A NEW APPROACH TO PROMOTE EMPLOYEE ENGAGEMENT: ONE-ON-ONE MEETINGS BETWEEN MANAGERS AND DIRECT REPORTS

by

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ABSTRACT

JONATHAN ROBERT FLINCHUM. A New Approach to Promote Employee Engagement: One-on-one Meetings Between Managers and Direct Reports. (Under the direction of DR. STEVEN ROGELBERG)

Organizations often struggle to engage their workforces despite various known benefits and predictors of employee engagement. The current study examined a new approach to promote employee engagement—1:1 meetings between managers and direct reports—which are commonly occurring, theoretically relevant, and understudied. Leveraging job-demands resources theory and self-determination theory, it was hypothesized that the quantity (i.e., frequency) and quality (i.e., presence of manager task- and relations-oriented behaviors) of 1:1 meetings promote direct report engagement by satisfying direct reports' basic psychological needs for autonomy, competence, and relatedness. The proposed moderated mediation model was tested with data collected from two time-separated online surveys (N = 303). Results suggest that 1:1 meeting quality—particularly manager relations-oriented behaviors—plays a stronger role in promoting direct report engagement as compared to 1:1 meeting quantity with the important caveat that 1:1 meetings happen at least monthly. Results also suggest that 1:1 meetings are conceptually distinct from and can promote direct report engagement beyond other manager-direct report meetings and interactions (e.g., email exchanges, team meetings) by better supporting direct reports in a synchronous and individualized manner. Taken together, the current study supports 1:1 meetings as a critical tool managers can leverage to promote their direct reports' engagement, while also contributing to both the meeting science and engagement literatures.

DEDICATION

To Mikki, for your endless love, understanding, and support for me throughout this entire process—I could not have done this without you. To my family, friends, and dog Winnie for always keeping me grounded and true to who I am.

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TABLE OF CONTENTS

LIST OF TABLES ix

LIST OF FIGURES x

CHAPTER 1: INTRODUCTION 1

CHAPTER 2: LITERATURE REVIEW 4

2.1 Employee Engagement 4

2.2 Outcomes and Predictors of Engagement 5

2.3 Work Meetings 7

2.4 Work Meetings and Engagement 9

2.5 One-on-One (1:1) Work Meetings 10

2.6 Manager-Direct Report 1:1 Work Meetings 11

2.7 Manager-Direct Report 1:1 Work Meetings and Engagement 13

CHAPTER 3: THEORETICAL FRAMEWORKS 17

3.1 Job Demands-Resources (JD-R) Theory 17

3.2 Self-Determination Theory (SDT) 19

CHAPTER 4: CURRENT STUDY AND HYPOTHESES 21

4.1 Frequency Component: 1:1 Meeting Quantity 21

4.2 Task and Relational Components: 1:1 Meeting Quality 23

4.2.1 Task Component. 24

4.2.2 Relational Component. 26

4.3 The Need for 1:1 Meeting Quantity and Quality in Promoting Engagement 27

4.4 Conceptually Distinguishing the 1:1 Meeting-Engagement Relationship 29

CHAPTER 5: METHOD 30
5.1 Participants and Procedure 30
5.2 Measures 35
5.2.1 One-on-One (1:1) Meeting Frequency 35
5.2.2 Manager Task- and Relations-Oriented 1:1 Meeting Behaviors 36
5.2.3 Basic Psychological Need Satisfaction (BNS) at Work 37
5.2.4 Employee Engagement 38
5.2.5 Manager Task- and Relations-Oriented Behaviors Outside 1:1 Meetings 39
5.2.6 Other Control Variables 40
5.2.7 Other 1:1 Meeting Characteristics 42
CHAPTER 6: RESULTS 43
6.1 Descriptive Statistics 43
6.2 Control Variable Inclusion 43
6.3 Testing for Common Method Bias 44
6.4 Hypothesis Testing 45
6.5 Alternative Models to Test Directionality of Hypotheses 52
6.6 Exploratory Analysis #1: Participants Without 1:1 Meetings 54
6.7 Exploratory Analysis #2: Other 1:1 Meeting Characteristics 55
CHAPTER 7: DISCUSSION 58
7.1 Theoretical Implications 63
7.2 Practical Implications 67
7.3 Limitations 69
7.4 Future Directions 72

7.5 Conclusion..... 76

REFERENCES 78

APPENDICES 138

LIST OF TABLES

TABLE 1: Data Cleaning Process for Both Data Sources 110

TABLE 2: Measure Comparison of Surveys 1 and 2 111

TABLE 3: Recoding for 1:1 Meeting Frequency 112

TABLE 4: Confirmatory Factor Analysis: Manager Behaviors 113

TABLE 5: Factor Loadings: Manager Behaviors 114

TABLE 6: Correlation Matrix: BNS and Engagement by Respective Dimensions 115

TABLE 7: Correlation Matrix: Primary Variables 116

TABLE 8: Participant Breakdown for 1:1 Meeting Frequency 117

TABLE 9: Frequency and Duration for 1:1 Meetings 118

TABLE 10: Confirmatory Factor Analysis: All Primary Study Variables 119

TABLE 11: Mean Comparisons: BNS and Engagement by 1:1 Meeting Frequency 120

TABLE 12: Hypothesis 1 Results: Direct and Indirect Effects 121

TABLE 13: Hypothesis 2 Results: Direct and Indirect Effects 122

TABLE 14: Hypothesis 3 Results: Direct and Indirect Effects 123

TABLE 15: Hypothesis 4a Results: Direct, Interactive, and Indirect Effects 124

TABLE 16: Hypothesis 4b Results: Direct, Interactive, and Indirect Effects 125

TABLE 17: Hypothesis 4 Post-Hoc Results: Direct, Interactive, and Indirect Effects 126

TABLE 18: Alternative Models to Test Directionality of Hypotheses 127

TABLE 19: Open-Ended Responses for Participants Without 1:1 Meetings 128

TABLE 20: Participant Responses: Other 1:1 Meeting Characteristics 129

TABLE 21: Correlation Matrix: Other 1:1 Meeting Characteristics 130

TABLE 22: Correlations: Other 1:1 Meeting Characteristics to BNS and Engagement 131

LIST OF FIGURES

FIGURE 1: Model of All Proposed Hypotheses 132

FIGURE 2: Hypothesis 1: Mediation Model Results 133

FIGURE 3: Hypothesis 2: Mediation Model Results 134

FIGURE 4: Hypothesis 3: Mediation Model Results 135

FIGURE 5: Hypothesis 4a: Moderated Mediation Model Results 136

FIGURE 6: Hypothesis 4b: Moderated Mediation Model Results 137

CHAPTER 1: INTRODUCTION

Employee engagement—the degree of physical, cognitive, and emotional investment individuals put into their work roles (Kahn, 1990; Houle et al., 2022)—is an increasingly popular topic of study in organizational science due to the beneficial outcomes related to engaged workforces (e.g., increased performance, organizational profit, employee well-being, decreased turnover; Christian et al., 2011; Harter et al., 2020; Leijten et al., 2015). However, despite a broad understanding of predictors of engagement (e.g., personality traits, perceived supervisor support, organizational justice perceptions; Saks, 2019; Young et al., 2018), organizations across the globe often struggle to engage their employees (Allam, 2017; Harter et al., 2002). Lack of engagement is estimated to cost organizations and society trillions of dollars each year in lost productivity (Gallup, 2021) and can negatively affect employees (e.g., decreased health and well-being; Cortés-Denia et al., 2021). Given this impact, researchers continue to investigate new ways to promote engagement. Meetings have recently begun to show promise in this pursuit (e.g., Allen & Rogelberg, 2013), which are ubiquitous in the workplace and theoretically relevant to the study of engagement.

The current study expands understandings of engagement and meetings by investigating an understudied but commonly occurring meeting type with the potential to promote employee engagement: one-on-one (1:1) work meetings, or intentional, synchronous gatherings between two individuals for work-related purposes (Flinchum et al., 2022). While 1:1 meetings come in many forms based on who is in attendance and what is discussed (e.g., peer-to-peer 1:1 meetings), the current study investigated 1:1 meetings between managers and direct reports that focus primarily on direct reports' work-related needs (i.e., support and guidance needed to accomplish work provided in an individualized and considerate manner). This particular type of

1:1 meeting differs from other meetings and interactions held between managers and direct reports and was studied for three reasons. First, managers are well positioned to promote direct reports' engagement. This influence is largely driven by their responsibility as a leader to address their direct reports' work-related needs and subsequent interactions with direct reports to do so (Breevaart et al., 2014; Clifton & Harter, 2019; Gruman & Saks, 2011). Second, 1:1 meetings are a type of manager-direct report interaction that include various manager behaviors known to promote engagement (e.g., providing feedback, recognition, and development opportunities; Mone et al., 2011). However, the current study is built on the argument that these behaviors are best suited to promote direct report engagement in 1:1 meetings as opposed to other settings (e.g., email, team meetings) by being performed synchronously and tailored to direct reports' individual needs. Last, recent internal data from organizations themselves (e.g., Cisco, Microsoft) suggest that most managers have 1:1 meetings with their direct reports, but that managers vary greatly in how they approach these meetings (e.g., how frequently they occur and how the meetings are structured; Fuller & Shikaloff, 2016; Keith, 2019; Knight, 2016; McEachran, 2019). Moreover, these data suggest that how managers approach 1:1 meetings (e.g., holding them more frequently) can promote direct report engagement. However, after an extensive search of related literature to support these claims and the potential 1:1 meetings have in promoting direct report engagement, a clear paucity of empirical research on 1:1 meetings was discovered—let alone how 1:1 meetings relate to engagement.

The current study sought to address this opportunity by investigating how the quantity and quality of manager-direct report 1:1 meetings can promote direct report engagement—beyond other manager-direct report meetings and interactions. Grounded in job demands-resources theory and self-determination theory, it was hypothesized that 1:1 meetings conducted

frequently (i.e., high quantity) and effectively by including manager task- and relations-oriented behaviors (i.e., high quality) act as a job resource for direct reports by satisfying their basic psychological needs at work for autonomy, competence, and relatedness, thus serving to promote their subsequent engagement.

CHAPTER 2: LITERATURE REVIEW

2.1 Employee Engagement

Kahn (1990) originally conceptualized employee engagement as "the harnessing of organization members' selves to their work roles… [such that they] employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). According to this conceptualization, engagement is a multidimensional, moment-to-moment state founded on three psychological conditions: meaningfulness, safety, and availability (Kahn, 1990; May et al., 2004). While this work catalyzed research on engagement, other researchers later reconceptualized Kahn's original ideas. Most notably, research in occupational stress and well-being redefined engagement as the opposite of burnout (c.f., Maslach & Leiter, 1997). From this perspective, engagement is characterized by dimensions of energy, involvement, and efficacy, each mirroring the dimensions of burnout. Schaufeli and colleagues (2002) later refined this work, arguing that burnout and engagement should be measured separately. They defined engagement as an ongoing—rather than momentary—positive motivational state of fulfilment for employees characterized by vigor, dedication, and absorption. While two of these dimensions (i.e., vigor and dedication) continued to mirror those of burnout (i.e., emotional exhaustion and depersonalization), they argued that reduced efficacy and absorption were conceptually distinct rather than opposing ends of an underlying continuum. They also argued that while Kahn (1992) later presented a theoretical model for engagement, he did not effectively operationalize engagement as a construct. To address these issues, they developed the aforementioned conceptualization of engagement and a related measure that is now widely used among engagement scholars (i.e., the Utrecht Work Engagement Scale, UWES; Schaufeli et al., 2002).

While this conceptualization is popular among engagement scholars, recent research has returned to and expanded upon Kahn's (1990) original conceptualization of engagement—represented by employees' physical (i.e., effort and energy), emotional (excitement, interest, and enthusiasm), and cognitive (attentiveness, concentration, and absorption) investment in their work roles (Rich et al., 2010; Houle et al., 2022). Using related theory (e.g., role theory; Goffman, 1961), these researchers sought to understand the investment employees put into their work roles rather than to understand a lack of employee engagement as posited by the opposite-of-burnout conceptualization (Houle et al., 2022). Their efforts resulted in an expanded understanding of engagement and the development of the Job Engagement Scale (JES; Rich et al., 2010; Houle et al., 2022), which addressed some scholars' concerns regarding previous conceptualizations of engagement (e.g., construct validity concerns; Byrne et al., 2016).

These advancements and varying conceptualizations underscore the complexity of understanding engagement as a construct (Saks, 2021). To account for these intricacies and to unify engagement research, many scholars have tried to merge these varying approaches (e.g., Byrne, 2022; Shuck et al., 2017). Despite continued disagreements and the need to continue these unification efforts, there are consistencies in the relationships between engagement and various constructs regardless of what conceptualized is used.

2.2 Outcomes and Predictors of Engagement

Engagement relates to various positive outcomes for both organizations and employees. For organizations, engagement is associated with increased organizational commitment, innovative behavior, performance, customer satisfaction, safety outcomes, and retention (Anitha, 2014; Gruman & Saks, 2011; Harter et al., 2002; Jiang & Shen, 2020; Kwon & Kim, 2020; Markos & Sridevi, 2010; Nahrgang et al., 2011; Saks, 2006; 2019; Schneider et al., 2009;

Schneider et al., 2018). Engagement has also been found to buffer the negative effects of economic hardships on business-unit success (e.g., profitability, productivity, turnover, and customer perceptions; Harter et al., 2020). For employees, engagement relates to increased health and well-being, job satisfaction, and career opportunities as well as decreased stress levels and burnout (Gruman & Saks, 2011; Leijten et al., 2015; Saks, 2006; 2019; Yang et al., 2018). Given these positive outcomes, organizations with engaged workforces create a competitive advantage over other organizations by developing a work environment where employees can thrive (Macey & Schneider, 2008). This advantage is likely driving the continued and growing interest in engagement by both academics and practitioners alike, with some scholars arguing that organizations should focus on 'engagement management' rather than performance management practices given these varied outcomes (Albrecht et al., 2015; Gruman & Saks, 2011).

To benefit from these positive outcomes, research has shown that various factors predict engagement—ranging from employee characteristics to employee perceptions of organizational characteristics. At the employee level, individual factors such as one's self-efficacy, optimism, resilience, positive affect, and conscientiousness positively relate to engagement (Saks, 2019; Xanthopoulou et al., 2007; Young et al., 2018). At the job level, predictors of engagement include factors such as performance feedback, supervisor support and leadership style, job characteristics (e.g., autonomy, skill variety), and opportunities for learning and development (Breevaart et al., 2014; Christian et al., 2011; Lesener et al., 2020; Saks, 2006; 2019). Employees can also become engaged by interacting with other employees who are engaged (or vice versa) as engagement can have bidirectional contagion effects (Bakker & Xanthopoulou, 2009; Gutermann et al., 2017; Wirtz et al., 2017). Last, employee perceptions of organizational-level factors can promote engagement such as perceptions of organizational support, rewards and

recognition, organizational culture, senior leadership effectiveness, and organizational justice (Haynie et al., 2016; Lee et al., 2020; Rich et al., 2010; Saks, 2006; 2019; Schneider et al., 2018).

However, despite understanding the benefits and predictors of engagement, many organizations continue to struggle to engage their employees (Allam, 2017; Harter et al., 2002). In fact, Gallup (2021) estimates that only 20 percent of employees were engaged in 2020, costing the global economy $8.1 trillion (USD) from lost productivity.[1] Not only does this staggering number account for nearly 10 percent of the global GDP, but this lack of engagement also leaves employees to suffer in the process. For instance, employees who are not engaged or are actively disengaged (i.e., intentional physical, cognitive, and emotional separation from one's work role; Wollard, 2011) are more likely to have long-term sickness absences, experience burnout, and struggle with physical and mental health issues (Cortés-Denia et al., 2021; Hakenen et al., 2006; Rongen et al., 2014). These and the many other negative consequences of failing to engage employees (e.g., decreased employee performance, commitment, and retention; Halbesleben, 2010) have led to continued efforts for researchers to find new avenues to promote engagement. A common workplace activity—meetings—has begun to show promise in this pursuit.

2.3 Work Meetings

A work meeting is defined as a "scheduled (i.e., prearranged) gathering of two or more individuals for the purpose of a work-related interaction (Schwartzman, 1986) that takes place either on or off site" (Rogelberg et al., 2006, p. 86). Employees attend millions of meetings every day across the globe (Cooman & Verstraeten, 2019; Keith, 2015) and recent data show this number is rising (DeFilippis et al., 2020; Keith, 2022). Although many employees perceive their

[1] This estimate is based on Gallup's most recent *State of the Global Workplace* report, which uses their own measure of engagement (i.e., the Q^{12}). Researchers have argued that the Q^{12} "may be considered a very quick and surface snapshot of work dimensions considered positively related to engagement" rather than a precise measure of engagement itself, despite being commonly used by organizations to measure engagement (Byrne, 2022, p. 100).

meetings to be ineffective (Geimer et al., 2015; Lehmann-Willenbrock et al., 2016), meetings serve various purposes that support the everyday functioning of organizational life. For example, meetings provide employees the space to problem solve, share information, generate ideas, brainstorm, build relationships, debrief, develop strategy, socialize, make decisions, and discuss projects (Allen et al., 2014; Romano & Nunamaker, 2001; Volkema & Niederman, 1995).

In serving these purposes, meetings relate to various outcomes for organizations and employees when effectively conducted. For organizations, effective meetings create a greater return-on-investment for the time, energy, and financial costs associated with meetings while also supporting organizational productivity (Mroz et al., 2018; Rogelberg et al., 2012). For employees, effective meetings relate to increased organizational commitment, improved job satisfaction, and reduced turnover intentions (Mikkelson et al., 2015; Rogelberg et al., 2006; Rogelberg et al., 2010). Effective meetings also relate to improved employee health and well-being by conserving employees' time and energy—reducing potential negative consequences of meetings such as fatigue (Levenson, 2017). It is important to note that employee perceptions and attitudes toward meetings related to these outcomes are also distinct from similar job perceptions and attitudes. For example, meeting satisfaction is not redundant to job satisfaction. Instead, research finds that meeting satisfaction is a distinct facet of job satisfaction—beyond satisfaction with peers, supervisors, and the work itself—revealing the unique function meetings hold for employees and organizations (Rogelberg et al., 2010). While these are just some of the outcomes associated with effective work meetings, research has recently started to investigate how work meetings relate to engagement.

2.4 Work Meetings and Engagement

Although meeting science research has advanced significantly since its inception, only a few studies have empirically investigated the relationship between meetings and engagement to date. In these studies, a positive relationship between effective meetings and engagement has been consistently supported. For example, Allen and Rogelberg (2013) first studied the meeting-engagement association in manager-led group meetings. They concluded that managers who held meetings that were relevant, gave participants a voice, and were managed for time related to increased participant engagement outside of the meetings. Next, Yoerger and colleagues (2015) investigated the relationship between attendee participation in decision-making (PDM) in meetings and engagement. Using social exchange theory, results supported the positive relationship between PDM in meetings and attendee engagement based on the norm of reciprocity (i.e., employees were more likely to perceive meetings as positive when they were actively involved in them, which promoted their engagement outside of the meetings). Results also supported two moderating effects, such that increased supervisor support and higher meeting load strengthened the relationship. Later, Lehmann-Willenbrock and colleagues (2016) investigated meeting attendee behaviors and their relationship with attendee engagement—proposing that attendee behavior could have lasting effects on attendees and their engagement. Supporting their hypotheses, productive meeting attendee behaviors (e.g., coming prepared) were positively related to engagement while counterproductive meeting attendee behaviors (e.g., running off topic) were negatively related to engagement. These relationships were mediated by both perceived meeting effectiveness and meeting satisfaction, respectively. Last and most recently, Allen and Prange (2021) investigated how non-profit organizations could use meetings

to increase volunteers' engagement. Supporting their hypotheses, effective meetings related to increased volunteer engagement by giving volunteers a voice in their organization.

While limited in number, these studies highlight the potential meetings have in promoting engagement when effectively conducted. Meeting science research is beginning to discern this idea more generally, arguing that meetings can have a positive and not just negative influence on employee health and well-being when relevant and done effectively (c.f., Lübstorf & Lehmann-Willenbrock, 2020). However, despite supporting the relationship between effective meetings and engagement, each of these studies investigated larger group meetings (i.e., three or more attendees). In doing so, this work overlooked one-on-one (1:1) meetings (i.e., two attendees) such as those between managers and direct reports, which are a commonly occurring yet understudied meeting type that—as discussed next—are theoretically positioned to be of great importance to the study of engagement.

2.5 One-on-One (1:1) Work Meetings

Estimated to account for between 20 to 50 percent of all work meetings, one-on-one (1:1) work meetings (i.e., intentional, synchronous gatherings between two individuals for work-related purposes) fill employee calendars and workdays (Doodle, 2021; Keith, 2015). In fact, the number of 1:1 work meetings has dramatically increased since the start of the COVID-19 pandemic, outpacing any other meeting type (Keith, 2022). However, despite their prevalence and meetings being defined to include *two* or more individuals, research in meeting science has largely overlooked this meeting type. This research gap has led to the implicit assumption that 1:1 meetings function in the same way as larger group meetings, which is problematic as dyads (i.e., groups of two individuals) hold conceptual, theoretical, and practical differences as compared to larger groups that can transfer to the meeting context (c.f., Flinchum et al., 2022).

For example, individuals in dyads are more likely to disclose emotions and relay personal information due to the more intimate nature of dyadic interaction (Islam & Zyphur, 2005; LePine & Van Dyne, 1998; Yoon et al., 2013). In the meeting context, this difference may mean that 1:1 meetings are more relational in nature than larger group meetings (e.g., team meetings). Differences like this example are important to consider when investigating the relationship between work meetings and engagement. For instance, more personal and emotional interactions can act as a form of social support, which can promote engagement (Beehr et al., 1990; Christian et al., 2011). Accordingly, 1:1 work meetings may be better positioned to promote direct report engagement than larger group work meetings in certain situations.

One situation to consider is the type of 1:1 work meeting. While 1:1 work meetings come in many forms based on who is in attendance (e.g., peer-to-peer, employee-to-customer) and what is discussed (e.g., plans to accomplish shared work, negotiating a deal), the current study investigated a specific type of 1:1 work meeting that is abundant and rich with theoretical and practical merit related to engagement—1:1 work meetings between managers and direct reports.

2.6 Manager-Direct Report 1:1 Work Meetings

Manager-direct report 1:1 work meetings are intentional, synchronous gatherings between a manager and their direct report to discuss shared work-related issues, focused primarily on the direct report's work-related needs—referred to as 1:1 meetings moving forward for simplicity (Flinchum et al., 2022). Direct reports' work-related needs refer to the support that direct reports require to effectively conduct their work as well as their need to be supported in a manner so that they feel respected, trusted, and valued as an individual (Breevaart & de Vries, 2021; Byham & Wellins, 2015; Kaluza et al., 2020; Yukl, 2012).

As defined, 1:1 meetings can be scheduled or impromptu but are intentional in discussing work-related issues. 1:1 meetings are also held synchronously (e.g., face-to-face, virtually, over the phone) rather than asynchronously (e.g., emails or notes exchanged). Last, while 1:1 meetings can include discussions that serve managers' work-related needs, 1:1 meetings are focused primarily on the work-related needs of direct reports (Flinchum et al., 2022; Rogelberg, 2022). For instance, managers can discuss roadblocks they are experiencing and the support they need from direct reports to overcome these problems in 1:1 meetings, but these manager-focused topics are supposed to be saved for the end of 1:1 meetings and instead start with and emphasize topics pertinent to direct reports' work-related needs and career development to best serve their purpose (Knight, 2016).

Based on these defining characteristics, 1:1 meetings differ from other types of meetings and interactions managers have with direct reports on several dimensions such as how the meetings are approached and their logistics. For example, meeting leaders are typically responsible for scheduling, preparing agendas, and conducting larger group meetings (Sisco, 1993). However, this is not always the case in 1:1 meetings. While managers are still recommended to schedule 1:1 meetings, how the meetings are scheduled differs. For example, reoccurring meetings can be perceived as an interruption or hassle to attendees in larger group meetings, which negatively relates to their well-being by adding to their meeting load (Luong & Rogelberg, 2005; Rogelberg et al., 2006). However, managers are paradoxically encouraged to schedule reoccurring 1:1 meetings with direct reports to best address their ongoing needs (Fuller & Shikaloff, 2016; Keith, 2019; Rogelberg, 2022). Agenda creation also differs. Rather than being controlled entirely by managers, direct reports are actively involved in creating 1:1 meeting agendas (Knight, 2016). Accordingly, the topics discussed during 1:1 meetings can

differ from those in larger group meetings (e.g., career planning, development, and performance discussions; Knight, 2016). Furthermore, who runs 1:1 meetings differs. Despite scheduling 1:1 meetings and contributing to their agendas, managers are not the primary meeting facilitator as with larger group meetings. Instead, direct reports share the responsibility for owning and leading 1:1 meetings, which start with their agenda items (Keith, 2019; Knight, 2016).

As seen in these examples, the unique characteristics of 1:1 meetings distinguish them from other meetings and interactions managers have with direct reports, which changes how 1:1 meetings should be approached (e.g., co-creation of agendas). When done effectively, 1:1 meetings serve as a dedicated space where managers can provide ongoing support for direct reports—described by some as a "precious moment of connection" between managers and direct reports (Knight, 2016, para. 5). Moreover, these characteristics position 1:1 meetings as a critical context for managers to promote their direct reports' engagement.

2.7 Manager-Direct Report 1:1 Work Meetings and Engagement

Managers play a critical role in the working lives of their direct reports including their engagement (Goler et al., 2018; Petrou et al., 2017). This influence stems from the responsibility managers have as leaders to oversee and address their direct reports' work-related needs, which can promote direct report engagement when done effectively (Hernaus et al., 2017). For example, managers are a key source of feedback, coaching/development, and support for direct reports—each of which positively relates to engagement (Gruman & Saks, 2011; Yang et al., 2018). Managers also serve as direct reports' primary source of organizational communication, such that their loyalty lies primarily with their manager rather the organization (Therkelsen & Fiebich, 2003).

To serve in this role effectively, managers must have continuous interactions with direct reports such as 1:1 meetings where certain behaviors that promote engagement are present. For example, discussing career development (Van de Ven, 2007), providing performance feedback (Asmuß, 2008; Elicker et al., 2006; Mone et al., 2011; Shi & Gordon, 2020), clarifying work roles (Xu & Thomas, 2011), coaching (Ellinger & Bostrom, 1999; Johnston et al., 2007; Olivero et al., 1997), recognizing and rewarding achievements (Saks, 2019), mentoring (Vásquez & Urzúa, 2009), offering autonomy in one's work (Meyer & Gagné, 2008), and relationship building (Duffy & McEuen, 2010; Lehmann-Willenbrock et al., 2018; Rogelberg et al., 2007) all positively relate to engagement and typically occur in 1:1 meetings. However, while managers may display these behaviors elsewhere (e.g., providing feedback via email or in team meetings), the distinct characteristics of 1:1 meetings enable managers to perform these behaviors synchronously and tailor them to direct reports' individual work-related needs—better positioning these behaviors to promote direct reports' engagement in 1:1 meetings beyond their use in other settings (Flinchum et al., 2022; Knight, 2016).

For example, communication in asynchronous interactions such as email makes it is more difficult to align perspectives and build trust between managers and direct reports as the rationale, motivation, and emotions of what is communicated can be misinterpreted or not understood (Byron, 2008; Panteli et al., 2018; Parlamis & Ames, 2010; Shaik & Makhecha, 2019). Therefore, constructive feedback intended to help direct reports sent by email may be perceived as unfair and not accepted or acted upon, which can hinder rather than promote their engagement (Leung et al., 2001; Sparr & Sonnentag, 2008; Volpone et al., 2012). Such discrepancies as seen in this example are also more difficult to resolve in asynchronous settings given the added time lag between communication. 1:1 meetings overcome these issues by

allowing managers and direct reports to synchronously discuss and align on feedback in real time, increasing the likelihood that the feedback promotes their engagement.

Relatedly, larger group interactions such as team meetings decrease the ability and effectiveness of managers to tailor their behaviors to address direct reports' individual work-related needs due to the differences between dyads and larger groups. For example, communication in larger groups tends to be less attentive, emotional, and personal than dyadic communication because individuals in dyads must directly interact and connect with one another (Islam & Zyphur, 2005; LePine & Van Dyne, 1998; Panko, 1992; Panko & Kinney, 1992; Poole & Billingsley, 1989). Thus, the content and messaging of feedback given to direct reports can differ in larger group interactions, which can affect how the feedback is received and how it then relates to engagement (Archer-Kath et al., 1994). For instance, feedback given in team meetings is more likely to target the entire team, which may be less specific and helpful in addressing direct reports' individual work-related needs (Aguinis et al., 2012). Moreover, when individual feedback is provided to direct reports in team meetings, it can be uncomfortable, demeaning, and embarrassing for direct reports regardless if the feedback is constructive or positive (Aguinis et al., 2012). Therefore, individual feedback is less effective and appropriate when provided during larger group interactions—limiting how the feedback can promote direct reports' engagement (Mone et al., 2011). 1:1 meetings overcome these issues by allowing managers to provide feedback to individual direct reports in a private setting tailored specifically to their work-related needs, increasing the likelihood that the feedback promotes their engagement.

Not only does this position 1:1 meetings as a better platform to engage direct reports as compared to other manager-direct report meetings and interactions, but recent organizational data estimate that most managers have 1:1 meetings with their direct reports (94%)—with nearly

half (49%) being on a weekly basis (McEachran, 2019). This cadencing aligns with practical guidelines, where regularly occurring 1:1 meetings are recommended to best support direct reports and their engagement (Knight, 2016). In fact, internal studies conducted at Cisco and Microsoft support this recommendation, reporting that direct reports who had more frequent (e.g., weekly) 1:1 meetings were more engaged than their peers (Fuller & Shikaloff, 2016; Keith, 2019). However, these internal studies also indicated that managers took varying approaches to their 1:1 meetings (e.g., how they were structured) and were not clear on how such variability could influence engagement.

Therefore, while these studies suggest that most managers have 1:1 meetings with their direct reports, they provide limited insight into how 1:1 meetings—other than being held more frequently—can promote engagement. Furthermore, they did not provide any theoretical justification for how frequent 1:1 meetings promoted engagement or consider how other manager-direct report meetings and interactions and known predictors of engagement could affect this relationship. To better understand this relationship, a review of meeting science, engagement, and related research was conducted. However, after an extensive search, a clear dearth of empirical research on 1:1 meetings currently exists—let alone how 1:1 meetings relate to engagement. The current study sought to address this research opportunity.

CHAPTER 3: THEORETICAL FRAMEWORKS

To better understand how 1:1 meetings can promote engagement, the current study leveraged two widely used and complementary theoretical perspectives in the engagement literature—job demands-resources (JD-R) theory and self-determination theory (SDT). JD-R theory posits that employees' job resources promote their engagement (Bakker & Demerouti, 2017), while SDT asserts that satisfying employees' basic psychological needs for autonomy, competence, and relatedness promotes their engagement (Deci & Ryan, 2000). When used in unison, SDT provides the explanatory mechanism for the job resource-engagement relationship postulated in JD-R theory, such that job resources promote engagement by satisfying employees' basic psychological needs (Decuypere & Schaufeli, 2020). This logic can also be used to explain how 1:1 meetings can promote engagement (i.e., when 1:1 meetings serve as a resource that satisfies direct reports' basic psychological needs) but requires a more detailed explanation of the nuances of each theory to be fully understood.

3.1 Job Demands-Resources (JD-R) Theory

JD-R theory and its respective model focus on two aspects of employees' work lives: job demands and job resources. Job demands are "physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs" (Bakker & Demerouti, 2017, p. 274). Examples of job demands include an employee's workload, customer interactions, administrative hassles, and time pressure. Job resources are "physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, or stimulate personal growth, learning, and development" (Bakker & Demerouti, 2017, p. 274). Examples of job resources include one's

health (personal resource), autonomy (job resource), supervisor support (social resource), and organizational policies and services (organizational resource; Lee et al., 2020).

To explain how job demands and job resources relate to engagement, the JD-R model includes two distinct pathways (Bakker & Demerouti, 2007; Bakker et al., 2014; Demerouti et al., 2001; Hakanen et al., 2008; Halbesleben, 2010; Schaufeli & Bakker, 2004). The health-impairment pathway describes how job demands have varied relationships with engagement depending on how they are appraised (Crawford et al., 2010). Demands appraised as a hindrance (e.g., interpersonal conflict, administrative hassles, job insecurity) tend to negatively relate to engagement, while demands appraised as a challenge (e.g., time pressure, cognitive demands) tend to positively relate to engagement. Although both types of demands deplete employee resources that can hinder engagement, challenge demands can overcome this negative effect by enabling employees to better invest themselves in their work (Van den Broeck, De Cuyper, et al., 2010).[2]

The motivational pathway of JD-R theory—central to the current study—describes how job resources promote engagement by helping employees accomplish their work, reduce their job demands, and more actively invest themselves in their work (Bakker & Demerouti, 2017). This pathway also explains how job resources more strongly relate to engagement when job demands are high and how job resources can buffer the positive relationship between job demands and burnout (Bakker et al., 2005; Bakker et al., 2007; Bakker et al., 2010; Heckenberg et al., 2020; Kwon & Kim, 2020; Xanthopoulou et al., 2007; Van Yperen & Hagedoorn, 2003). Therefore,

[2] While demands have been categorized in this way, research is still investigating this dichotomy. For example, time pressure is argued to be a challenge demand that promotes engagement but can also serve as a hindrance demand that hinders engagement if experienced for prolonged periods of time (Baethge et al., 2018).

job resources are critical for engaging employees, especially in more demanding roles (e.g., Van Yperen & Hagedoorn, 2003).

3.2 Self-Determination Theory (SDT)

To expand on the motivational pathway relating job resources to engagement, self-determination theory (SDT; Deci & Ryan, 2000) has been used in unison with JD-R theory (e.g., Albrecht, 2010; Crawford et al., 2010; Van den Broeck et al., 2008). SDT posits that individuals have three basic psychological needs that—when satisfied—promote engagement (Deci et al., 2017; Shuck et al., 2015). First, individuals have a need for autonomy such that they "experience a sense of choice and psychological freedom when carrying out an activity" (Van den Broeck, Vansteenkiste, et al., 2010, p. 982). Second, individuals have a need for competence such that they "desire to feel effective in interacting with the environment" (Van den Broeck, Vansteenkiste, et al., 2010, p. 982). Last, individuals have a need for relatedness such that they "feel connected to others…to be a member of a group, to love and care and [to] be loved and cared for" (Van den Broeck, Vansteenkiste, et al., 2010, p. 982-3).

When combined with JD-R theory, the satisfaction of these basic psychological needs is understood as the motivational mechanism relating job resources indirectly to engagement (i.e., job resources satisfy employees' basic psychological needs, which then promote their engagement). For example, empowerment in the form of increased task control (i.e., job resource) relates to the satisfaction of employees' need for autonomy (Van den Broeck et al., 2008), which positively relates to engagement (Meyer & Gagné, 2008). As illustrated in this example and recently proposed as the intrapersonal motivational pathway of JD-R theory (c.f., Decuypere & Schaufeli, 2020), job resources that satisfy employees' basic psychological needs enable and motivate employees to optimally function in their work environment—increasing the

likelihood that they are engaged (e.g., Rahmadani et al., 2019; Schreurs et al., 2014). Serving as the theoretical foundation of the current study, this logic can also be applied to 1:1 meetings. More specifically, 1:1 meetings can promote engagement when they serve as a resource for direct reports, such that they satisfy direct reports' basic psychological needs for autonomy, competence, and relatedness at work. However, the critical question that remains is how 1:1 meetings can serve this purpose.

CHAPTER 4: CURRENT STUDY AND HYPOTHESES

To understand how 1:1 meetings can serve as a need-satisfying, engagement-promoting resource for direct reports as aligned with the intrapersonal motivational pathway of JD-R theory, the current study investigated two characteristics of 1:1 meetings—their quantity and quality. Frequent 1:1 meetings (i.e., 1:1 meeting quantity) should enable direct reports' basic psychological needs to be satisfied more readily, increasing the chances that 1:1 meetings serve as an engagement-promoting resource for direct reports. However, while the frequency of 1:1 meetings should promote direct report engagement individually (e.g., development of manager-direct report trust through increased interaction frequency; McAllister, 1995), 1:1 meetings are likely most effective in doing so when they are also high in quality. To establish high-quality 1:1 meetings, I argue that two types of manager behavior (i.e., task- and relations-oriented) must be present to sufficiently satisfy direct reports' basic psychological needs, thus promoting their subsequent engagement. Together and as aligned with JD-R theory and SDT, the current study contends that 1:1 meetings serve as a need-satisfying resource for direct reports that most effectively promotes their engagement when 1:1 meetings are both high in quantity (frequency component) and quality (task and relational components). Given the unique characteristics of 1:1 meetings (i.e., held synchronously and tailored to direct reports' individual needs), 1:1 meetings are also argued to serve this purpose beyond the influence of other manager-direct report meetings and interactions.

4.1 Frequency Component: 1:1 Meeting Quantity

For 1:1 meetings to promote engagement, it is first assumed that these meetings are happening. Moreover, 1:1 meetings should be held frequently (e.g., weekly) to best promote engagement (Fuller & Shikaloff, 2016; Keith, 2019; Knight, 2016). Rather than waiting until

problems arise or overlooking potential issues, frequent 1:1 meetings are a proactive way managers can address direct reports' work-related needs in real time. In doing so, direct reports' basic psychological needs can be more readily satisfied. For instance, frequent 1:1 meetings allow managers to continually encourage direct reports to keep working on difficult tasks independently—satisfying their need for autonomy (Hardré & Reeve, 2009). Relatedly, managers who provide ongoing, helpful feedback to direct reports in 1:1 meetings set direct reports up to be more effective in their role over time—satisfying their need for competence (Deci et al., 2017; Fereday & Muir-Cochrane, 2006). Furthermore, frequent 1:1 meetings provide managers the ongoing opportunity to recognize direct reports' high performance and explain how their work benefits the team and organization—satisfying their need for relatedness (Kovjanic et al., 2013). By continually satisfying these needs, frequent 1:1 meetings serve as a resource for direct reports that can strengthen their relationship with their manager, enhance their perceptions of their manager's effectiveness as a leader, and promote their subsequent engagement (Gajendran & Joshi, 2012; Kleinman, 2004; Meyer & Gagné, 2008). This aligns with a study conducted by McAllister (1995), for example, which found that managers who met more frequently with direct reports established greater trust between the pair—which serves as a social resource for direct reports that can promote their engagement (Lee et al., 2020).

However, each of these examples imply that 1:1 meetings are not only high in quantity but also high in quality by including manager behaviors focused on direct reports' work-related needs. While 1:1 meeting quality is a critical aspect of 1:1 meetings, the quantity of 1:1 meetings is argued to be a unique component that can satisfy direct reports' basic psychological needs regardless of 1:1 meeting quality—though likely to a lesser extent. For example, frequent 1:1 meetings can develop greater trust between the pair, which is needed for managers to release

control over work to direct reports—satisfying their need for autonomy (McAllister, 1995; Long & Sitkin, 2018). Relatedly, even if a manager does not focus on their direct reports' work-related needs, hearing a manager explain their ongoing work process and needs can provide direct reports with learning opportunities to better conduct their own work—satisfying their need for competence (Stone et al., 2009). Furthermore, managers who have frequent 1:1 meetings with their direct reports—even if conducted poorly—demonstrate that they care about their direct reports by providing them with their time and energy—satisfying their need for relatedness (Spreitzer & Porath, 2014). Therefore, frequently held 1:1 meetings better position direct reports to engage in their work by more readily satisfying their basic psychological needs.

> *Hypothesis 1. The satisfaction of direct reports' basic psychological needs mediates the relationship between 1:1 meeting frequency and direct report engagement, such that more frequent 1:1 meetings positively relate to direct report engagement by satisfying direct reports' basic psychological needs.*

4.2 Task and Relational Components: 1:1 Meeting Quality

While frequently held 1:1 meetings can promote engagement in their own right, the quality of 1:1 meetings likely matters as much—if not more—than their quantity in promoting direct report engagement by ensuring that their basic psychological needs are fully satisfied (e.g., Sin et al., 2009; Windeler et al., 2017). The importance of manager-direct report interaction quality—not just quantity—is well grounded. For example, while not specific to 1:1 meetings, Jian and Dalisay (2018) found that manager-direct report communication frequency served as a resource for direct reports by reducing their work role stressors, but the quality of their communication strengthened this effect. In the current study, 1:1 meeting quality is represented by the task- and relations-oriented behaviors managers display in 1:1 meetings. The goal of task-

oriented leader behaviors is “to accomplish work in an efficient and reliable way,” while relations-oriented leader behaviors are used “to increase the quality of human resources and relations” (Yukl, 2012, p. 68). These types of leader behavior have long been theorized by researchers, starting in the mid-1900s with the Ohio State Leadership Studies (c.f., Stogdill, 1950). Regardless of variations in their conceptualization and measurement over time, there is ample empirical evidence demonstrating the utility of these types of leader behavior and their benefits for direct reports. For instance, task- and relations-oriented leader behaviors both positively relate to direct report job satisfaction, motivation, job performance, and perceptions of managerial effectiveness (Judge et al., 2004; Yammarino et al., 2020; Yukl et al., 2019). Most relevant to the current study, both types of leader behavior also support direct reports’ engagement and basic psychological need satisfaction (Decuypere & Schaufeli, 2020; Kovjanic et al., 2013; Rahmadani et al., 2019; Van Dierendonck et al., 2014; Yukl et al., 2019). Meeting science research on larger group meetings supports this claim more generally, finding that managers who perform needs-satisfying behaviors (e.g., encouraging attendee participation and voice) relate to both the satisfaction of attendee basic psychological needs (e.g., Schuleigh et al., 2019; 2021) and enhanced attendee engagement (e.g., Allen & Rogelberg, 2013). Therefore, the quality—and not just the quantity—of 1:1 meetings must also be considered in understanding how 1:1 meetings can serve as a need-satisfying resource that can promote direct report engagement—represented by the inclusion of manager task-oriented and relations-oriented 1:1 meeting behaviors (i.e., task and relational components).

4.2.1 Task Component. To set direct reports up for success in their work, 1:1 meetings should first include manager task-oriented behaviors. These behaviors provide direct reports the support required to effectively conduct their work and include behaviors such as: setting

expectations, defining role requirements, aligning perspectives, resolving issues, problem solving, monitoring progress, clarifying goals and priorities, outlining deadlines, providing updates, delivering feedback, removing roadblocks, and supplying resources (Breevaart & de Vries, 2021; Byham & Wellins, 2015; Kaluza et al., 2020; Yukl, 2012; Yukl et al., 2002). These examples are not exhaustive and 1:1 meetings do not need to include all behaviors at once. Instead, manager task-oriented behaviors should be purposefully used in 1:1 meetings to fit direct reports' work-related needs when appropriate.

Managers who perform task-oriented 1:1 meeting behaviors demonstrate to direct reports that they are invested in their success at work. Rather than leaving direct reports to fend for themselves, managers who partake in these exchanges provide direct reports with the guidance and support (e.g., feedback, resources, training, equipment) needed to accomplish their work. In doing so, direct reports' basic psychological needs are more likely to be satisfied. For instance, planning and assigning individual work activities can satisfy direct reports' need for autonomy; clarifying responsibilities can satisfy direct reports' need for competence; and removing roadblocks and providing resources can satisfy direct reports' need for relatedness through felt care (e.g., Kovjanic et al., 2013; Rahmadani et al., 2019). Therefore, the inclusion of manager task-oriented behaviors in 1:1 meetings better positions direct reports to engage in their work by satisfying their basic psychological needs.

> *Hypothesis 2. The satisfaction of direct reports' basic psychological needs mediates the relationship between manager task-oriented 1:1 meeting behaviors and direct report engagement, such that manager task-oriented 1:1 meeting behaviors positively relate to direct report engagement by satisfying direct reports' basic psychological needs.*

4.2.2 Relational Component. As with any meeting, 1:1 meetings should also be run in a considerate manner so that direct reports feel heard, respected, trusted, valued, and supported (Breevaart & de Vries, 2021; Byham & Wellins, 2015; Kaluza et al., 2020; Tabernero et al., 2009). To do so, managers must consider how their 1:1 meeting behavior may affect direct reports and demonstrate relevant relations-oriented behaviors (Lehmann-Willenbrock et al., 2015; Malouff et al., 2012; Odermatt et al., 2017). Examples of such behaviors include: listening attentively, considering how decisions may affect direct reports, letting direct reports voice their opinions, providing career advice and mentoring, trusting direct reports with stretch assignments, being empathetic when delivering constructive feedback, involving direct reports in decision making that can affect them, providing deserved recognition, and showing interest in direct reports' perspectives (Jonsdottir & Kristinsson, 2020; Mone et al., 2011; Yukl et al., 2002; Yukl et al., 2019). Like the task component of 1:1 meetings, these examples are not exhaustive and should be purposefully introduced (and reintroduced) in 1:1 meetings to fit direct reports' work-related needs when appropriate. For instance, not every 1:1 meeting should address employee development. However, this is an important activity to include from time-to-time (e.g., once a month; Flinchum et al., 2022).

Managers who perform relations-oriented 1:1 meeting behaviors demonstrate to direct reports that they do not view their employees as simply a way to accomplish work (Stogdill, 1950). Instead, managers who partake in these exchanges provide direct reports with a sense of respect, trust, and value by demonstrating greater care and support for direct reports as individuals (Byham & Wellins, 2015). Through these interactions, the pair can understand one another at a deeper level, mutual trust can be developed, and their relationship can be strengthened over time (Brower & Schoorman, 2000; Judge et al., 2004; Matta et al., 2015;

McAllister, 1995). In doing so, direct reports' basic psychological needs are also more likely to be satisfied. For instance, receiving responsibility for important tasks can satisfy direct reports' need for autonomy; discussing strengths and development opportunities can support direct reports' need for competence; and managers who actively listen to direct reports' perspectives show greater care for direct reports that can satisfy their need for relatedness (e.g., Rahmadani et al., 2019; Slemp et al., 2018; Van Dierendonck et al., 2014). Therefore, the inclusion of manager relations-oriented behaviors in 1:1 meetings also positions direct reports to better engage in their work by satisfying their basic psychological needs.

> *Hypothesis 3. The satisfaction of direct reports' basic psychological needs mediates the relationship between manager relations-oriented 1:1 meeting behaviors and direct report engagement, such that manager relations-oriented 1:1 meeting behaviors positively relate to direct report engagement by satisfying direct reports' basic psychological needs.*

4.3 The Need for 1:1 Meeting Quantity and Quality in Promoting Engagement

While each 1:1 meeting component is argued to promote direct report engagement individually, all components are likely needed for 1:1 meetings to be most effective in engaging direct reports. The frequency component (i.e., quantity) of 1:1 meetings ensures that 1:1 meetings are consistently happening and allows direct reports' basic psychological needs to be satisfied in an ongoing and timely manner. The task and relational components (i.e., quality) of 1:1 meetings ensure that 1:1 meetings fully satisfy direct reports' basic psychological needs by including manager task- and relations-oriented behaviors, which allow managers to support direct reports both in their work and as individuals. Therefore, I argue that 1:1 meetings are best positioned to serve as an engagement-promoting resource for direct reports when 1:1 meetings

are high in both quantity and quality, which can best satisfy direct reports' basic psychological needs (Decuypere & Schaufeli, 2020).

Consequently, even if one component is missing, 1:1 meeting effectiveness in engaging employees may decline. For example, 1:1 meetings may be frequently held (i.e., high frequency component) where managers support the work of direct reports (i.e., high task component), but if these meetings are not held in a considerate way (i.e., low relational component) then 1:1 meetings are less likely to fully satisfy direct report basic psychological needs. Such threats to direct reports' basic psychological need satisfaction decrease their enablement and motivation, which then limit them from engaging in their work (Deci et al., 2001; Goodboy et al., 2017; Meyer & Gagné, 2008). Thus, it was last hypothesized that while frequent 1:1 meetings (i.e., high quantity) are needed to promote direct report engagement by more readily satisfying their basic psychological needs, 1:1 meetings are most effective in doing so when they also include manager task- and relations-oriented 1:1 meeting behaviors (i.e., high quality). See Figure 1 for the proposed model, which outlines all hypotheses.

Hypothesis 4a. Manager task-oriented 1:1 meeting behaviors moderate the indirect effect of 1:1 meeting frequency on direct report engagement via the satisfaction of direct reports' basic psychological needs, such that the indirect effect is more positive when manager task-oriented 1:1 meeting behaviors are high.

Hypothesis 4b. Manager relations-oriented 1:1 meeting behaviors moderate the indirect effect of 1:1 meeting frequency on direct report engagement via the satisfaction of direct reports' basic psychological needs, such that the indirect effect is more positive when manager relations-oriented 1:1 meeting behaviors are high.

4.4 Conceptually Distinguishing the 1:1 Meeting-Engagement Relationship

While 1:1 meetings are argued to best promote direct report engagement when they are high in both quantity and quality, the unique characteristics of 1:1 meetings (i.e., held synchronously and tailored to direct reports' individual needs) also position 1:1 meetings to do so beyond the influence of other manager-direct report meetings and interactions. Therefore, the task- and relations-oriented behaviors managers displayed outside of 1:1 meetings were accounted for when investigating the proposed relationship between 1:1 meetings and engagement. Aligned with JD-R theory, these manager behaviors may also serve as engagement-promoting resources for direct reports. Moreover, these manager behaviors may also influence the quantity and quality of 1:1 meetings that managers have with their direct reports. For example, a manager may schedule 1:1 meetings less frequently (e.g., quarterly) if they feel that they are demonstrating these behaviors in other settings. Therefore, these manager behaviors were accounted for to conceptually distinguish 1:1 meetings from other manager-direct report meetings and interactions, including how 1:1 meetings can promote engagement beyond these other settings.

CHAPTER 5: METHOD

5.1 Participants and Procedure

Participants were recruited from two sources. Inclusion criteria limited participants to employees who were: a) based in the United States, b) 18 years of age or older, c) full-time employees (more than 30 hours per week), and d) overseen by their manager for at least one month. Participants were surveyed at two time points, which separated predictor and outcome variables to help mitigate common method bias and to establish temporal precedence for directionality of the model (Chang et al., 2010; Podsakoff et al., 2003; Spector, 2019). Before surveys were distributed, a small pilot study and verbal protocol analysis (i.e., subject matter experts reading through the survey item-by-item with the primary investigator to assess its quality) were conducted to receive feedback on the surveys. This work streamlined surveys before distribution by providing insight on how to improve their quality (e.g., ways to shorten surveys to limit survey fatigue; Meade & Craig, 2012), while also limiting potential threats to data quality (e.g., insufficient effort responding and non-response bias).

Participants were first recruited from a large manufacturing company headquartered in the southeastern United States. The first survey was sent to approximately 2,700 employees. Rather than paying employees to participate, employees chose a charity associated with the organization's philanthropic efforts where research funds were donated to after completing the survey(s). Unfortunately, due to a large, unexpected organizational change announced during the start of data collection, response rates were exceptionally low—only 55 employees completed the first survey over two weeks, which included a one-week extension and increased survey communications to improve response rates. Despite this low response rate, qualifying participants (n = 50) were sent the second survey one week after taking the first survey.

Participant responses (n = 35) were then cleaned and matched using employee email addresses—which were recoded and then deleted from the dataset—for a final sample size of 25 employees.

To supplement these limited data, another 300 participants were recruited through Prolific—a web-based crowdsourcing platform designed to recruit research participants.[3] Prolific has been found to produce higher-quality data (e.g., less insufficient effort responding) as compared to other crowdsourcing platforms (e.g., Amazon's MTurk; Eyal et al., 2021). Screening parameters also allowed for a more representative sample (e.g., balanced gender distribution) and inclusion criteria to be met. Participants were sent survey one and compensated $2.50 for participating based on Prolific's pay rate recommendations. Data were then cleaned for insufficient effort responding (IER), or when participants are unmotivated to "comply with survey instructions, correctly interpret item content, and provide accurate responses" (Huang et al., 2012, p. 100). Participants marked for IER were removed as IER reduces data quality and can inflate relationship magnitudes and chances of Type I error depending on how participants respond (c.f., DeSimone et al., 2018; Huang et al., 2015). Based on this work, eight participants were excluded from taking survey two due to IER (e.g., incorrectly answering catch questions; Huang, Bowling, et al., 2015). Six of these participants were also flagged during intra-individual response variability (IRV) index analyses, which detect IER if participants consistently respond in a certain way (e.g., at the mid-point) over long strings of items (Dunn et al., 2018). See Table 1 for a breakdown of the data cleaning process, which was used for both data sources.

Qualifying participants (n = 292) were then sent the second survey one week later. After completing survey two, participants (n = 287) were compensated an additional $2.50 despite

[3] This number of employees was chosen to ensure sufficient power was achieved when running the proposed moderated mediation analyses via a structural equation modeling framework, which was determined by reviewing sample sizes of related studies using moderated mediation in high-impact journals (e.g., *Journal of Applied Psychology*, *Journal of Management*; Martinaityte et al., 2019; Ng et al., 2008; Schaubroeck et al., 2017).

taking a shorter survey to reduce dropout rates (1.8%, $n = 5$). Data were then cleaned and merged with data from survey one based on participants' Prolific identification codes—resulting in a sample size of 278 participants. When combined with the first data source, a final sample size of 303 participants was achieved—meeting the target of 300 participants for sufficient power.

Data from both sources were compared to justify merging them into one dataset. First, demographic characteristics (e.g., job level, work hours) and responses to primary variables (e.g., basic psychological need satisfaction, engagement) across both surveys were assessed. Results indicated minimal differences between participants from each data source existed, warranting the merge. The most apparent difference between the data sources was with their 1:1 meetings. Most notably, the first data source had more participants without 1:1 meetings ($n = 10$) as compared to the second data source ($n = 8$). Despite this difference, other 1:1 meeting frequencies did not vary greatly between the two sources. A second difference was that the first data source reported significantly more manager 1:1 meeting behaviors for those who had 1:1 meetings ($M = 3.63$, $SD = 1.04$) than the second data source ($M = 3.02$, $SD = 0.82$), $t(15) = 2.24$, $p = .041$. However, due to the small sample size of the first data source, there were no significant differences between manager 1:1 meeting behaviors in the second data source when compared to the merged dataset ($M = 3.06$, $SD = 0.84$), $t(533) = 0.46$, $p = .644$. Another approach normally conducted to support combining datasets is statistically comparing their covariance matrices, but these analyses were not possible in the current study given the small sample size of the first dataset. However, correlation matrices between the two datasets were highly similar upon inspection (e.g., direction and magnitude of correlations between variables). Therefore, the data sources were merged for hypothesis testing, which increased variability of 1:1 meeting quantity and quality. Post-hoc

analyses were also conducted using only the second, larger dataset to compare their results to further warrant merging the datasets.

Once combined, data were assessed for three additional concerns when using online self-report surveys. First, missing data were addressed, which can introduce bias and misconstrue results if not handled appropriately (Newman, 2014). Following previous survey preparation tactics (e.g., attention checks) and data cleaning efforts (e.g., non-response cutoffs), missing data were not problematic in the current study.[4] For example, only six participants missed a single item for basic need satisfaction while only one participant missed a single item for engagement. Thus, full information maximum likelihood procedures were used in subsequent analyses for any missing data present. These procedures were used rather than others (e.g., listwise deletion) to ensure all participant data—partial or complete—were used in analyses, eliminating the need to exclude participant data and increasing power during hypothesis testing (Newman, 2014).

Second, data were checked for the presence of bots (i.e., "algorithmically controlled accounts that emulate the activity of human users but operate at much higher pace"), which was primarily done for Prolific data (Bessi & Ferrara, 2016, para. 2). While Prolific has many safeguards against bots (e.g., submissions are limited by unique IP addresses; Bradley, 2018), bots can become problematic for online survey research as they threaten the integrity of data quality and interpretation of subsequent findings (Griffin et al., 2022). Thus, data were screened for potential bots by assessing open-ended, qualitative data for duplicate and/or unusual responses and comparing demographic information between survey data and user's Prolific

[4] Missing data were likely not problematic as a result of Prolific participants—most of the sample—being required to complete the entirety of surveys to be compensated, which was complemented by large incentives based on Prolific's pay rate guidelines.

demographic data (Griffin et al., 2022). Complemented by the previous data cleaning efforts (e.g., IER removal), this work indicated bots were not present in the cleaned data.

Last, three techniques aligned with Rogelberg and Stanton's (2007) N-BIAS framework were conducted to reduce concerns of non-response bias (i.e., when participants who respond to a survey differ from participants who do not, creating a biased and unrepresentative sample that could influence results and their interpretation; Berg, 2005). First, a wave analysis compared responses between late and early respondents. Second, an interest-level analysis compared participants who wanted to receive study summary results to participants who did not. Third, a split-group mean comparison analysis compared responses between participants who answered both surveys to those who responded only to survey one. Results of all three analyses indicated no significant differences between respective groups on focal survey measures. Therefore, there was no evidence of non-response bias in the data.

On average, it took participants 22 minutes to take survey one and eight minutes to take survey two. Participants were evenly split by female-male gender identities (49.5% female; 0.01% non-binary; 49.8% male), had a mean age of 38.5 years (*SD* = 11.2 years), and were primarily white (82.5%, *n* = 250). Most participants were employed as individual contributors (41.3%, *n* = 125) or managers/supervisors (41.9%, *n* = 127), held their current role for approximately four and a half years (*SD* = 5.78 years), and were at their organization for about eight years on average (*SD* = 7.78 years). Participants worked an average of 42.8 hours per week (*SD* = 7.19 hours) and worked in both fully remote (23.0%, *n* = 70) and fully in-person (37.0%, *n* = 112) settings—with many participants working in a hybrid environment (40.0%, *n* = 121).[5]

[5] Participants working in hybrid work settings varied in how often they worked remotely, ranging from five to 97 percent of the time. Hybrid participants working less than 50 percent of the time virtually (*n* = 72) outnumbered employees working more than 50 percent of the time virtually (*n* = 49).

5.2 Measures

Survey one included measures for all primary variables (i.e., 1:1 meeting frequency, manager task- and relations-oriented 1:1 meeting behaviors, basic psychological need satisfaction, engagement, control variables, and demographics). Survey two measured basic psychological need satisfaction and engagement for testing alternative models to establish the directionality of hypothesized models (discussed later), and also included questions about other 1:1 meeting characteristics for exploratory analyses. See Table 2 for similarities and differences between the surveys and Appendices A through M for all primary measures.

5.2.1 One-on-One (1:1) Meeting Frequency

1:1 meeting frequency was measured using an item created for the study (see Appendix A). Participants were asked how many 1:1 meetings they had with their manager in the past four weeks, ranging from 'We did not meet' to '5+ times'. This timeframe was chosen to be long enough to account for different 1:1 meeting cadences (e.g., monthly versus more than weekly) and short enough to limit the potential for human error (e.g., recall bias).[6] Participants were also asked to confirm these values with their work calendars to ensure their accuracy. Responses were then recoded to reflect typical 1:1 meeting cadences as seen in the practice literature: 'Weekly or More,' 'Bi-Weekly to Monthly,' 'Less than Monthly', and 'No 1:1 Meetings' (see Table 3; McEachran, 2019; Rogelberg, 2022).[7] While this approach to coding allowed for a more clear interpretation of results and better alignment with how 1:1 meetings are discussed in practice, it

[6] The definition of 1:1 meetings with examples were provided in instructions to ensure participants understood the conceptualization of 1:1 meetings (see Appendix A).

[7] Though frequency was recoded into four categories that mirrored recommendations in practice, this variable was analyzed as a continuous variable during hypothesis testing. This approach was appropriate as frequency was recoded as an ordinal variable, which can be treated as a continuous variable (c.f., Robitzch, 2020).

is important to note that post-hoc analyses showed that findings were almost identical regardless of the coding approach used.

5.2.2 Manager Task- and Relations-Oriented 1:1 Meeting Behaviors

Manager task- and relations-oriented 1:1 meeting behaviors were measured using two sub-scales (i.e., task-oriented and relations-oriented leader behaviors) from a slightly adapted version of Yukl and colleagues' Managerial Practices Survey (MPS) Form 17-1 S (Hassan et al., 2018; Kim & Yukl 1995; Yukl, 2012; Yukl et al., 2002; 2019).[8] Each sub-scale has five items, each representing a set of manager behaviors. A sample item for task-oriented behaviors is, "Made clear my task assignments and explained my responsibilities; set specific goals and deadlines for my important tasks; explained priorities for my different objectives; explained rules, policies, and standard procedures to me." A sample item for relations-oriented behaviors is, "Showed concern for my needs and feelings; was considerate and supportive with me; provided me support and encouragement when there was a difficult or stressful task." Instructions asked participants to describe how much their manager displayed each set of behaviors in their past four weeks of 1:1 meetings, recorded on a five-point response scale from 'Not at all or not applicable' to 'To a very great extent'. Internal reliability estimates of both adapted sub-scales were strong (α = .84 for task-oriented; α =.81 for relations-oriented). See Appendix B for an overview of the measures and adaptations.[9]

As recommended by Heggestad and colleagues (2019), confirmatory factor analysis (CFA) was run to account for adaptations made to the original scale as well as to confirm the two-factor structure representing each type of manager behavior. Results indicated that a two-factor model ($\chi^2(34) = 107.91$, $p < .001$, CFI = .98, TLI = .98, SRMR = .07, RMSEA = .10) fit

[8] Permission from Dr. Yukl was granted to use the MPS for the current study.
[9] The full MPS and adaptations made could not be presented due to copyright.

the data well and better than a one-factor model ($\chi^2(35) = 201.57$, $p < .001$, CFI = .96, TLI = .95, SRMR = .10, RMSEA = .14), with factor loadings ranging from .61 to .88 (see Tables 4 and 5). Factor structures and factor loadings were also similar when comparing the adapted sub-scales to the original sub-scales used in other studies (e.g., Yukl et al., 2002; Yukl et al., 2019), supporting the use of the adapted measures.

5.2.3 Basic Psychological Need Satisfaction (BNS) at Work

Direct report basic psychological need satisfaction (BNS) at work was measured using Van den Broeck and colleagues' (2010) 16-item Work-related Basic Need Satisfaction (W-BNS) scale (see Appendix C). The scale has three sub-scales representing the satisfaction of each basic psychological need (i.e., autonomy, competence, and relatedness). Sample items include: "I feel free to do my job the way I think it could best be done" (autonomy), "I am good at the things I do in my job" (competence), and "At work, I feel part of a group" (relatedness). Responses were on a five-point Likert-type scale from 'Completely disagree' to 'Completely agree'.

Sub-scales were combined to represent participants' overall BNS as hypothesized and seen in other studies investigating engagement (Van den Broeck et al., 2008; van Dierendonck et al., 2014) and other outcomes (e.g., Lian et al., 2012; Rosen et al., 2014). Despite serving different purposes for employees, each basic psychological need strongly relates to one another such "that the satisfaction of one need is likely to go hand in hand with the satisfaction of the other two needs" (Van den Broeck et al., 2008, p. 281).[10] Accordingly, SDT posits that threats to the satisfaction of any basic psychological need reduces employee motivation, which then hinders their engagement (Deci & Ryan, 2000; Meyer & Gagné, 2008). In this way, overall BNS

[10] Due to their interconnected relationships, BNS dimensions not only relate to each other but also tend to hold similar relationships to other constructs such as engagement (e.g., Shuck et al., 2015). These relationships were supported in the current study (see Table 6).

serves as the foundation of employees' autonomous (i.e., intrinsic) motivation, which enables employees to best engage in their work when satisfied (Fernet et al., 2012; Stone et al., 2009). Therefore, sub-scales were combined to represent overall BNS as recommended by SDT. Internal reliability estimates of the combined scale measured in both surveys were strong (α = .91 for survey one; α = .90 for survey two).

5.2.4 Employee Engagement

Direct report engagement was measured using Houle and colleagues' (2022) nine-item Job Engagement Scale Short Form (JES^{9}) in English (see Appendix D). Based on Rich and colleagues' (2010) Job Engagement Scale (JES^{18}), the JES^{9} has three sub-scales representing each dimension of engagement (i.e., physical, emotional, and cognitive). Sample items include: "I exert my full effort to my job" (physical), "I am interested in my job" (emotional), and "At work, I focus a great deal of attention on my job" (cognitive). Responses were assessed on a 5-point Likert scale from 'Strongly disagree' to 'Strongly agree'.

Sub-scales were combined to represent participants' overall engagement as hypothesized and seen in other studies (e.g., Alfes et al., 2013; Basit, 2017; Shuck et al., 2015). As originally proposed by Kahn (1990), engagement is an overall construct with dimensions that interrelate and form a higher-order construct.[11] The JES aligns with this conceptualization, which was designed to account for the commonalities between each dimension to represent overall engagement (Rich et al., 2010). In doing so, engagement using the JES is understood as the simultaneous interplay of the dimensions of engagement rather than these dimensions alone, which represents employees' overall investment of themselves into their work role (Houle et al., 2022). The current study intended to assess direct reports' overall engagement as aligned with

[11] The current study supported this claim, with bi-variate correlations between each dimension of engagement ranging from .59 to .80 (see Table 6).

these ideas and Kahn's (1990) original conceptualization, which warranted combining sub-scales for each dimension. Internal reliability estimates of the combined scale measured in both surveys were strong ($\alpha = .93$ for both survey one and two).

5.2.5 Manager Task- and Relations-Oriented Behaviors Outside 1:1 Meetings

Manager task- and relations-oriented behaviors displayed outside of 1:1 meetings—like manager task- and relations-oriented 1:1 meeting behaviors—were measured using two sub-scales (i.e., task-oriented and relations-oriented leader behaviors) from a slightly adapted version of Yukl and colleagues' MPS Form 17-1 S (Hassan et al., 2018; Kim and Yukl 1995; Yukl, 2012; Yukl et al., 2002; 2019). All adaptations made were the same except for the instructions, which asked participants how much their manager displayed each set of behaviors outside of their 1:1 meetings in the past four weeks. CFA was run on the scale to account for adaptations and to confirm the two-factor structure representing each type of manager behavior. Results indicated that a two-factor model ($\chi^2(34) = 103.35$, $p < .001$, CFI = .99, TLI = .99, SRMR = .06, RMSEA = .09) fit the data well and better than a one-factor model ($\chi^2(35) = 215.64$, $p < .001$, CFI = .98, TLI = .97, SRMR = .09, RMSEA = .15), with factor loadings ranging from .69 to .90 (see Table 4 and 5). Factor structures and factor loadings mirrored those of the adapted sub-scales for manager 1:1 meetings behaviors and the original sub-scales used in other studies (e.g., Yukl et al., 2002; Yukl et al., 2019), supporting the use of the adapted scale. Internal reliability estimates of both adapted sub-scales were strong ($\alpha = .88$ and $\alpha = .85$, respectively). See Appendix E for an overview of the measures and adaptations.[12]

[12] The full MPS and adaptations made could not be presented due to copyright.

5.2.6 Other Control Variables

Seven other control variables were included in the current study using recommendations from organizational science research (Becker et al., 2016; Spector & Brannick, 2011). These control variables (e.g., direct reports' job demands, positive affect, and overall trust in their manager) were included due to their relevance to both engagement and 1:1 meetings. Aligned with JD-R theory, these variables can influence engagement by serving as job resources or demands for direct reports. While engagement has various predictors, these variables were purposefully chosen for showing the strongest relationships to engagement. For example, several personality traits (e.g., proactive personality, conscientiousness) predict engagement by serving as personal resources for employees, but positive affect (PA) does so most strongly (Christian et al., 2011; Wefald et al., 2011; Young et al., 2018). Moreover, these variables can influence whether 1:1 meetings serve as an engagement-promoting resource for direct reports by changing the quantity and quality of 1:1 meetings. Expanding on the previous example, managers may also meet more frequently with high-PA direct reports and enact more task- and relations-oriented behaviors within 1:1 meetings (e.g., development support) as these individuals tend to be more pleasing to interact with (Berry & Hansen, 1996). Therefore, these control variable were accounted for to understand how 1:1 meetings can promote engagement beyond currently known predictors showing the strongest relationships to engagement that were also relevant to 1:1 meetings. Measures for each of these added control variables and their specific rationale for inclusion can be found in Appendices F through L.

Overall meeting time demands was measured with two items used in other meeting science studies (e.g., Rogelberg et al., 2006; see Appendix F). These items asked participants, "On average, approximately how long do you spend in meetings in a typical week? Indicate in

hours to the nearest hour:" (time spent in meetings) and "On average, how many meetings do you attend in a typical week? Indicate the number, regardless of duration:" (number of meetings).

Job demands were measured using an 11-item scale developed by Van Veldhoven and Meijman (1994; $\alpha = .90$ in the current study; see Appendix G). Responses were on a 4-point scale from 'Never' to 'Always' with sample items being, "Do you have to work extra hard to finish a task?" (intensity), "Do you have too much work to do?" (volume), and "Do you work under time pressure?" (time restraints).

Positive affect was measured using the five-item positive affect sub-scale of Thompson's (2007) International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) in English ($\alpha = .85$ in the current study; see Appendix H). This sub-scale asked participants, "Thinking about yourself and how you normally feel, to what extent do you generally feel:" and then had participants rate a list of adjectives (e.g., 'Inspired') on a five-point scale from 'Never' to 'Always'.

Manager-direct report relationship tenure was measured with an item created for the current study (see Appendix I). This item read, "How long have you reported to your manager?" and had a response scale in years and months.

The number of direct reports managers oversaw was measured using an item created for the study (see Appendix J). This item read, "How many employees (including yourself) currently report to your manager?" with responses on a numerical scale.

Relational demography (i.e., demographic characteristics that are (dis)similar between individuals in a dyad) was measured using items created for this survey based on related research (e.g., Tsui & O'Reilly III, 1989; see Appendix K). These items asked participants, "Do you and

your manager share the same [demographic]?" and included responses of 'Yes' (1), 'No' (0), and 'Unsure' (0). The demographic variables investigated were gender, race/ethnicity, age, and education level. Each of these items were summed for each participant to represent their overall relational (dis)similarity to their manager.

Direct reports' trust in their manager was measured using Mayer and Gavin's (2005) 10-item trust scale using managers as the referent ($\alpha = .86$ in the current study; see Appendix L). A sample item is, "I would tell my manager about mistakes I've made on the job, even if they could damage my reputation." Items were rated on a five-point Likert scale from 'Strongly disagree' to 'Strongly agree'.

5.2.7 Other 1:1 Meeting Characteristics

Other 1:1 meeting characteristics (e.g., agenda usage, punctuality, notetaking practices) outside of 1:1 meeting frequency and manager task- and relations-oriented 1:1 meeting behaviors were assessed in survey two (see Appendix M). While not central to hypotheses, these variables were measured for exploratory analyses.

CHAPTER 6: RESULTS

6.1 Descriptive Statistics

Means, standard deviations, reliability estimates (i.e., alpha coefficients), and bi-variate correlations for all primary variables are reported in Table 7. Most participants (94.1%, n = 285) reported having 1:1 meetings with their manager, which were typically held weekly or more frequently (56.1%, n = 160; see Table 8). Regardless of their frequency, most 1:1 meetings lasted approximately 30 minutes (see Table 9).[13] Within 1:1 meetings, participants' reported that their managers used slightly more relations-oriented behaviors (M = 3.14, SD = 0.93) as compared to task-oriented behaviors (M = 2.98, SD = 0.98), $t(548) = 1.98$, $p = .049$. Participants also reported that their managers displayed more task- and relations-oriented behaviors within 1:1 meetings (M = 3.06, SD = 0.84) than outside of 1:1 meetings (M = 2.83, SD = 0.90), $t(541) = 3.02$, $p < .01$. While participants' individual BNS (time one) and engagement (time two) varied, overall BNS (M = 3.78, SD = 0.69) and engagement (M = 3.94, SD = 0.80) of the sample were both above scaling midpoints (i.e., three out of five points).

6.2 Control Variable Inclusion

While eight control variables were proposed, only five were included during hypothesis testing. To be included, control variables needed to be significantly related to both predictor and outcome variables (i.e., 1:1 meetings quantity and/or quality and engagement; Becker et al., 2016; Bernerth & Aguinis, 2016). Based on this cutoff, manager task- and relations-oriented behaviors outside 1:1 meetings, trust in one's manager, positive affect, job demands, and manager-direct report relationship tenure were included in analyses, while overall meeting time

[13] Most participants reported having the same frequency (74.5%, n = 216) and duration (79.3%, n = 230) of 1:1 meetings currently as before the COVID-19 pandemic began. Data were collected in April 2022.

demands, manager number of direct reports, and relational demography were excluded from analyses (see Table 7).[14]

6.3 Testing for Common Method Bias

Common method variance (CMV) is a source of systematic measurement error where variance attributable to one's measurement method is incorrectly understood as variance attributable to the constructs those measures represent (Podsakoff et al., 2003). If not accounted for, CMV can bias results (e.g., inflate or deflate effect sizes) and thus misconstrue their interpretation—referred to as common method bias (CMB; Chang et al., 2010; Conway & Lance, 2010). Given the use of self-report survey data that is more prone to CMB than other methodologies (e.g., experimental designs), several steps were taken to limit concerns of CMB when designing the current study (e.g., temporal separation of predictor and outcome variables, using measures with different response scales, streamlining surveys through a pilot study and verbal protocol analysis; Chan, 2009; Jakobsen & Jensen, 2015; Lindell & Whitney, 2001; Podsakoff et al., 2012).

Additionally, CFA was run on the measures of all relevant primary study variables to test for the presence of CMB and to differentiate each of these variables. This set of variables excluded 1:1 meeting frequency due to it being a single item and control variables that were not tested in hypotheses based on the previous criteria. Therefore, measures of nine variables were included in the CFA representing nine different models: 1) manager task-oriented 1:1 meeting behaviors, 2) manager relations-oriented 1:1 meeting behaviors, 3) basic psychological need satisfaction, 4) engagement, 5) manager task-oriented behaviors outside 1:1 meetings, 6) manager relations-oriented behaviors outside 1:1 meetings, 7) job demands, 8) positive affect,

[14] Job demands did not significantly correlate to engagement initially but did have significant direct effects on both 1:1 meetings and engagement as a control variable in the hypothesized models, which is discussed later.

and 9) trust in one's manager. Starting with a one-factor model including all measures, subsequent models factored out measures of individual variables one-by-one until all were treated as their own factor (i.e., nine-factor model). Variables were taken out in the opposite order listed above (i.e., starting with trust in one's manager and ending with manager task-oriented 1:1 meeting behaviors).

Before the CFA was conducted, Harman's single-factor test for CMB using factor analysis with an unrotated factor solution was run (Zhonglin, 2020). Despite limitations with this test, results indicated CMB was not detected in the current study (i.e., total variance extracted by one factor did not exceed 50 percent; Podsakoff & Organ, 1986). CFA was then run to further support the discriminant validity of each measure and the underlying constructs they represented (e.g., Leiter & Durup, 1994). Results indicated that the nine-factor model—with each measure as its own factor—fit the data best ($\chi^2(2{,}378) = 8{,}714.16$, $p < .001$, CFI = .96, TLI = .95, SRMR = .11, RMSEA = .11).[15] Together, given the methodological tactics noted and the above analyses, CMB concerns appeared to be mitigated. CFA results can be seen in Table 10.

6.4 Hypothesis Testing

Hypothesis 1 proposed that direct report BNS mediated the positive relationship between 1:1 meeting frequency and direct report engagement, while accounting for control variables. Bi-variate correlations—though relatively weak—supported the positive relationships 1:1 meeting frequency held with BNS at time one ($r = .15$, $p < .01$) and engagement at time two ($r = .17$, $p < .01$; see Table 7). Supporting these results and to better understand these relationships, one-way ANOVAs were also conducted to examine potential differences in BNS and engagement between each 1:1 meeting frequency category (see Table 11 for all means and standard

[15] The eight-factor model also fit the data well but showed a significantly higher χ^2 value.

deviations).[16] When using BNS as the outcome, ANOVA results were significant, $F(3, 299) = 2.88$, $p < .05$. Post-hoc Tukey HSD comparisons indicated that participants who met 'Weekly or More' ($M = 3.83$, $SD = 0.68$) had greater BNS than participants who did not have 1:1 meetings ($M = 3.34$, $SD = 0.66$; $p < .05$). All other differences were non-significant, including for participants who met 'Bi-weekly to Monthly' ($M = 3.79$, $SD = 0.70$, $p = .051$) and 'Less than Monthly' ($M = 3.64$, $SD = 0.53$, $p = .739$) when compared to those without 1:1 meetings. When using engagement as the outcome, ANOVA results were also significant, $F(3, 299) = 3.66$, $p < .05$. Post-hoc Tukey HSD comparisons indicated that participants who met 'Weekly or More' ($M = 4.01$, $SD = 0.75$; $p < .01$) and 'Bi-weekly to Monthly' ($M = 3.94$, $SD = 0.79$, $p < .05$) were both more engaged than participants who did not have 1:1 meetings ($M = 3.36$, $SD = 1.07$). All other differences were non-significant, including for participants who met 'Less than Monthly' ($M = 3.85$, $SD = 0.73$, $p = .474$) when compared to those without 1:1 meetings. Overall, results supported differences in BNS and engagement based on participants' 1:1 meeting frequency—particularly for participants who had 1:1 meetings weekly or more often.

After establishing the positive relationships between 1:1 meeting frequency to both BNS and engagement, the mediation model was tested in R Studio using 'lavaan' and 'mediation' packages to specify a path model via a structural equation modeling (SEM) framework.[17] Bias-corrected bootstrapping was used for testing indirect effects as recommended by Cheung and

[16] Potential curvilinear effects were also assessed but not supported. The Box-Cox method was used to determine the best transformation type given the data, which uses power transformations to optimize normality and equal variances of the data (Osborne, 2010). Results indicated that engagement to the power of two was most appropriate. However, results using this transformation did not improve upon results seen when the transformation was not used, justifying the use of the original, untransformed variables.

[17] Path modeling was used to test all hypothesized models, which assesses the relationships between latent variables but does not account for measurement error (Grapentine, 2000). To account for measurement error, SEM can be conducted (MacCallum, 2000). However, SEM was not used in the current study due to the complexity of the models, which required a substantial sample size to run that was not obtained. Instead, the current study ran CFA differentiating all primary variables to ensure their psychometric soundness, which was further supported with strong reliability estimates for each scale (see Table 10).

Lau (2008). As proposed, the model included past month 1:1 meeting frequency, BNS at time one, engagement at time two, and control variables. The direct effects of 1:1 meeting frequency on BNS ($\beta = .13$, $p = .021$) and BNS on engagement ($\beta = .58$, $p < .001$) were both significant, while the direct effect of 1:1 meeting frequency on engagement ($\beta = .05$, $p = .385$) was non-significant. The indirect effect of the model was also supported (bias-corrected 95% CI = .073 [LL = .010, UL = .149]), indicating full mediation of BNS on the positive relationship between 1:1 meeting frequency and engagement. Only two control variables—job demands ($\beta = .18$, $p < .001$) and positive affect ($\beta = .37$, $p < .001$)—held significant relationships with engagement. See Table 12 for results, which are outlined in Figure 2. Overall, hypothesis 1 was supported.

While hypothesis 1 tested how the quantity of 1:1 meetings could promote direct reports' engagement via BNS, it did not account for the quality of 1:1 meetings (i.e., inclusion of manager task- and relations-oriented behaviors). Therefore, hypotheses 2 and 3 examined the relationship between both manager task- and relations-oriented 1:1 meeting behaviors to direct reports' engagement via BNS, respectively. These relationships were tested before each type of manager 1:1 meeting behavior was included as a moderator in the final models—assessing both 1:1 meeting quantity and quality—to establish the role each type of manager behavior holds as a need-satisfying, engagement promoting resource for direct reports irrespective of 1:1 frequency.

Bi-variate correlations supported the positive relationships both manager 1:1 meeting behavior types had with BNS and engagement (see Table 7). For BNS at time one, correlations were stronger for manager relations-oriented 1:1 meeting behaviors ($r = .40$, $p < .001$) as compared to manager task-oriented 1:1 meeting behaviors ($r = .19$, $p < .01$). For engagement at time two, correlations were slightly stronger for manager relations-oriented 1:1 meeting

behaviors (r = .31, $p < .001$) as compared to manager task-oriented 1:1 meeting behaviors (r = .21, $p < .001$).

After establishing these positive relationships, two mediation models—one for each manager 1:1 meeting behavior type in relation to engagement via BNS—were tested in R Studio using the same packages and approach as hypothesis 1. For both models, variables included BNS at time one, engagement at time two, and control variables as proposed. Manager task- and relations-oriented behaviors displayed outside 1:1 meetings were only included as control variables for their respective manager 1:1 meeting behavior type. For example, when using manager task-oriented 1:1 meeting behaviors as the predictor, manager task-oriented behaviors displayed outside of 1:1 meetings was used as the control variable. This approach was done to isolate each manager behavior type in the model, which provided a better understanding of how each type of manager behavior related to engagement when being displayed within or outside of 1:1 meetings, respectively.

When using manager task-oriented 1:1 meeting behaviors as the independent variable, the direct effects of these 1:1 meeting behaviors on BNS ($\beta = .19$, $p < .01$) and BNS on engagement ($\beta = .59$, $p < .001$) were both significant, while the direct effect of these 1:1 meeting behaviors on engagement ($\beta = .00$, $p = .953$) was non-significant. The indirect effect of the model was also supported (bias-corrected 95% CI = .078 [LL = .022, UL = .146]), indicating full mediation of BNS on the positive relationship between manager task-oriented 1:1 meeting behaviors and engagement. Only two control variables—job demands ($\beta = .18$, $p < .001$) and positive affect ($\beta = .35$, $p < .001$)—held significant relationships with engagement, which excluded manager task-oriented behaviors displayed outside of 1:1 meetings ($\beta = .00$, $p = .953$). Results can be seen in Table 13 and are outlined in Figure 3, which supported hypothesis 2.

When using manager relations-oriented 1:1 meeting behaviors as the independent variable, the direct effects of these 1:1 meeting behaviors on BNS (β = .40, $p < .001$) and BNS on engagement (β = .57, $p < .001$) were both significant, while the direct effect of the 1:1 meeting behaviors on engagement (β = -0.07, $p = .399$) was non-significant. The indirect effect of the model was also supported (bias-corrected 95% CI = .173 [LL = .111, UL = .251]), indicating full mediation of BNS on the positive relationship between manager relations-oriented 1:1 meeting behaviors and engagement. Like the previous models, only two control variables—job demands (β = .17, $p < .001$) and positive affect (β = .36, $p < .001$)—held significant relationships with engagement, which excluded manager task-oriented behaviors displayed outside of 1:1 meetings (β = .08, $p = .416$). Results can be seen in Table 14 and are outlined in Figure 4, which supported hypothesis 3.[18]

Last, hypothesis 4 proposed that direct report engagement is promoted through frequent 1:1 meetings via their BNS (i.e., high quantity), but more strongly if greater manager task- and relations-oriented 1:1 meeting behaviors are present to fully satisfy their basic psychological needs (i.e., high quality). After testing how the quantity and quality of 1:1 meetings could serve as need-satisfying, engagement-promoting resources for direct reports individually in previous hypotheses, hypotheses 4a and 4b examined both manager 1:1 meeting behaviors when considering 1:1 meeting frequency, respectively.

To test these moderated mediation models, path modeling via a structural equation modeling (SEM) framework was conducted in R Studio. This work utilized Moon's (2021) 'processR' package and related code, which is inspired by Hayes' (2013) 'PROCESS' macro used in SPSS and SAS. The moderated mediation models were first specified and proposed

[18] Post-hoc analyses using only the Prolific dataset showed similar results for hypotheses 2 and 3, which supported merging the data sources.

variables (i.e., past month 1:1 meeting frequency, manager task- and relations-oriented 1:1 meeting behaviors, BNS at time one, engagement at time two, and control variables)—were assigned within the models as hypothesized. Code was then generated to represent the models and tailored for analyses. Once finalized, code was run to test the models, which included direct, interactive, indirect, and conditional indirect (i.e., moderated mediation) effects.

First, the moderated mediation model was tested using manager task-oriented 1:1 meeting behaviors as the moderator. Results did not support this hypothesis (4a) in full. The direct effects of 1:1 meeting frequency on BNS (β = .26, p = .118) and engagement (β = -.02, p = .562) as well as manager task-oriented 1:1 meeting behaviors on BNS (β = .50, p = .058) were all non-significant. The interactive effect of 1:1 meeting frequency and manager task-oriented 1:1 meeting behaviors on BNS was also non-significant (β = -.43, p = .188). Therefore, the indirect effect of the model (bias-corrected 95% CI = .041 [LL = -.045, UL = .140]) was not supported. Given these results, conditional indirect effects of the model were not tested. Despite these null results, some parts of the proposed model held. The direct effects of BNS (β = .69, p < .001), job demands (β = .17, p < .01) and positive affect (β = .34, p < .001) had significant direct effects on engagement, which excluded manager task-oriented behaviors displayed outside of 1:1 meetings (β = .00; p = .976). Results can be seen in Table 15 and are outlined in Figure 5.

Second, the moderated mediation model was tested using manager relations-oriented 1:1 meeting behaviors as the moderator. Results did not support this hypothesis (4b) in full. The direct effects of 1:1 meeting frequency on BNS (β = -.06, p = .766) and engagement (β = -.03, p = .541) as well as manager relations-oriented 1:1 meeting behaviors on BNS (β = .32, p = .283) were all non-significant. The interactive effect of 1:1 meeting frequency and manager relations-oriented 1:1 meeting behaviors on BNS (β = .12, p = .763) was also non-significant. Therefore,

the indirect effect of the model (bias-corrected 95% CI = -.001 [LL = -.079, UL = .087]) was not supported. Given these results, conditional indirect effects of the model were not tested. Despite these null results, some parts of the proposed model held. The direct effects of BNS (β = .57, p < .001), job demands (β = .18, p < .001), and positive affect (β = .37, p < .001) all had significant direct effects on engagement, which excluded manager relations-oriented behaviors displayed outside of 1:1 meetings (β = .02; p = .700). Results can be seen in Table 16 and are outlined in Figure 6.

Post-hoc analyses were also run to compare both manager 1:1 meeting behaviors in relation to each other, which were conducted to test the claim that both manager 1:1 meeting behaviors are needed to promote direct reports' engagement via BNS. Given the non-significant results of 1:1 meeting frequency within both of the previous moderated mediation models, this variable was excluded and replaced with manager relations-oriented 1:1 meeting behaviors (i.e., manager-relations-oriented 1:1 meeting behaviors as the independent variable, manager task-oriented 1:1 meeting behaviors as the moderating variable). Manager task- and relations-oriented behaviors outside of 1:1 meetings were both included as control variables to account for both manager 1:1 meeting behaviors being included as predictors in the model. All other variables in the model were the same as previous models.

Results did not support this model in full. The direct effects of manager task-oriented (β = -.17, p = .446) and relations-oriented (β = .31, p = .083) 1:1 meeting behaviors on BNS were non-significant. The interaction between both types of manager 1:1 meeting behavior was also non-significant (β = .20, p = .566) as well as the direct effect of manager relations-oriented 1:1 meeting behaviors on engagement (β = -0.07, p = .406). As seen in all previous models, the direct effects of BNS (β = .60, p < .001), job demands (β = .16, p < .01), and positive affect (β =

.34, $p < .001$) on engagement were significant, while the direct effects of both manager task-oriented (β = .00; $p = .940$) and relations-oriented (β = .06; $p = .494$) behaviors displayed outside of 1:1 meetings on engagement were non-significant. Interestingly, results supported the indirect effect of the model (bias-corrected 95% CI = .192 [LL = .122, UL = .282]). However, conditional indirect effects of the model were not supported. Full results can be seen in Table 17.

Relative weight analysis (RWA) was also conducted in post-hoc analyses to assess all 1:1 meeting components (i.e., frequency, task, relational) together in relation to BNS and engagement. RWA determines what variable(s) in a model best predict an outcome by decomposing the total variance of the outcome as attributed by each predictor, respectively (Tonidandel and LeBreton, 2015). When using BNS as the outcome (R^2 = 17.62%), results indicated that manager relations-oriented 1:1 meeting behaviors (RW = .142 [CI-L = .066, CI-U = .234], RS-RW = 80.70%) were the best predictor as compared to manager task-oriented 1:1 meeting behaviors (RW = .018 [CI-L = .004, CI-U = .053], RS-RW = 10.28%) and 1:1 meeting frequency (RW = .016 [CI-L = -.002, CI-U = .061], RS-RW = 9.02%). When using engagement as the outcome (R^2 = 11.61%), results indicated that manager relations-oriented 1:1 meeting behaviors (RW = .072 [CI-L = .026, CI-U = .139], RS-RW = 61.72%) were the best predictor as compared to manager task-oriented 1:1 meeting behaviors (RW = .022 [CI-L = .002, CI-U = .066], RS-RW = 19.23%) and 1:1 meeting frequency (RW = .022 [CI-L = -.001, CI-U = .086], RS-RW = 19.05%). With both outcomes, the 95 percent confidence intervals using 1,000 bootstrapping iterations for 1:1 meeting frequency included zero (i.e., non-significant).

6.5 Alternative Models to Test Directionality of Hypotheses

Aligned with the intrapersonal motivational pathway of JD-R theory, hypotheses included BNS as the mediator and engagement as the outcome (i.e., proposed directionality;

Decuypere & Schaufeli, 2020). However, BNS and engagement were measured in both surveys to test alternative models to establish the directionality of these hypothesized models (e.g., Olafsen et al., 2018). Five alternative models—one for each hypothesis—were tested using engagement as the mediator and BNS as the outcome (i.e., opposite directionality). Results of alternative models were then compared to the results of corresponding hypothesized models, which was done to assess the directionality of hypotheses specific to BNS and engagement.

Results for all ten models are outlined in Table 18.[19] For hypothesis 1, there were two primary differences between the proposed and alternative models. Contrary to results of the proposed model, the direct effect of 1:1 meeting frequency on BNS and the indirect effect of the model were not supported in the alternative model. Thus, the alternative model did not support that 1:1 meeting frequency promoted BNS via engagement, while the proposed model supported that 1:1 meeting frequency promoted engagement via BNS. Model comparisons for hypothesis 2 and 3 showed similar differences, such that the direct effects of manager task-oriented and relations-oriented 1:1 meeting behaviors on BNS and the indirect effect of the models were not supported in the alternative models. Therefore, the alternative models did not support that both types of manager 1:1 meeting behavior promoted BNS via engagement, while the proposed models supported that both types of manager 1:1 meeting behavior promoted engagement via BNS. Given the lack of support for the proposed models in hypotheses 4a and 4b, model comparisons were limited. However, indirect effects were also not supported for the alternative models.[20] For all hypotheses, results of both proposed and alternative models supported the

[19] Test-retest reliability between measure time points as assessed by bi-variate correlations (see Table 7) was positive and strong for both BNS (r = .92, p < .001) and engagement (r = .92, p < .001). Thus, the stability of the constructs over the week period between surveys was strong.

[20] Post-hoc analyses for hypothesis 4 using both task- and relations-oriented manager 1:1 meeting behaviors as predictors of engagement via BNS were found to hold a significant indirect effect of the proposed model. However, when the alternative model was run for this post-hoc analysis, the indirect effect was not supported.

positive relationship between BNS and engagement. Overall, the differences between proposed and alternative models—particularly with the unsupported indirect effects for alternative models for hypotheses 1 through 3—supported the directionality of hypotheses.

6.6 Exploratory Analysis #1: Participants Without 1:1 Meetings

Given organizational reports and data that suggest direct reports without 1:1 meetings are the least likely to be engaged (Fuller & Shikaloff, 2016; Keith, 2019), participants who did not have 1:1 meetings were asked if they would prefer to have 1:1 meetings and why. Participants who wanted 1:1 meetings were also asked what frequency and duration they would prefer for their 1:1 meetings (see Appendix A). These analyses were conducted to better understand how not having 1:1 meetings affected these participants, what may be leading to their situation, and if they thought that they could benefit from having 1:1 meetings.

Most participants who did not have 1:1 meetings (n = 18) wanted to have 1:1 meetings with their manager (55.6%, n = 10), either monthly (n = 5) or weekly (n = 3) for an average of approximately 20 minutes (M = 18.33, SD = 7.50). These participants often mentioned that they wanted 1:1 meetings to get support from their manager that they were not currently receiving. For example, one participant wrote: “I would prefer to have 1:1 meetings because then I would know what to expect and be able to ask questions and receive feedback." Participants without 1:1 meetings who did not want 1:1 meetings (27.8%, n = 5) were often cynical about their managers. For instance, one participant noted that, “Meetings are useless with [my] manager because they are a one way conversation… [My] manager does not care to hear other points of view.” The rest of participants (16.7%, n = 3) were unsure if they wanted 1:1 meetings or not. See Table 19 for all participant responses.

6.7 Exploratory Analysis #2: Other 1:1 Meeting Characteristics

While hypotheses in the current study investigated 1:1 meeting frequency and manager 1:1 meeting behaviors, various other 1:1 meeting characteristics exist. Therefore, participants who had 1:1 meetings were asked about other characteristics of their 1:1 meetings in addition to primary study variables such as 1:1 meeting agenda usage, punctuality, and scheduling practices (see Appendix M). Participants rated their agreement on whether each characteristic was typically included in and/or relevant to their 1:1 meetings. Responses were then analyzed to build a better understand of 1:1 meetings more generally, including how these other 1:1 meeting characteristics related to direct reports' BNS and engagement.

Participants who had 1:1 meetings (n = 285) reported that they were mostly held in person (53.7%) or virtually (39.6%) rather than over the phone (6.7%). A majority of these 1:1 meetings were scheduled in advance (M = 74.5%, SD = 31.4%), with many participants having all pre-scheduled 1:1 meetings (31.8%, n = 92). Participants also reported that about half of their 1:1 meetings were held on a reoccurring basis such as every Monday at 9 AM (M = 54.0%, SD = 40.3%), with some participants having no reoccurring 1:1 meetings (22.5%, n = 65) and others having all reoccurring 1:1 meetings (20.8%; n = 60). 1:1 meetings were typically scheduled by participants' managers rather than themselves (81% agreement) and were not frequently cancelled by managers (11% agreement). If 1:1 meetings were cancelled, managers typically rescheduled them in a timely fashion (65% agreement). Most participants perceived their manager as prepared for their 1:1 meetings (82% agreement), which typically started and ended on time (77% agreement for both). Agenda usage in 1:1 meetings varied (47% agreement, 38% disagreement), but both managers and participants typically took notes during the meetings (52% and 65% agreement, respectively). Participants reported that their manager talked more often

than themselves during the meetings (44% and 21% agreement, respectively). Despite this difference, participants agreed that their 1:1 meetings mostly focused on their work-related needs (88% agreement). 1:1 meetings also built off each other, where updates on previous action items were addressed (73% agreement) and action items were created for the next 1:1 meeting (70% agreement). See Table 20 for all participant responses and Table 21 for bi-variate correlations between each 1:1 meeting characteristic.

Bi-variate correlations of these 1:1 meeting characteristics in relation to direct reports' BNS and engagement were also assessed (see Table 22). Overall, most characteristics held positive relationships to both direct reports' BNS and engagement. For example, 1:1 meetings that started on time (r = .25, p < .001; r = .17, p < .01), included agendas (r = .16, p < .01; r = .21, p < .001), and created action items for the next 1:1 meeting (r = .23, p < .001; r = .25, p < .001) all held significant, positive relationships with BNS and engagement, respectively. The strongest of these positive relationships were for 1:1 meetings that focused on direct reports' work-related needs (r = .32, p < .001; r = .28, p < .001) and when managers came prepared to 1:1 meetings (r = .39, p < .001; r = .29, p < .001). While most 1:1 meeting characteristics held positive relationships with BNS and engagement, a few did not. For instance, who scheduled 1:1 meetings—either managers (r = .07, p = .231; r = .09, p = .150) or direct reports (r = .07, p = .268; r = -.01, p = .827)—did not relate to either BNS or engagement. Another 1:1 meeting characteristic—when managers cancelled 1:1 meetings often (r = -.27, p < .001; r = -.16, p < .01)—was also negatively related to both BNS and engagement.

Participants who had all virtual 1:1 meetings (n = 124) and all in-person 1:1 meetings (n = 64) were further compared. These groups did not differ in most primary variables (i.e., 1:1 meeting frequency, manager task- and relations-oriented 1:1 meeting behaviors, and BNS).

However, participants who had all virtual 1:1 meetings (M = 4.05, SD = 0.72) were slightly more engaged than participants who had all in-person 1:1 meetings (M = 3.80, SD = 0.84), $t(111)$ = 2.05, p = .042. These groups also differed in some of their other 1:1 meeting characteristics. First, participants with all virtual 1:1 meetings (M = 25.90, SD = 18.38) held slightly shorter 1:1 meetings than participants with all in-person 1:1 meetings (M = 32.36, SD = 16.31), $t(142)$ = 2.46, p = .015. Second, participants with all virtual 1:1 meetings (M = 3.67, SD = 1.18) were less likely to have reoccurring 1:1 meetings than participants with all in-person 1:1 meetings (M = 4.13, SD = 1.02), $t(142)$ = 2.71, p = .007. Third, participants with all virtual 1:1 meetings (M = 3.78, SD = 1.04) were less likely to have scheduled 1:1 meetings than participants with all in-person 1:1 meetings (M = 4.35, SD = 0.85), $t(150)$ = 4.01, $p < .001$. Last, participants with all virtual 1:1 meetings (M = 3.45, SD = 1.31) were less likely to have their cancelled 1:1 meetings rescheduled by their managers than participants with all in-person 1:1 meetings (M = 3.95, SD = 1.08), $t(135)$ = 2.65, p = .009.

CHAPTER 7: DISCUSSION

Employee engagement has tremendous benefits for both organizations and their employees, yet organizations around the world often struggle to engage their workforces (Allam, 2017; Harter et al., 2002). The current study sought to address this discrepancy by investigating 1:1 meetings between managers and their direct reports as a new approach to promote engagement. This type of 1:1 meeting was examined as it has been understudied empirically despite being theoretically relevant to engagement research and ubiquitous in the workplace (Flinchum et al., 2022; Keith, 2015). Grounded by the intrapersonal motivational pathway of JD-R theory, data collected from two time-separated online surveys were used to investigate how the quantity and quality of 1:1 meetings could promote direct reports' engagement by satisfying their basic psychological needs for autonomy, competence, and relatedness (Decuypere and Schaufeli, 2020). While results presented a more nuanced understanding of how 1:1 meetings relate to engagement than hypothesized, four primary findings were established concerning this relationship.

First, results indicated that the quality—rather than the quantity—of 1:1 meetings matters more in how 1:1 meetings promote direct report engagement—beyond the influence of other manager-direct report meetings and interactions. In the current study, 1:1 meeting quality was represented by the task- and relations-oriented behaviors that managers display in 1:1 meetings. Each type of manager 1:1 meeting behavior serves a unique purpose in addressing direct reports' work-related needs—either supporting direct reports in accomplishing their work (i.e., task-oriented) or supporting direct reports as individuals so that they feel respected, trusted, and valued (relations-oriented; Breevaart & de Vries, 2021; Byham & Wellins, 2015; Kaluza et al., 2020; Yukl, 2012). In providing this support for direct reports, it was hypothesized that 1:1

meetings including these types of manager behavior could more adequately satisfy direct reports' basic psychological needs that would then promote their engagement. Results not only supported each type of manager 1:1 meeting behavior in this way, but also supported these relationships when accounting for these manager behaviors displayed outside of direct reports' 1:1 meetings. While the quantity of 1:1 meetings was also hypothesized to serve as an engagement-promoting resource for direct reports by more readily satisfying direct reports' basic psychological needs, results indicated that this was only true when 1:1 meeting quality was not considered. For example, RWA results indicated that manager 1:1 meeting behaviors were more important in predicting direct report BNS and engagement than 1:1 meeting frequency.

Therefore, while frequently held 1:1 meetings provide managers with more opportunities to engage direct reports, results suggest that these opportunities are best seized when managers display task- and relations-oriented 1:1 meetings behaviors. Aligned with JD-R theory, this finding indicates that what determines whether 1:1 meetings serve as an engagement-promoting resource for directs reports depends more on their quality, which enables direct reports to more effectively achieve their work goals, reduce their job demands, and stimulate their growth and development (Bakker & Demerouti, 2017). Moreover, this finding suggests that high-quality 1:1 meetings can promote direct reports' engagement even when they are held less frequently, which refutes the claim that 1:1 meetings must be high in both quality and quantity to best promote direct reports engagement. This contradiction is likely explained by differences in direct reports' individual resources and demands, which can affect their work-related needs and engagement (Van den Broeck, De Cuyper, et al., 2010). The current study attempted to address some of these individual differences by accounting for factors related to 1:1 meetings that have shown the strongest relationships with engagement (e.g., positive affect, job demands; Christian et al.,

2011; Crawford et al., 2010). However, results continued to downplay the importance of 1:1 meeting frequency in promoting engagement and instead supported the need to include manager task- and relations-oriented 1:1 meeting behaviors.

Second and relatedly, while results supported the value that both types of manager 1:1 meeting behavior hold in promoting direct reports' engagement, results (e.g., RWA) also suggested that manager relations-oriented 1:1 meeting behaviors were more strongly positioned in doing so. Previous research has also observed the relative importance of relations-oriented behaviors when investigating leader behavior in relation to engagement and other direct report outcomes (e.g., follower satisfaction, motivation, perceptions of leader effectiveness; Atwater & Brett, 2006; Judge et al., 2004; Li et al., 2021; Yukl et al., 2019). In fact, research on larger group meetings has supported the stronger influence that relations-oriented leader behaviors can have on attendees—though not specific to engagement. For example, Hoogeboom and Wilderom (2015) studied meeting leader behaviors and their relationships to attendee outcomes using both surveys and video-coded observations. Consistent with results of the current study, attendees in their study were more likely to rate the meeting leader and the meeting itself as more effective when leaders displayed greater relations-oriented than task-oriented meeting behaviors. Relatedly, Odermatt and colleagues (2017) found that larger group meetings with more relations-oriented meeting procedures (e.g., open discussions) were more strongly related to attendee meeting satisfaction than task-oriented meeting procedures.

These findings and results of the current study suggest that managers who take a more relational approach to 1:1 meetings may be better positioned to promote direct report engagement. In doing so, managers support their direct reports as individuals, which can strengthen their respective relationship and provide direct reports with a greater sense of respect,

trust, and value (Brower & Schoorman, 2000; Byham & Wellins, 2015; Stogdill, 1950). However, this does not mean that managers should avoid using task-oriented behaviors in 1:1 meetings. Despite showing weaker results, task-oriented 1:1 meeting behaviors were still supported as a means to promote direct report engagement. Managers who use these behaviors provide direct reports with the support needed to conduct their work, which demonstrates to direct reports that their manager is invested in their success at work (Byham & Wellins, 2015; Yukl, 2012). Therefore, while results indicated that manager relations-oriented 1:1 meeting behaviors were better able to promote direct report engagement than manager task-oriented 1:1 meeting behaviors, 1:1 meetings are best positioned as an engagement-promoting resource for direct reports when they include both types of manager behavior.

Third, results suggested that while the frequency of 1:1 meetings was found to play a lesser role in promoting direct reports' engagement, there is likely a minimum threshold for how often 1:1 meetings should be held to promote direct report engagement. Direct reports who had 1:1 meetings more than once per month did not differ in their BNS or engagement regardless of their specific 1:1 meeting cadence (e.g., weekly). However, results of supplemental analyses indicated that direct reports who had 1:1 meetings less than monthly or not at all had the lowest levels of BNS and engagement. This finding suggests that 1:1 meetings do not have to be held more frequently to be considered an engagement-promoting resource—as long as 1:1 meetings happen at least monthly.

This threshold is likely the result of what having less-than-monthly 1:1 meetings or no 1:1 meetings at all signals to direct reports about their manager. By definition, 1:1 meetings are a dedicated space for managers to support the work-related needs of their direct reports. While some direct reports may need fewer 1:1 meetings, managers who have 1:1 meetings at least

monthly with their direct reports demonstrate that they are invested in supporting their direct reports' work, career, and well-being. Even if only held monthly, this perceived support can promote direct reports' engagement by serving as a social resource that can extend to direct reports' perceptions of the support they receive from their organization more generally (Eisenberger et al., 2002; Holland et al., 2017).

However, managers who have 1:1 meetings less than monthly (or not at all) can signal the opposite message. While managers likely do not do this intentionally or may be unaware of the consequences, having little-to-no 1:1 meetings can negatively affect direct reports' engagement and can reduce the effectiveness of 1:1 meetings when they do occur (Fuller & Shikaloff, 2016). Instead of providing direction and support tailored to direct reports' work-related needs, less-than-monthly 1:1 meetings leave direct reports to navigate their work on their own and can result in direct reports feeling a lack of care, trust, and support from their manager (Byham & Wellins, 2015; Hight et al., 2019; McAllister, 1995). Moreover, larger time gaps between 1:1 meetings can make it more difficult for managers and direct reports to prepare for 1:1 meetings when they do happen (e.g., remembering and connecting previous action items to the new agenda), which can reduce 1:1 meeting effectiveness (Odermatt et al., 2015). As a result, 1:1 meetings that are held less than monthly are limited in their ability to serve as a resource for direct reports—decreasing the likelihood that their basic psychological needs are satisfied and that they are subsequently engaged. When considering this idea with the previous two findings, results suggest that managers should tailor the frequency of their 1:1 meetings to individual direct reports' work-related needs—held at least monthly—and include both types of manager behavior—particularly relations-oriented behaviors—to best promote their direct reports' engagement.

Last and importantly, results suggested that 1:1 meetings are conceptually distinct from other manager-direct meetings and interactions (e.g., email exchanges, team meetings) and can promote direct report engagement beyond these other settings. 1:1 meetings differ from other meetings and interactions direct reports have with their manager by being both synchronously held and tailored to direct reports' individual work-related needs (Flinchum et al., 2022). As argued in the current study, these unique characteristics position 1:1 meetings to better serve as an engagement-promoting resource for direct reports as compared to other settings. Results supported this claim, finding that manager task- and relations-oriented behaviors demonstrated in 1:1 meetings promoted direct report engagement beyond their use outside of 1:1 meetings. Therefore, while direct reports may have other meetings and interactions with their managers, the current study suggests that 1:1 meetings are conceptually different and better positioned to promote direct reports' engagement than these other settings.

7.1 Theoretical Implications

The current study contributes to understandings in both the meeting science and engagement literatures as well as expands upon JD-R theory and SDT. To start, this study is one of the first investigations examining 1:1 meetings in an empirical way. While meeting science has advanced significantly since its inception which has broadened understandings of meetings as a phenomenon, this work has largely neglected 1:1 meetings. As discussed, this dearth of research is problematic due to the conceptual, theoretical, and practical differences seen between dyads and larger groups, which can translate to meetings (Flinchum et al., 2022). Current findings provide initial insight into some of these potential differences, particularly with how 1:1 meetings relate to engagement. Most notably, results suggest that manager task- and relations-oriented 1:1 meeting behaviors are conceptually distinct from and can promote direct report

engagement beyond these manager behaviors displayed in other settings. While these findings provide a greater understanding of 1:1 meetings and how they can promote engagement, the current study is only the start of addressing the lack of research specific to 1:1 meetings in the meeting science literature.

Second, the current study contributes to the engagement literature by leveraging recent advancements in engagement research. Specifically, a revised conceptualization and related measure of engagement were utilized (i.e., JES; Houle et al., 2022; Rich et al., 2010). While other research has conceptualized engagement as the opposite of burnout, this measure and the conceptualization it is founded on were developed using theory to expand on Kahn's (1990) original conceptualization of engagement (i.e., the physical, emotional, and cognitive investment employees put into their work role). In doing so, limitations of other conceptualizations and measures of engagement were mitigated (Basit & Chauhan, 2017; Rich et al., 2010; Shuck et al., 2014). For example, the JES is less highly correlated to related job attitudes (e.g., job satisfaction, affective organizational commitment, job involvement) than other engagement measures (e.g., UWES; Schaufeli et al., 2002), thus reducing construct validity concerns (Byrne et al., 2016; Harter & Schmidt, 2008; Mackay et al., 2017; Meyer, 2017; Newman & Harrison, 2008; Newman et al., 2010).[21] Therefore, results of the current study were able to assess the construct domain of engagement more precisely. In doing so, a more accurate understanding of how engagement relates to meetings was established, adding to current knowledge of predictors of engagement including in the new context of 1:1 meetings. Moreover, results demonstrated how 1:1 meetings could promote engagement beyond the influence of some known predictors

[21] While the JES and UWES are correlated, they are not interchangeable. The UWES is recommended for use when assessing more global job attitudes, while the JES is recommended for use when exploring the construct domain of engagement (Byrne et al., 2016).

(e.g., trust in one's manager) but not for others (i.e., job demands, positive affect). This finding suggests that while 1:1 meetings can serve as an engagement-promoting resource for direct reports, other factors should still be accounted for when trying to understand what drives direct reports' engagement. While these findings offer opportunities for future research, the current study provides the engagement literature with a better understanding of the 1:1 meeting-engagement relationship, which support 1:1 meetings as a promising new approach to promote engagement.

Last, JD-R theory and SDT were expanded upon in the current study, which were both used in unison to explain how 1:1 meetings could promote engagement. More specifically, the current study used the recently proposed intrapersonal motivational pathway of JD-R theory as its theoretical foundation, which uses the basic psychological needs of SDT to explain how job resources relate to engagement (Decuypere and Schaufeli, 2020). The current study tested this proposed pathway specific to 1:1 meetings and engagement, which expanded on current understandings in JD-R theory and SDT. For example, 1:1 meeting frequency was argued to be a need-satisfying, engagement-promoting resource for direct reports, such that more frequent 1:1 meetings could better engage direct reports by more readily satisfying their basic psychological needs. However, results provided a multifaceted view of when 1:1 meeting frequency could be considered a resource—being supported in some cases and not in others. For example, results of hypothesis 1 supported 1:1 meeting frequency as a need-satisfying, engagement-promoting resource for direct reports. Contradicting this finding, results of hypothesis 4 did not, which was likely due to 1:1 meeting quality being omitted from the first hypothesis. However, supplemental analyses complicated these conflicting findings by suggesting that a monthly 1:1 meeting frequency was needed to support direct reports' BNS and engagement. Together, these findings

put to question what can definitively be considered a need-satisfying, engagement-promoting resource and if that status can change when considering other factors. Given the various categorizations and number of resources that can promote engagement (e.g., personal, home, job, social, and organizational resources; c.f., Lee et al., 2020), this opens the door for new avenues for future research—including studying the boundary conditions of what promotes engagement and when.

The current study also addressed the call by JD-R theory researchers to investigate new leadership behaviors and their effects on employee resources, demands, and well-being—including engagement (c.f., Bakker & Demerouti, 2017). The current study addressed this call by investigating manager task- and relations-oriented behaviors displayed within 1:1 meetings. As discussed, the unique characteristics of 1:1 meetings position manager task- and relations-oriented 1:1 meeting behaviors to be most effective in promoting engagement by better supporting direct report's work-related needs in a synchronous and individualized manner. Not only did results support this reasoning, but these manager 1:1 meeting behaviors also promoted engagement when accounting for their use in other settings. This finding expands upon understandings in JD-R theory, specifically for when leader behavior can best serve as an engagement-promoting resource such as where the behaviors are displayed.

A final contribution to these theories was the replication of the long-standing, positive relationship between BNS and engagement as posited by SDT (e.g., Deci et al., 2017; Shuck et al., 2015). While the relationships between other variables often varied when tested in different models, the relationship between BNS and engagement did not. Although causality can only be established with experimental designs, the temporal separation of BNS and engagement and post-hoc analyses of alternative models also provided some evidence to support the directionality

of this relationship as posited in SDT (i.e., BNS led to engagement instead of the other way around). These findings support the robust, positive effect BNS has on engagement, which warrants continued efforts to identify job resources that promote engagement via BNS as proposed by the intrapersonal motivational pathway of JD-R theory—including further research on how 1:1 meetings can best serve this purpose.

7.2 Practical Implications

Managers are people leaders—their position carries the responsibility of overseeing, guiding, and supporting their direct reports' performance, development, and overall success at work. When done effectively, everyone benefits. Direct reports are more likely to perform highly and hold positive job attitudes (Clifton & Harter, 2019); managers can establish themselves as effective leaders, develop stronger relationships with direct reports, and retain high-performers (Alatawi, 2017; Alfes et al., 2013; Yukl et al., 2013); and organizations can provide customers with higher-quality products and services (e.g., increased innovation and customer service quality), increase business-unit performance (e.g., profitability), and decrease costly turnover (Church, 1995; Gerlach et al., 2021; Wang et al., 2011). More importantly, effective managers can promote their direct reports' engagement, which relates to several of these and other positive outcomes (Mone et al. 2011; Saks, 2019). While there are many ways for managers to effectively perform their role as a leader to reap these benefits, the current study investigated how managers can leverage 1:1 meetings in this pursuit—specifically in promoting their direct reports' engagement. Results of the current study provide managers with four key takeaways and recommendations for how to use 1:1 meetings in this way.

First and foremost, if a manager is not having 1:1 meetings with their direct reports, they should be. While most direct reports indicated that they had 1:1 meetings with their manager,

those who did not were the least engaged. By having 1:1 meetings, managers give their direct reports individualized facetime and convey the message that they are invested in and care about their direct reports as individuals and their work-related needs. Second, managers should tailor 1:1 meeting frequency to individual direct reports—but have them at a least monthly. While limited engagement differences were found between employees with 1:1 meeting cadences happening more than monthly, results also suggested that a weekly cadence showed the most promise and that meeting more often was not harmful to engagement. Moreover, having more time elapse between 1:1 meetings—especially one month or longer—makes it harder to build momentum between 1:1 meetings and develop strong interpersonal, trusting relationships (McAllister, 1995; Odermatt et al., 2015). Therefore, weekly or bi-weekly 1:1 meetings can best serve to promote direct report engagement. Third and relatedly, managers should focus on the quality of their 1:1 meetings more so than their quantity to promote engagement. Specifically, two types of manager behavior are needed: task-oriented (i.e., intended to support direct reports accomplishing their work) and relations-oriented (i.e., intended to support direct reports as individuals and the quality of manager-direct report relationships; Byham & Wellins, 2015). By including these behaviors, managers can best meet the work-related needs of direct reports and promote their engagement—particularly when including relations-oriented behaviors. Last, exploratory results suggest that managers should follow typical recommendations for holding effective meetings in their 1:1 meetings (e.g., coming prepared, having an agenda, ending on time). However, they should also consider other tactics (e.g., taking notes, not cancelling meetings, listening more than talking) to improve 1:1 meeting effectiveness and direct report engagement. By using all of these recommendations, managers can get the most out of their 1:1 meetings and best promote their direct reports' engagement.

7.3 Limitations

As with all research, the current study has its limitations regardless of the forethought and steps taken to maximize its rigor. First, there were issues with how to best measure 1:1 meeting frequency. While several tactics were used to accurately measure this variable (e.g., comparing original and recoded frequencies in post-hoc analyses), there were two primary limitations in assessing this variable. First, the way 1:1 meeting frequency was assessed was prone to capturing only scheduled 1:1 meetings. For example, participants' 1:1 meetings were corroborated with their work calendars to ensure their accuracy and to limit recall bias, but this verification also suggests that these meetings were scheduled in advance. While participants noted that most of their 1:1 meetings were scheduled in advance, some of their 1:1 meetings were not. Therefore, the current measurement of 1:1 meeting frequency may have excluded participants' unscheduled 1:1 meetings, which could have underreported the frequency of 1:1 meetings for some participants and affected results. Second, recoding frequencies to 'Weekly or More,' 'Bi-Weekly to Monthly,' 'Less than Monthly,' and 'No 1:1 Meetings' also had inherent problems. Most notably, variability in responses was lost in the process. However, this recoding helped the frequency variable mirror typical 1:1 meeting frequencies as seen in practice (McEachran, 2019; Rogelberg, 2022), which provided a more meaningful interpretation of results. Moreover, post-hoc analyses supported the decision to recode 1:1 meeting frequency when compared to results using the original coding scheme. Despite these limitations of how 1:1 meeting frequency was measured, results did not show consistent nor strong results for the variable during hypotheses testing—leading to the conclusion that 1:1 meeting quantity (i.e., frequency) is less important than 1:1 meeting quality in promoting direct report engagement. However, more research is

needed to further explore the most appropriate way to measure 1:1 meeting frequency to build a better understanding of the role it has in promoting direct report engagement.

Second and relatedly, participants who did not have 1:1 meetings or had them very infrequently (i.e., less than monthly) only made up a small portion of the sample but showed the most promise in understanding the importance of 1:1 meeting frequency in results (e.g., ANOVA results investigating BNS and engagement by frequency categories). While this finding could be seen as a limitation to the current study, it should rather be understood as a key insight. Results suggested that participants without 1:1 meetings had the lowest scores on all primary variables (i.e., manager behaviors, BNS, and engagement) as compared to all other frequency groups. This finding is consistent with findings in practice, which suggest that employees who do not have 1:1 meetings with their manager are the least likely to be engaged or have favorable outcomes when compared to their counterparts (Fuller & Shikaloff, 2016; Keith, 2019). Participants with less-than-monthly 1:1 meetings also showed less favorable outcomes—though not as drastic as results of participants without 1:1 meetings. Given the nature of these findings, future research is needed to not only investigate how to best measure 1:1 meeting frequency but also to explore the profound effect that not having 1:1 meetings—or having them very infrequently—can have on direct report engagement and other outcomes. Given that most participants had 1:1 meetings that also occurred on a more frequent basis in the current study, this future research should be mindful in how they recruit participants such as by targeting those with lower-frequency 1:1 meetings.

A final limitation of the current study was the use of the adapted, short version of the MPS to measure manager 1:1 meeting behaviors. Adapting and shortening measures can affect their psychometric properties and validity in measuring respective constructs (Heggestad et al.,

2019). However, these changes were done purposefully and were accounted for in the current study. Given the nascent nature of 1:1 meetings research and the resulting lack of options to measure manager 1:1 meeting behaviors, adaptations to the MPS were made to align with behaviors most relevant to 1:1 meetings. Additionally, the short version was used to limit survey fatigue and IER as participants were also asked these questions pertaining to their manager's behaviors outside of their 1:1 meetings. To account for these changes, CFAs were run and supported the use of the adapted short version of the MPS. However, more research is needed to assess its psychometric properties. A second limitation of using this adapted measure was that direct reports assessed their managers' behavior retrospectively. While this adaptation allowed for time separation between 1:1 meeting quality and BNS as the mediator and greater coverage of direct reports 1:1 meetings, it also increased the chances that the measure was more prone to certain biases (e.g., recall and recency biases) that could have affected participants responses (Martin, 2005). Future studies can overcome this limitation by altering their research designs such by using experience sampling (Heggestad et al., 2022), diary studies (Rieman, 1993), and longitudinal, event-based survey methodologies (O'Neill & Palmer, 2001). Leveraging these and other research designs not only mitigates the potential for these biases, but also continues to separate measures by time. A third limitation of the using the adapted measure was that change-oriented manager behaviors (i.e., used to "identify and implement desirable changes in tasks, outputs or work procedures for the leader's team or work") were excluded in the current study (Yukl et al., 2019, p. 775).[22] This type of manager behavior was not investigated due to the behaviors holding a stronger focus on a manager's team rather than individual direct reports and

[22] As proposed by Yukl (2012), a fourth type of manager behavior also exists. However, these behaviors are targeted toward outside parties rather than a manager's team or individual direct reports (e.g., networking with external stakeholders; Hassan et al., 2018) and are therefore irrelevant to manager behaviors displayed within 1:1 meetings.

because the behaviors did not align with the proposed task and relational components of 1:1 meetings. However, these manager behaviors are also foundational to managerial effectiveness and could potentially be investigated specific to 1:1 meetings (Borgmann et al., 2016; Li et al., 2021; Yukl et al., 2019). For instance, some change-oriented behavioral items could be adapted to fit the 1:1 meeting context (e.g., "encourages members to look for better ways to accomplish work unit objectives" to "encourages [me] to look for better ways to accomplish [my work] objectives"). Using these more comprehensive versions of the MPS could provide greater insight into how manager 1:1 meeting behaviors can promote direct report engagement, which was limited in the current study by using the adapted, short version.

7.4 Future Directions

The limited research on 1:1 meetings provides countless opportunities for future studies to better understand 1:1 meetings and their relationship with engagement. First, future research should leverage other methodologies and research designs to investigate 1:1 meetings. Self-report survey data were used in the current study, which was warranted given respective hypotheses and the focus on direct reports' engagement and perceptions of their 1:1 meetings. Potential limitations of this method (e.g., common method bias, non-response bias, IER) were also accounted for to limit their influence on results. However, other methodological approaches could provide different perspectives to 1:1 meetings and expand on results of the current study. For example, dyadic methodological approaches are highly relevant as 1:1 meetings are held between two individuals. In using this approach, data would be obtained from both direct reports and their managers, with hypotheses and research questions involving both individuals as well as their shared working relationship. Data would then be analyzed using various dyadic statistical techniques available (e.g., the actor–partner interdependence model; Cook & Kenny, 2005),

which would provide insights for both individual-level and bidirectional (i.e., dyadic-level) effects. These results could expand on findings in the current study such as by understanding how employees reporting to the same manager may vary in how their 1:1 meetings—both in quantity and quality—relate to their engagement. Dyadic methods could also shed light on how 1:1 meetings could affect managers, such as by promoting their engagement via bidirectional contagion effects or impairing their health and well-being given the demands needed to effectively support direct reports in 1:1 meetings (e.g., Liao et al., 2021; Lin et al., 2021; Wirtz et al., 2017). Relatedly, dyadic methods could investigate how the (mis)alignment of direct report and manager perceptions of 1:1 meetings could hinder or promote engagement (e.g., Matta et al., 2015). While this is just one example, using dyadic and other methodological approaches and designs outside of self-report surveys (e.g., diary studies, randomized controlled experiments) will broaden understandings of 1:1 meetings and how they can promote engagement.

Second, future research should investigate how other characteristics of 1:1 meetings can promote direct reports' engagement. Exploratory analyses provided initial insight to this idea, suggesting that certain 1:1 meeting characteristics (e.g., scheduling 1:1 meetings in advance, taking notes during 1:1 meetings, reviewing past and creating future action items) were positively related to BNS and engagement, while other 1:1 meeting characteristics (e.g., frequently cancelled 1:1 meetings, managers talking more during 1:1 meetings) were negatively related to BNS and engagement. However, these findings were exploratory, correlational, and not grounded in theory, which requires future research using more sophisticated and targeted approaches to better understand these relationships. Relatedly, future research should also identify how 1:1 meeting characteristics may be considered task-oriented or relations-oriented. Researchers have begun to investigate this idea for larger group meetings, where certain meeting

procedures (e.g., a clear meeting structure) were considered task-oriented and other meeting procedures (e.g., open discussions) were considered relations-oriented (Odermatt et al., 2016; Odermatt et al., 2017).[23] Given that results of the current study supported relations-oriented manager 1:1 meeting behaviors as more promising in promoting direct report engagement, this research should test if 1:1 meeting characteristics identified as relations-oriented hold this same potential. Not only will this research help to identify specific 1:1 meeting characteristics that can promote engagement, but it will also provide managers with empirical guidance on how to effectively conduct their 1:1 meetings outside of their frequency and use of task- and relations-oriented behaviors.

Last, future research should investigate the boundary conditions and generalizability of findings in the current study. One timely example is with virtual (i.e., remote) 1:1 meetings. The COVID-19 pandemic increased the overall frequency of meetings globally (particularly with 1:1 meetings), but also led to the rise of virtual meetings given stay-at-home ordinances (DeFilippis et al., 2020; Karl et al., 2022; Keith, 2022). This shift created a surge of researchers from various disciplines to study virtual meetings to better understand their nature and subsequent effects on employees. For instance, several recent studies investigated the fatigue employees experienced from attending virtual meetings during the pandemic (e.g., Bennett et al., 2021; Nesher Shoshan & Wehrt, 2022; Shockley et al., 2021). Results from these studies suggest that some of the unique characteristics of virtual meetings—such as having one's camera on—can negatively affect attendees. However, more research is needed specific to virtual 1:1 meetings as such findings may differ. For example, data on virtual 1:1 meetings collected by myself and a team of

[23] The scale created in this study—the Zurich Meeting Questionnaire (ZMQ)—was not used in the current study to measure task- and relations-oriented meeting leadership behaviors because the scale focuses on meeting procedures rather than leader behaviors and is most relevant to larger group meetings (Odermatt et al, 2016). For example, one relations-oriented item is, "The interests of the various meeting participants were taken into consideration."

graduate students under the direction of Dr. Steven Rogelberg found that direct reports recommended using cameras during their virtual 1:1 meetings to increase their effectiveness. Participants often noted that their virtual 1:1 meetings were more efficient but less personal than their in-person 1:1 meetings, and that having their cameras on helped create more personal interactions. By having cameras on during the meetings, participants could better read the non-verbal communication of their manager (e.g., head nodding, facial expressions) which made them feel more connected to their managers. Therefore, having cameras on during virtual 1:1 meetings may not be as fatiguing—and may in fact provide more benefits—for direct reports as compared to having cameras on in virtual meetings of larger sizes. This finding aligns with the more relational nature of dyadic interactions as well as the current finding that relations-oriented rather than task-oriented manager 1:1 meeting behaviors were more strongly related to direct report engagement (Islam & Zyphur, 2005; LePine & Van Dyne, 1998; Yoon et al., 2013). Relatedly, more frequent virtual 1:1 meetings may also benefit direct reports rather than fatigue them. The shift to remote work not only led to an increase in virtual meetings, but also eliminated all in-person, impromptu run-ins between direct reports and their managers (e.g., water cooler chats, stops by the manager's office; Microsoft, 2021). Losing these interactions deprived direct reports from having more frequent interactions with their manager, which could have served as a social resource (e.g., building trust) that supported their engagement (Lee et al., 2020; McAllister et al., 1995). Therefore, more frequent virtual 1:1 meetings could support direct report engagement by filling in for these lost interactions rather than being perceived as fatiguing interruptions or hassles (Luong & Rogelberg, 2005).[24] As organizations continue to navigate

[24] The data on virtual 1:1 meetings previously mentioned provide one caveat to this idea. Participants were asked if they wanted more or less 1:1 meetings and why. When they wanted more, they described how more 1:1 meetings could further support their needs. When they wanted less, participants indicated problems with the effectiveness of their 1:1 meetings (e.g., managers rambling during the meeting). Therefore, managers effectiveness as a leader and

their transition back to the office (either fully or in hybrid work settings), virtual meetings will continue to happen. Future research on virtual 1:1 meetings will help to better understand how these meetings can promote direct report engagement as well as identify how this influence may differ from findings on virtual meetings of larger groups.

7.5 Conclusion

The current study investigated 1:1 meetings as a new approach to promote employee engagement, which organizations often struggle to establish despite various known benefits and predictors of creating engaged workforces. While meetings have begun to show promise in promoting engagement, this specific type of meeting was investigated given its prevalence in the workplace and theoretical relevance to the study of engagement. Grounded in JD-R theory and SDT, it was argued that 1:1 meetings that were held frequently (i.e., high quantity) and included manager task- and relations-oriented behaviors (i.e., high quality) would promote direct report engagement by satisfying their basic psychological needs for autonomy, competence, and relatedness. However, results did not fully align with this reasoning. While manager 1:1 meeting behaviors—particularly relations-oriented behaviors—demonstrated clear positive associations with BNS and engagement, 1:1 meeting frequency did not. Instead, findings suggested that having 1:1 meetings at least monthly was needed to promote direct reports' engagement, but that the variation in 1:1 meeting frequency above that threshold was not meaningful in promoting direct report engagement. Relatedly, results suggested that direct reports fared the worst when they did not have any 1:1 meetings with their managers at all. Therefore, results of the current study suggest that 1:1 meeting quality is more important in promoting direct report engagement than 1:1 meeting quantity—with the important caveat that 1:1 meetings happen at least monthly.

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in running 1:1 meetings likely plays a role in how frequently direct reports can benefit from virtual 1:1 meetings, which aligns with results of exploratory analyses in the current study.

Moreover, results also supported 1:1 meetings as conceptually distinct from other manager-direct report meetings and interactions, while also suggesting that 1:1 meetings can promote direct report engagement beyond these settings by better supporting direct reports in a synchronous and individualized manner. Taken together, the current study provides initial support for 1:1 meetings as a commonly occurring but overlooked way to promote employee engagement, which will only benefit from future research.

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Table 1

Data Cleaning Process for Both Data Sources

Survey	Survey Process	Overall	Data Source 1	Data Source 2
1	Surveys Distributed	*N* = 3,000	*n* = 2,700	*n* = 300
	Respondents	*N* = 355	*n* = 55	*n* = 300
	Data Cleaning	*N* = 342	*n* = 50	*n* = 292
	Response Time	-4	0	-4
	Infrequency Approach	-7	-4	-3
	Non-Response Cutoff	0	0	0
	IRV Index	-7	-1	-6*
	Bots	0	0	0
2	Surveys Distributed	*N* = 342	*n* = 50	*n* = 292
	Respondents	*N* = 322	*n* = 35	*n* = 287
	Data Cleaning	*N* = 303	*n* = 25	*n* = 278
	Response Time	0	0	0
	Infrequency Approach	0	0	0
	Non-Response Cutoff	-1	-1*	0
	IRV Index	0	0	0
	Bots	0	0	0
	Data Merging	-19	-10	-9

Note. IRV = intra-individual response variability (IRV) index. Response time excluded participants who spent less than five minutes in survey one and less than two minutes in survey two per pilot study results. The infrequency approach used catch questions with clear correct answers (e.g., “Please select strongly agree for this item.”), which excluded participants who got two or more incorrect. The non-response cutoff excluded participants who completed less than 75 percent of surveys. * indicates duplicate values for those removed for two or more reasons.

Table 2

Measure Comparison of Surveys 1 and 2

Construct	Survey 1	Survey 2
1:1 Meeting Frequency	✓	
Manager 1:1 Meeting Behaviors	✓	
Control Variables	✓	
Demographics	✓	
DR Basic Psychological Needs Satisfaction	✓	✓
DR Engagement	✓	✓
Other 1:1 Meeting Characteristics		✓

Note. DR = direct report.

Table 3

Recoding for 1:1 Meeting Frequency

Original Coding			Recoding		
Frequency (Past Month)	Coding	Count	Frequency (Past Month)	Coding	Count
5+ Times	6	67	Weekly or More	3	160
4 Times	5	62			
3 Times	4	31			
2 Times	3	58	Bi-Weekly to Monthly	2	117
1 Time	2	59			
We did not meet	1	8	Less than Monthly	1	8
No 1:1 Meetings	0	18	No 1:1 Meetings	0	18
Total		303	Total		303

Original Coding			Recoding		
Frequency (Average)	Coding	Count	Frequency (Average)	Coding	Count
More than once per week	8	62	Weekly or More	3	164
Once per week	7	102			
Once every 2 weeks	6	50	Bi-Weekly to Monthly	2	102
Once every 3 weeks	5	10			
Once every 4 weeks	4	42			
Once every 5 weeks	3	3	Less than Monthly	1	19
Once every 6 weeks	2	4			
Once every 7+ weeks	1	12			
No 1:1 Meetings	0	18	No 1:1 Meetings	0	18
Total		303	Total		303

Table 4

Confirmatory Factor Analysis: Manager Behaviors

Model	CFI	TLI	χ^2	*df*	χ^2_{diff}	SRMR	RMSEA
Manager Within 1:1 Meeting Behaviors (N = 238)							
One-factor model	.96	.95	201.57***	35		.10	.14
Two-factor model	.98	.98	107.91***	34	93.66***	.07	.10
Manager Outside 1:1 Meeting Behaviors (N = 238)							
One-factor model	.98	.97	215.64***	35		.09	.15
Two-factor model	.99	.99	103.35***	34	112.29***	.06	.09

Note. The one-factor models include manager task- and relations-oriented behaviors, while the two-factor models treat both as factors as posited by the leadership literature (c.f., Yukl et al., 2002). CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation. *** $p < .001$.

Table 5

Factor Loadings: Manager Behaviors

Sub-Factor	Item	Within 1:1 Meetings	Outside 1:1 Meetings
Task-Oriented	MB_1	.72	.82
	MB_3	.78	.85
	MB_5	.76	.79
	MB_6	.84	.88
	MB_9	.76	.80
Relations-Oriented	MB_2	.71	.80
	MB_4	.74	.78
	MB_7	.88	.90
	MB_8	.66	.72
	MB_10	.61	.69

Note. N = 238 for both analyses.

Table 6

Correlation Matrix: BNS and Engagement by Respective Dimensions

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1. BNS (S1)	3.78	0.69	(.91)															
2. Autonomy (S1)	3.53	0.84	.85**	(.85)														
3. Competence (S1)	4.27	0.63	.58**	.35**	(.87)													
4. Relatedness (S1)	3.70	1.00	.89**	.58**	.36**	(.93)												
5. BNS (S2)	3.76	0.68	.92**	.76**	.53**	.83**	(.91)											
6. Autonomy (S2)	3.48	0.84	.78**	.86**	.32**	.59**	.86**	(.86)										
7. Competence (S2)	4.30	0.62	.49**	.29**	.83**	.31**	.53**	.29**	(.87)									
8. Relatedness (S2)	3.69	0.97	.82**	.55**	.37**	.91**	.89**	.61**	.30**	(.93)								
9. Engagement (S1)	3.92	0.81	.71**	.57**	.51**	.62**	.70**	.58**	.48**	.60**	(.93)							
10. Physical (S1)	4.05	0.85	.53**	.35**	.48**	.47**	.52**	.37**	.44**	.46**	.88**	(.85)						
11. Emotional (S1)	3.69	1.09	.74**	.69**	.37**	.62**	.72**	.70**	.36**	.59**	.87**	.59**	(.94)					
12. Cognitive (S1)	4.03	0.80	.60**	.42**	.52**	.54**	.59**	.42**	.49**	.53**	.91**	.80**	.67**	(.83)				
13. Engagement (S2)	3.94	0.80	.70**	.58**	.50**	.60**	.72**	.60**	.50**	.60**	.92**	.78**	.84**	.81**	(.93)			
14. Physical (S2)	4.06	0.83	.55**	.41**	.47**	.48**	.57**	.42**	.47**	.49**	.81**	.80**	.64**	.74**	.89**	(.87)		
15. Emotional (S2)	3.73	1.05	.69**	.65**	.38**	.57**	.71**	.68**	.39**	.56**	.82**	.57**	.91**	.64**	.89**	.63**	(.93)	
16. Cognitive (S2)	4.02	0.81	.61**	.44**	.50**	.54**	.62**	.46**	.49**	.55**	.84**	.76**	.66**	.83**	.91**	.79**	.68**	(.86)

Note. N = 303. BNS = basic needs satisfaction; S1 = survey 1; S2 = survey 2. ** indicates $p < .01$.

Table 7

Correlation Matrix: Primary Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Past Month Frequency	2.38	0.80	--																	
2. Average Frequency	2.36	0.85	.90**	--																
3. Man 1:1 Behaviors (T)	2.98	0.98	.07	.10	(.84)															
4. Man 1:1 Behaviors (R)	3.14	0.93	.13*	.07	.56**	(.81)														
5. BNS (S1)	3.78	0.69	.15**	.16**	.19**	.40**	(.91)													
6. BNS (S2)	3.76	0.68	.15**	.15**	.20**	.44**	.92**	(.91)												
7. Engagement (S1)	3.92	0.81	.15**	.15**	.25**	.32**	.71**	.70**	(.93)											
8. Engagement (S2)	3.94	0.80	.17**	.17**	.21**	.31**	.70**	.72**	.92**	(.93)										
9. Job Demands	2.29	0.57	.07	.03	-.01	-.21**	-.31**	-.34**	-.01	-.06	(.90)									
10. Positive Affect	3.72	0.74	.15**	.16**	.30**	.36**	.68**	.66**	.74**	.71**	-.11*	(.85)								
11. Man Tenure	4.46	5.78	.07	.08	-.03	-.01	.20**	.21**	.21**	.20**	-.07	.23**	--							
12. Man DR	9.89	7.35	-.14*	-.13*	.10	-.09	.06	.06	.06	.08	.10	.13*	.06	--						
13. Relational Dem	0.57	0.27	.00	.02	-.12	.06	.10	.10	.05	.05	-.12*	.04	.12*	-.07	--					
14. Man Trust	3.78	0.77	.21**	.19**	.27**	.51**	.63**	.65**	.41**	.43**	-.29**	.40**	.11	.00	.09	(.89)				
15. Meet Time	9.15	20.65	.14*	.12*	.00	.04	.02	.03	.02	.01	.04	.01	.01	-.03	-.03	.00	--			
16. Meet Number	5.88	9.40	.19**	.16**	.02	.07	.04	.04	.04	.02	.10	.07	-.01	-.04	.11	.08	.39**	--		
17. Man Out Behaviors (T)	2.71	1.00	-.00	.03	.77**	.55**	.17**	.18**	.24**	.17**	-.01	.23**	-.05	.07	-.06	.25**	.03	.05	(.88)	
18. Man Out Behaviors (R)	2.96	0.98	.10	.08	.52**	.84**	.41**	.44**	.39**	.35**	-.15*	.39**	.03	-.04	.08	.49**	.03	.08	.67**	(.85)

Note. N = 303. Man = manager; (T) = task-oriented; (R) = relations-oriented; S1 = survey 1; S2 = survey 2; DR = direct report; Dem = demography. 1:1 meeting frequency was recoded. Control variables are below middle line. * indicates $p < .05$, ** indicates $p < .01$.

Table 8

Participant Breakdown for 1:1 Meeting Frequency

Frequency (Past Month)	*n*	*Proportion*
5+ Times	67	22.1%
4 Times	62	20.5%
3 Times	31	10.2%
2 Times	58	19.1%
1 Time	59	19.5%
We did not meet	8	2.6%
No 1:1 meetings	18	5.9%
Total	303	100%

Frequency (Average)	*n*	*Proportion*
More than once per week	62	20.5%
Once per week	102	33.7%
Once every 2 weeks	50	16.5%
Once every 3 weeks	10	3.3%
Once every 4 weeks	42	13.9%
Once every 5 weeks	3	1.0%
Once every 6 weeks	4	1.3%
Once every 7+ weeks	12	4.0%
No 1:1 meetings	18	5.9%
Total	303	100%

Table 9

Frequency and Duration for 1:1 Meetings

Frequency (Past Month)	*n*	*M*	*SD*
5+ Times	67	30.93	23.31
3-4 Times	92	30.77	18.12
2 Times	58	25.70	17.60
1 Time	59	33.17	24.88
We did not meet	8	--	--
Total	284	30.14	20.98

Frequency (Average)	*n*	*M*	*SD*
More than once per week	60	25.07	17.25
Once per week	101	32.31	17.50
Once every 2 weeks	50	28.66	17.77
Once every 3-4 weeks	52	30.83	22.38
Once every 5+ weeks	19	26.05	17.73
Total	282	28.58	21.71

Table 10

Confirmatory Factor Analysis: All Primary Study Variables

Model	CFI	TLI	χ^2	*df*	χ^2_{diff}	SRMR	RMSEA
One-factor model	.81	.80	30,560.16***	2,414		.19	.23
Two-factor model	.82	.81	28,644.38***	2,413	181.71***	.19	.23
Three-factor model	.82	.82	28.207.02***	2,411	122.93***	.18	.22
Four-factor model	.87	.87	21,236.17***	2,408	389.27***	.16	.19
Five-factor model	.87	.87	20,879.25***	2,404	58.07***	.16	.19
Six-factor model	.89	.88	18,823.81***	2,399	175.87***	.15	.18
Seven-factor model	.91	.90	16,216.74***	2,393	305.85***	.15	.16
Eight-factor model	.95	.95	9,643.12***	2,386	351.28***	.12	.12
Nine-factor model	.96	.95	8,714.16***	2,378	134.49***	.11	.11

Note. The one-factor model includes all primary study variables: 1) manager task-oriented 1:1 meeting behaviors, 2) manager relations-oriented 1:1 meeting behaviors, 3) basic psychological need satisfaction, 4) engagement, 5) manager task-oriented behaviors outside 1:1 meetings, 6) manager relations-oriented behaviors outside 1:1 meetings, 7) job demands, 8) positive affect, and 9) trust in one's manager. 1:1 meeting frequency was not included due to it being a single item and only control variables used in hypothesis testing were included. Each model after proceeds to factor out individual variables until the final model, which separates each variable as its own factor. Variables were taken out in the opposite order listed above (i.e., starting with trust in one's manager and ending with manager task-oriented 1:1 meeting behaviors). CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation. *** $p < .001$.

Table 11

Mean Comparisons: BNS and Engagement by 1:1 Meeting Frequency

Past Month 1:1 Meeting Frequency	*N*	BNS (S1)		Engagement (S2)	
		M	*SD*	*M*	*SD*
Weekly or More	160	3.83*	0.68	4.01**	0.75
Bi-Weekly to Monthly	117	3.79	0.70	3.94*	0.79
Less than Monthly	8	3.64	0.53	3.85	0.73
No 1:1 Meetings	18	3.34	0.66	3.36	1.07
Total	303	3.78	0.69	3.82	0.84

Note. S1 = survey 1; S2 = survey 2. When compared to 'No 1:1 Meetings' in Tukey HSD post-hoc analyses: ** indicates $p < .01$, * indicates $p < .05$.

Table 12

Hypothesis 1 Results: Direct and Indirect Effects

Outcome	Predictor(s)	Path Label	B	SE	*Z*	*p*	β
BNS (S1)	Frequency	a	.12	.05	2.26	.021	.13
Engage (S2)	Frequency	c	.04	.04	1.06	.385	.05
Engage (S2)	BNS (S1)	b	.60	.07	8.34	< .001	.58
Engage (S2)	Job Demands (C)	g1	.22	.06	3.90	< .001	.18
Engage (S2)	Positive Affect (C)	g2	.36	.06	6.17	< .001	.37
Engage (S2)	Manager Tenure (C)	g3	.01	.01	1.11	.225	.05
Engage (S2)	Trust in Manager (C)	g4	.01	.05	0.16	.885	.01
Engage (S2)	Task Out Behaviors (C)	g5	.00	.04	-0.01	.989	.00
Engage (S2)	Relations Out Behaviors (C)	g6	.00	.05	0.01	.995	.00

Indirect Effect	Path Label	Estimate	Lower Limit	Upper Limit
Frequency on Engage (S2) via BNS (S1)	(a)*(b)	.073	[.010	.149]

Note. N = 279. BNS = basic needs satisfaction; Engage = engagement; Task Out Behaviors = manager task-oriented behaviors outside 1:1 meetings; Relations Out Behaviors = manager relations-oriented behaviors outside 1:1 meetings; S1 = survey 1; S2 = survey 2; (C) = control variable. Frequency (past month, recoded) was used in the model as proposed. Twenty-four cases were dropped due to missing data for exogenous variables when using a fixed-effects model. The 95% confidence interval for the indirect effect was calculated using bias-corrected bootstrapping using 1,000 iterations.

Table 13

Hypothesis 2 Results: Direct and Indirect Effects

Outcome	Predictor(s)	Path Label	B	SE	*Z*	*p*	β
BNS (S1)	Task 1:1 Behaviors	a	.13	.04	3.08	.007	.19
Engage (S2)	Task 1:1 Behaviors	c	.00	.05	-0.03	.979	.00
Engage (S2)	BNS (S1)	b	.59	.07	8.01	< .001	.59
Engage (S2)	Job Demands (C)	g1	.22	.06	3.73	< .001	.18
Engage (S2)	Positive Affect (C)	g2	.33	.06	5.59	< .001	.35
Engage (S2)	Manager Tenure (C)	g3	.01	.01	1.25	.188	.06
Engage (S2)	Trust in Manager (C)	g4	.02	.05	0.38	.734	.02
Engage (S2)	Task Out Behaviors (C)	g5	.00	.05	0.06	.953	.00

Indirect Effect	Path Label	Estimate	Lower Limit	Upper Limit
Task 1:1 Behaviors on Engage (S2) via BNS (S1)	(a)*(b)	.078	[.022	.146]

Note. $N = 262$. Task 1:1 Behaviors = manager task-oriented 1:1 meeting behaviors; BNS = basic needs satisfaction; Engage = engagement; Task Out Behaviors = manager task-oriented behaviors outside 1:1 meetings; S1 = survey 1; S2 = survey 2; (C) = control variable. Forty-one cases were dropped due to missing data for exogenous variables when using a fixed-effects model. The 95% confidence interval for the indirect effect was calculated using bias-corrected bootstrapping using 1,000 iterations.

Table 14

Hypothesis 3 Results: Direct and Indirect Effects

Outcome	Predictor(s)	Path Label	B	SE	*Z*	*p*	β
BNS (S1)	Relations 1:1 Behaviors	a	.30	.04	7.14	< .001	.40
Engage (S2)	Relations 1:1 Behaviors	c	-.05	.06	-0.93	.399	-.07
Engage (S2)	BNS (S1)	b	.58	.07	8.01	< .001	.57
Engage (S2)	Job Demands (C)	g1	.21	.06	3.63	< .001	.17
Engage (S2)	Positive Affect (C)	g2	.34	.06	5.91	< .001	.36
Engage (S2)	Manager Tenure (C)	g3	.01	.01	1.22	.192	.05
Engage (S2)	Trust in Manager (C)	g4	.03	.05	0.50	.662	.03
Engage (S2)	Relations Out Behaviors (C)	g5	.05	.06	0.98	.416	.08

Indirect Effect	Path Label	Estimate	Lower Limit	Upper Limit
Relations 1:1 Behaviors on Engage (S2) via BNS (S1)	(a)*(b)	.173	[.111	.251]

Note. $N = 267$. Relations 1:1 Behaviors = manager relations-oriented 1:1 meeting behaviors; BNS = basic needs satisfaction; Engage = engagement; Relations Out Behaviors = manager relations-oriented behaviors outside 1:1 meetings; S1 = survey 1; S2 = survey 2; (C) = control variable. Thirty-six cases were dropped due to missing data for exogenous variables when using a fixed-effects model. The 95% confidence interval for the indirect effect was calculated using bias-corrected bootstrapping using 1,000 iterations.

Table 15

Hypothesis 4a Results: Direct, Interactive, and Conditional Indirect Effects

Outcome	Predictor(s)	Path Label	B	SE	*Z*	*p*	β
BNS (S1)	Frequency	a1	.42	.26	1.64	.118	.26
BNS (S1)	Task 1:1 Behaviors (W)	a2	.43	.22	2.00	.058	.50
BNS (S1)	Frequency:Task 1:1 Behaviors	a3	-.12	.08	-1.43	.188	-.43
Engage (S2)	Frequency	c	-.03	.06	-0.61	.562	-.02
Engage (S2)	BNS (S1)	b	.59	.07	8.02	< .001	.69
Engage (S2)	Job Demands (C)	g1	.22	.06	3.74	.001	.17
Engage (S2)	Positive Affect (C)	g2	.34	.06	5.71	< .001	.34
Engage (S2)	Manager Tenure (C)	g3	.01	.01	1.28	.177	.05
Engage (S2)	Trust in Manager (C)	g4	.02	.05	0.40	.731	.02
Engage (S2)	Task Out Behaviors (C)	g5	.00	.03	0.03	.976	.00

Conditional Indirect Effects	Path Label	Estimate	Lower Limit	Upper Limit
Frequency & Task 1:1 Behaviors on Engage (S2) via BNS (S1)	$(a1+a3*W_{-1SD})*b$	.109	[-.022	.252]
	$(a1+a3*W_{mean})*b$	.041	[-.045	.140]
	$(a1+a3*W_{+1SD})*b$	-.027	[-.170	.111]

Note. N = 262. BNS = basic needs satisfaction; Engage = engagement; Task Out Behaviors = manager task-oriented behaviors outside 1:1 meetings; S1 = survey 1; S2 = survey 2; (W) = moderator; (C) = control variable. Frequency (past month, recoded) was used in the model as proposed. Forty-one cases were dropped due to missing data for exogenous variables when using a fixed-effects model. The 95% confidence interval for the indirect effect was calculated using bias-corrected bootstrapping using 1,000 iterations.

Table 16

Hypothesis 4b Results: Direct, Interactive, and Conditional Indirect Effects

Outcome	Predictor(s)	Path Label	B	SE	*Z*	*p*	β
BNS (S1)	Frequency	a1	-.08	.26	-0.32	.766	-.06
BNS (S1)	Relations 1:1 Behaviors (W)	a2	.23	.20	1.15	.283	.32
BNS (S1)	Frequency:Relations 1:1 Behaviors	a3	.03	.08	0.33	.763	.12
Engage (S2)	Frequency	c	-.03	.06	-0.61	.541	-.03
Engage (S2)	BNS (S1)	b	.58	.07	8.00	< .001	.57
Engage (S2)	Job Demands (C)	g1	.21	.06	3.77	.001	.18
Engage (S2)	Positive Affect (C)	g2	.34	.06	5.89	< .001	.37
Engage (S2)	Manager Tenure (C)	g3	.01	.01	1.29	.168	.06
Engage (S2)	Trust in Manager (C)	g4	.02	.05	0.38	.738	.02
Engage (S2)	Relations Out Behaviors (C)	g5	.02	.04	0.45	.700	.02

Conditional Indirect Effects	Path Model	Estimate	Lower Limit	Upper Limit
Frequency & Relations 1:1 Behaviors on Engage (S2) via BNS (S1)	$(a1+a3*W_{-1SD})*b$	-.014	[-.132	.110]
	$(a1+a3*W_{mean})*b$	-.001	[-.079	.087]
	$(a1+a3*W_{+1SD})*b$	.013	[-.121	.145]

Note. N = 267. BNS = basic needs satisfaction; Engage = engagement; Relations Out Behaviors = manager relations-oriented behaviors outside 1:1 meetings; S1 = survey 1; S2 = survey 2; (W) = moderator; (C) = control variable. Frequency (past month, recoded) was used in the model as proposed. Thirty-six cases were dropped due to missing data for exogenous variables when using a fixed-effects model. The 95% confidence interval for the indirect effect was calculated using bias-corrected bootstrapping using 1,000 iterations.

Table 17

Hypothesis 4 Post-Hoc Results: Direct, Interactive, and Conditional Indirect Effects

Outcome	Predictor(s)	Path Label	B	SE	*Z*	*p*	β
BNS (S1)	Relations 1:1 Behaviors	a1	.25	.13	1.89	.083	.31
BNS (S1)	Task 1:1 Behaviors (W)	a2	-.13	.15	-0.88	.446	-.17
BNS (S1)	Relations:Task 1:1 Behaviors	a3	.03	.04	0.65	.566	.20
Engage (S2)	Relations 1:1 Behaviors	c	-.05	.06	-0.90	.406	-.07
Engage (S2)	BNS (S1)	b	.59	.07	7.94	< .001	.60
Engage (S2)	Job Demands (C)	g1	.21	.06	3.59	.001	.16
Engage (S2)	Positive Affect (C)	g2	.34	.06	5.71	< .001	.34
Engage (S2)	Manager Tenure (C)	g3	.01	.01	1.20	.246	.05
Engage (S2)	Trust in Manager (C)	g4	.02	.05	0.42	.692	.02
Engage (S2)	Relations Out Behaviors (C)	g5	.05	.06	0.75	.494	.06
Engage (S2)	Task Out Behaviors (C)	g6	.00	.04	-0.08	.940	.00

Conditional Indirect Effects	Path Label	Estimate	Lower Limit	Upper Limit
Relations & Task 1:1 Behaviors on Engage (S2) via BNS (S1)	$(a1+a3*W_{-1SD})*b$	.176	[.098	.278]
	$(a1+a3*W_{mean})*b$	.192	[.122	.282]
	$(a1+a3*W_{+1SD})*b$	.207	[.116	.330]

Note. $N = 262$. BNS = basic needs satisfaction; Engage = engagement; Task Out Behaviors = manager task-oriented behaviors outside 1:1 meetings; Relations Out Behaviors = manager relations-oriented behaviors outside 1:1 meetings; S1 = survey 1; S2 = survey 2; (W) = moderator; (C) = control variable. Frequency (past month, recoded) was used in the model as proposed. Forty-one cases were dropped due to missing data for exogenous variables when using a fixed-effects model. The 95% confidence interval for the indirect effect was calculated using bias-corrected bootstrapping using 1,000 iterations.

Table 18

Alternative Models to Test Directionality of Hypotheses

Hypothesis	Model	IV	Moderator	Mediator	DV	Significant Results
H1	1*	FREQ	--	BNS (S1)	ENG (S2)	FREQ-BNS; BNS-ENG + Indirect Effect
	2	FREQ	--	ENG (S1)	BNS (S2)	ENG-BNS
H2	3*	TASK	--	BNS (S1)	ENG (S2)	TASK-BNS; BNS-ENG + Indirect Effect
	4	TASK	--	ENG (S1)	BNS (S2)	ENG-BNS
H3	5*	REL	--	BNS (S1)	ENG (S2)	REL-BNS; BNS-ENG + Indirect Effect
	6	REL	--	ENG (S1)	BNS (S2)	ENG-BNS
H4a	7*	FREQ	TASK	BNS (S1)	ENG (S2)	BNS-ENG
	8	FREQ	TASK	ENG (S1)	BNS (S2)	ENG-BNS
H4b	7*	FREQ	REL	BNS (S1)	ENG (S2)	BNS-ENG
	8	FREQ	REL	ENG (S1)	BNS (S2)	ENG-BNS

Note. FREQ = 1:1 meeting frequency; TASK = manager task-oriented 1:1 meeting behaviors; REL = manager relations-oriented 1:1 meeting behaviors; BNS = basic psychological needs satisfaction; ENG = engagement; S1 = survey 1; S2 = survey 2. * indicates proposed model direction tested in hypotheses.

Table 19

Open-Ended Responses for Participants Without 1:1 Meetings

Responses to, "Would you prefer to have 1:1 meetings with your manager?"

Yes (*n* = 10)	No (*n* = 5)	Unsure (*n* = 3)
• *My manager is very hands off in many ways. Sometimes that's good, because it means I am trusted to do my own work in my own way. But sometimes, it would be nice to have a bit more direction. I'd prefer to have 1:1 meetings as a way to get more feedback on my work performance.* • *I have to ask for performance reviews.* • *I would prefer to have 1:1 meetings because then I would know what to expect and be able to ask questions and receive feedback.* • *I would like to have the opportunity to talk about any concerns I may have and be evaluated on my performance.* • *I would feel like I was at least being appreciated or considered doing valuable work rather than just doing the perceived work that I do now.* • *To give and get better feed back and find out about possible new opportunities.* • *[I would want them] in person. That way you have his undivided attention.*	• *Meetings are useless with [my] manager because they are a one way conversation.. [My] manager does not care to hear other points of view.* • *Middle management is a waste of company resources.* • *I do not feel like they are necessary. If I was having issues with my work, then I think they would be appropriate, but I am not.*	• *I rarely see or talk to my manager, but if there is an issue while trying to run something I get feedback or he helps me try to problem solve to resolve the issue.* • *Depends on context of conversation.*

Table 20

Participant Responses: Other 1:1 Meeting Characteristics

Item	*n*	*M*	*SD*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. 1:1 meetings are held on a reoccurring/standing basis (e.g., weekly)	287	3.86	1.10	5%	12%	6%	49%	29%
2. 1:1 meetings are scheduled in advance	287	3.95	1.03	3%	10%	9%	46%	32%
3. You schedule the 1:1 meetings	276	2.43	1.18	24%	37%	16%	18%	5%
4. Your manager schedules the 1:1 meetings	285	4.02	0.97	3%	6%	10%	47%	33%
5. Your manager cancels your 1:1 meetings often	275	1.93	1.02	40%	39%	10%	9%	2%
6. If your manager cancels your 1:1 meetings, they promptly reschedule the 1:1 meetings	271	3.59	1.23	9%	13%	14%	41%	24%
7. 1:1 meetings start on time	284	3.89	0.96	2%	8%	12%	52%	25%
8. My manager comes to the 1:1 meetings prepared	287	4.09	0.89	1%	6%	11%	47%	35%
9. Agendas are used in the 1:1 meetings	282	3.05	1.24	13%	25%	15%	37%	10%
10. 1:1 meetings address updates on action items of the previous 1:1 meeting	288	3.79	0.93	2%	8%	16%	54%	19%
11. 1:1 meetings focus on your work, needs, and/or topics of interest	290	4.15	0.81	1%	4%	7%	54%	33%
12. Your manager talks more in the 1:1 meetings than you	290	3.24	1.17	5%	27%	24%	27%	17%
13. You talk more in the 1:1 meetings than your manager	287	2.50	1.10	20%	34%	24%	18%	3%
14. Your manager takes notes in the 1:1 meetings	287	3.24	1.20	9%	23%	16%	40%	13%
15. You take notes in the 1:1 meetings	287	3.49	1.21	9%	15%	11%	47%	17%
16. 1:1 meetings end when you expect them to end	290	3.83	0.94	2%	9%	12%	56%	21%
17. You leave the 1:1 meetings with action items for the next 1:1 meeting	289	3.73	1.03	5%	8%	17%	49%	21%

Note. Correlations between 1:1 meeting characteristics can be seen in Table 21.

Table 21

Correlation Matrix: Other 1:1 Meeting Characteristics

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Reoccurring	3.86	1.10																	
2. Scheduled	3.95	1.03	.36**																
3. Scheduled (DR)	2.43	1.18	.01	.11															
4. Scheduled (Man)	4.02	0.97	.25**	.28**	-.35**														
5. Cancel	1.93	1.02	-.05	-.08	.02	-.03													
6. Reschedule	3.59	1.23	.21**	.30**	.03	.24**	-.26**												
7. Start on Time	3.89	0.96	.20**	.33**	.01	.24**	-.43**	.47**											
8. Man Prepared	4.09	0.89	.20**	.31**	-.02	.29**	-.38**	.52**	.63**										
9. Agenda	3.05	1.24	.18**	.20**	-.04	.19**	-.10	.15*	.25**	.32**									
10. Action Items (Past)	3.79	0.93	.28**	.21**	.04	.23**	-.20**	.20**	.27**	.34**	.48**								
11. DR Focus	4.15	0.81	.23**	.19**	-.00	.20**	-.30**	.39**	.44**	.59**	.18**	.38**							
12. Talk (Man)	3.24	1.17	-.02	-.18**	-.21**	.20**	.19**	-.17**	-.16**	-.16**	.04	-.04	-.08						
13. Talk (DR)	2.50	1.10	.03	.09	.33**	-.13*	-.04	.14*	.10	.13*	-.05	.06	.15*	-.61**					
14. Notes (Man)	3.24	1.20	.15*	.31**	.05	.20**	-.14*	.32**	.29**	.38**	.33**	.22**	.22**	-.22**	.20**				
15. Notes (DR)	3.49	1.21	.04	.28**	.15*	.14*	.07	.26**	.11	.15**	.16**	.24**	.16**	-.06	.05	.36**			
16. End on Time	3.83	0.94	.06	.23**	-.05	.07	-.32**	.31**	.47**	.36**	.00	.17**	.36**	-.28**	.21**	.23**	.17**		
17. Action Items (Next)	3.73	1.03	.25**	.28**	.06	.21**	-.11	.26**	.23**	.39**	.39**	.56**	.35**	-.03	.08	.38**	.42**	.21**	

Note. Full items can be seen in Table 20 in numerical order. * indicates $p < .05$, ** indicates $p < .01$.

Table 22

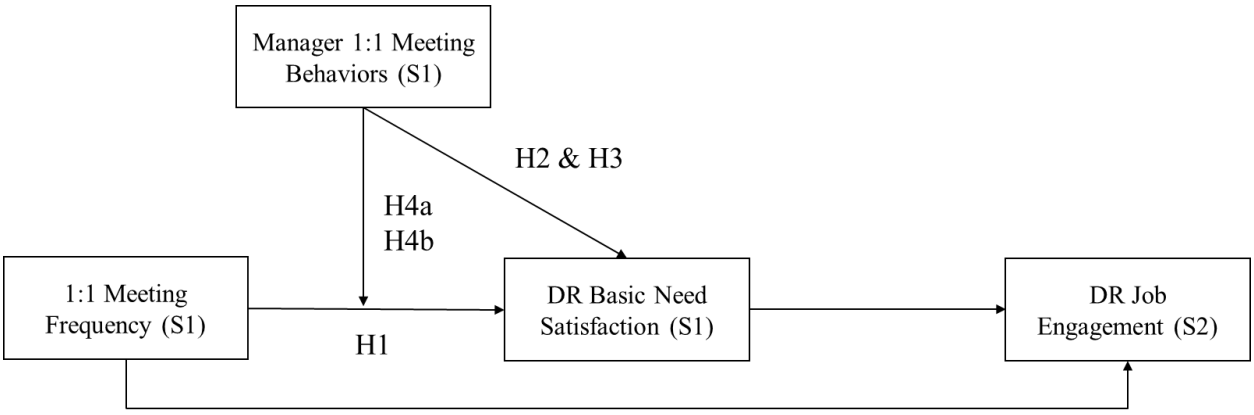
Correlations: Other 1:1 Meeting Characteristics to BNS and Engagement

1:1 Meeting Characteristics	BNS	Engagement
1. Reoccurring	.19**	.23**
2. Scheduled	.22**	.16**
3. Scheduled (DR)	.07	-.01
4. Scheduled (Man)	.07	.09
5. Cancel	-.27**	-.16**
6. Reschedule	.27**	.16**
7. Start on Time	.25**	.17**
8. Man Prepared	.39**	.29**
9. Agenda	.16**	.21**
10. Action Items (Past)	.22**	.16**
11. DR Focus	.32**	.28**
12. Talk (Man)	-.23**	-.06
13. Talk (DR)	.19**	.09
14. Notes (Man)	.21**	.23**
15. Notes (DR)	.13*	.14*
16. End on Time	.30**	.15**
17. Action Items (Next)	.23**	.25**

Note. BNS = basic needs satisfaction. BNS was measured at time 1. Engagement was measured at time two. * indicates $p < .05$, ** indicates $p < .01$.

Figure 1

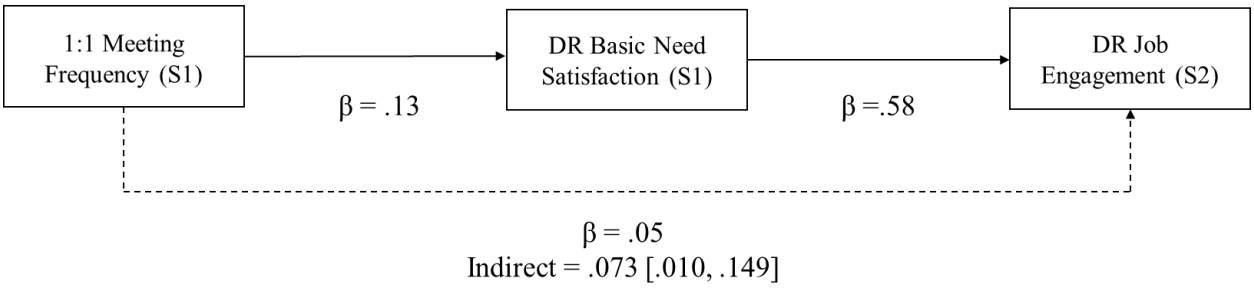
Model of All Proposed Hypotheses



Note. 1:1 meeting frequency (past month, recoded), manager task- and relations-oriented 1:1 meeting behaviors, and direct report (DR) basic need satisfaction were measured in survey 1 (S1). Direct report engagement was measured in survey 2 (S2). Control variables were measured in survey 1 and included: 1) manager task-oriented behaviors outside 1:1 meetings, 2) manager relations-oriented behaviors outside 1:1 meetings, 3) job demands, 4) positive affect, and 5) trust in one's manager.

Figure 2

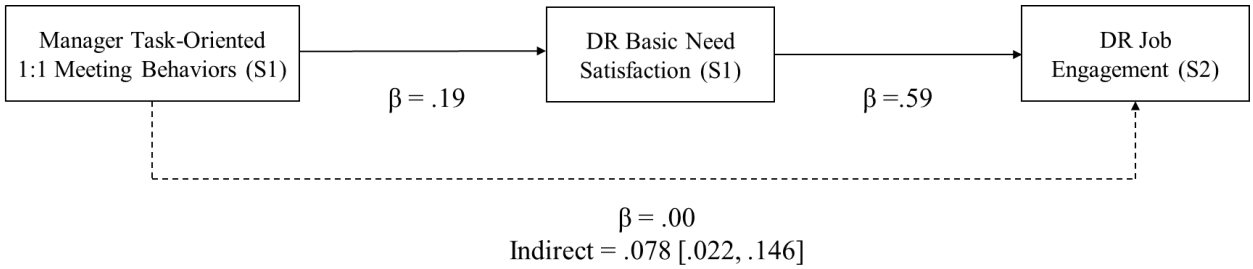
Hypothesis 1: Mediation Model Results



Note. N = 279. S1 = survey 1; S2 = survey 2; DR = direct report. Model includes all control variables. Frequency (past month, recoded) was used in the model as proposed. Twenty-four cases were dropped due to missing data for exogenous variables when using a fixed-effects model. See Table 12 for full results, including significant control variables (job demands, positive affect).

Figure 3

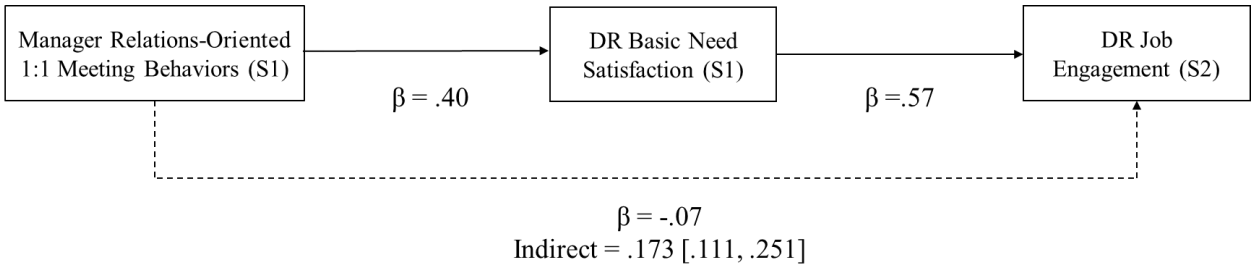
Hypothesis 2: Mediation Model Results



Note. N = 262. S1 = survey 1; S2 = survey 2; DR = direct report. Model includes control variables. Frequency (past month, recoded) was used in the model as proposed. Forty-one cases were dropped due to missing data for exogenous variables when using a fixed-effects model. See Table 13 for full results, including significant control variables (job demands, positive affect).

Figure 4

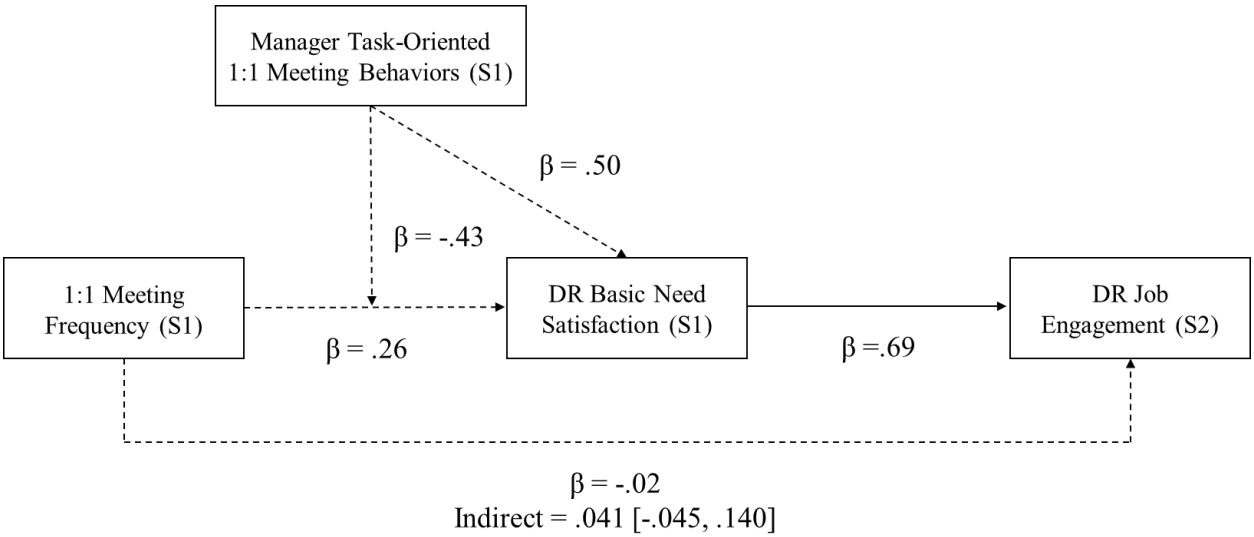
Hypothesis 3: Mediation Model Results



Note. N = 267. S1 = survey 1; S2 = survey 2; DR = direct report. Model includes control variables. Frequency (past month, recoded) was used in the model as proposed. Thirty-six cases were dropped due to missing data for exogenous variables when using a fixed-effects model. See Table 14 for full results, including significant control variables (job demands, positive affect).

Figure 5

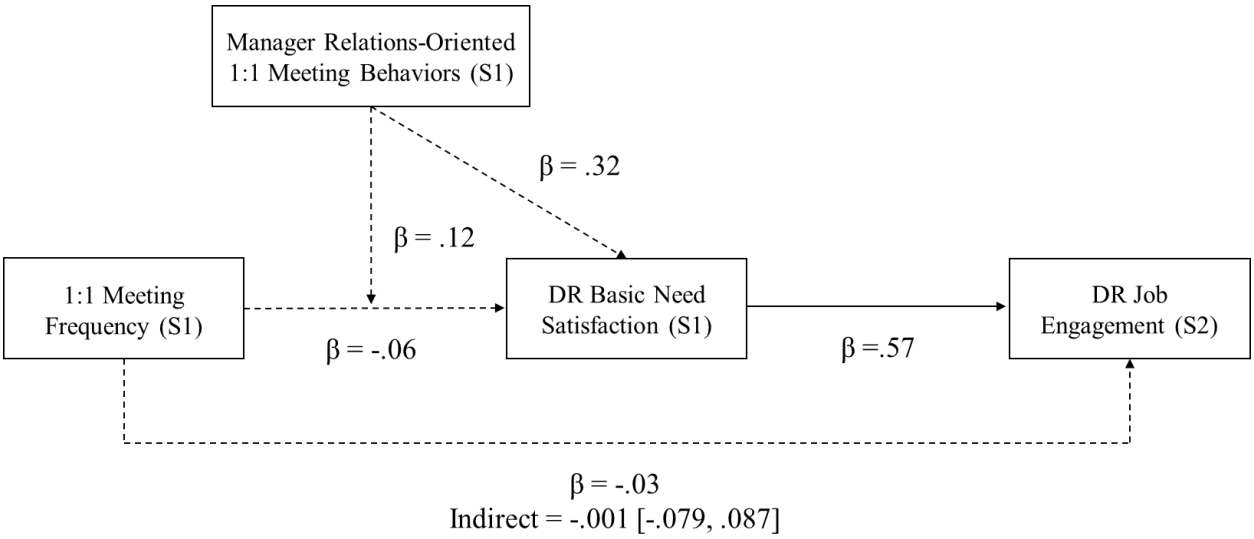
Hypothesis 4a: Moderated Mediation Model Results



Note. N = 262. S1 = survey 1; S2 = survey 2; DR = direct report. Model includes control variables. Frequency (past month, recoded) was used in the model as proposed. Forty-one cases were dropped due to missing data for exogenous variables when using a fixed-effects model. See Table 15 for full results, including significant control variables (job demands, positive affect).

Figure 6

Hypothesis 4b: Moderated Mediation Model Results



Note. N = 267. S1 = survey 1; S2 = survey 2; DR = direct report. Model includes control variables. Frequency (past month, recoded) was used in the model as proposed. Thirty-six cases were dropped due to missing data for exogenous variables when using a fixed-effects model. See Table 16 for full results, including significant control variables (job demands, positive affect).

Appendix A

Construct: 1:1 Meeting Frequency (& Duration)

Variable Type: Independent

Measure: Created for Study

Instructions:

One-on-one (1:1) meetings are intentional gatherings (scheduled or impromptu) between a manager and their direct report to discuss shared work-related issues, focused primarily on the direct reports' work-related needs. 1:1 meetings are synchronous (i.e., face-to-face, virtual, or over the phone) rather than asynchronous (e.g., emails, text messaging) interactions.

Here are a few examples of 1:1 meetings:

- Your manager schedules weekly or bi-weekly meetings with you (in-person or virtually) to check in on your work, see how you are doing, and ask if you need any support.
- Your manager calls you on the phone to see how a project is going, provides feedback on your work, and asks if you have any roadblocks they can provide resources to help address.
- Your manager calls you to their office to discuss an opportunity to learn new skills or teaches you those skills themselves to better do your work.

Based on the above definition, do you have 1:1 meetings with your manager?

- Yes / No (skip logic)

Think about the 1:1 meetings you have with your manager based on the previous definition (also below), then answer the following questions. Please refer to your work calendar (such as Outlook or Google Calendar) to help answer the questions.

Items & Response Scales ('Yes'):

1) On average, how often do you have 1:1 meetings with your manager?
    - More than once per week
    - Once per week
    - Once every 2 weeks
    - Once every 3 weeks
    - Once every 4 weeks
    - Once every 5 weeks
    - Once every 6 weeks
    - Once every 7+ weeks

2) On average, how long (in minutes) are the 1:1 meetings with your manager? _____

3) In the past month, how often did you have 1:1 meetings with your manager?
    - We did not meet
    - 1 time
    - 2 times
    - 3 times
    - 4 times
    - 5+ times

4) In the past month, please estimate the total time (in minutes) you spent in 1:1 meetings with your manager. _____

Items & Response Scales ('No'):

1) Would you prefer to have 1:1 meetings with your manager?
    - Yes / No / Not Sure

2) Why would you prefer to have or not have 1:1 meetings with your manager? Please explain below. _____

3) If you had 1:1 meetings, how frequently would you want them?
    - More than once per week
    - Once per week
    - Once every 2 weeks
    - Once every 3 weeks
    - Once every 4 weeks
    - Once every 5 weeks
    - Once every 6 weeks
    - Once every 7+ weeks

5) If you had 1:1 meetings, how long (in minutes) would you want them to be? _____

Notes: See Table 3 for recoding of 1:1 meeting frequency.

Appendix B

Construct: Perceptions of Manager Task- and Relations-Oriented 1:1 Meeting Behaviors

Variable Type: Moderator

Measure: Managerial Practices Survey (MPS – Form 17-1 S; Hassan et al., 2018; Kim and Yukl 1995; Yukl, 2012; Yukl et al., 2002; 2019)

Instructions:

Please describe how much your manager used each managerial practice or leadership behavior **within your 1:1 meetings in the past month**. Think about each type of behavior separately, and do not allow your general evaluation of your manager to bias your answers about specific behaviors.

Overview of Items:

1) Clarifying
2) Supporting
3) Planning Activities
4) Recognizing & Rewarding
5) Monitoring Operations
6) Training & Instruction
7) Developing & Mentoring
8) Consulting about Decisions
9) Problem Solving
10) Delegating

Response Scale: 5-point scale: Not at All or Not Applicable (1) to To a Very Great Extent (5)

Reliability: $\alpha = .84$ (task-oriented); $\alpha = .81$ (relations-oriented)

Adaptations:

- Only two subscales were used out of four total, excluding change and external behaviors.
- One relations-oriented item (i.e., encouraging teamwork and cooperation) was not included as it did not align with 1:1 meetings.
- Instructions were adapted to fit the context of 1:1 meetings in the past four weeks.
- Items were changed to past tense and focused on behaviors targeted at direct report.
- Participants without 1:1 meetings were instructed to respond about their manager's task- and relations-oriented behaviors in general in the past month.

Notes:

Due to copyright, neither the full scale nor full adaptations could be provided. Two meta-categories (i.e., task- and relations-oriented behaviors) were used, excluding change-oriented and external behaviors. Each item represents a specific behavioral component of the two meta-categories used: task-oriented meeting procedures (#1, 3, 5, 6, 9) and relational-oriented meeting procedures (#2, 4, 7, 8, 10). Each item provides a list of specific behaviors related to the behavioral category.

Appendix C

Construct: Basic Psychological Need Satisfaction at Work

Variable Type: Mediator

Measure: Work-Related Basic Need Satisfaction (W-BNS) Scale (Van den Broeck et al., 2010)

Instructions: Please rate the extent to which you agree with the following items.

Item(s):

1) I feel like I can be myself at my job.
2) At work, I often feel like I have to follow other people's commands.
3) If I could choose, I would do things at work differently.
4) The tasks I have to do at work are in line with what I really want to do.
5) I feel free to do my job the way I think it could best be done.
6) In my job, I feel forced to do things I do not want to do.
7) I really master my tasks at my job.
8) I feel competent at my job.
9) I am good at the things I do in my job.
10) I have the feeling that I can even accomplish the most difficult tasks at work.
11) I don't really feel connected with other people at my job.
12) At work, I feel part of a group.
13) I don't really mix with other people at my job.
14) At work, I can talk with people about things that really matter to me.
15) I often feel alone when I am with my colleagues.
16) Some people I work with are close friends of mine.

Response Scale: 5-point Likert-type scale: Completely Disagree (1) to Completely Agree (5)

Reliability: $\alpha = .91$ (survey 1); $\alpha = .90$ (survey 2)

Notes: Three sub-scales: autonomy satisfaction (#1-6), competence satisfaction (#7-10), and satisfaction support (#11-16).

Appendix D

Construct: Employee Engagement

Variable Type: Dependent

Measure: Job Engagement Scale Short Form in English (JES^9; Houle et al., 2022)

Instructions:

Following are a number of statements regarding how you invest your energies at work. Read each statement carefully. Then, fill in the bubble indicating your level of agreement with each statement:

Item(s):

1) I exert my full effort to my job.
2) I try my hardest to perform well on my job.
3) I exert a lot of energy on my job.
4) I am enthusiastic about my job.
5) I am interested in my job.
6) I am excited about my job.
7) At work, I focus a great deal of attention on my job.
8) At work, I am absorbed by my job.
9) At work, I concentrate on my job.

Response Scale: 5-point Likert scale: Strongly Disagree (1) to Strongly Agree (5)

Reliability: $\alpha = .93$ (both surveys)

Notes: Based on Rich and colleagues' (2010) Job Engagement Scale (JES), this scale is split into three sub-scales: physical (#1-3), emotional (#4-6), and cognitive engagement (#7-9).

Appendix E

Construct: Perceptions of Manager Task- and Relations-Oriented Behaviors (Outside 1:1 Meetings)

Variable Type: Control

Measure: Managerial Practices Survey (MPS – Form 17-1 S; Hassan et al., 2018; Kim and Yukl 1995; Yukl, 2012; Yukl et al., 2002; 2019)

Instructions, Response Scale, & Item(s):

These sub-scales were the same adapted sub-scale used to measure manager behaviors within 1:1 meetings (Appendix B). However, instructions stated, "…outside your 1:1 meetings in the past month").

Reliability: $\alpha = .88$ (task-oriented); $\alpha = .85$ (relations-oriented)

Rationale for Inclusion: Controlling for this variable isolated manager behaviors to the 1:1 meeting context (i.e., the focus of the current study) rather manager behaviors in general, which could promote participants' engagement. These behaviors could also influence how often 1:1 meetings are held and behaviors within them. For example, less 1:1 meetings may be needed if these behaviors happen often outside of 1:1 meetings.

Notes: Due to copyright, neither the full scale nor full adaptations could be provided.

Appendix F

Construct: Overall Meeting Time Demands

Variable Type: Control

Measure: Rogelberg, Leach, Warr, & Burnfield (2006)

Instructions: Now think about all of the meetings you attend, including your 1:1 meetings.

Item(s):

1) On average, approximately how long do you spend in meetings in a typical week? Indicate in hours to the nearest hour:

2) On average, how many meetings do you attend in a typical week? Indicate the number, regardless of duration:

Response Scale: Numeric

Rationale for Inclusion: The time employees spend in meetings can act as a resource or demand depending on how they are conducted (Allen et al., 2012; Lübstorf & Lehmann-Willenbrock, 2020), which can influence employee engagement levels (Allen & Rogelberg, 2013). Meeting time demands can also influence the frequency of 1:1 meetings and their related manager 1:1 meeting behaviors. For example, employees with more frequent and longer meetings may have trouble scheduling 1:1 meetings with their manager due to time restrictions. As a result, more frequent and longer meetings may lead to less frequent or shorter 1:1 meetings, influencing what behaviors a manager enacts within the meetings. For instance, managers may have a greater task- as compared to relational focus to ensure direct reports' work is addressed.

Appendix G

Construct: Job Demands

Variable Type: Control

Measure: Van Veldhoven & Meijman, 1994

Instructions: Please rate the extent to which you experience the following in your work.

Item(s):

1) Do you have to work fast?
2) Do you have too much work to do?
3) Do you have to work extra hard to finish a task?
4) Do you work under time pressure?
5) Do you have to rush?
6) Can you do your work in comfort? (R)
7) Do you have to deal with a backlog at work?
8) Do you have too little work? (R)
9) Do you have problems with the pace of work?
10) Do you have problems with the workload?
11) Do you wish you could work at an easier pace?

Response Scale: 4-point scale: Never (1) to Always (4)

Reliability: $\alpha = .90$

Rationale for Inclusion: Job demands vary by employee and positively or negatively relate to engagement depending on how they are perceived (Bakker & Demerouti, 2017; Crawford et al., 2010). Job demands can also influence the frequency of 1:1 meetings and related manager 1:1 meeting behaviors. For example, an employee with a time-sensitive project may require more 1:1 meetings, while an employee with greater interpersonal conflict and administrative hassles may require their 1:1 meeting discussions to focus on those demands.

Notes: Based on Ganster & Fusilier's (1989) work, job demands refer to the degree of intensity (i.e., fast and hard), volume (i.e., a great deal to do), and time restraints (i.e., too little time) employees have to accomplish their work. Shown good internal reliability (c.f., Van Yperen & Hagedoorn, 2003; Van Yperen & Snijders, 2000).

Appendix H

Construct: Positive Affect

Variable Type: Control

Measure: International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) in English (Thompson, 2007)

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

Item(s):

1) Alert
2) Inspired
3) Determined
4) Attentive
5) Active

Response Scale: 5-point scale: Never (1) to Always (5)

Reliability: $\alpha = .85$

Rationale for Inclusion: Personality traits such as positive affect (PA) vary by individual and can act as a personal resource that can enhance employee engagement levels (Christian et al., 2011; Wefald et al., 2011). While many personality traits (e.g., proactive personality, conscientiousness) hold this positive relationship with engagement, a meta-analysis conducted by Young and colleagues (2018) found that PA has the strongest relationship with engagement for any individual disposition. PA can also influence the frequency of 1:1 meetings and related manager 1:1 meeting behaviors. For example, managers may meet more often and enact certain behaviors (e.g., development support) with employees high in PA as they are likely more pleasing to interact with (Berry & Hansen, 1996).

Notes: Based on Watson, Clark, & Tellegen's (1988) original 10-item PANAS. Two sub-scales: positive affect and negative affect. Only positive affect scale was measured.

Appendix I

Construct: Manager-Direct Report Relationship Tenure

Variable Type: Control

Measure: Created for Study

Instructions: How long have you reported to your manager?

Response Scale: Years ____ Months _____

Rationale for Inclusion: The tenure a manager and direct report have working together likely influences direct report engagement levels. For new employees, not much is known about their manager or role. Trust—a key foundation of high-quality dyadic relationships and a social resource that supports engagement—is only developed through ongoing interactions, which takes time (Cherry, 2015; Lee et al., 2020; McAllister, 1995). As time progresses, direct reports are better able to understand their manager and role as well as become exposed to more organizational knowledge and resources that could influence their engagement levels—for better or worse. Direct reports may also be more engaged by the novelty of starting a new position or working under a new manager. Relationship tenure can also influence the frequency of 1:1 meetings between the pair and related manager 1:1 meeting behaviors. In the beginning of manager-direct report relationships, there is a greater need to have consistent, ongoing 1:1 meetings to get direct reports onboarded (O'Neil et al., 2017). This onboarding lends itself to an increased frequency of 1:1 meetings and changes the content of the meetings, including what 1:1 meeting behaviors managers may display. For example, there may be more feedback given in the beginning of a manager-direct report relationship to ensure direct reports understand their role, work objectives, and manager's expectations. Over time, direct reports begin to better understand their role and may rely less on their manager to get accustomed to their job. This difference may change the frequency and related manager behaviors of their 1:1 meetings—again, for better or worse.

Appendix J

Construct: Manager Number of Direct Reports

Variable Type: Control

Measure: Created for Study

Instructions: How many employees (including yourself) currently report to your manager?

Response Scale: Numeric

Rationale for Inclusion: Aligned with JD-R theory, the more employees a manager oversees limits the potential resources (e.g., time and energy) they can provide their direct reports, including how often they meet with them. This resource limitation can negatively affect a manager's ability to engage their direct reports through 1:1 meetings. For example, a manager with 12 direct reports would have to invest greater time and energy to meet with all of their direct reports in 1:1 meetings as compared to a manager with only three direct reports. Thus, the former manager likely meets less often and/or for shorter periods of time to ensure all direct reports get face time. Not only can this limit how often direct reports get to meet with their managers, but it also limits the amount of related manager behaviors displayed that could better engage them in their work. Contrasting this manager, direct reports of the latter manager have the potential to meet with their manager more often and for longer—giving them the opportunity to obtain more resources and/or reduce their demands to better engage in their work.

Appendix K

Construct: Relational Demography

Variable Type: Control

Measure: Created for Study Based on Previous Research (e.g., Tsui & O'Reilly III, 1989)

Instructions: Do you and your manager share the same [demographic]?

Item(s):

1) [Gender]
2) [Race/Ethnicity]
3) [Similar Age]
4) [Education Level]

Response Scale:

i. Yes (1)
ii. No (0)
iii. Not Sure (NA)

Rationale for Inclusion: Research on dyads finds that relational demography (i.e., demographic characteristics that are (dis)similar between individuals in a dyad) can influence employee attraction, interactions, and attitudes—with generally more positive outcomes for dyads consisting of similar rather than dissimilar individuals (e.g., Elfenbein & O'Reilly III, 2007; Riordan & Shore, 1997). These differences likely influence engagement as well as 1:1 meeting frequency and related manager 1:1 meeting behaviors. For example, a manager who is more similar to a direct report may feel more inclined to meet with that employee because they feel more comfortable or compelled to interact with them (Avery et al., 2007; Montoya & Horton, 2013). Demographic similarities may also influence the content and interactions of 1:1 meetings, including what behaviors are demonstrated. For example, recent research found that female employees are more likely to receive support from their manager if their manager is female as compared to male (Hatmaker & Hassan, 2021). This difference presents the opportunity for more-similar direct reports to be put in a better position to become engaged, such as by gaining increased access to resources and/or help reducing demands through such support.

Notes: Responses were summed for overall demographic (dis)similarity, ranging from 0 to 4.

Appendix L

Construct: Trust in Manager

Variable Type: Control

Measure: Trust Scale with Manager Referent (Mayer & Gavin, 2005)

Instructions: Please rate the extent to which you agree with the following items.

Item(s):

1) If I had my way, I wouldn't let my manager have any influence over issues that are important to me. (R)
2) I would be willing to let my manager have complete control over my future in this company.
3) I really wish I had a good way to keep an eye on my manager. (R)
4) I would be comfortable giving my manager a task or problem which was critical to me, even if I could not monitor their actions.
5) I would tell my manager about mistakes I've made on the job, even if they could damage my reputation.
6) I would share my opinion about sensitive issues with my manager even if my opinion was unpopular.
7) I am afraid of what my manager might do to me at work. (R)
8) If my manager asked why a problem happened, I would speak freely even if I were partly to blame.
9) If someone questioned my manager's motives, I would give my manager the benefit of the doubt.
10) If my manager asked me for something, I would respond without thinking about whether it might be held against me.

Response Scale: 5-point Likert scale: Strongly Disagree (1) to Strongly Agree (5)

Reliability: $\alpha = .86$

Rationale for Inclusion: Like relational demography, how much a direct report trusts their manager can influence their subsequent attitudes and behavior (Dirks & Ferrin, 2002). Aligned with JD-R theory, trust acts as a social resource that promotes employee engagement by providing direct reports with a source of support they can rely on (Lee et al., 2020; Wang & Hsieh, 2013). In establishing this sense of support, direct reports who trust their manager are also more likely to have more frequent 1:1 meetings with their manager. Added to their frequency, trust can also influence manager behaviors in 1:1 meetings, specifically with how behaviors are perceived. For example, direct reports who lack trust in their manager are less likely to perceive feedback received from their manager as fair and may disregard it even if it could support their engagement (Earley, 1986; Ryu & Hong, 2020).

Appendix M

1) Other 1:1 Meeting Characteristics

a. **Instructions:**

Think about the 1:1 meetings you have with your manager based on the previous definition (also below), then answer the following questions.

One-on-one (1:1) meetings are intentional gatherings (scheduled or impromptu) between a manager and their direct report to discuss shared work-related issues, focused primarily on the direct reports' work-related needs. 1:1 meetings are synchronous (i.e., face-to-face, virtual, or over the phone) rather than asynchronous (e.g., emails, text messaging) interactions.

Please rate the extent to which you agree with the following statements about the 1:1 meetings you have with your manager on average.

b. **Items:**

1. 1:1 meetings are held on a reoccurring/standing basis (e.g., weekly)
2. 1:1 meetings are scheduled in advance
3. You schedule the 1:1 meetings
4. Your manager schedules the 1:1 meetings
5. Your manager cancels your 1:1 meetings often
6. If your manager cancels your 1:1 meetings, they promptly reschedule the 1:1 meetings
7. 1:1 meetings start on time
8. My manager comes to the 1:1 meetings prepared
9. Agendas are used in the 1:1 meetings
10. 1:1 meetings address updates on action items of the previous 1:1 meeting
11. 1:1 meetings focus on your work, needs, and/or topics of interest
12. Your manager talks more in the 1:1 meetings than you
13. You talk more in the 1:1 meetings than your manager
14. Your manager takes notes in the 1:1 meetings
15. You take notes in the 1:1 meetings
16. 1:1 meetings end when you expect them to end
17. You leave the 1:1 meetings with action items for the next 1:1 meeting

c. **Response Scale:** 5-point Likert scale (1 – strongly disagree, 3 – neither agree nor disagree, 5 – strongly agree)

2) **1:1 Meeting Scheduling**
    a. What percentage of your 1:1 meetings are scheduled in advance? ____

3) **1:1 Meeting Reoccurrence**
    a. What percentage of your 1:1 meetings are reoccurring/standing meetings (e.g., held every Monday)? ____

4) **COVID-19 Differences**

    a. Since the COVID-19 pandemic began, do you meet 1:1 with your manager more, the same, or less?
        1. More
        2. Same
        3. Less

    b. Since the COVID-19 pandemic began, are the 1:1 meetings longer, the same, or shorter?
        1. Longer
        2. Same
        3. Shorter