (b) energize people to work harder, (c) prolong effort, and (d) create excitement and more use of task-relevant knowledge towards goal completion (Locke & Latham, 2002).

Goals work best when paired with feedback on progress, as this provides not only a sense of achievement and accomplishment (Locke & Latham, 2002) but also provides insight to help coachees course-correct. Specifically, feedback is used to help identify discrepancies between performance and goals, which then allows the coachee to self-regulate their behavior (Neubert, 1998). Due to the proximity and daily contact managers have with their employees (unlike a monthly one-hour session one might have with an executive coach), managers can provide continuous feedback and help employees build habits that bring them closer to their desired goals.

Development

The third pillar of the RAD model centers on personal growth, not necessarily tied to the planned goals. This fundamentally humanistic-approach is based on the core belief that clients drive the change. *Development* is also grounded in positive psychology – specifically, the strength-based approach, which focuses on developing strengths rather than shoring up weaknesses, is shared by many coaching models (Abravanel & Gavin, 2017). The RAD model specifically focuses on practices such as challenging one's perspective, thinking through actions, and taking risks.

Thinking in new ways and challenging assumptions are important outcomes of coaching (Paige, 2002) that are included in other managerial coaching models (see Hamlin, et al., 2006). These may include new ways of assessing situations, proposing alternative solutions, and exploring assumptions about themselves or others. Similarly, focusing on reflection and metacognitions can effectively improve transformational leadership skills (Cerni et al., 2010).

Coaching Outcomes

Thus far I have defined managerial coaching, explained why it is important in both practice and research, and reviewed some of the different approaches. I then discussed the specific model of managerial coaching behaviors used in this study, focusing on the three factors of the RAD model. In this next section I outline the outcomes of managerial coaching. First, I provide a brief overview of how outcomes are typically measured for coaching, including the challenges inherent in these different outcomes. Then I review the four outcomes selected by the CCL as part of their workshop and included in this with a review of their theoretical underpinnings related to coaching and the specific RAD factors. Coaching effectiveness is the immediate, or proximal outcome for coaching. Perceptions of supervisor support, occupational

self-efficacy, and work engagement are all distal outcomes – they are likely to be a more indirect effect of coaching, as many other things in the organization also impact these outcomes.

Measuring Coaching Outcomes

The methods by which coaching outcomes are measured varies widely based on the trigger for the coaching. Ideally, managerial coaching should be a continual process that is integrated into the manager's regular routines; realistically coaching is often trigged by perceived gaps, employee development, or political reasons (Ellinger, 2003). Gaps include poor performance due to deficiencies in skills or poor behavior due to low emotional maturity as well as simply seeking the expertise of the manager. Developmental triggers included new assignments, employee transitions, and intentional assignment of learning opportunities. Political reasons included preparing employees for tasks that would be critical to their career or to the organization. Not surprisingly, the variety of goals results in a variety of outcomes, reflected in the inconsistency of outcome constructs and their measurements in both practice and research (Grant, 2003).

Some organizations use company-level outcomes for measuring effectiveness. For example, many companies try to use ROI as an indicator (e.g., for executive coaching ROI is estimated between 545 – 788%; Grant, 2013; Theeboom et al., 2014). However, the calculation of such figures is ambiguous and unreliable given the difficulty of disentangling coaching from other organizational interventions and contexts, the wide variety of coaching efficacy outcomes, and the often low-quality measures used.

In executive coaching, the most common outcome measures were targeted surveys on specific goals set by the clients, generally in 360-fashion (coachee, manager, and peers; Grant, 2013). Generally, these reports fail to provide psychometric reliability or validity information

(Burt & Talati, 2017). A meta-analysis of executive coaching outcomes estimated an overall effect size (Hedges' *g*; interpreted similar to Cohen's *d* as the mean difference expressed in weighted pooled standard deviations; Hedges, 1981) for a variety of coaching outcomes, limiting their analysis to those with well-validated measures (Theeboom et al., 2014). They found that coping was the lowest of their 5 outcomes ($g = 0.43$), followed closely by well-being ($g = 0.46$) and work attitudes ($g = 0.54$). Performance and skill development showed even more improvements ($g = 0.66$) while goal-directed self-regulation had the strongest effect size ($g = 0.74$). Across all outcomes, the estimated effect size was $g = 0.66$, which indicates that the weighted effect size is a medium, positive effect.

In workplace and personal coaching, 360 measures were also common, but Grant (2013) noted the more frequent use of objective outcome measures, such as reductions in sick days, increased safety behaviors, and improved job performance assessment scores. This inconsistency makes for difficult comparisons across studies as well as true efficacy estimations. Specifically, coaching research generally occurs in the real world with outcomes and research designs focused on business needs, in contrast to the sterile and tightly-controlled labs of the traditional medical-model, making research design elements such as randomly-assigned control groups more challenging to implement (Grant, 2013). This difficulty in research has resulted in few research studies on coaching, much less managerial coaching (Ellinger et al., 2010). However, despite the issues in measurement, organizations with coaches generally report higher revenue compared to firms without coaches in their industry groups (Filipkowski et al., 2017).

Proximal Outcome: Coaching Effectiveness

Coaching effectiveness, the proximal outcome of this study, is not well defined in the literature. Bono (2009) reported on the variety of ways this is defined and assessed. Coaching

assessments were the most frequent; these typically target efficacy of coaching process or outcomes, attainment of written or implicit goals, and increased self-understanding or confidence and are often done as 360s. Other methods including having the supervisor for the coachee (or HR) assess their satisfaction with the outcomes, behavioral changes, or other goals. Sometimes other outcomes are used as auxiliary outcomes of the coaching effectiveness such as attitude changes, promotion rates, or ROI analyses. Although the CCL included some of these additional measures as coaching outcomes, the primary outcome measure for the CE360 rates the managerial coach's effectiveness in producing general outcomes (how well the manager coaches their direct reports to make positive changes and perform to their potential) and overall effectiveness as a coach.

For this study, coaching effectiveness is expected to be predicted by the one-factor model of coaching behaviors and will likely have a stronger relationship than the more indirect outcomes examined in this paper. When looking at the individual factors of the RAD model, *accountability* is likely to be strongly related to coaching effectiveness because the triggers of many coaching conversations tend to be centered on specific goals. *Relationships* may also be strongly related because of the importance of the working relationship in co-creating goals and partnering throughout the coaching process.

Distal Outcome 1: Perceptions of Supervisor Support

Workplace social support is a global construct in which employees (a) feel cared for and appreciated and (b) have access to the help and resources required for their jobs (Kossek et al., 2011). Supervisors, coworkers, and organizations are all sources of this social support. Traditionally, research has focused on how employees feel supported from the organization as a whole. Eisenberger et al.'s (1986) Survey of Perceived Organizational Support (SPOS) was

developed to measure this concept as the antecedent to organizational commitment. Specifically, they postulated that the support felt by employees would create a sense of reciprocity (social exchange theory, Blau, 1964; reciprocity, Gouldner, 1960), therefore improving their commitment and reducing behavior such as absenteeism.

Normally, such a relationship should be carried out between individuals. However, Eisenberger et al. (1986) focused on the organization as a proxy for the collective of individuals that make up a company. Eisenberger et al.'s construction was based on Levinson's (1965) work suggesting that employees view actions by agents of an organization as representing the organization itself. Furthering this line of research, Kottke and Sharafinski (1988) isolated the effects of the supervisors from the global entity of the organization – as supervisors are generally the closest conduit for these supportive behaviors – by revising the SPOS, creating the Survey of Perceived Supervisory Support (SPSS) by replacing the word "organization" with "supervisor" for the measure's items. Since then, perceptions of supervisor support (PSS) have been linked to a number of individual outcomes such as enhanced job satisfaction, affective commitment, and both in-role and extra-role performance (Ng & Sorense, 2008; Shanock & Eisenberger, 2006). Most research on perceptions of supervisor support use either the SPSS or mimic their process to create a supervisor-focused version of an organizational support scale.

For measuring the impacts of managerial coaching, focusing on the support at the supervisor level rather than at the organizational level is preferred, since it is the supervisor who is engaging in the coaching behaviors. Perceptions of supervisor support (PSS) is defined as the opinion employees form "concerning the degree to which supervisors value their contributions and care about their well-being" (Eisenberger et al., 2002, pp. 565). This care includes both

emotional and tangible support (Kossek et al., 2011), which are also markers of managerial coaching (Ellinger, 2013).

Psychological Contracts and PSS. Managerial coaching is one source of tangible resources provided by the organization to elicit a sense of reciprocity. Managerial coaching is an investment in employee training – a specific high-performance work practice (HPWP; Combs et al., 2006) strategy employed by HR departments to improve employee competencies and motivation. As such, it fulfills part of the psychological contract between employees and their organization – the belief that employees hold about their due rewards in addition to monetary compensation in exchange for their efforts, commitment, and loyalty (Rousseau, 1995). Like the relationship between PSS and commitment, the psychological contract is based on social exchange theory (Bleau, 1964) and the theory of reciprocity (Gouldner, 1960). Unsurprisingly, PSS seems to reduce the feeling of contract breech when other resources are unavailable (Zagenczyk et al., 2009). Thus, managerial coaching can fulfill an important role in maintaining the employee-employer relationship by both providing expected resources and buffering the impact of perceived contract breeches.

Interactional Justice and PSS. Interactional justice is another way that supervisors build feelings of trust and support in subordinates (DeConinck & Johnson, 2009). Interactional justice is the extent to which people perceive others to have treated them well through interpersonal interactions (Cropanzano et al., 2002). This includes treating people with dignity and respect (Bies & Moag, 1986) and providing subordinates with reasonable and timely justifications and explanations (Shapiro et al., 1994). These fit in well with the qualities of goal-setting and feedback, which are also key behaviors for supervisors in supporting their subordinates (Hutchinson & Garstka, 1996). Goals require the commitment of the subordinate, which would

require justification, and embedded feedback (Locke & Latham, 2002). Feedback should be timely (which may depend on the type of task), framed respectfully (e.g., unbiased, focused on behaviors), and include specific details (Shute, 2008). Notably, these behaviors of supportive superiors are also all behaviors expected from managerial coaches (Naudé & Stichelmans, 2015).

RAD Coaching and Perception of Supervisor Support. The foundational nature of social exchange theory and reciprocity supporting PSS, psychological contracts, and interactional justice suggest that managerial coaching behavior in all three categories (*relationships*, *accountability*, and *development*) should improve PSS scores. The emotional aspects of social support may be the most prominent; as such, the correlation between *relationship* behaviors and PSS is hypothesized to be stronger than the other two. *Accountability* behaviors, such as goal-setting, are also highly associated with the expectations of managers. When they are missing, they are likely to cause a low score of PSS due to the contract breech. Lastly, *developmental* coaching behaviors, while part of the psychological contract, may be less expected than behaviors tied more directly to business outcomes, and as such may have the lowest correlation to PSS of the three coaching behavior categories.

Distal Outcome 2: Occupational Self-Efficacy

Changes in behavior are predicted by expectations of success; these include both *efficacy* expectations (self-efficacy) and *outcome* expectations (Bandura, 1977). Outcome expectations are those that connect a certain behavior with an outcome, such as dieting leading to weight loss, or quality work leading to positive performance reviews. In contrast, efficacy expectations connect the person with the behavior (e.g., my belief that I can diet, or my belief that I can perform good work). The strength of one's self-efficacy is central to motivational theory, in that low self-efficacy often leads to poor coping choices such as avoidance. In contrast, high self-

efficacy can lead to a higher likelihood of behavior initiation and longer persistence, especially when obstacles are experienced.

Specific vs Generalized Self-Efficacy. Self-efficacy is a general construct which may be divided into two levels – generalized and specific (Bandura, 2006). Generalized self-efficacy (GSE) is the fundamental ability to cope with challenges, perform tasks, and to be successful (Judge et al., 1998). GSE is a core self-evaluation – a dispositional trait – which is related to organizational outcomes such as job satisfaction and job performance (Judge & Bono, 2001). GSE predicts both behavior intentions and actual performance (Sadri & Robertson, 1993).

However, GSE is often insufficient as a predictor, as people have different levels of self-efficacy in different domains. In the examples above, one may have high GSE, or high self-efficacy pertaining to their professional work, but low levels of self-efficacy for dieting. In this case, the specific self-efficacy is a better predictor than GSE for predicting successful dieting. This is consistent with the specificity-matching principal, in which the specificity of the predictor and outcomes should be matched (Swann et al., 2016). This principal helps to eliminate extraneous influences on the predictor-criterion relationship.

Bandura (2006) offered guidance on creating and modifying measures to be domain-specific, such as using items that connect directly to the specific behaviors and include common challenges within those tasks. Continuing from the previous dieting example, these might include items about tracking macros and engaging in physical activities. For this study, occupational self-efficacy is the relevant domain.

Occupational Self-Efficacy. Occupational self-efficacy is the confidence one feels in their ability to successfully accomplish behaviors specifically related to work-related tasks (Schyns & Sczesny, 2010). The construct was first conceptualized and measured by Schyns and

von Collani (2002), who demonstrate its utility across a variety of professions and job types, which is necessary when within across departments and organizations. It was further refined into a short version by Rigotti et al. (2008), which is the measure used most widely today. Occupational self-efficacy predicts numerous employee outcomes, including work engagement (Hirschi, 2012), job satisfaction (Rigotti et al., 2008; Schyns & von Collani, 2002), job performance (Rigotti et al., 2008), team climate (Loeb et al., 2016), organizational commitment (Rigotti et al., 2008), salary status, (Abele & Spurk, 2009), and career satisfaction (Abele & Spurk, 2009). Unfortunately, although the construct is relevant to self-efficacy in the workplace, the research is still sparse compared to the studies using GSE in the workplace.

Occupational Self-Efficacy and Managerial Coaches. GSE and OSE are considered instrumental to managerial coaching. Lathan and Wexley (1994) proposed that "the job of coaching is to strengthen an employee's self-efficacy regarding a specific task so that there is an inextinguishable sense of commitment that is resilient to drawbacks and rejections" (p. 208). They seek to improve both outcome expectations and self-efficacy using tools such as performance reviews, focused feedback, and creating action plans (Richardson, 2009). Pousa and Mathieu (2015) found that for sales employees, managerial coaching was significantly related to self-efficacy (r = .37). These results are similar to the more extensive research on the relationship between executive coaching and GSE (Baron & Morin, 2009; de Haan et al., 2016). As such, it is reasonable to hypothesize that occupational self-efficacy, being more domain-specific than GSE, will also be related to managerial coaching behaviors.

Sources of Self-Efficacy in Managerial Coaching. Bandura (1977) described four sources of efficacy expectations: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. First, one's own past successful performances are a powerful

source of self-efficacy, as it is evidence that one has the capability to perform the behavior. Managerial coaches are well-placed to provide scaffolding experiences to build a history of successful performances. Specifically, the manager can provide easier versions of the task initially, and then progressively increase the difficulty until the employee is at full performance (see Collins et al., 1989). Managing outcome expectations is critical, as lacking the skills required to do the behavior increases the feelings of low self-efficacy, demoralization, and goal abandonment (Bandura, 1977).

Secondly, managerial coaches can provide vicarious experience through personally modelling behavior or providing instruction or mentoring from coworkers. These experiential methods can thus improve the connection between one's own capabilities and the ability to perform the required behaviors. Vicarious experience is especially powerful when paired with performance accomplishments, Bandura noted, and both benefit from clear outcomes, as one would expect from goal-setting theory (Locke & Latham, 2002). Specifically, clear outcome standards allow for comparison and self-evaluation of the performance against one's self-efficacy; without clarity of goals such experience has little impact on motivation (Bandura & Cervone, 1983). Likewise, setting performance outcomes within reachable limits permits attainment that match or exceed the goal, which then produces positive emotions (e.g., self-satisfaction) as well as evidence of attainability.

Thirdly, managerial coaches can also use coaching conversations to improve self-efficacy through verbal persuasion, such as is used in Coach Motivation (Collins et al., 2020) and many other coaching models. This is usually combined with the fourth approach, as skilled coaches can likewise use emotional arousal to improve self-efficacy by reducing fear through practice or helping their direct reports feel excitement about the task. Managerial coaches are well-placed

for this situation as well, since executive coaches may be limited to their coaching sessions without having control over real-time feedback, observing performances, or providing experiences as necessary. Like vicarious experience, these tactics are less effect when conducted alone but are useful when combined with other methods of improving self-efficacy.

RAD Coaching and Self-Efficacy. Altogether, managerial coaching seems to be well-suited as a tactic for improving OSE. Interestingly, though coaching heavily relies on the working alliance between the coach and coachee, this deepened relationship seems to have little to do with improving OSE (Landany et al., 1999). Thus, it is expected that while coaching behaviors will increase self-efficacy overall, *relationship*-focused coaching behaviors will likely be less effective than *accountability* or *developmental* behaviors. Further, because self-efficacy depends heavily on completing specific tasks, *accountability* is likely to be the strongest predictor within the model with its reliance on goal-setting theory.

Distal Outcome 3: Work Engagement

The last outcome addressed in this study was work engagement (WE), which is a common outcome desired by organizations due to its connection with other key outcomes such as job performance, turnover intentions, client satisfaction, and financial returns (Bakker et al., 2011; Halbesleben, 2010). Despite the popularity of the construct, it is relatively new, and is often used interchangeably with the terms “employee engagement,” “workplace engagement,” and “job engagement.” This confusion comes from a lack of clarity on the construct; it can be considered a psychological state related to the emotional component of job satisfaction, the affective component of organizational commitment, job involvement (or task engagement), and/or action-focused psychological empowerment (Macey & Schneider, 2008). Similarly, there is some debate on whether engagement is a state, which supports the idea that it is more flexible

dependent on job circumstances, or if it is a positive affect trait, which suggests that it is a motivation for work that is internal for the employee. Within this debate, some may differentiate employee engagement as a trait and work engagement as a state.

Given that the interest for an organization is how to improve state engagement, this study uses work engagement as conceived by Schaufeli and colleagues, who defined work engagement as a "positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74). Work engagement was originally conceptualized as the opposite of burnout (though subsequent analysis demonstrated that they were not exact reflections) and is a signal of well-being and human flourishing in and influenced by the work environment. The three factors of vigor (drive and persistence), dedication (pride and enthusiasm), and absorption (immersion and flow) are distinct yet correlated. Given that the correlations between the scales are between 0.7 and 0.9 (Schaufeli et al., 2002), they are often treated as a single outcome variable in studies.

Managerial Coaching as a Job Resource. One key driver of work engagement is job resources (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004), which are physical, social, or organizational characteristics of a job that reduce job demands, improves one's ability to achieve goals, and improves employee development (job demands-resources model; JD-R; Demerouti et al., 2001). These outcomes relate directly to managerial coaching; the RAD models' *accountability* factor ties directly to goal-setting and the *development* factor is focused on employee development activities.

Job resources vary widely and are located at different levels of the company: company-level (e.g., job security, organizational climate), relationships (e.g., supervisor or social support), work organization (e.g., role clarity), and tasks (e.g., feedback, autonomy). These tangible

resources work to fulfill basic human needs such as autonomy, competence, and relatedness (Bakker & Demerouti, 2007), which serves to motivate employees. External motivations may come through achieving work goals; intrinsic motivations may come through learning and social support (Bakker & Demerouti, 2008).

While managers may have limited control over company-level resources, they oftem have influence over other resources. As the ones in charge of their subordinate's jobs and the resources given to them, as managers they are well-situated to tailor resources to their subordinate's needs and to provide coaching as another resource. For example, Mauno et al. (2007) found that job control was one of the largest job resources to predict work engagement; some of the *developmental* activities within the RAD coaching model specifically help employee to take control of their jobs such as specifically practicing new behaviors. Likewise, if a manger cooperatively sets goals with their subordinate, they will feel an increase in control over their job as opposed to simply being handed down goals – an aspect of the *accountability* factor.

Having managers as an easily-accessible resource may help improve the salience of this and other job resources, which may further improve the effects of job resources according to the conservation of resources theory (COR; Hobfoll, 2011). This is especially true in contexts where employees face other job stressors. For example, a lack of resource gain (e.g., promotions) is likely to lead to burnout, especially after a great deal of resource expenditure (Hobell, 2001; Bakker et al., 2005). In this case, easy access to managerial coaching could act has a buffer to experiencing a loss spiral. On the other hand, ample job resources lead to higher work engagement and emotional well-being, which then predicts a greater availability to job resources – an upward spiral (Bakker & Demerouti, 2008). In this case, having a managerial coach can

encourage employees to take advantage of other resources, or having other resources can encourage them to take advantage of the coaching their manager offers.

RAD Coaching and Work Engagement. Numerous studies have pointed to a relationship between managerial coaching and work engagement (Ali et al, 2018; Heyns et al., 2019; Ladyshewsky & Taplin, 2018; Lee et al., 2019; Tanskanen et al., 2019). These studies used a variety of different managerial coaching measures; other studies likewise included managerial coaching behaviors either individually or as part of leadership styles and similarly found a connection between these and work engagement (e.g., Christian et al. 2011). Thus, it is likely that the one-factor model of managerial coaching behaviors used in this study will likewise predict work engagement.

Although all three factors of the RAD model make theoretical sense as job resources, in addition to the salience of coaching availability, the *relationship* of the coach and coachee is likely to take a back seat to *accountability* and *developmental* behaviors due to the specific edge of job control in predicting work engagement.

Research Models and Hypotheses

This study includes four different outcomes – one proximal and three distal – as well as a predictor that may be assessed as either a single-factor or as three separate factors. Together, these hypotheses (a) test the relationships between the re-specified model of coaching behaviors (RAD) and select coaching outcomes, and (b) assess which sub-dimensions have the strongest correlations with each outcome.

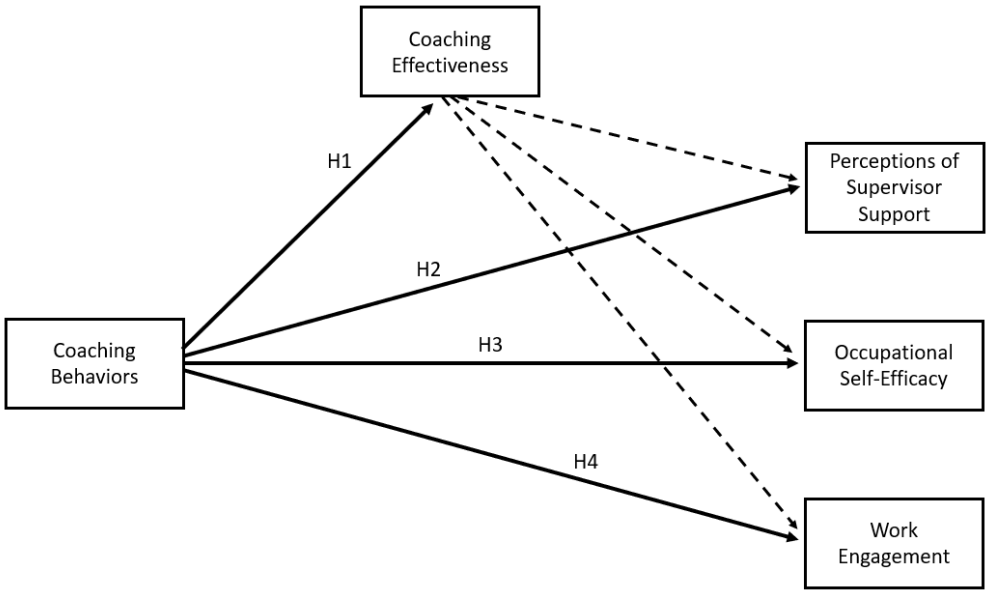
Overall RAD Model

The RAD model, in its similarity to the original RACSR model presented by the CCL, has theoretical support but limited empirical studies backing it. As such, the first set of hypotheses were intended to test these relationships (see Figure 1).

- *Hypothesis 1*: There is a positive relationship between coaching behaviors (one-factor model) and coaching effectiveness (CE).
- *Hypothesis 2*: There is a positive relationship between coaching behaviors (one-factor model) and perceptions of supervisor support (PSS).
- *Hypothesis 3*: There is a positive relationship between coaching behaviors (one-factor model) and occupational self-efficacy (OSE).
- *Hypothesis 4*: There is a positive relationship between coaching behaviors (one-factor model) and work engagement (WE).

Figure 1

Integrated Model of the One-Factor RAD Model



Note. The first 4 hypotheses are noted; the dashed lines indicate the model segments that were not tested.

The complete model is a partial mediation, as the distal outcomes likely rely on the perception of the managerial coach as being effective. However, only the primary relationships between the predictor and the four outcomes were tested in this study because (a) the available data was cross-sectional, which prevents causal claims, and (b) the planned statistical analysis that accounts for within-manager variance is difficult to do with the mediation. This study thus serves to determine the feasibility of the model, focusing on the initial path of each mediation.

Exploring the RAD Factors

Knowing that the overall model is effective is only the first step. While many other studies on managerial coaching show relationships between coaching overall and various outcomes (e.g., Agarwal et al., 2009; Ali et al., 2018; Ladyshewsky & Taplin, 2018; Lee et al., 2019), they rarely assess each factor's contributions to the outcome. This next step in the research will provide guidance on which types of coaching behaviors may be driving these relationships. For researchers and those developing coaching programs or models, these analyses may help guide them in deciding what coaching behaviors to study or teach. For managerial coaches using the model in this study, these analyses will allow them to tailor their approach, emphasizing different coaching behaviors in order to get specific results.

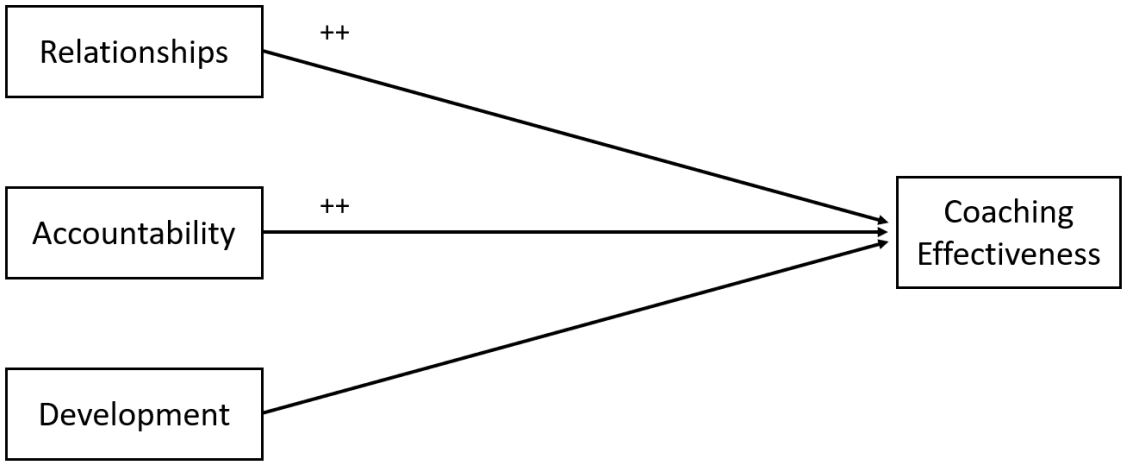
For these analyses, each of the outcomes and the three factors of the RAD model were isolated. Within the models below, a "+" sign was used to indicate the extent to which the relationship was expected to be positive; a single "+" indicates a comparatively moderate relationship and a double "++" indicates a stronger relationship.

- *Hypothesis 5*: *Relational* and *accountability* behaviors will have a stronger relationship with coaching effectiveness than *developmental* behaviors.

- *Hypothesis 6*: *Relationship* behaviors will have a stronger relationship with perceptions of supervisor support (PSS) than *accountability* behaviors; both will have a stronger relationship than *development* behaviors.
- *Hypothesis 7*: *Accountability* will have the strongest relationship with occupational self-efficacy (OSE), followed by *developmental* behaviors.
- *Hypothesis 8*: *Accountability* and *development* behaviors will have a stronger relationship with work engagement (WE) than *relational* behaviors.

Figure 2

Theoretical Model of the Strength of Each Relationship in Hypothesis 5



+ comparatively moderate relationship
++ comparatively stronger relationship

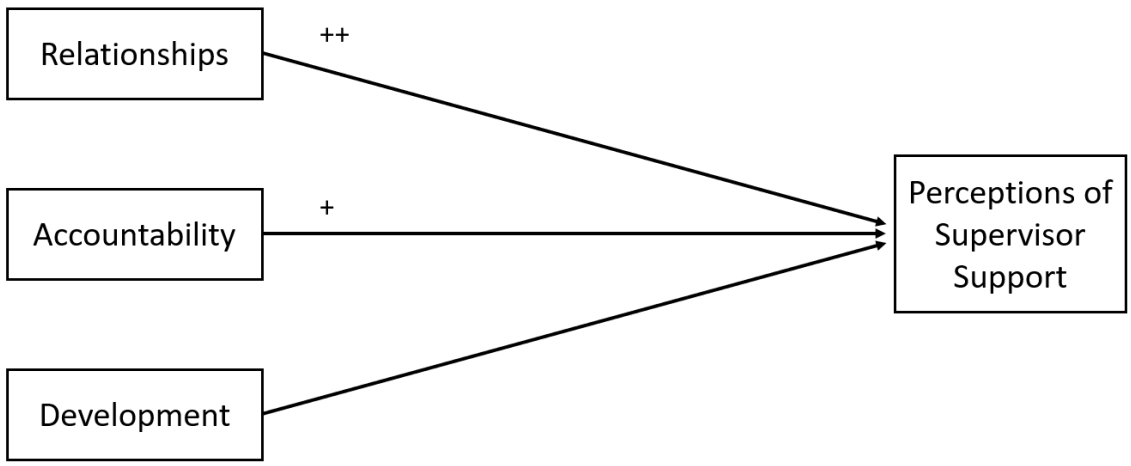
For predicting ratings of coaching effectiveness, *accountability* is expected to have a strong relationship due to many coaching conversations being goal-driven. *Relationships* is

expected to be important due to the necessity of co-creating goals in coaching, as opposed to handing them town top-down as a traditional manager (see Figure 2).

For predicting perception of supervisor support, *relationships* is expected to be the strongest factor as many of the specific behaviors within this subscale are intended to explicitly provide social support. *Accountability* is expected to have a moderate role due to the negative effect of psychological contract breeches when managers fail to set expectations and provide feedback and other resources (see Figure 3).

Figure 3

Theoretical Model of the Strength of Each Relationship in Hypothesis 6



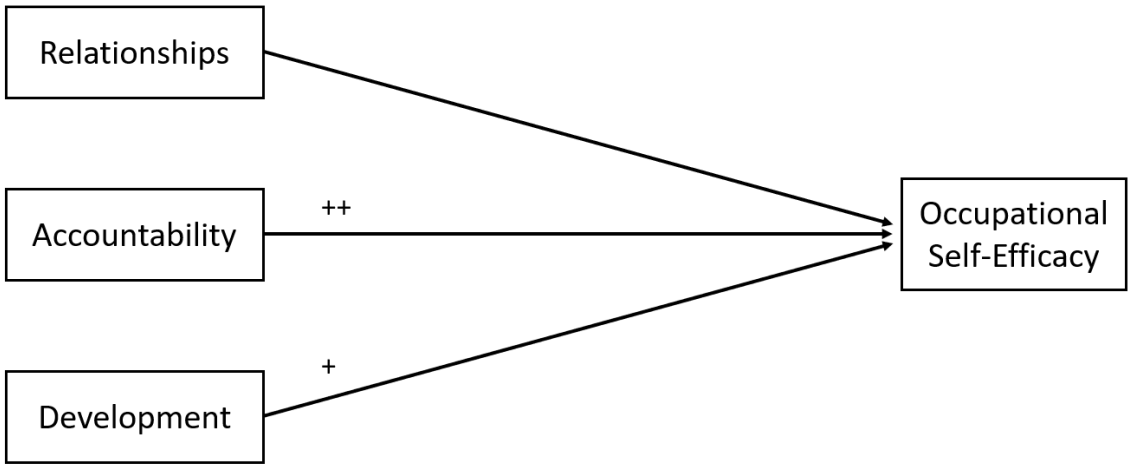
+ comparatively moderate relationship
++ comparatively stronger relationship

For predicting occupational self-efficacy, *accountability* is expected to be the strongest predictor due to the direct influence of meeting goals with building specific self-efficacy. *Development* may have a moderate influence on OSE through opportunities to practice new

behaviors, take risks, and evaluate how different coachee behaviors could result in different outcomes (see Figure 4).

Figure 4

Theoretical Model of the Strength of Each Relationship in Hypothesis 7

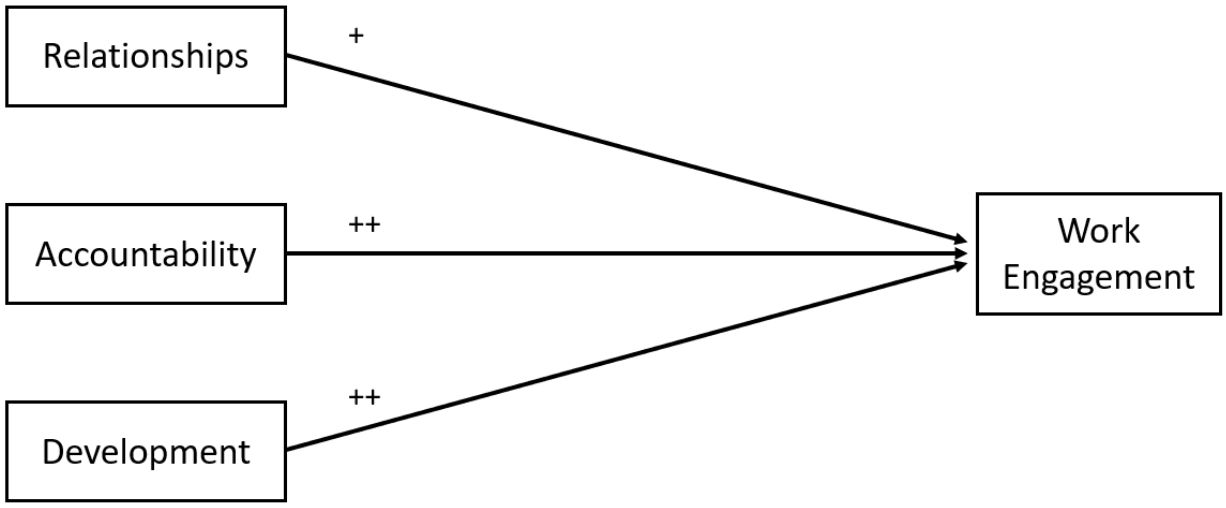


+ comparatively moderate relationship
++ comparatively stronger relationship

Lastly, both the resource of having a manager act as a coach and the resources that they provide act to improve engagement through removing barriers, enabling goal completion, and offering opportunities for growth. Due to the tendency for jobs to be goal-orientated and based on the direct connection between development opportunities and job resources, *accountability* and *development* are both expected to be strong predictors of work engagement. However, *relationships* is also expected to predict engagement as a source of social support (see Figure 5).

Figure 5

Theoretical Model of the Strength of Each Relationship in Hypothesis 8



+ comparatively moderate relationship
++ comparatively stronger relationship

CHAPTER III:

Method

This study utilized archival data from the Center for Creative Leadership, which maintains several extensive databases for research purposes. The complete assessment included self-ratings and 360° responses from bosses, peers, and other sources in addition to direct reports. However, for the purposes of this study, only the direct reports were included, as subordinates have been found to be the best predictors of coaching competency assessment (Atkins & Wood, 2002). Below I present information on how data was collected and screened, the measures that were used, and the analyses used to test the hypotheses.

Participants and Procedures

Study participants included direct reports (N = 1477) of 439 managers who were enrolled in the CCL's Coaching for Greater Effectiveness Program between 2011 and 2016. This is a paid, open enrollment workshop consisting of three days of coaching and leadership training for people managers. Each participant recruited between 1 and 13 direct reports for the 360° assessments, which were used as an initial evaluation of coaching skill. Direct reports were informed that their individual responses would not be provided to the managers, and instead were reported as composite scores in order to provide anonymity. Neither the CCL nor this study's investigator provided any incentives for assessment completion. There were no known additional exclusion criteria.

Program participants consisted of 62.4% male (n = 274) and 37.6% female (n = 165) managers between the ages of 22 and 69 (M = 45.08, SD = 8.37). A large number of managers did not report their current country of residence (32.6%); of the remainder, 40.6% were from the United States, 6.8% from Canada, 3.6% from Singapore, and the remainder divided between 32

other countries. The organizations with which the participants were associated varied widely; the most common industries were chemicals (18%); retail (11%); food, beverage, and tobacco (9%), and pharmaceuticals 9%). Government employees made up 5% of the data, and 3% were in the non-profit sector. Other demographic variables are reported in Table 2. Demographic data for the direct reports were unavailable.

Table 3

Participant Characteristics for Managers

Characteristic	Response rate	Categories	*n* (%)
Race	225 (51%)	African American	13 (3.0)
		Asian or Asian American	22 (5.0)
		Caucasian	169 (38.5)
		Hispanic	6 (1.4)
		Native American	1 (0.2)
		Multiracial	6 (1.4)
		Other	6 (1.4)
Highest Degree Earned	429 (98%)	High school	12 (2.7)
		Associate's	12 (2.7)
		Bachelor's	159 (36.2)
		Master's	188 (42.8)
		Doctorate	29 (6.6)
		Professional	19 (4.3)
		Other	10 (2.3)
Organization Level	420 (96%)	Executive	134 (30.5)
		Top	26 (5.9)
		First Level	14 (3.2)
		Upper Middle	162 (36.9)
		Middle	84 (19.1)

Note. N (manager) = 439.

Sample Size, Power, and Precision

This study used a nested design in which direct reports rated managers (i.e., direct reports were nested within managers). Based on the previous research that has examined coaching and

related outcomes, I expected a small to medium effect size to represent significant findings within the data across all criterions tested. In order to detect these small to medium effect sizes, attention to sample size is important. However, determining the appropriate sample size for multi-level modeling is more complex than for OLS regression due to considerations such as the ICC, the number of Level-2 clusters, whether the design is balanced (i.e., an approximately equal number of observations within each cluster), whether FIML or REML is used for the analyses, whether the slopes and intercepts are set as fixed or random, whether the equations include covariates and interactions, whether experimental designs include randomization at the Level-1 versus the Level-2 units (Dedrick et al., 2009; McNeish & Stapleton, 2014).

Numerous rules of thumb exist; for example, the 30/30 rule for multilevel modeling outlines the proposition that there should be 30 or more groups in the Level-2 variable, and 30 raters for each of those groups (Kreft & De Leeuw, 1998). On the other hand, 100 clusters of 10 observations are appropriate if using REML (Hox, 1998, 2010). A simulation study by McNeish and Stapleton (2014) found that the number of clusters and cluster size had no effect on the fixed-effect point estimates in balanced designs and showed very small impacts on Level-2 variance components for simulations with over 100 clusters regardless of cluster size. Generally, considerations of sample size are more important at Level-2 (the number of clusters) when considering possible biases (Dedrick et al., 2009). Thus, the 439 clusters of managers greatly exceed the recommendations by McNeish and Stapleton (2014) of 100 clusters and is likely to be large enough to reveal small to medium effect sizes, despite having an unbalanced design (i.e., clusters from 1 to 13 direct reports).

Measures

To test the proposed hypotheses, I used five measures; one as the predictor and four as outcome variables. The predictor construct, coaching behavior (CB) skills, was used as both a single-dimension predictor for the main hypotheses and as a three-dimension measure for exploratory analyses. The outcome constructs were coaching effectiveness (CE), work engagement (WE), self-efficacy (SE), and perceptions of supervisor support (PSS). All measures are included in the Appendices.

Coaching Behavior Skills

The Coaching Effectiveness 360 (CE360) was created by the CCL as a training tool for managerial coaches, following their coaching model RACSR (Center for Creative Leadership, n.d.). Participants in their workshops and coaching engagements ask their boss, peers, and at least one direct report to complete the measure, in addition to filling it out themselves. The measure then serves as a guide for which coaching behaviors they need to improve in order to increase their effectiveness as a coach. The CE360 included 52 questions on the RACSR model, 3 items on coaching effectiveness, and 13 demographic items. The coaching effectiveness items are addressed separately.

The CCL performed the initial reliability and validity analyses (A. Pascal, personal communication, May 8, 2017). The original measure was intended to include nine subdomains (Naudé & Stichelmans, 2015); the CCL established content validity for these during the creation of the measure through evaluations by SMEs. Criterion-related validity was established by correlating ratings on the nine dimensions on the outcomes, such that greater use of coaching behaviors predicted higher ratings on the outcomes in the original samples; these patterns hold whether the ratings are completed by direct reports, peers, or bosses. Each dimension had reliability scores of $\alpha > .70$ for each rater source and were correlated with one another ranging

from .50 to .90. Notably, the CCL reported that the factors did not hold up to a factor analysis, mostly due to high multicollinearity between some of the factors.

Due to the high observed correlations, subsequent researchers have explored alternative models. Pascal (2018) argued for a single-factor solution; in his study the full CE360 had high inter-item reliability (α = .99) and explained 58.34% of the variance by way of exploratory axis factoring. Analysis accounting for the nested nature of the data revealed nearly identical results. Pascal also conducted a CFI using both the subordinate and self-ratings combined, comparing 1-, 3-, and 5- factor models; the single-factor solution had the best fit indices (RMSEA = 0.055, CFI = 0.87, SRMR = 0.04) compared to the 3-factor solution (RMSEA = 0.054, CFI = 0.87, SRMR = 0.15) and 5-factor solution (RMSEA = 0.050, CFI = 0.89, SRMR = 0.04) though all had fairly similar fit.

Concurrently, Kinase Kolb et al. (2018) performed a principal components analysis to see whether the CCL's proposed nine dimensions, the five-factor solution that they used with the RACSR training model, or another solution would be most appropriate for use in analyses. They found that while a one-factor solution was useable, a three-factor solution was nearly equivalent and perhaps more useful for practitioners. They also reduced the number of items in the measure to fit the three-factor solution, which was dubbed the RAD scale (*relationships*, *accountability*, and *development*). The model was fine-tuned in a second PCA analysis (promax rotation) which included a CFA (Cospito et al., 2019), which is the version of the scale used in this study. Within the PCA, *relationships* account for 21% of the variance, *accountability* accounts for 24%, and *development* accounts for 16%. Comparing the original CE260 with the reduced RAD model, they found that the 3-dimension solution was a better fit (CFI = .922, RMSEA = 0.55) compared to the original (CFI = .875, RMSEA = .067). The three dimensions are highly correlated:

relationships with *accountability r* = .76, *accountability* with *development r* = .85, and *relationships* with *development r* = .80. The high correlations coupled with the previous psychometric studies suggest that the measure is usable as either a single-factor or a three-factor scale.

The RAD Model. Coaching behaviors were measured using the 45-item RAD scale (Cospito et al., 2019; Kolb et al., 2018). Participants rated their manager's use of coaching behaviors using a Likert-like scale from 1 (*to an extremely small extent*) to 7 (*to an extremely large extent*). Responses were aggregated into the subscales by taking the mean of the items to form composite scores for each dimension (or into a single dimension, for the main hypotheses). As a single-factor model, the items have a high inter-item reliability (α = .98). The full RAD model is presented in Appendix A.

Relationships. The coaching relationship is the connection between managerial coach and their direct report where the roles are explicitly established and collaborative in nature (O'Brion & Palmer, 2009; Wang, 2013). These relationships are built through behaviors focusing on building rapport, demonstrating trust-worthiness, and showing trust in the coachee. This dimension consisted of 15 items, with an inter-item reliability of α = .95. Example items include: "Demonstrates patience in relationships," "Leads by example," "Is fair and ethical," and "Provides timely positive feedback."

Accountability. Managerial coaches build accountability through the process of co-creating action plans for achieving organizationally-relevant goals coupled with corresponding timetables and progressive feedback (Longenecker & Neubert, 2005). This dimension has 18 items (α = .96). Example items include: "Assists in establishing specific milestones for

employees' goals," "Checks in on progress toward goals," and "Provides timely negative feedback."

Development. Managerial coaches develop their direct reports through the exploration of personal identity through self-discovery, new experiences, and taking risks, which facilitates self-awareness and introspection (Kinase Kolb et al., 2018). The 12 items in this dimension has an internal reliability of $\alpha = .94$. Examples include: "Asks open-ended questions to challenge current thinking," "Challenges assumptions in order to explore new ideas," and "Asks questions more than gives advice."

Coaching Effectiveness

Coaching effectiveness was the primary outcome for the CCL's CE360 measure. Written by the CCL, the coaching effectiveness items asked raters to compare their manager to other leaders within their organization. This measure included three items: "How well does this person coach others to make positive changes?", "How well does this person coach others to perform to their potential?", and "How would you rate this person's effectiveness as a coach?" These items were rated on a Likert-like scale from 1 (*among the worst*) to 5 (*among the best*) with reliability for this study measured at $\alpha = .95$. The three items were aggregated into a single composite score.

Perceptions of Supervisor Support

Perceptions of supervisor support reflect the feeling of commitment the employee feels from their immediate supervisor (Kottke & Sharafinski, 1988). PSS was measured using four items adapted from Kottke and Sharafinski's Perceptions of Supervisor Support Scale (SPSS). All items were measured using 5-point Likert scales from 1 (*strongly disagree*) to 5 (*strongly agree*). Two of the items were reverse-coded (e.g., "My supervisor fails to appreciate any extra

effort from me"; see Appendix B). After recoding, the items were aggregated into a composite score (α = .77).

Notably, it is unclear why the CCL decided to use the particular items they selected. The original scale by Kottke and Sharafinski (1988) was an adaptation of the 16-item short form of Eisenberger et al.'s (1986) Survey of Perceived Organizational Support, in which they altered the items to focus on the supervisor rather than the organization. Others have used 4-item versions of the SPSS. For example, Rhoades et al. (2001; α = .90) selected four items based on factor loadings and construct validity, but the resulting scale only overlaps with this study's in two of the four items. Many other studies copied Rhoades et al.'s methodology and specific items (e.g., Chew Sze & Angeline, 2011; α = .86, r_{EE} = .14). Unfortunately, selecting only a small part of the scale and not using the same four as others renders any comparisons with other studies difficult (e.g., reliability, correlations). However, taking a subset of the original SPSS geared for the specific study seems to be fairly common practice, especially for practitioners such as the CCL.

Occupational Self-Efficacy

Self-efficacy was measured using the Short Occupational Self-Efficacy Scale (SOSS; Rigotti et al., 2008), which is a domain-specific assessment referring to "the competence that a person feels concerning the ability to successfully fulfill the tasks involved in his or her job" (p. 239). The SOSS contains 6 of the original 20 items in the long-version developed by Schyns and von Collani (2002), which was adapted from items from The Self Efficacy Scale (Sherer et al., 1982), The Generalized Self-Efficacy Scale (Schwarzer, 1994), The Hope Scale (Synder et al., 1991) and The Heuristic Competence Scale (Staudel, 1988; see Appendix C). The direct reports responded on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Example items include: "I feel prepared for most of the demands in my job" and "When I am confronted

with a problem in my job, I can usually find several solutions." Scores were aggregated to form a composite scale (α = .81).

When developing the scale, Rigotti et al. (2008) cross-validated in five Western countries in their respective languages (Belgium, Germany, Great Britain, Spain, and Sweden). After item reduction the final psychometric fit statistics across the different languages were similar; the GFI and CFI values were all over .90 and RMSEA values were under .08, which were the criteria selected by the authors. The internal reliability ranged from .85 and .90, and the item-total correlations were greater than .50 for all samples. Content validity was assessed through correlations (controlling for age) with performance (r = .32 to .58), job satisfaction (r = .17 to .46), commitment (r = .13 to .39), and job insecurity (r = -.27 to .06). The scale has been used in many subsequent studies with similar reliability ranges. For example, Hirschi's (2012) study has a reliability of .87 (and r = .50 with the UWES-9). Carrell's (2008) study on a different managerial coaching measure had α = .86 (r_{CB} = .32, r_{EE} = .48, and r_{PSS} = .37).

Work Engagement

Work engagement was measured by the Utrecht Work Engagement Scale (UWES), which was originally developed by Schaufeli et al. (2002). They defined engagement as persistent work-related attitude characterized by *vigor* (drive and persistence), *dedication* (pride and enthusiasm), and *absorption* (immersion and flow). Direct reports responded on a 7-point Likert-like scale from 1 (*never*) to 7 (*always*). Items included: "At my work, I feel bursting with energy" (vigor), "I find the work that I do full of meaning and purpose" (dedication), and "When I am working, I forget everything else around me" (absorption).

The original measure consisted of 24 items, which was reduced to 17 through psychometric analysis. Later, the UWES was shortened to a 9-item scale which is usable as

either a single- or three-factor measure. Although the measure has received criticism over the psychometric properties, such as which factor structure is superior (e.g., Kulikowski, 2017), it is one of the most common measures of work engagement used. This study uses the UWES-9 as a single-factor scale (see Appendix D). Schaufeli et al. (2006) reported the internal consistency ranging between .85 and .92 across different countries; in this study $\alpha = .92$.

Demographics and Covariates

Managers were asked 15 items regarding participants' personal demographics (gender, age, race/ethnicity, education, country of native origin, country of residence, native language), their job and organization (job function, organizational level, organization type, sector), and coaching experience (opportunities, resources, formal coaching experience, years of coaching skills experience). Questions were presented as a mix of fill-in-the-blank, multiple choice, and Likert scale format. Direct reports were not asked any demographic questions, but were asked how long they had been in a formal coaching relationship with their supervisor, and what type of coaching relationship this was (formal, informal, or none at all). The last item was used as a screening question (detailed below).

Procedure and Analyses

Research Design

The study is a quantitative non-experimental single-group design using a cross-sectional approach evaluating the relationship between coaching behaviors and four different outcomes, treating coaching behaviors as a single-factor variable as well as three dimensions. These relationships follow the proposed model, but do not take a mediation approach due to the cross-sectional nature of the study.

Post-Collection Data Screening

Participants were screened for inclusion based on two criteria. First, each manager needed to have at least one direct report that answered the survey; 53 did not fit this criterion. This screening was necessary since (a) those without matching data from direct reports may not be people managers, and (b) the outcome variables were taken from the direct reports, necessitating the exclusion of these managers. Secondly, each direct report was asked what type of coaching relationship they had with the manager; those that responded "none at all" were excluded from the study; 153 direct reports were excluded.

Analytic Strategy

Each of the hypotheses were tested using cross-sectional multi-level modeling in R (version 3.5.0) with random intercepts, a regression approach that considers the dependencies caused by multiple direct reports reporting to the same manager. This data structure has two distinct levels: the manager (Level-2, or L2) and the individual/direct reports (Level-1, or L1); all variables were measured on the lowest level. We used a compositional effect approach (Enders & Tofighi, 2007) to center our variables. Our L1 variables were group-mean centered (centered within the context of their managerial coach). This allows us to consider the association between coaching behaviors and the outcome of interest for any given managerial coach. In addition, they were also added in as L2 predictors by calculating their group aggregate, which provides a secondary consideration of whether coaches that more consistently engage in high coaching behaviors are associated with the outcomes of interest. This approach allows for an examination of cross-level interactions, which occurs when the L2 context of coaching behaviors (e.g., generally high usage of coaching behaviors) moderates the magnitude of the L1 relationship (Enders & Tofighi, 2007).

Each set of hypotheses were tested using this approach; first using CB as a single predictor, followed by using the three factors of the RAD model as separate predictors. Within each analysis I used a model-generating approach as recommended by O'Conner et al. (2013), starting with the intercept-only model and then sequentially adding in the L1 predictors, L2 predictors, and then the cross-level interaction. All variance components and fit indexes were evaluated across all models to determine the final model.

CHAPTER IV:

Results

The results are reported in three sections. First, I conducted data cleaning and preparation procedures to assess and account for missingness and to examine the descriptives for analysis appropriateness. I then report the results for the first set of hypotheses, which use the complete RAD model of coaching behaviors as the predictor. I then report the secondary set of hypotheses, which examine the RAD dimensions separately.

Data Diagnostics and Preparation

The data was first assessed for missingness and for outliers to determine which data to include. Next, the data was assessed for suitability for the MLM analysis by calculating the intraclass correlation coefficient (ICC). After determining which regression type would be appropriate, the data was centered as a final step prior to testing the hypotheses. Lastly, the tests for linearity and other assumptions were conducted on each of the final models.

The data was analyzed and managed for missingness using SPSS 24. First, the data was examined for completion rates for each scale using the requirement that at least 75% of the items on each scale were completed; for the 3-item CE scale participants could have no missingness. Seventy participants were excluded due to this criterion. Next, I examined the questions within the measures. A missing data analysis was used to test for patterns of missingness with the minimum set at 1%. Results indicated missingness for 91% of the variables and 44% of the cases; 97% of the values in the model had complete data. A visual inspection of missing value patterns indicated the general, or haphazard pattern as described by Enders (2010). Given this and the lack of obvious reasons explaining the observed missingness, I proceeded with the item-level imputation process and included all predictor and criterion variables. Cases were included

in the multiple imputation if no more than 24% of data was missing; 54 cases were dropped due to this cut-off.

As outliers are an aspect of assumption testing that can lead to further elimination of datapoints, I tested the data first for univariate normality and the multivariate normality. Although the skew and kurtosis for each variable were within normal ranges (i.e., below 3 for skew and below 8 for kurtosis; Kline, 2016), using the Mahalanobis distance test for multivariate normality revealed 35 outliers. Specifically, these 35 scores exceeded three standard deviations beyond the median. Thus, these cases were dropped and the resulting number of direct reports was 1442. None of these 35 caused a change in the number of groups; thus, the final number of managers remained 439.

After testing and removing data based on missingness, completion, and outliers, I next assessed whether the data was nested enough to warrant MLM analysis. The primary assumption within nested data is to test whether the data clusters around the grouping variable (i.e., the managers), which determines whether OLS regression or MLM is more appropriate. To test for the degree of clustering within the direct reports, I calculated the ICC for each outcome variable, which is the average correlation between variables measured on direct reports of the same manager (Hox, 2010). Researchers have suggested a wide range of cut-off values for the ICC; Heck et al. (2010) suggests 5% as a conservative criterion, whereas Muthén and colleagues have suggested that the ICC can be as low as 2% (cf., Muthén, 1991, 1994; Muthén & Satorra, 1989, 1995). To stay on the conservative end, I chose to follow Heck's advice and use the 5% cut-off score. The ICC scores for all outcome variables were between .05 and .29, indicating that for each variable, at least 5% of the variances was explained by the clustering, thus providing justification for the MLM analysis rather than the OLS non-nested regression (see Table 4).

Table 4

Descriptive Statistics for RAD Model and Outcomes

Variables	*M*	*SD*	Items	Skewness	Kurtosis	ICC
Relationships	5.74	0.91	15	-0.93	0.69	
Accountability	5.40	0.92	18	-0.52	0.13	
Development	5.34	0.93	12	-0.48	-0.04	
RAD full scale	5.50	0.87	45	-0.62	0.28	
CE	3.89	0.85	12	-0.61	0.03	.29
PSS	4.04	0.74	4	-0.54	-0.14	.15
OSE	4.28	0.45	6	-0.26	-0.27	.05
WE	5.65	0.87	9	-0.59	-0.07	.20

Note. Relationships, *accountability*, *development*, and *work engagement* were measured on a 7-point scale; *coaching effectiveness*, *perceptions of supervisor support*, and *occupational self-efficacy* were measured on a 5-point scale.

After testing for normality and ICC, I tested the correlations between scales (Table 5). As expected, each of the RAD factors was highly correlated with each factor and with the overall scale. Coaching effectiveness was also highly corelated to coaching behaviors, ranging from r = .70 to .76. The outcome variables had lower correlations with each other, ranging from r = .19 to .48, and with the RAD scale, ranging from r = .31 to .50.

Table 5

Reliability and Correlations for RAD Model and Outcomes

Variables	1	2	3	4	5	6	7	8
1. Relationship	(.95)							
2. Accountability	.82	(.97)						
3. Development	.79	.87	(.93)					
4. RAD overall	.93	.96	.93	(.98)				
5. CE	.74	.71	.70	.76	(.95)			
6. PSS	.52	.47	.41	.50	.44	(.77)		
7. OSE	.28	.32	.28	.31	.19	.26	(.81)	
8. WE	.39	.42	.40	.43	.32	.34	.48	(.92)

Note. Correlations at the diagonal are the Cronbach's alpha interitem reliability scores. Relationships, *accountability*, *development*, and *work engagement* were measured on a 7-point scale; *coaching effectiveness*, *perceptions of supervisor support*, and *occupational self-efficacy* were measured on a 5-point scale. All correlations were significant at $p < .001$.

MLM regression uses maximum likelihood estimation, which is generally more robust against mild violations of normality and other OLS regression assumptions when used with large samples, particularly when the number of L2 units is large (Heck & Thomas, 2020). As such, after the above assessments were made, the predictors were centered and hypothesis testing completed.

Primary Analyses

Hypothesis 1: Coaching Behaviors Predicting CE

Hypothesis 1 posited that there is a positive relationship between coaching effectiveness and coaching behaviors. The first model was an intercept-only model with coaching effectiveness as the dependent variable and no predictors entered. The ICC suggested that 29% of the variance in coaching effectiveness was between the different coaches and 71% was within-coaches (i.e., the managers had different relationships between coaching behaviors and outcomes between their different direct reports). I added the L1 predictor of coaching behaviors in the second model and the L2 aggregate predictor in the third model. The fourth model included a cross-level interaction which was not significant and provided no improvement to our model indexes; as such, Model 3 was the final model (see Table 6).

Both the L1 and L2 predictors were statistically significant and had strong beta-weights. As seen in Figure 6, as the ratings of coaching behavior use increased on the individual (L1) level, so did the ratings of coaching effectiveness. In addition, when coaches were rated as more consistent in coaching their direct reports on the aggregate level (L2), their coaching effectiveness ratings increased above and beyond their individual efforts.

Table 6

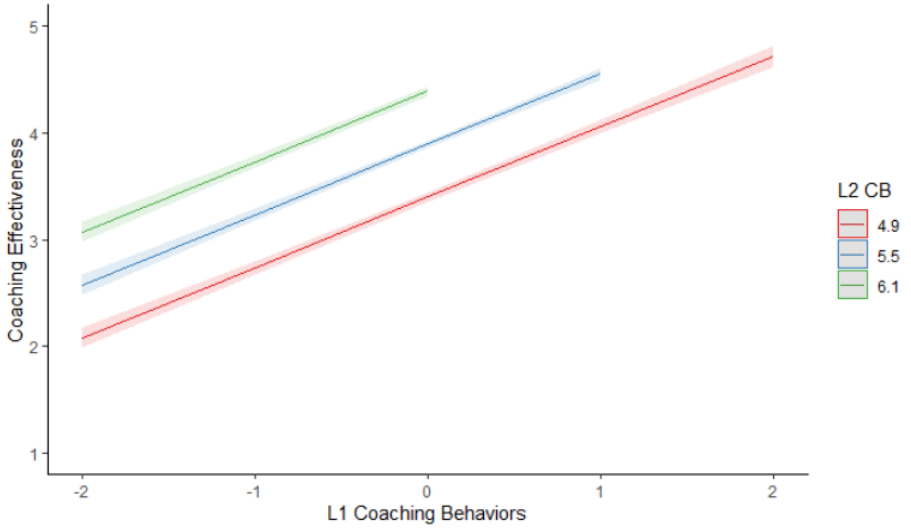
Model Parameters for Coaching Effectiveness Ratings and Coaching Behaviors

	Model 1	Model 2	Model 3	Model 4
		Fixed effects		
Intercept	3.89*** (0.03)	3.89*** (0.03)	-0.66*** (0.15)	-0.65*** (0.15)
RAD L1		0.66*** (0.02)	0.66*** (0.02)	0.99*** (0.21)
RAD L2			0.83*** (0.03)	0.83*** (0.03)
Interaction				-0.06 (0.04)
		Random effects		
σ^2	0.51	0.27	0.27	0.27
τ_{00}	0.21	0.28	0.03	0.03
ICC	0.29	0.52	0.09	0.10
Marginal R^2	0.00	0.23	0.59	0.59
Conditional R^2	0.29	0.63	0.63	0.63
		Goodness of fit		
Deviance	3465.57	2816.64	2311.74	2309.15
AIC	3471.57	2824.64	2321.74	2321.15

Note. Standard errors are in parentheses. Model 3 is the final model for Hypothesis 1.
*p < .05. **p < .01. ***p < .001.

Figure 6

Marginal Effects for Coaching Effectiveness Ratings and Coaching Behaviors



Note. The center value (blue) shows the fixed effect result of coaching behaviors on CE ratings. The green line depicts coaches whose aggregate scores (L2) are one standard deviation higher than the average; the red line shows coaches that are one SD below the mean.

Hypothesis 2: Coaching Behaviors Predicting PSS

Hypothesis 2 suggested that coaching behaviors predict perceptions of supervisor support. The same model-building approach was used. The ICC indicated that 15% of the variance in PSS was between the different coaches and 85% was within-coaches (i.e., the managers had different relationships between coaching behaviors and outcomes between their different direct reports). Model 4's cross-level interaction was statistically significant and the fit indexes were lowest for this model, making Model 4 the final model (see Table 7).

Table 7

Model Parameters for PSS Ratings and Coaching Behaviors

	Model 1	Model 2	Model 3	Model 4
		Fixed effects		
Intercept	4.04*** (0.02)	4.04*** (0.02)	1.69*** (0.18)	1.69*** (0.18)
RAD L1		0.42*** (0.03)	0.42*** (0.03)	1.30*** (0.24)
RAD L2			0.43*** (0.03)	0.43*** (0.03)
Interaction				-0.17*** (0.04)
		Random effects		
σ^2	0.46	0.36	0.36	0.36
τ_{00}	0.08	0.12	0.05	0.05
ICC	0.15	0.24	0.12	0.12
Marginal R^2	0.00	0.13	0.25	0.26
Conditional R^2	0.15	0.34	0.34	0.35
		Goodness of fit		
Deviance	3169.16	2927.14	2774.08	2760.33
AIC	3175.16	2935.14	2784.08	2772.33

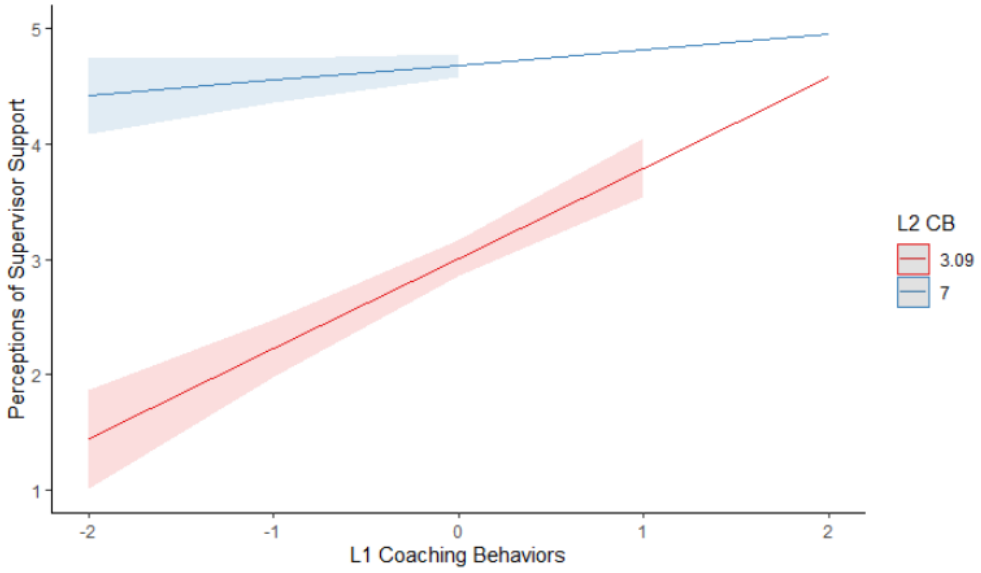
Note. Standard errors are in parentheses. Model 4 is the final model for Hypothesis 2.
*p < .05. **p < .01. ***p < .001.

As shown in Figure 7, for those coaches that consistently engage in managerial coaching behaviors, there was only a small increase of ratings due to differences of coaching behaviors. However, for those managers who do not consistently engage in managerial coaching across all

of their direct reports, when they do managerial coaching the PSS ratings are almost as high as for the high-consistency coaches. Thus, high aggregate ratings may act as a buffer for when they fail to coach an individual employee. On the other hand, managers who do not engage at either the aggregate or individual levels have much lower ratings of PSS.

Figure 7

Marginal Effects for PSS Ratings and Coaching Behaviors



Note. The blue and red lines depict the coaches whose aggregate ratings are high (blue) and low (red) in coaching behaviors.

Hypothesis 3: Coaching Behaviors Predicting OSE

Hypothesis 3 theorized that there is a positive relationship between occupational self-efficacy and managerial coaching behaviors. Although the ICC barely met the threshold, it was still high enough to warrant the MLM analysis. Similar to Hypothesis 1, the L1 and L2 predictors were significant but the cross-level interaction was not; Model 3 was thus the final model (see Table 8).

Table 8

Model Parameters for OSE Ratings and Coaching Behaviors

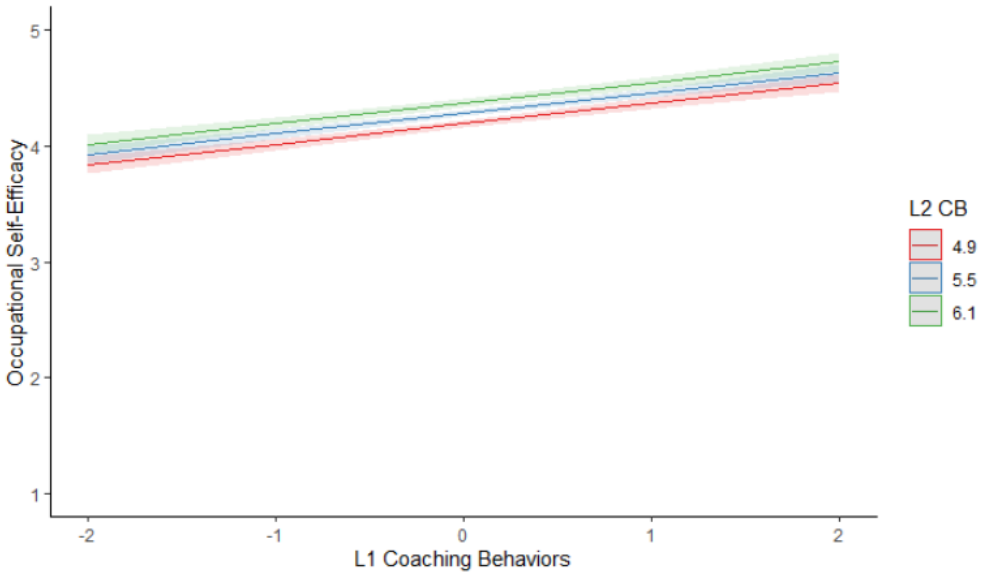
	Model 1	Model 2	Model 3	Model 4
		Fixed effects		
Intercept	4.28*** (0.01)	4.28*** (0.01)	3.46*** (0.11)	3.46*** (0.11)
RAD L1		0.18*** (0.02)	0.18*** (0.02)	-0.13 (0.17)
RAD L2			0.15*** (0.02)	0.15*** (0.02)
Interaction				0.06 (0.03)
		Random effects		
σ^2	0.19	0.18	0.18	0.18
τ_{00}	0.01	0.02	0.01	0.01
ICC	0.05	0.08	0.04	0.04
Marginal R^2	0.00	0.06	0.10	0.10
Conditional R^2	0.06	0.14	0.13	0.14
		Goodness of fit		
Deviance	1794.20	1699.02	1646.25	1642.78
AIC	1800.20	1707.02	1656.25	1654.78

Note. Standard errors are in parentheses. Model 3 is the final model for Hypothesis 3.
*p < .05. **p < .01. ***p < .001.

The slopes for both the L1 and L2 coaching behaviors were small yet significant. As seen in Figure 8, the slope for coaching is low because in general, OSE is high for all employees. Those employees who have coaches with higher aggregate scores do show slight improvements in their OSE scores regardless, suggesting that consistency from managers doing coaching behaviors offers small yet significant improvements.

Figure 8

Marginal Effects for Coaching Effectiveness Ratings and Coaching Behaviors



Note. The center value (blue) shows the fixed effect result of coaching behaviors on CE ratings. The green line depicts coaches whose aggregate scores (L2) are one standard deviation higher than the average; the red line shows coaches that are one SD below the mean.

Hypothesis 4: Coaching Behaviors Predicting WE

Lastly, work engagement was hypothesized to be related to coaching behaviors. Using the same approach, both the L1 and L2 predictors were significant but not the cross-sectional interactions, following the same pattern as Hypotheses 1 and 3 (see Table 9).

As seen in Figure 9, greater uses of coaching behaviors improved WE scores. In addition, those employees whose coaches more consistently engaged in coaching across employees had higher engagement scores compared to those whose coaches were less consistent, holding the L1 coaching behaviors constant.

Table 9

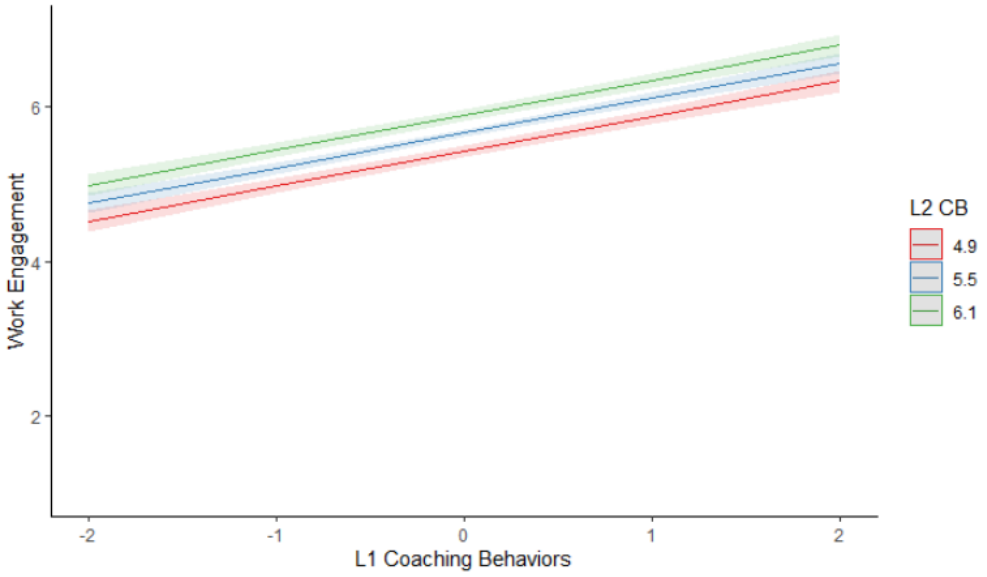
Model Parameters for WE Ratings and Coaching Behaviors

	Model 1	Model 2	Model 3	Model 4
		Fixed effects		
Intercept	5.66*** (0.03)	5.66*** (0.03)	3.52*** (0.23)	3.52*** (0.23)
RAD L1		0.45*** (0.03)	0.45*** (0.03)	0.22 (0.28)
RAD L2			0.39*** (0.04)	0.39*** (0.04)
Interaction				0.04 (0.05)
		Random effects		
σ^2	0.60	0.49	0.50	0.50
τ_{00}	0.15	0.19	0.12	0.12
ICC	0.20	0.27	0.20	0.20
Marginal R^2	0.000	0.11	0.18	0.18
Conditional R^2	0.20	0.35	0.34	0.34
		Goodness of fit		
Deviance	3619.05	3408.75	3330.98	3330.30
AIC	3625.05	3416.75	3340.98	3342.30

Note. Standard errors are in parentheses. Model 3 is the final model for Hypothesis 4.
*p < .05. **p < .01. ***p < .001.

Figure 9

Marginal Effects for WE Ratings and Coaching Behaviors



Note. The center value (blue) shows the fixed effect result of coaching behaviors on CE ratings. The green line depicts coaches whose aggregate scores (L2) are one standard deviation higher than the average; the red line shows coaches that are one SD below the mean.

Secondary Analyses

The second set of hypotheses took the analysis one step further, by separating the three dimensions of the RAD model and using them as three separate predictors.

Hypothesis 5: RAD Dimensions Predicting CE

Hypothesis 5 posited that *relational* and *accountability* behaviors would be related to coaching effectiveness, but *developmental* behaviors would not. As the interaction effects were not significant (Model 4) and the goodness of fit indexes indicated no improvements, the final model was Model 3 (see Table 10).

Table 10

Model Parameters for Coaching Effectiveness Ratings and Each RAD Dimension

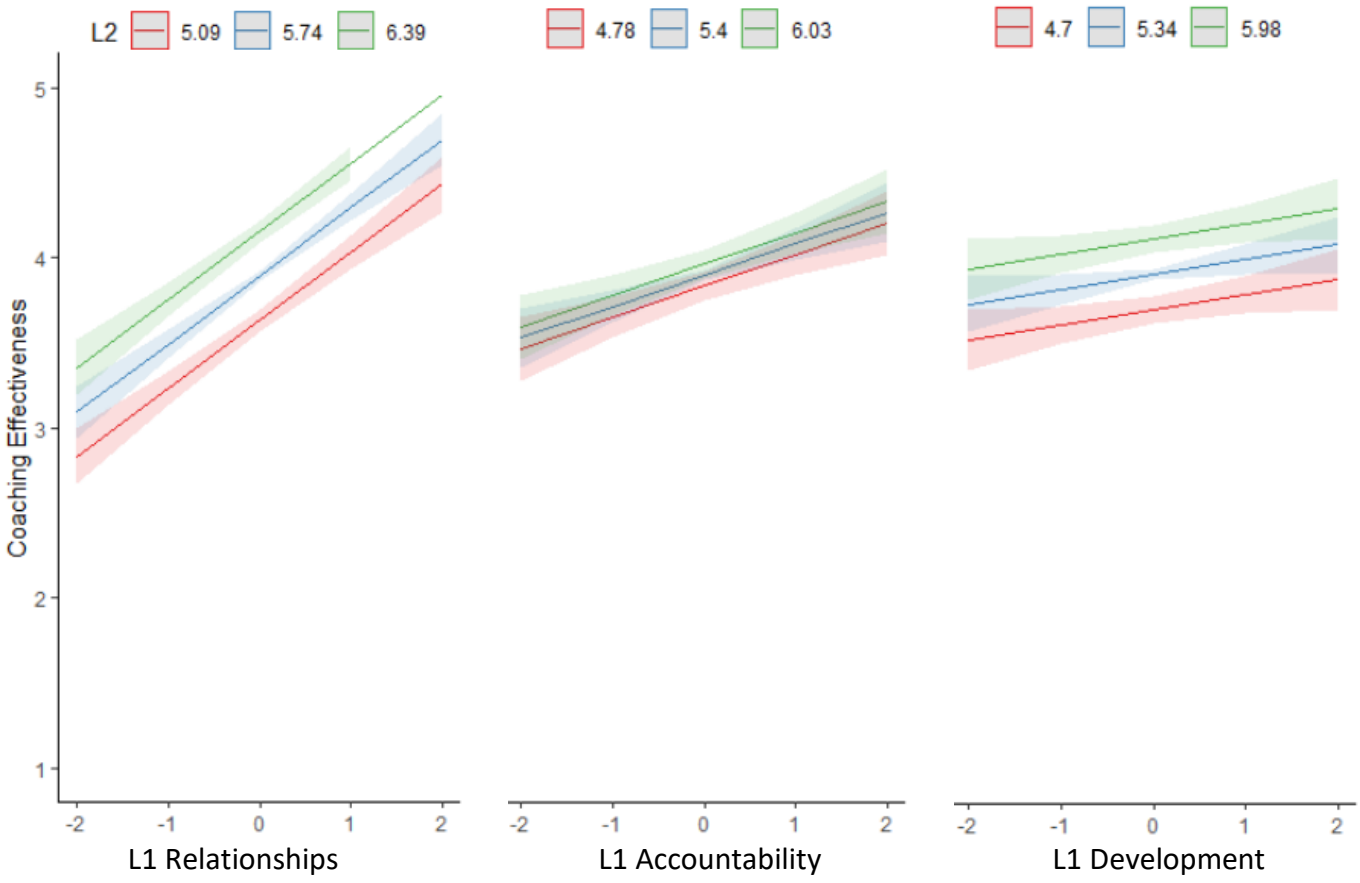
	Model 1	Model 2	Model 3	Model 4
		Fixed effects		
Intercept	3.89*** (0.03)	3.89*** (0.03)	-0.69*** (0.14)	-0.69*** (0.14)
Relationships L1		0.40*** (0.04)	0.40*** (0.04)	0.66** (0.26)
Accountability L1		0.18*** (0.04)	0.18*** (0.04)	0.19 (0.29)
Development L1		0.09* (0.04)	0.09* (0.04)	0.00 (0.28)
Relationships L2			0.40*** (0.04)	0.40*** (0.04)
Accountability L2			0.10 (0.06)	0.10 (0.06)
Development L2			0.32*** (0.05)	0.32*** (0.05)
Relationships L1*L2				-0.05 (0.05)
Accountability L1*L2				0.00 (0.06)
Development L1*L2				0.02 (0.05)
		Random effects		
σ^2	0.51	0.26	0.26	0.26
τ_{00}	0.21	0.29	0.02	0.02
ICC	0.29	0.52	0.08	0.09
Marginal R^2	0.00	0.24	0.60	0.60
Conditional R^2	0.29	0.66	0.63	0.63
		Goodness of fit		
Deviance	3465.57	2792.63	2271.99	2270.50
AIC	3471.57	2804.63	2289.99	2294.50

Note. Standard errors are in parentheses. Model 3 is the final model for Hypothesis 5.
*p < .05. **p < .01. ***p < .001.

For the L1 predictors, the slopes were significant for all three RAD dimensions, though the slope was strongest for *relationships* and very weak for *development*. This follows the pattern of the hypothesis. However, the L2 predictors indicated that when considering the aggregate ratings, behaviors from the *relationships* and *development* dimensions improve ratings of coaching effectiveness. In contrast, *accountability* behaviors were only important at the individual level, not at the group level (see Figure 10).

Figure 10

Marginal Effects for Coaching Effectiveness Ratings and Each RAD Dimension



Note. The center value (blue) shows the fixed effect result of each dimension on CE ratings. The green line depicts coaches whose aggregate scores (L2) are one standard deviation higher than the average; the red line shows coaches that are one SD below the mean.

Hypothesis 6: RAD Dimensions Predicting PSS

Hypothesis 6 theorized that *relational* behaviors would have a strong relationship with PSS and *accountability* behaviors would have a moderate relationship, but *developmental* behaviors would have a small-to-no relationship. Similar to the previous hypothesis, Model 3 had the best model fit as the cross-level interactions were not significant (see Table 11).

Table 11

Model Parameters for PSS Ratings and Each RAD Dimension

	Model 1		Model 2		Model 3		Model 4	
			Fixed effects					
Intercept	4.04***	(0.02)	4.01***	(0.02)	1.60***	(0.17)	1.60***	(0.17)
Relationships L1			0.43***	(0.04)	0.43***	(0.04)	0.44	(0.29)
Accountability L1			0.15**	(0.05)	0.15**	(0.05)	0.16	(0.33)
Development L1			-0.14**	(0.05)	-0.14**	(0.05)	0.34	(0.32)
Relationships L2					0.37***	(0.05)	0.37***	(0.05)
Accountability L2					0.16*	(0.07)	0.16*	(0.07)
Development L2					-0.09	(0.07)	-0.09	(0.07)
Relationships L1*L2							-0.00	(0.05)
Accountability L1*L2							-0.00	(0.06)
Development L1*L2							-0.09	(0.06)
			Random effects					
σ^2	0.46		0.34		0.34		0.34	
τ_{00}	0.08		0.12		0.05		0.05	
ICC	0.15		0.26		0.12		0.13	
Marginal R^2	0.00		0.15		0.29		0.29	
Conditional R^2	0.15		0.38		0.38		0.38	
			Goodness of fit					
Deviance	3169.16		2870.04		2694.60		2689.13	
AIC	3175.16		2882.04		2712.60		2713.13	

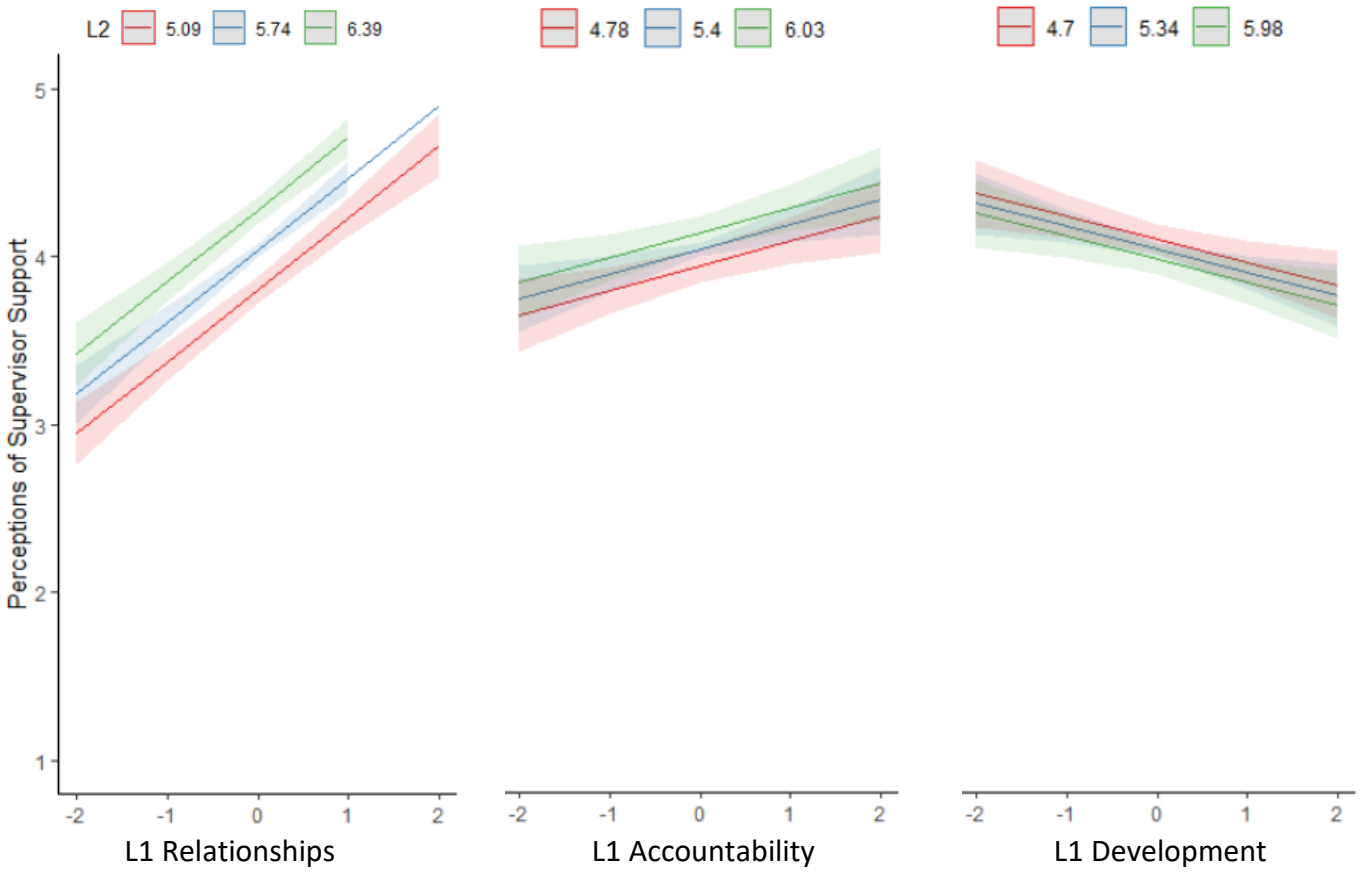
Note. Standard errors are in parentheses. Model 3 is the final model for Hypothesis 6.
*p < .05. **p < .01. ***p < .001.

As seen in Figure 11, the strength of the relationship followed the expected pattern; *relationships* had a strong positive relationship, *accountability* has a small positive relationship, and *development* surprisingly had a small negative relationship. For the L2 predictors, coaches

that consistently used *relationships* behaviors across their employees were seen as more supportive; *accountability* also had a slight increase in ratings from higher aggregate ratings. However, *development* did not show significant differences between the coaches that had higher or lower aggregate scores.

Figure 11

Marginal Effects for PSS Ratings and Each RAD Dimension



Note. The center value (blue) shows the fixed effect result of each dimension on CE ratings. The green line depicts coaches whose aggregate scores (L2) are one standard deviation higher than the average; the red line shows coaches that are one SD below the mean.

Hypothesis 7: RAD Dimensions Predicting OSE

Hypothesis 7 postulated that *accountability* behaviors would be related to occupational self-efficacy; *developmental* behaviors would have a smaller relationship and *relationships* would likely not have one at all. As with the previous hypotheses, the cross-level interaction effects were not significant, and thus Model 3 was the final model (see Table 12).

Table 12

Model Parameters for OSE Ratings and Each RAD Dimension

	Model 1		Model 2		Model 3		Model 4	
			Fixed effects					
Intercept	4.28***	(0.01)	4.28***	(0.01)	3.48***	(0.11)	3.48***	(0.11)
Relationships L1			0.05	(0.03)	0.05	(0.03)	0.05	(0.21)
Accountability L1			0.15***	(0.04)	0.15***	(0.04)	-0.26	(0.24)
Development L1			-0.03	(0.03)	-0.03	(0.03)	0.07	(0.23)
Relationships L2					0.00	(0.03)	0.00	(0.03)
Accountability L2					0.14**	(0.05)	0.14**	(0.05)
Development L2					0.00	(0.04)	0.00	(0.04)
Relationships L1*L2							0.00	(0.04)
Accountability L1*L2							0.08	(0.05)
Development L1*L2							-0.02	(0.04)
			Random effects					
σ^2	0.51		0.26		0.26		0.26	
τ_{00}	0.21		0.29		0.02		0.02	
ICC	0.29		0.52		0.08		0.09	
Marginal R^2	0.00		0.24		0.60		0.60	
Conditional R^2	0.29		0.66		0.63		0.63	
			Goodness of fit					
Deviance	3465.57		2792.63		2271.99		2270.50	
AIC	3471.57		2804.63		2289.99		2294.50	

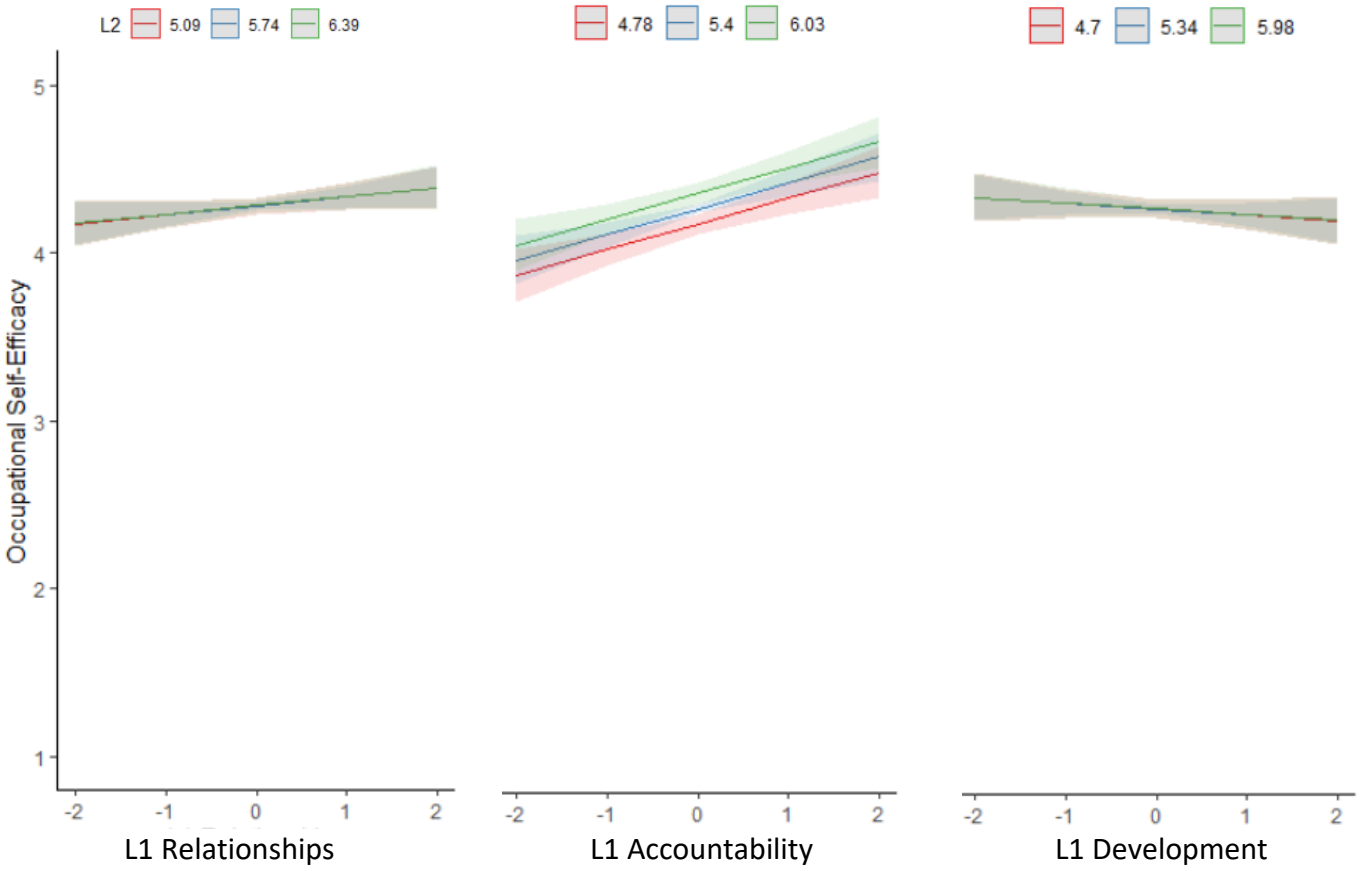
Note. Standard errors are in parentheses. Model 3 is the final model for Hypothesis 7.
*p < .05. **p < .01. ***p < .001.

For both the L1 and L2 predictors, only *accountability* had significant slopes. Holding other coaching behaviors constant, using *relationships* or *development* coaching behaviors do not improve OSE. *Accountability* behaviors improve OSE, and employees whose managers more

consistently use accountability behaviors have higher OSE compared to those who do not (see Figure 12).

Figure 12

Marginal Effects for OSE Ratings and Each RAD Dimension



Note. The center value (blue) shows the fixed effect result of each dimension on CE ratings. The green line depicts coaches whose aggregate scores (L2) are one standard deviation higher than the average; the red line shows coaches that are one SD below the mean.

Hypothesis 8: RAD Dimensions Predicting WE

Hypothesis 8 posited that *accountability* and *development* behaviors would be related to WE, and *relationship* behaviors would have a small relationship. None of the interactions or L2 predictors were significant; as such, Model 2 was the final model (see Table 13). As such, when

holding individual levels of each behavior constant as well as the levels of each dimension, the consistency of use for specific factors did not impact the ratings of WE.

Table 13

Model Parameters for WE Ratings and Each RAD Dimension

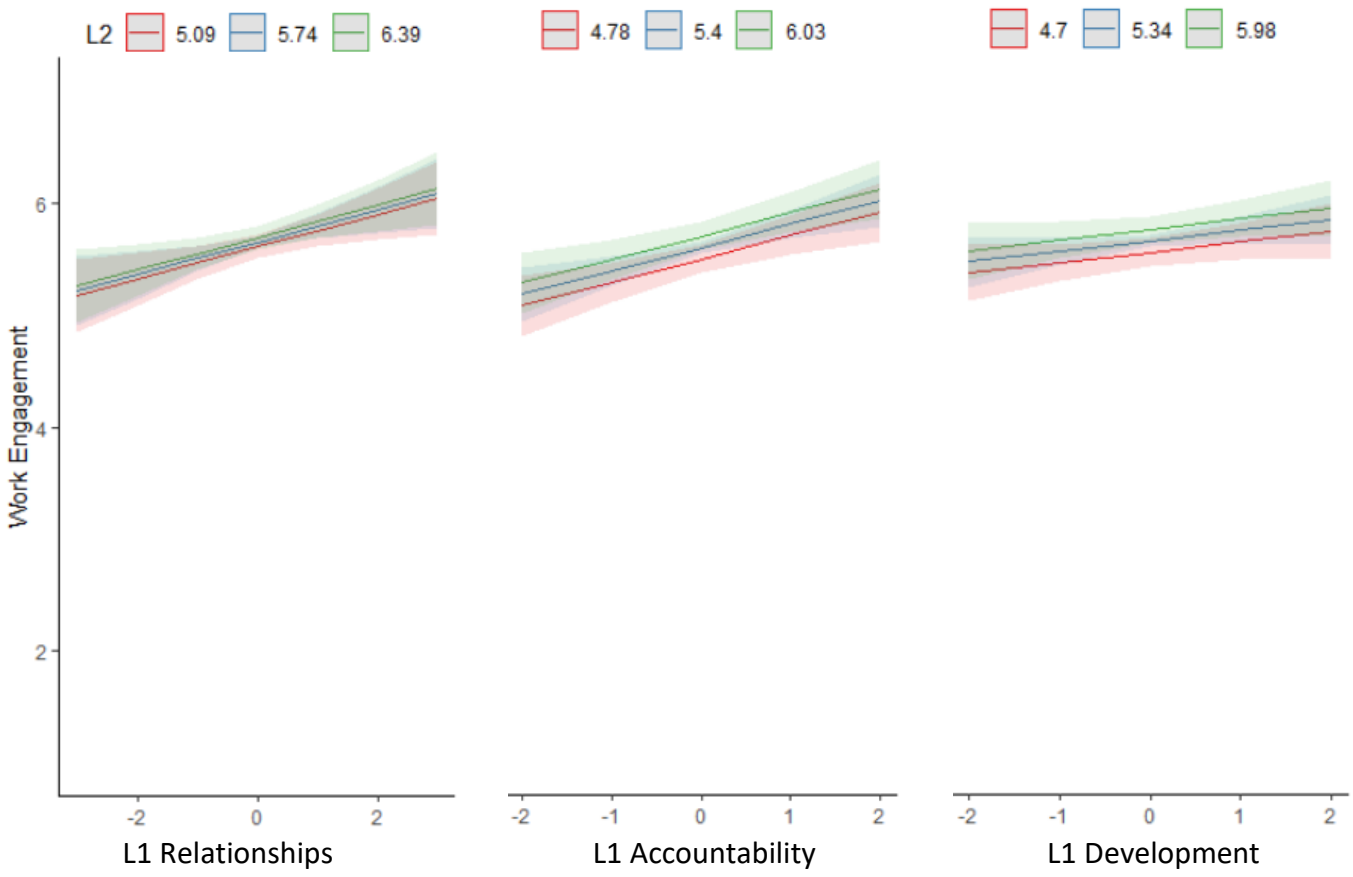
	Model 1		Model 2		Model 3		Model 4	
			Fixed effects					
Intercept	5.66***	(0.03)	5.66***	(0.03)	3.55***	(0.23)	3.55***	(0.23)
Relationships L1			0.15**	(0.05)	0.15**	(0.05)	-0.01	(0.35)
Accountability L1			0.21***	(0.06)	0.21***	(0.06)	0.00	(0.41)
Development L1			0.10	(0.06)	0.10	(0.06)	0.23	(0.39)
Relationships L2					0.06	(0.07)	0.06	(0.07)
Accountability L2					0.16	(0.10)	0.16	(0.10)
Development L2					0.16	(0.09)	0.16	(0.09)
Relationships L1*L2							0.03	(0.07)
Accountability L1*L2							0.04	(0.08)
Development L1*L2							-0.03	(0.07)
			Random effects					
σ^2	0.60		0.49		0.50		0.50	
τ_{00}	0.15		0.19		0.12		0.12	
ICC	0.20		0.27		0.20		0.20	
Marginal R^2	0.00		0.11		0.18		0.18	
Conditional R^2	0.20		0.35		0.34		0.34	
			Goodness of fit					
Deviance	3619.05		3408.46		3329.65		3328.65	
AIC	3625.05		3420.46		3347.65		3352.65	

Note. Standard errors are in parentheses. Model 2 is the final model for Hypothesis 8.
*p < .05. **p < .01. ***p < .001.

The hypothesis was partially supported, as *accountability* behaviors predicted WE, though the slope was low (see Figure 13). However, *development* behaviors were not significant, and surprisingly *relationships* did have a positive albeit small relationship.

Figure 13

Marginal Effects for WE Ratings and Each RAD Dimension



Note. The center value (blue) shows the fixed effect result of each dimension on CE ratings. The green line depicts coaches whose aggregate scores (L2) are one standard deviation higher than the average; the red line shows coaches that are one SD below the mean.

CHAPTER V:

Discussion

Summary of Findings

The overall aim of this research was to test whether managerial coaching, as measured by the RAD model, predicted four outcomes (coaching effectiveness, perceptions of supervisor support, occupational self-efficacy, and work engagement) and to identify which of the RAD factors were most important in moving the dial on those outcomes. Using MLM regression, I was able to parse out the effects of coaching behaviors on an individual, one-on-one level (L1) from the aggregate ratings (L2) for each managerial coach. I did so by evaluating a series of nested models (i.e., adding the L1 predictor, then the L2 predictor, and finally their interaction) and retaining the model with statistically significant regression weights. That is, if only the L1 predictor was significant, it was the only one retained. For each of the dependent variables, two sets of models were evaluated: RAD as a unidimensional predictor and RAD predicted by each of the factors, separately. This process was repeated for CE, PSS, OSE, and WE.

In the following sections each of the outcome variables is discussed in turn. Notably, the examination of group-level effects is novel in the coaching space. There is little research to provide insight into these L2 findings and thus the original hypotheses and the discussion below focuses primarily on the L1 outcomes.

Coaching Effectiveness Findings

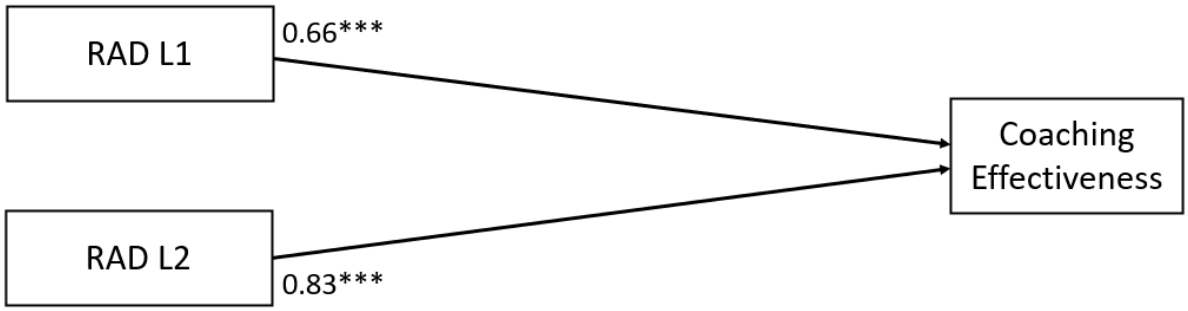
Hypothesis 1: There is a positive relationship between coaching behaviors (one-factor model) and coaching effectiveness (CE).

Managers were rated on the extent of their use of coaching behaviors; as these ratings increased so did their ratings of coaching effectiveness at both the individual and group level,

giving support for Hypothesis 1 (see Figure 14). As such, managers are perceived as effective by a direct report when they engage in the behaviors with them, but as an even more effective coach when they conduct coaching with all of their direct reports. The strength of the relationship was not surprising; Burt and Talati's (2017) meta-analysis found an overall effect size of $\hat{p} = 0.42$ across a variety of effectiveness measures.

Figure 14

Predicting Coaching Effectiveness from the Unidimensional RAD Model



Note. Level-1 and Level-2 predictors are separated for clarity. *$p < .05$. **$p < .01$. ***$p < .001$

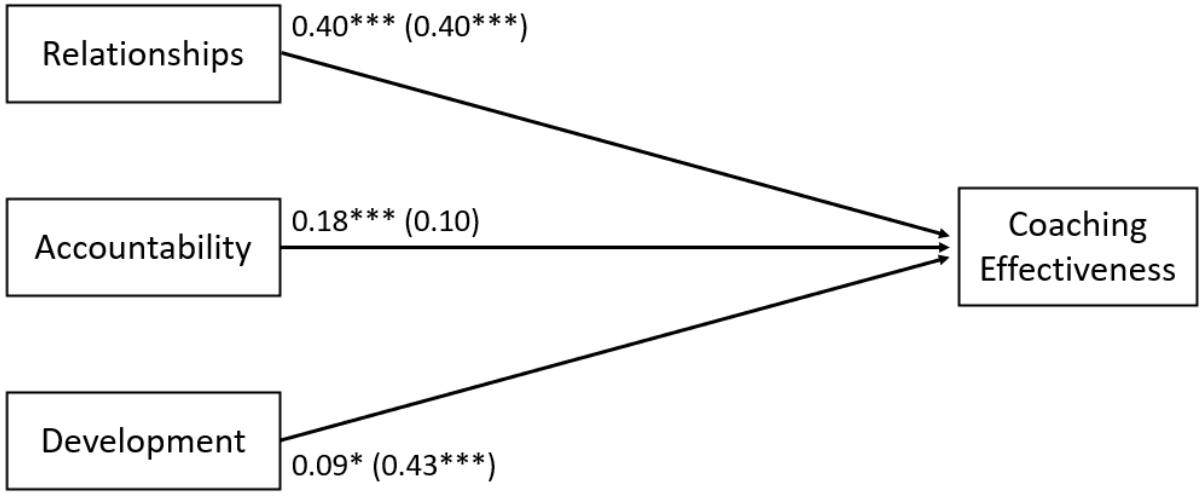
Hypothesis 5: *Relational* and *accountability* behaviors will have a stronger relationship with coaching effectiveness than *developmental* behaviors.

There was partial support for Hypothesis 5. The change in CE for the individual coaching seems to be driven primarily by the *relationships* factor, though *accountability* had a medium effect and *development* had a small effect. The latter was expected, but originally, I hypothesized that the other factors would both be strong. Although coaching studies do not often separate out scale subdimensions or coaching competencies, there are studies that measure the working alliance, which was theorized to be the primary mechanism for the *relationships* factor. These

studies have found correlations between .58 and .75 between working alliance and a variety of coaching effectiveness measures (de Hann et al., 2016; Graßmann et al., 2020; Landany et al., 1999) which was comparable to this study's r = .74. The raw correlation for *accountability* was similar (r = .70). However, Gessnitzer and Kauffeld (2015) found mixed results relating goals and coaching success; when clients initiated the agreement on goals there was a positive relationship (r = .32), but when the coaches initiated the conversations there was a negative relationship (r = -.39). Given that their study was using external coaches and managerial coaches may be likely to have goals directed by the company rather than the client, this may explain the low impact of *accountability*.

Figure 15

Predicting Coaching Effectiveness from the Multidimensional RAD Model



Note. Level-2 β weights are in parentheses. *p < .05. **p < .01. ***p < .001

Interestingly, the results for the group-level showed a different pattern (see Figure 15) – while *relationships* retained the large effect, *development* also had a large effect whereas

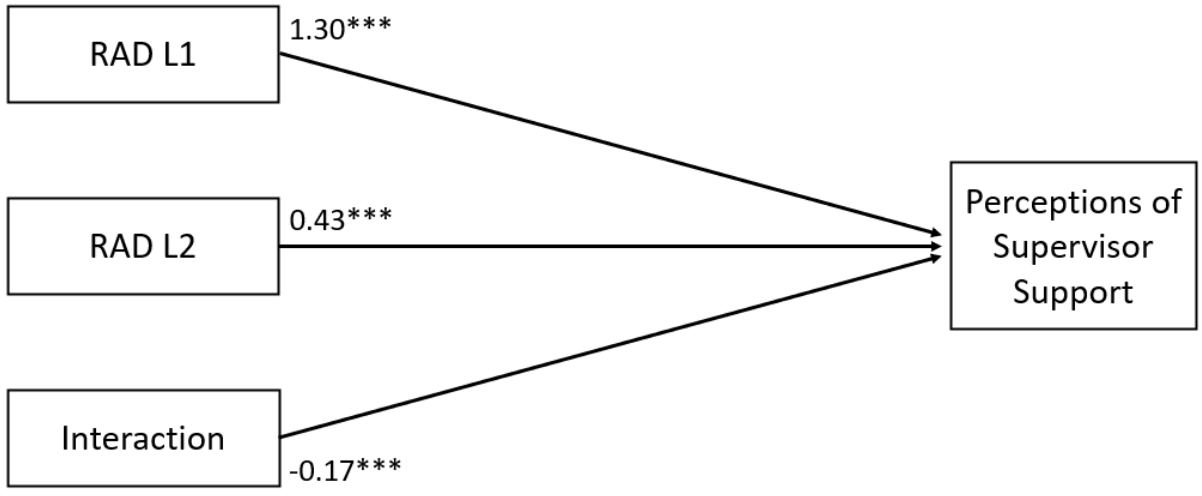
accountability had no effect. As such, when all other behaviors are at an average, *accountability* behaviors matter on an individual basis but managers are not seen as more effective when they are doing goal-setting and similar behaviors with each direct report. However, while *developmental* behaviors have a low impact on CE on the individual basis, doing these consistently with all direct reports does improve perceptions of effectiveness. This may mean that while it is important to use *relationship* and *development* behaviors with all employees, managers can target *accountability* behaviors when most appropriate.

Perceptions of Supervisor Support Findings

Hypothesis 2: There is a positive relationship between coaching behaviors (one-factor model) and perceptions of supervisor support (PSS).

Figure 16

Predicting Perceptions of Supervisor Support from the Unidimensional RAD Model



Note. Level-1 and Level-2 predictors are separated for clarity. *$p < .05$. **$p < .01$. ***$p < .001$

Hypothesis 2 was supported (see Figure 16); increases in coaching behaviors predicted increases in PSS. This is consistent with similar studies; Sonesha et al. (2015) reported an overall effect of Hedge's g = .33 in their meta-analysis on coaching and generic relationship improvements, which was similar to this study's R^2 = .34. This relationship held for both the individual level and the group level, and the cross-level interaction indicated that when managers use coaching behaviors consistently across their direct reports they are rated as supportive even when they are not using coaching with the employee doing the rating.

Hypothesis 6: *Relationship* behaviors will have a stronger relationship with perceptions of supervisor support (PSS) than *accountability* behaviors; both will have a stronger relationship than *development* behaviors.

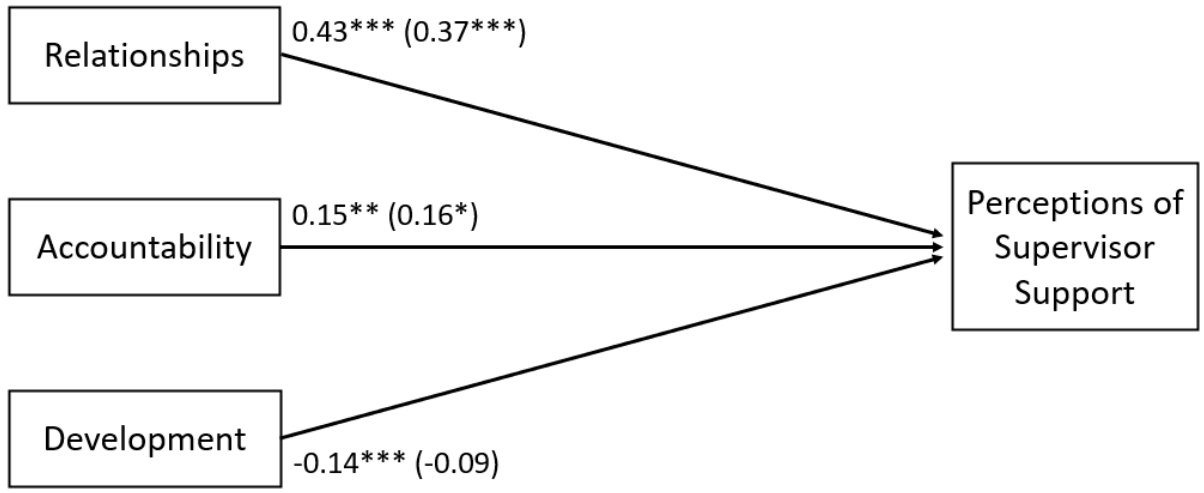
Hypothesis 6 was supported. *Relationships* had a strong effect at both the individual and group level and was the main driver behind the one-factor model's scores. As noted above, there is little research connecting each factor to specific outcomes for comparisons of effect size, though the correlation was stronger than in a prior study between working alliance and PSS in the coaching context (r = .29). As expected, *accountability* had a smaller impact on PSS on both the individual and group level. Thus, when looking to improve PSS, behaviors supporting relationships will improve scores more than accountability. Doing them at the individual level or the group level have similar impacts (see Figure 17).

Development had a surprisingly negative effect on the individual, indicating that when the other behaviors were done at an average level, using more developmental behaviors was harmful to ratings of PSS, despite having a strong positive zero-order correlation. Perhaps when doing the other behaviors good enough, pushing employees to challenge their ways of thinking and take risks reduces employees' sense of trust and safety in their manager. There was no effect

on the group level, as expected – neither psychological contracts or interactional justice seem related to the behaviors in this subscale.

Figure 17

Predicting Perceptions of Supervisor Support from the Multidimensional RAD Model



Note. Level-2 β weights are in parentheses. *$p < .05$. **$p < .01$. ***$p < .001$

Occupational Self-Efficacy Findings

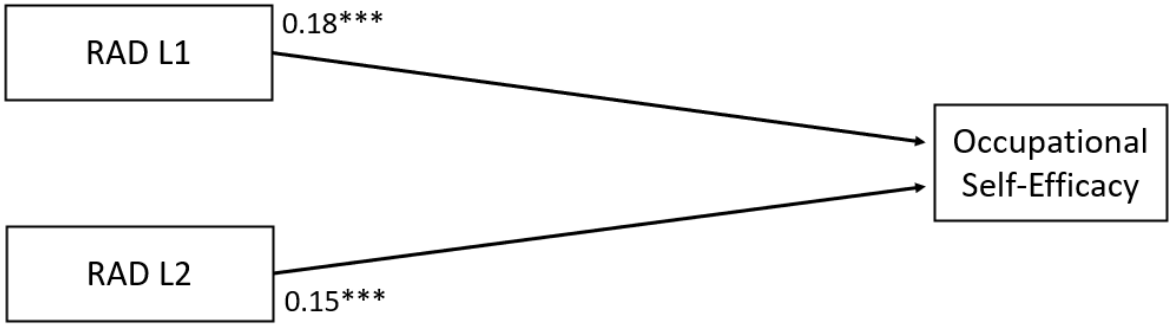
Hypothesis 3: There is a positive relationship between coaching behaviors (one-factor model) and occupational self-efficacy (OSE).

Hypothesis 3 was supported; coaching behavior ratings predicted OSE for both the individual- and group-level. The raw correlation between the overall RAD measure and OSE (r = .31) was similar to prior studies (Abid et al., 2020, r = .46; Baron & Morin, 2010, r = .28; Pousa & Mathieu, r = .37). However, the impact of coaching on this outcome was surprisingly low compared to the other measures, though the data itself may have been suffering from a ceiling

effect, as the ratings for OSE were generally high (M = 4.28, SD = 0.45). This naturally reduces the variance in the data, offering less room for coaching to make a difference.

Figure 18

Predicting Occupational Self-Efficacy from the Unidimensional RAD Model



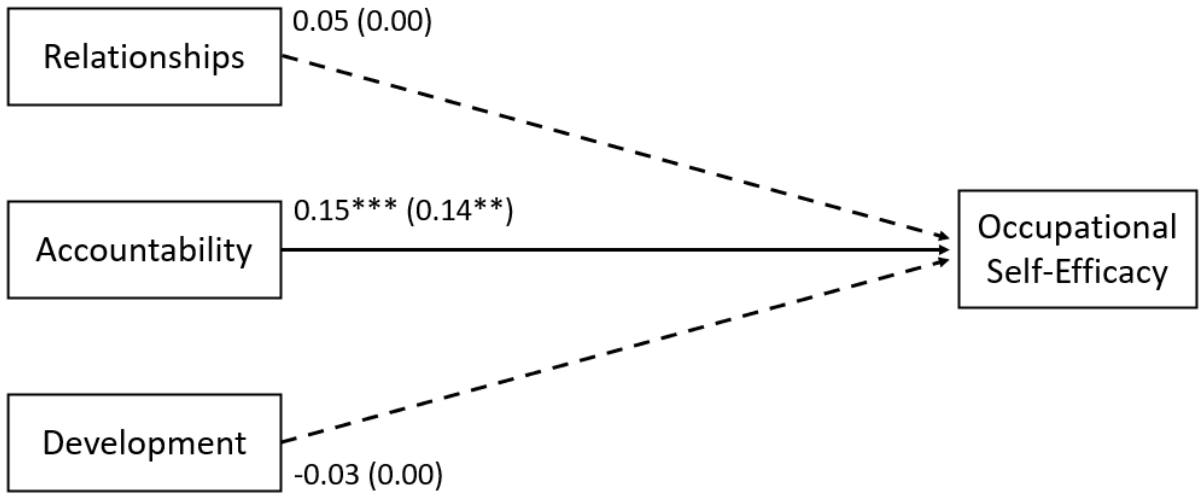
Note. Level-1 and Level-2 predictors are separated for clarity. *p < .05. **p < .01. ***p < .001

Hypothesis 7: *Accountability* will have the strongest relationship with occupational self-efficacy (OSE), followed by *developmental* behaviors.

Hypothesis 7 was partially supported; as expected, *accountability* was the factor that was important for predicting OSE at both the individual and group level. However, the original hypothesis was that *developmental* behaviors would support OSE as well, but neither of the other factors was significant. Without accounting for *accountability* behaviors, the zero-order correlations were as expected. According to a meta-analysis by Graßmann et al. (2020), working alliance, similar to *relationships*, was related to client self-efficacy (r = .32), which was comparable to this study's r = .28. According to Leonard-Cross (2010), coaching that specifically targets developmental behaviors improved general self-efficacy (η^2 = .34). Despite these, if the targeted outcome for improvement is self-efficacy, almost all the variance in the RAD model is explained by just *accountability* (see Figure 19).

Figure 19

Predicting Occupational Self-Efficacy from the Multidimensional RAD Model



Note. Level-2 β weights are in parentheses. Dashed lines indicate non-significant predictors at both levels.

*$p < .05$. **$p < .01$. ***$p < .001$

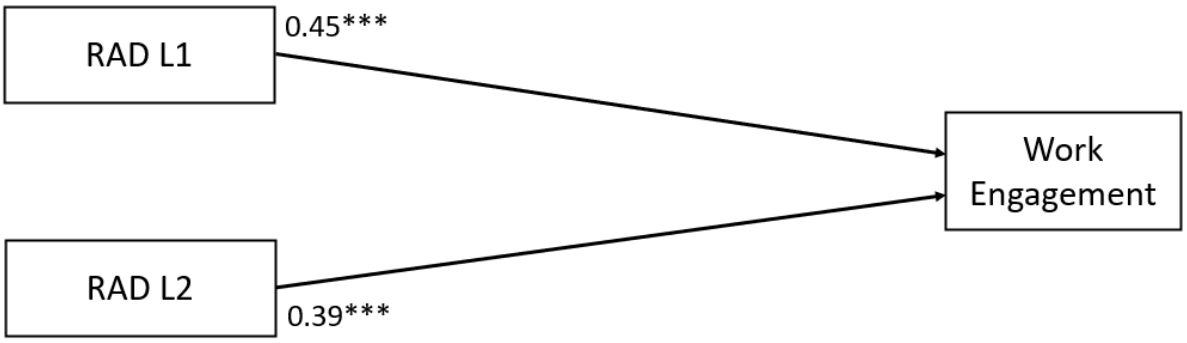
Work Engagement Findings

Hypothesis 4: There is a positive relationship between coaching behaviors (one-factor model) and work engagement (WE).

Hypothesis 4 was supported (see Figure 20); coaching behavior ratings predicted WE for both the individual- and group-level. The findings were comparable to Ali et al. (2008) and Tanskanan et al. (2019), whose correlations between coaching and WE were .43 and .40, respectively. Other studies show smaller relationships (Ladyshewsky & Taplin, 2018, $r = .26$; Lee at al., 2019, $r = .21$).

Figure 20

Predicting Work Engagement from the Unidimensional RAD Model



Note. Level-1 and Level-2 predictors are separated for clarity. *$p < .05$. **$p < .01$. ***$p < .001$

Hypothesis 8: *Accountability* and *development* behaviors will have a stronger relationship with work engagement (WE) than *relational* behaviors.

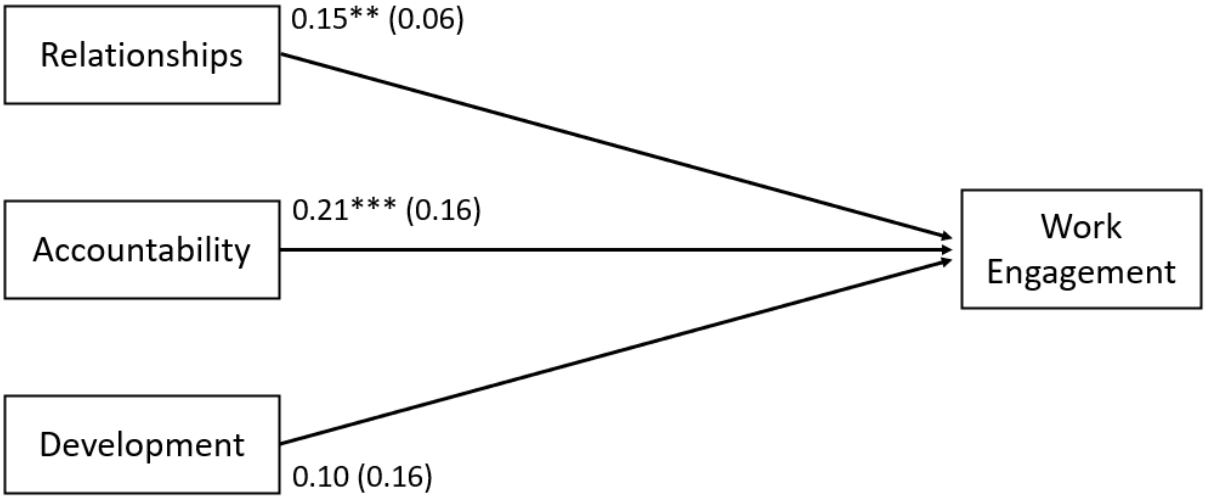
Hypothesis 8 was only partially supported; it was expected that *accountability* and *development* would have strong relationships and *relationships* would have a weak one. Unexpectedly, *development* was not statistically significant and *accountability* was the stronger predictor (see Figure 21). The hypotheses were based on the job demands-resources model, but perhaps given that work engagement is also the affective component of organizational commitment (Macey & Schneider, 2008), I underestimated the importance of relationships in the emotional side of work engagement.

In addition, these predictors were only significant at L1, which implies that these behaviors really matter on an individual level. This was an interesting finding since the overall model was significant at the group level; while overall coaching consistency across subordinates predicted work engagement scores, this was not reflected in more fine-tuned analysis. This

suggests that there may be an overall effect of coaching that impacts the group that is lost in the micro view.

Figure 21

Predicting Work Engagement from the Multidimensional RAD Model



Note. Level-2 β weights are in parentheses. *$p < .05$. **$p < .01$. ***$p < .001$

Overall, most of the hypotheses were either fully or partially supported. Using the unidimensional model, coaching behaviors predicted all four outcomes at the individual-level as well as at the group level, suggesting that (a) the RAD model is a useful tool for managers to improve a variety of outcomes, and (b) managers who coach well consistently across all their direct reports will reap additional benefits compared to a manager who has low overall coaching behavior ratings. When using the multidimensional aspects of the model, prior research generally predicted the strongest factor (e.g., *relationships* for CE and PSS, *accountability* for OSE and WE) though *development* surprisingly under-performed in relation to the other factors except for

CE. The group-level effects and cross-level interactions were not included in the hypotheses but provided surprising insight, offering interesting theoretical and practical implications.

Theoretical and Research Implications

The research for managerial coaching is still in its nascent stage. As such, this study helps to move the field further in both understanding coaching and in how to approach coaching data. For the more common outcomes, this study demonstrated similar results to other coaching frameworks; for less common outcomes it provides information about additional results of managerial coaching. The similarity in these results seem to resemble those of other types of coaching, reinforcing the theory that managerial coaching is more akin to executive coaching than simple a tool for learning new skills. Finally, this study's statistical approach demonstrated how MLM and compositional effects can be used to gain additional insights into coaching data above and beyond the more-frequent use of coaching dyads in research.

Outcomes of Managerial Coaching

This study answers the call of many other studies on managerial coaching – to conduct more studies so that we get a more robust understanding of the field (e.g., Baron & Morin, 2009; Pousa & Mathieau, 2015). Work engagement, a common outcome measure in coaching, showed similar results to studies using different coaching behavior measures. This suggests that this model for coaching shows similar results to other coaching models, though more rigorous psychometric analysis is desirable such as comparing this model to other established coaching models. Likewise, though the measure used for coaching effectiveness was novel and deliberately general (as opposed to meeting specific organizational or performance goals), the findings were similar to validated and specific CE measures, suggesting that these items may also warrant further validation studies to be used as a simple way to measure this construct.

In contrast, few studies have specifically examined managerial coaching and PSS or OSE. The significant results suggest that these are distal outcomes that future studies may want to include. Thus, this study contributes greatly towards discovering what outcomes managerial coaching may positively influence.

Managerial Coaching's Similarity to Other Coaching

Due to the studies between managerial coaching and these outcomes being so sparse, this study relied on research on executive and other types of coaching for theory development and comparisons within the summary of findings. As mentioned previously, managerial coaching has been treated as both being primarily focused as a learning intervention as well as being treated as a variation of other coaching, a similar approach to the relationship between OSE and other specific and general self-efficacy constructs. Due to the similarities in results between this study and studies targeting other coaching types, it seems that managerial coaching, executive coaching, and other coaching in workplaces may improve similar outcomes for employees, despite the differences in context. As more studies are conducted, future research should include a meta-analysis examining coaching types to test for differences in effectiveness for various outcomes.

Multi-Level Models and Compositional Effects

Coaching studies are often conducted with coaching dyads – one coachee for each coach (e.g., Boyce et al., 2010; Gessnitzer & Kauffeld, 2015). Even those studies that do have multiple coaches associated with a single coach (e.g., de Hann et al., 2016) do not take a compositional effects approach to centering and then testing the data using multi-level modeling. However, this study highlighted the utility of this statistical approach in differentiating the relationships between individual-level and group-level behaviors, which suggests that just using coaching

dyads does not capture the full effects of coaching on outcomes. Therefore, future studies should consider collecting data from coaching clusters (multiple coachees per coach) and using this relatively new approach to analyzing nested data.

Practical Implications

Given the findings above, the RAD model seems to be a viable managerial coaching model that managers and organizations should consider for their organization. This section details how to use the multi-dimensional nature of the RAD model for strategic coaching. In addition, it explains the importance for organizations to select a coaching model for training and integration into other HR practices and explains how managerial coaching can be used to jumpstart leadership.

Using the Multidimensional RAD Model

The RAD model can be used effectively as a training or measurement tool as either the unidimensional or multidimensional model. The unidimensional model predicted all four outcomes – coaching effectiveness, perceptions of supervisor support, occupational self-efficacy, and work engagement. As such, the RAD model could be used within performance evaluations for managers whose coaching skills are considered part of their job expectations. However, using the separate factors may be useful for managers who wish to tailor their approach to achieve different outcomes.

Relationships was the key driver for CE and PSS for both L1 and L2 effects. This reiterates other literature about the importance of relationships in coaching (e.g., McCarthy & Milner, 2012) and suggests that for these two outcomes, engaging in coaching consistently across one's direct reports is important for improvements. There was only an L1 effect for WE, suggesting that while *relationships* helped to improve engagement, employees were focused

more on the individual relationship for their own engagement. Though a smaller effect than CE and PSS, *relationships* did predict all three outcomes, making it an excellent factor for new coaches to focus on, especially for improving perceptions about their effectiveness as a coach.

Accountability had small effects across all four outcomes, positioning it to be especially effective as a universal tool for achieving a variety of results. This is consistent with prior research on coaching about the importance of goal setting even when controlling for relationship-centered coaching factors (Grant, 2012), and makes sense considering that setting and accomplishing goals are frequent triggers for coaching conversations (Ellinger, 2003). The L2 effects for PSS and WE suggest that for these outcomes, consistency across all direct reports positively influenced ratings.

Development had the most surprising results; for coaching effectiveness there was a small L1 effect and a large L2 effect – coaches were greatly influenced by the consistency of *developmental* behaviors but most of the variance in CE scores on an individual level were explained by the other factors. Despite the positive zero-order correlations for all four outcomes, *development* was not a significant predictor for either OSE or WE when other coaching behaviors were being done at an average level, and for PSS it was surprisingly detrimental. The reasoning for this may be in the items themselves; the *development* factor's items are largely based on challenging employees' way of thinking, asking them to take risks, and other difficult behaviors. These challenges may be perceived as a positive influence towards whether the coach is effective but may erode the feeling of trust from supervisors if employees are doing a good job already. Managers should thus use these behaviors carefully depending on the desired outcomes and the readiness for coachees to handle the developmental challenges presented.

Training and Measuring Coaching Behaviors

The RAD coaching model, as a variant of the RACSR model offered by the CCL's managerial coaching training workshops, offers a practical behaviorally-based model for training and assessing coaching competencies. As noted earlier, companies are increasingly demanding these skills from their managers. However, only 36% offer coach-specific training (Filipkowski et al., 2017). When organizations do train their managers, it allows the organization to control the quality of the training provided in addition to integrating the resulting performance as part of their performance appraisals and other feedback systems used within strategic human resource development practices. Providing the training rather than expecting managers to learn to coach independently may improve their performance (Harrison, 2000; Otoo & Mishra, 2018) as well as employee attitudes (e.g., affective commitment, organizational citizenship behavior, and intent to remain with the organization; Kehoe & Wright, 2013).

In addition to improving the quality by offering a training program, organizations can have a consistent expectation for measurable performance for all managers. Since managerial coaching tends to be less formal than other types of coaching, employees may fail to realize they are being coached (Dixey, 2015), which makes assessing their coaching effectiveness more difficult. This challenge can may also contribute to organizations failing to measure or reward coaching by managers, which is a common issue in organizations (March, 1992; Orth et al., 1987). In contrast, by (a) offering coaching skills training and (b) integrating these practices into the norms for managerial performance, organizations can build a coaching culture, which then amplifies the effectiveness of individual-level coaching (Filipkowski et al., 2017).

This model offers several strengths for use in organizations. First, the RAD model focuses on behaviors that a managerial coach can use strategically in a flexible manner. For example, a managerial coach seeking to improve their overall *accountability* score can look at

the items within the model and select specific behaviors to work on. They can also consider whether the outcomes they expect are related to the consistency across their direct reports (L2 group effects). Novice coaches may be more comfortable with a process-based model such as GROW, which guides the coach to assist the coachee identify a goal, their current reality, obstacles hindering success, and lastly their own willingness to change. This process is meant to be step-by-step, and thus offers less flexibility compared to the RAD model (McCarthy & Milner, 2012). Behavioral items are also more accurate for ratings in 360 assessments (Hansbrough et al., 2015), which is helpful for integrating into performance appraisals.

Secondly, this model is specifically designed for managerial coaches, rather than for executive or other types of coaches. Coach training is often limited to general coaching programs (e.g., sending employees to the same training as executive coaches) rather than tailored for the specific context of managerial coaching (McCarthy & Milner, 2012). While the basic skills may be similar, training designed for executive coaching or more generic coaching may not include specific training on topics related to the managerial coaching context. For example, executive coaching training often emphasizes contracts as the first step of the formal process; managerial does not require the same process since coaching typically occurs in an informal basis. Similarly, training as a life coach would not incorporate handling of the business context, such as goals delivered by the organization, which was an important critique by Hamlin et al. (2006). As such, training for coaching skills for managers need to be targeted for managerial coaching, as this model is.

Coaching and Leadership in Organizations

Managerial coaching frameworks such as the RAD model follow a participative “pull” paradigm (e.g., inspire people to reach for extraordinary results which then call for the action

required to reach them) that is similar to modern leadership theories such as transformational leadership (Hargrove, 2008). This can be seen by the importance of co-creating goals and leveraging the relationship between the coach and coachee to help improve various outcomes. In contrast, traditional management uses a directive, "push" paradigm (e.g., training programs provide education on new behaviors and attitudes). When in a push environment where managers are more directive, managerial coaching has a less ideal fit. The differences and incompatibilities were described by Evered and Sleman (1989) in a comparison of "traditional" management and coaching: (a) managers motivate their employees; in coaching the employees generate their own motivation; (b) managers get employees to "buy into" initiatives; in coaching employees bring their own commitment to the task; (c) managers' responsibility is negotiated; in coaching responsibility is a privilege; and (d) managers decide and instruct employees to implement behaviors; coaches focus on providing resources and eliminating barriers cooperatively with employees.

Overall, these traditional management environments tend to be more transactional in nature, and individual managers attempting to coach their employees may have difficulties without the support of a coaching culture within their companies. However, managerial coaching may be a useful tool to incorporate modern leadership into these workplaces or at least shift managers towards participative approaches, as suggested by Milner and McCarthy (2016) – using managerial coaching to make transformational leadership actionable. In this case, managerial coaches must balance the demands of traditional management environments – the focus on results, evaluation, and taking a hands-on approach – with the slower process of allowing subordinates to grow and develop through delegating challenging assignments, building up their self-efficacy, and fostering strong relationships (Kepler & Morgan, 2005). Managers are

well-positioned for this responsibility, as they can make the job assignments, set the direction of structured learning experiences, set the performance measurements, provide individualized feedback, set strategy for the team, and align resources for this purpose.

The RAD model is an ideal way for managers to make this transition. Specifically, from the *relationship* dimension managers transitioning into a participative style might focus on having more conversations with subordinates where they are explicitly listening to ideas and suggestions without distractions. For *accountability*, rather than simply evaluating performance a managerial coach should be having frequent conversations with employees to give them feedback; while holding them accountable for achieving the goals they should also be helping them identify barriers and ineffective behaviors so the employees can course-correct and make improvements. For *development*, instead of simply having employees stay within their job descriptions, managers can encourage them to take on stretch assignments that will help prepare them for their next role. They can also use feedback conversations to ask employees questions about their behaviors, to help them understand consequences and generate alternative options for accomplishing their work.

Limitations

Several limitations should be considered when interpreting these findings. First, the data was collected at a single time point (non-experimental research design) rather than at multiple time points (e.g., a pre- and post-test design) that would have allowed us to see the change in ratings before and after the training workshop. As such, the direction for the causal inferences is ambiguous (Shadish et al., 2002). Thus, it is difficult to determine if the coaching behaviors caused any of the outcomes, or if perhaps more engaged, supported, or highly-efficacious employees might rate their managers higher in coaching behaviors. Future research should use an

experimental research design, at least with a pre- and post-test if not including a control group for comparison. Ideally, such a study would take a longitudinal approach to test the effects on the distal outcomes as well.

A second threat to the internal validity of the study comes from possible selection bias. Due to the archival nature of the data, it is unknown how each manager selected direct reports to participate in the feedback surveys. For example, we do not know if all their direct reports were required to participate, what criteria was used to select participants, whether managers selected individuals who might rate them positively, or if the employees may have been more or less likely to participate based on engagement, company culture, or other factors. Luckily, the international and multi-organizational nature of the data helps to mitigate systematic bias.

Relatedly, despite an individual manager's use of coaching behaviors, each manager-employee dyad sits within a larger system which may influence the effectiveness of the coaching. In other words, external political, economic, societal, or technological factors as well as internal factors such as company culture, mission, strategy, history, or structure may be in play (Ellinger et al., 2010). For example, Bozer and Jones (2018) identified several antecedents to coaching that are not part of this model, including: coachee self-efficacy pre-coaching, the extent to which the coachee is motivated to engage in coaching, whether the coachee is experiencing a performance or learning goal orientation, and interpersonal attraction between the managerial coach and coachee. Similarly, Gregory & Levy (2011) identified the supervisor's individual consideration (from transformational leadership), the coachee's trust in their supervisor, and the organization's feedback culture as additional variables that impact evaluations of coaching relationships. Carter et al. (2017) also found that coachee readiness and engagement in coaching, disagreements on goals, and lack of a coaching culture within a

company are all barriers to coaching that may not be captured in the study measures. As such, these factors can act as confounding variables that dampen or change the relationship between the predictor and outcome variables, thus limiting construct validity.

Lastly, some of the constructs lacked robustness. *Coaching effectiveness* in particular was a measure that was created by the CCL; it is unknown how they developed or tested this measure prior to implementing it in their workshop. As such, there might be inadequate construct explanation as well as issues from unreliability, as the only reliability data available was my own test for inter-item consistency (Shadesh et al., 2002). PSS was also questionable, as the CCL did not provide any explanation for why they selected the specific four items from the SPSS scale (Kottke & Sharafinski, 1988). Although this measure is a popular one, selecting a small number of items from a larger scale may cause inadequate construct explanation due to not asking questions that cover the breadth of a construct. Follow-up studies should measure the same constructs using alternative measures to test the robustness of the relationships while combating mono-operation bias.

Conclusion

Managerial coaching is a practitioner-focused area of study, where many models are generated in the field before undertaking more rigorous testing. In this study, I presented a coaching model that has been fine-tuned from an existing practitioner model. The statistical approach in this study provides evidence that a multi-level approach with compositional effects can provide additional information about coaching that has thus far been lacking in the field. The findings indicated that not only is the model an effective tool for improving coaching effectiveness, perceptions of supervisor support, occupational self-efficacy, and work engagement, it can also be used in a flexible manner by managers, enabling them to focus their

attention on different dimensions to target different outcomes on both individual and group levels. The RAD model is a tool for human resources to add to their strategy for the training and development of managers, including their performance management. Organizations can also use coaching as a steppingstone into higher leadership roles that demand more transformational leadership behaviors while providing coaching as an accessible resource for all employees.

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Appendix A

The RAD Coaching Behaviors Items

Response Scale:

1 = Never
2 = Almost Never (A few times a year)
3 = Rarely (Once a month or less)
4 = Sometimes (A few times a month)
5 = Often (Once a week)
6 = Very often (A few times a week)
7 = Always (Every day)

Component: Relationships

1. Shows good judgment about which information to share and which to hold private.
2. Avoids gossip.
3. Demonstrates patience in relationships.
4. Is fair and ethical.
5. Shows genuine curiosity in what employees say.
6. Clearly articulates the limits of confidentiality.
7. Follows through on promises and agreements.
8. Provides timely positive feedback.
9. Demonstrates attentiveness with eye contact and body posture.
10. Leads by example.
11. Puts distractions aside to focus on important conversations.
12. Assumes positive intent.
13. Acknowledges good work.
14. Is aware of impact on others.
15. Listens carefully to the ideas and suggestions of others.

Component: Accountability

1. Is clear about objectives for employee development.
2. Provides timely negative feedback.
3. Checks in on progress toward goals.
4. Helps employees identify specific behaviors that will lead to achieving their goals.
5. Explores the gap between current performance and desired performance.
6. Helps employees understand the intent of their behavior.
7. Helps identify obstacles to achieving goals.
8. Assists employees in creating a development plan that incorporates their goals.
9. Helps employees adjust goals when necessary.
10. Assists in establishing specific milestones for employees' goals.
11. Takes time to clarify roles.
12. Helps employees notice when they repeat ineffective behaviors.
13. Recognizes employees' progress toward their goals.
14. Helps employees recognize areas for improvement.
15. Helps employees think through the potential consequences of not making changes.
16. Gives feedback in the moment.
17. Holds employees accountable for achieving their desired goals.
18. Aids employees in identifying goals that will have the greatest impact.

Component: Development

1. Uses metaphors and stories to challenge current thinking.
2. Encourages employees to practice new behaviors.
3. Challenges assumptions in order to explore new ideas.
4. Encourages the use of reflection as a tool for increasing self-awareness.
5. Encourages employees to generate alternative solutions.
6. Encourages employees to take reasonable risks.
7. Helps employees see complex problems from different points of view.
8. Asks open-ended questions to challenge current thinking.
9. Role-plays difficult conversations with employees to increase confidence.
10. Encourages employees to handle difficult conversations directly.
11. Asks questions more than gives advice.
12. Helps employees explore the unintended consequences of a potential action.

Appendix B

Perceptions of Supervisor Support from Eisenberger et al. (2002)

Response Scale:

1 = Strongly Disagree
2 = Disagree
3 = Neither Agree or Disagree
4 = Agree
5 = Strongly Agree

1. My supervisor fails to appreciate any extra effort from me. (Reverse coded)
2. My supervisor really cares about my well-being.
3. My supervisor shows very little concern for me. (Reverse coded)
4. My supervisor takes pride in my accomplishments at work.

Appendix C

Self-Efficacy (Short Occupational Self-Efficacy Scale)

Response Scale:

1 = Strongly Disagree
2 = Disagree
3 = Neither Agree or Disagree
4 = Agree
5 = Strongly Agree

1. I can remain calm when facing difficulties in my job because I can rely on my abilities.
2. When I am confronted with a problem in my job, I can usually find several solutions.
3. Whatever comes my way in my job, I can usually handle it.
4. My past experiences in my job have prepared me well for my occupational future.
5. I meet the goals that I set for myself in my job.
6. I feel prepared for most of the demands in my job.

Appendix D

Work Engagement (Utrecht Work Engagement Scale)

Response Scale:

1 = Never
2 = Almost Never (A few times a year)
3 = Rarely (Once a month or less)
4 = Sometimes (A few times a month)
5 = Often (Once a week)
6 = Very often (A few times a week)
7 = Always (Every day)

1. At my work, I feel bursting with energy.
2. At my job, I feel strong and vigorous.
3. I am enthusiastic about my job.
4. My job inspires me.
5. When I get up in the morning, I feel like going to work.
6. I feel happy when I am working intensely.
7. I am proud of the work that I do.
8. I am immersed in my work.
9. I get carried away when I am working.