Employee Recognition: Understanding the Construct, its Measurement

and its Relationship to Employee Outcomes

by

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Abstract

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Despite its intuitive importance to organizational management, the concept of employee recognition has received little systematic research attention. Because there is no generally accepted construct definition, different studies tend to rely on a variety of conceptualizations and measures, the latter often being developed by the researchers for that specific study. This has resulted in a sparse and disorganized collection of knowledge regarding a construct that should be an essential component of any modern organizations' HR management strategy, leaving many to rely on anecdotal evidence or passing industry trends.

The primary purpose of this research project was to establish an empirical basis on which future research could build. Using a conceptual definition put forth by Brun and Dugas (2008), a measure of employee recognition was developed and validated. Results from research involving this scale suggest it is a valid and reliable measure of employee recognition as a higher-order factor with four highly intercorrelated second-order facets. This measure can be used to predict outcomes such as organizational citizenship behaviors, organizational commitment, emotional well-being, turnover intention, perceived organizational support and self-rated job-performance.

A vignette study demonstrated that while there may be a conceptual distinction between the facets of recognition. Because they are highly correlated, it is difficult to discriminate between the facets consistently. Therefore, it may be more effective to measure recognition as a higher-order factor, as evidenced by the fact that the different dimensions tended to have similar effects on outcomes.

Finally, an eight week diary study suggested that recognition predicts between-person differences in organizational citizenship behaviors (OCB), performance and emotional well-being, as well as longitudinal within-person changes in OCB and self-rated performance. Evidence generally indicated that recognition provides unique predictive ability over transformational leadership TFL. Taken together, the results of this research project support the use of recognition as an alternative or complementary predictor of important employee outcomes.

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Employee recognition has appeared sporadically in the research literature for over three decades, receiving attention from experts aiming to identify new factors in employee performance and motivation (Godkin, Parayitam & Natarajan, 2010; Magnus, 1981;), as well as those interested in effective leader-follower relationships (Luthans, 2000). More recently, recognition has been acknowledged as an integral aspect of psychologically healthy workplaces (Grawitch, Gottschalk & Munz, 2006). Not surprisingly, research also indicates that employees consider personalized recognition for the work they do to be an integral part of the rewards they receive at work (Luthans, 2000). Employee recognition is widely recognized as an essential part of effective human resource management. However, results from a survey of 312 North-American managers in the public sector showed that while the vast majority agreed on the importance of recognition programs, barely half of them reported the existence of formal employee recognition strategies in their own organizations (Saunderson, 2004).

In an influential review, Grawitch, Gottschalk and Munz (2006) identified 5 categories of healthy workplace practices: work-life balance, employee growth and development, health and safety, recognition and employee involvement. While some of these areas have received a considerable amount of research attention (ie: work-life balance, health & safety, employee development), relatively little research has focused exclusively on employee recognition (see Tetrick & Haimann, 2014 for an overview). This lack of research, along with the general absence of a clear conceptual definition of

employee recognition has resulted in a somewhat vague and disconnected collection of work on the subject, considerably limiting our understanding of why and how recognition affects key individual and organizational outcomes (Brun & Dugas, 2008).

Goals of the Current Research Project

Given the lack of systematic research into employee recognition, my goal with this thesis project was to help contribute to a conceptual base upon which future research could build. One of the first issues I aimed to address was that of conceptual measurement. Because recognition can be defined in a number of ways, researchers tend to measure recognition in different ways, making it difficult to integrate various research findings. Thus, the first goal of this project was to develop a scale of employee recognition that could be used by future researchers. While recognition programs may include financial incentives (i.e.: bonuses), non-financial awards or public recognition (Tetrick & Haimann, 2014), I chose to focus on interpersonal recognition coming from an employee's supervisor. Immediate leaders tend to be in a unique position to provide recognition to employees because they have a formal position that allows (and may even require) them to recognize individual contributions. While peers can be an important source of recognition, they may lack the formal authority to provide recognition on a regular basis. The organization and general public can also be important sources of recognition, but given their considerable social distance from the individual, they may not be able to provide frequent individual recognition. Immediate leaders have both the formal authority and social proximity to individual employees. This helps make leaders a key source of recognition to research.

The development of this scale also allowed me to investigate the factor structure

of recognition (as measured by the scale). Gaining a better understanding of the measurement structure of recognition could have substantial implications for how organizations and leaders develop recognition programs, as well as how professionals in the organizational consulting field approach the subject of employee recognition.

Next, my goal was to investigate the specific outcomes of recognition. While it seems intuitive to think that recognition will be associated with positive outcomes such as motivation, satisfaction and commitment, the relatively sparse amount of existing research leaves both organizations and practitioners wanting in terms of understanding what the exact effects of recognition are, as well as how exactly these effects come to be. Given my focus on recognition from one's leader, it was necessary to assess the relationship between recognition and other key leadership attributes that are already well established in the organizational literature (ie: transformational leadership).

Employee Recognition as a Social Exchange

Of course, employee recognition is not a replacement for salaries and other financial incentives. Employment is, after all, a transactional relationship where individuals exchange time, effort and expertise for money and other benefits. However, the employment relationship must also be recognized as a social exchange between individuals and organizations, often represented by an employee's immediate leader. Underlying this social exchange is the norm of reciprocity, which is one of the most actively studied rules of social exchange (Colquitt et al., 2013). Simply stated, individuals who are treated fairly by another person or entity will usually feel compelled to treat that person (or entity) fairly in return (Blau, 1964).

Reciprocity is of central importance to understanding employee recognition

since it lies at the root of the bi-directional relationships employees share with their

supervisors and organizations (Brun & Dugas, 2008). When employees dedicate time

and effort to completing a job, they are, in a sense, investing resources into these

relationships. In return, they expect certain tangible outcomes such as fair pay and

benefits. Employees also expect their employer to reciprocate with a number of

intangible resources in exchange, such as a safe work environment and respect, for

example. When organizations provide these, employees may feel a desire to reciprocate

in turn with sustained effort and commitment to the organization. Once such exchanges

begin, they can develop into self-sustaining cycles where one party's actions elicit a

positive reaction from the other, which in turn elicits another positive reaction in the

initial party (Cropanzano & Mitchell, 2005). In other words, when two parties respond

to each-other's actions with appropriate, mutually beneficial behaviors, a high quality

relationship often develops.

Given the importance of non-financial resources and of reciprocity in the

context of employee recognition coming from the immediate leader, Social Exchange

Theory (Blau, 1964) is one of the best-suited theoretical frameworks for research into

how the actions of organizations and supervisors produce a sense of social obligation in

employees (Wayne et al., 2002). However, the mechanisms through which these social

obligations are created remain somewhat uncertain. As Social Exchange Theory (SET)

has been used to delve into workplace relationships, it has become apparent that certain

events in the workplace give rise to what have been termed *social exchange*

relationships which in turn shape future interactions, as well as individual attitudes and

behaviors (Cropanzano, Byrne, Bobocel & Rupp, 2001).

Although there has been a limited amount of coordinated research focusing directly on employee recognition, much can be inferred from our knowledge of related constructs, such as organizational justice. Following a number of influential meta-analyses around the turn of the century (e.g.: Cohen-Charash & Spector, 2001; Viswesvaran & Ones, 2002) and a subsequent onslaught of research, Social Exchange Theory (SET; Blau, 1964) has emerged as one of the primary theoretical contexts within which to understand how justice affects such individual outcomes as turnover intention and organizational citizenship behaviours (OCB) (Cropanzano & Mitchell, 2005). In fact, some would argue that SET is "among the most influential conceptual paradigms for understanding workplace behaviours" (Cropanzano & Mitchell, 2005, p. 874). According to SET, different social parties exchange various types of resources based on certain rules or norms (Colquitt et al., 2013). These resources can be economic (ie: money) and socio-emotional (Foa & Foa, 1974; 1980). Socio-emotional resources tend to be largely symbolic in nature and tend to nurture the individual's sense of self-esteem (Cropanzano & Mitchell, 2005). They are particularly relevant to employee recognition, since the social exchanges between employees and their supervisors are not typically based on economic resources. When supervisors take the time to recognize an employee's accomplishments or positive attitude, they are in effect providing certain socio-emotional resources (appreciation, public recognition, etc.) that help sustain a positive sense of self-esteem in employees.

Based on the norm of reciprocity, employees who perceive their supervisor as investing resources into their interpersonal relationship will seek to return the favour with other socio-emotional resources, such as sustained effort, positive workplace

behaviours, or loyalty. This provides supervisors with an opportunity to renew the exchange cycle by reciprocating with further recognition and appreciation. At each step of the process, one party's action elicits a reaction from the other. As long as these reactions are positive and appropriate, the cycle is self-reinforcing in nature (Cropanzano & Mitchell, 2005). In the context of organizational justice, employees who feel they are being treated fairly by their organization may similarly reciprocate with improved task performance and organizational citizenship behaviours (OCB). Similarly, employees who feel their contributions are being adequately recognizes could be expected to behave in a similar way. While we are at a relatively early stage in researching employee recognition, it appears that Social Exchange Theory can provide an informative context within which to interpret the effect of recognition on important individual and organizational outcomes.

The Importance of Employee Recognition

Despite the inherent limitations in the existing literature, a quick overview of existing work suffices to demonstrate the importance of employee recognition in modern organizational life. As work continues to play a more important role in how people define themselves and the lives they lead, the perceived value of this work impacts not only their sense of identity, but also their overall well-being. It thus follows that individuals use both internal and external information in ascertaining the value of their various contributions. In this sense, employee recognition is an important form of (positive) feedback, providing key information to employees regarding successful performance of both in- and extra-role behavior. While employee recognition can take numerous forms, one of the uniting features of the variations is the fact that recognition

communicates to the individual that they are valued by their colleagues, leader, and / or organization (Tetrick & Haimann, 2014). The role of recognition as a form of feedback will be further discussed in a following section.

Recognition and Motivation. Information regarding the value of an individual's contributions has an impact on a variety of outcomes. One of the most important individual outcomes driving organizational interventions is motivation. The need to sustain a motivated workforce drives substantial financial and research investment. In fact, it could be argued that one of the driving forces behind the field of Organizational Psychology is the desire to achieve increased levels of performance through motivation. Employees' level of motivation will increase when they feel that they, as individuals, together with the work they do, are valued by others (Amabile & Framer, 2007). This highlights the importance of employee recognition as a primary source of information regarding the value of an employee's contributions to the organization. Feeling that one commands respect and esteem from others is a central element in Maslow's (1943) hierarchy of needs. Thus, it follows that leaders and organizations who take the time to communicate this esteem to employees help increase motivation by creating an environment that satisfies a key human psychological need. The notion that psychological needs drive workplace performance has drawn considerable research attention over the last 30 years, helping to shift focus away from the purely financial or material motivators that organizations have relied on for so long.

Of course, the motivational role of employee recognition should come as no surprise, since this is the underlying reason organizations invest in developing employee recognition programs. Empirical research has consistently demonstrated that

employee recognition is associated with higher levels of employee engagement, motivation and satisfaction (Krueger et al., 2002; Siraz, Rashid & Riaz, 2011). In fact, a meta-analysis by Stajkovic and Luthans (2003) involving roughly 70 studies provides clear support for the idea that recognition in the form of financial rewards, positive feedback and social recognition is linked with increased levels of job performance. Perhaps not surprisingly, employees who feel their contributions are recognized also tend to experience higher levels of job-satisfaction, another key outcome in organizational research (Kooij, Jansen, Dikkers & De Lange, 2010).

Self-determination theory (SDT) is an important theory of motivation that recognizes that humans are active, growth-oriented beings (Deci & Ryan, 2000). One of the primary contributions of this theoretical approach to motivation is the fact that it draws a clear conceptual link between employee motivation and psychological well-being, arguably two of the most important individual outcomes in organizational research. This theory focuses on three innate psychological needs: competence, autonomy and relatedness, which are critical for achieving intrinsic motivation and healthy psychological functioning (Ryan & Deci, 2000). According to Ryan and Deci (2000), a basic need is "an energizing state that if satisfied, conduces toward health and well-being but if not satisfied, contributes to pathology and ill-being" (p. 74). Because of its emphasis on human flourishing, and its well established usefulness in understanding mental health and motivation, self-determination theory provides an interesting theoretical framework within that to understand the effects of employee recognition.

Recognition is closely related to the fundamental psychological need for

competence stipulated in Self-Determination Theory (Ryan & Deci, 2000). Individuals

whose work allows them to feel competent will be more intrinsically motivated by this

work, which will lead to higher levels of performance. As noted above, recognition

plays a key role in providing information to individuals about their contributions,

thereby bolstering feelings of competence. This provides leaders with a great

opportunity to foster motivation in employees by identifying specific examples of

competence and communicating these back to the individual.

Another key motivating force according to SDT is the need for relatedness

(Ryan & Deci, 2000). Individuals tend to be more intrinsically motivated to engage in

activities that make them feel related to others. In a way, recognition helps to achieve

this by making employees feel that they are valued by others in their organization. The

need for relatedness represents an innate need to be "securely connected to and

esteemed by others, and to belong to a larger social whole" (Ryan & Stolky, 1996, p.

251). By helping to foster a healthy relationship between supervisor and employee,

recognition helps the individual to feel that their work connects them to others, as well

as their organization, that is often most directly represented by the immediate leader.

Thus, there appears to be a considerable theoretical basis for the motivational benefits

of employee recognition.

Recognition and Psychological Well-Being. A lack of recognition may also

place employees at greater risk of experiencing psychological distress (Ryan & Deci,

2000; Brun et al., 2003). As noted above, recognition helps to satisfy key psychological

needs such as the need for competence and relatedness that allow individual

psychological health to flourish. A number of studies linking recognition to

psychological well-being have also used the framework of Job Demands-Resources (JDR; Bakker & Demerouti, 2007), which states that employees' jobs require them to invest certain physical, psychological and social resources (see Tetrick & Haimann, 2014 for a more in-depth discussion of recognition & JDR). Because these resources are finite in nature, individuals who expend their physical / mental energy to meet the demands of their jobs may find themselves feeling depleted. Conversely, individuals also have a number of resources at their disposal via their job, which enable them to manage the demands of their work successfully. While job-demands deplete an employee's physical and psychological energy, these resources help to replenish the individual, fostering heightened levels of motivation and well-being (Bakker & Demerouti, 2007). Employee recognition represents an important resource that helps provide positive information regarding an individual's contributions. This recognition communicates to the individual that they are making meaningful contributions and that these contributions are valued by others. This represents an important form of psychological resource that may help individuals to better deal with the stress arising from their work.

In one study, employees who received recognition in the form of appreciation and / or bonuses tended to experience lower levels of psychological distress (Gelsema et al., 2005). Research has also demonstrated that individuals who are adequately recognized for their contributions experience a lower level of emotional exhaustion (Macky & Boxell, 2008). Thus, it appears the key benefits of employee recognition are two-fold, affecting motivation (thereby leading to increased performance) as well as fostering psychological well-being in employees. Of course, additional research is

needed, since results in some studies have not been consistent with the expected

patterns. For example, Grawitch, Trares, and Kohler (2007) found a positive

relationship between employee recognition and emotional exhaustion (these results will

be further discussed later).

Recognition as a Form of Positive Feedback

As previously noted, recognition is a form of positive feedback as it is

inherently a (positive) value judgement about some aspect of an employee's workplace

contributions. Like feedback, the ideal form of recognition should be based on specific

behaviors or characteristics, clearly identifying the desired contribution that is, in a

sense, being rewarded with recognition. Although recognition need not include an

explicit statement of thanks, it necessarily involves an acknowledgement and

appreciation of an individual's work. Thus, within a behavioral context, employee

recognition can be understood as a consequence of an individual's behavior or, in some

cases, characteristics and other contributions.

More specifically, recognition can be understood within the context of operant

conditioning (Skinner, 1953). According to this perspective, associations are created

between certain behaviors and their outcomes or consequences. Individuals are

motivated to perform behaviors for which they have been rewarded in the past and will

avoid engaging in behaviors that have previously led to punishment. When certain

behaviors are recognized by one's colleagues, leader or organization, these behaviors

become more likely to re-occur. As such, recognition is an important way that leaders

can motivate employees to continue engaging in positive behaviors that generate

meaningful contributions to the organization.

Effective feedback should be delivered as soon as possible after the relevant event. The issue of timing has substantial implications for the effectiveness of many recognition programs. In many cases, recognition is provided after a considerable delay (ie: yearly bonuses, annual awards, etc.). While these types of recognition may nonetheless be much appreciated by individuals, it is feasible that their effect may be diluted by the delay between the actual behavior and the recognition for the behavior. This especially highlights the value of interpersonal feedback from immediate supervisors (the primary focus of this research project) since supervisors tend to be in a unique position that allows them to observe desired behavior and administer feedback immediately. Thus, training leaders to effectively recognize opportunities to provide recognition is crucial if individuals are to be recognized with relative immediacy.

The Construct of Employee Recognition

Despite a growing interest over the past decade, our understanding of employee recognition and its effects is still quite restricted. For example, as a central component of healthy workplace practices, employee recognition programs would be expected to have a positive effect on individual well-being, performance and related organizational outcomes. However, results have been mixed. In one study of healthy workplace practices, satisfaction with employee recognition programs had a positive correlation with organizational commitment ($r = .39$, $p< .05$) and a negative correlation with turnover intentions ($r = -.23$, $p< .05$), as would be expected of any healthy workplace practice (Grawitch, Trares, & Kohler, 2007). However, it also had a positive correlation with emotional exhaustion ($r = .22$, $p< .05$). Furthermore, the relationship between recognition and turnover intention became positive when other predictors were included

as part of a regression analysis, indicating suppression effects for the recognition-turnover intent relationship. However, when employee involvement (arguably the most important component of all healthy workplace practices; Grawitch et al., 2009) was removed from the regression analysis, the suppression effects on employee recognition disappeared. These results highlight the need for caution when implementing employee recognition programs since these may have a negative impact on employee well-being in some cases. This also suggests that employee recognition programs may backfire when organizations fail to involve employees in the development process. Further, a reliance on recognition programs that focus on financial rewards and other incentives may foster competition between employees or departments and often have a negative impact on morale and performance (Grawitch, Trares, & Kohler, 2007).

Such results demonstrate the importance of taking into account the social nature of the employment relationship. In the contemporary work context, employees engage in both social and economic exchanges with their organizations. A study of 181 aerospace employees found that economic exchanges did not directly predict any employee performance outcomes, while social exchanges were significantly related to tardiness (r = -.23, p< .05), absences (r = -.17, p< .05), organizational citizenship (r = .22, p< .05) and overall performance (r = .28, p< .05) (Shore, Tetrick, Lynch & Barksdale, 2006). Thus, it appears that organizations wishing to improve performance and employee well-being need to go beyond economic rewards to include more social manifestations of employee recognition.

The confusing statistical relationship between employee recognition and other important factors noted above may also be indicative of a higher-order problem with

the construct (or lack thereof) of employee recognition. Although employee recognition appears to be an intuitive subject, its true complexity quickly emerges as we reflect on what it means to recognize employees. *What exactly is being recognized? Who is being recognized? Who should do the recognizing?* Such questions deserve careful consideration since each pertains to a different aspect of employee recognition. Following a systematic review of the research examining these questions, Brun and Dugas (2008) provided a conceptual framework that encompasses the multi-dimensionality of employee recognition, while also establishing a functional definition:

> Recognition is first and foremost a constructive response; it is also
> a judgement made about a person's contribution, reflecting not just
> work performance but also personal dedication and engagement.
> Lastly, recognition is engaged in on a regular or ad hoc basis, and
> expressed formally or informally, individually or collectively,
> privately or publicly, and monetarily or non-monetarily.

Brun and Dugas, 2008, p. 727

The Object of Recognition

The above definition of recognition reflects an important lesson that has been learned over the years: employee recognition goes well beyond simply giving rewards for reaching specific targets. Brun and Dugas (2008) identified 4 sub-dimensions, each representing a different *object* of recognition (what is being recognized): the *personal* dimension (recognizing the employee as an individual), the *achievement* dimension (recognizing the results of the employee's performance*),* the *work performance* dimension (focuses on <u>how</u> someone does their job) and, finally, the *job dedication* dimension (how committed / loyal an employee is to their job or organization) (Brun & Dugas, 2008).

Personal Recognition. This involves recognizing that every employee is an individual human being who deserves to be treated with respect and dignity (Brun *&* Dugas, 2008). A key aspect of this dimension is making the individual feel that they matter. It also involves taking each individual's unique abilities and needs into account. This type of recognition can be demonstrated by treating employees respectfully, keeping them informed of what is going on in the organization and by assigning them tasks that match their capacities and allow them to grow as individuals (Brun & Dugas, 2008). For example, an employer who asks an employee with a sick child at home to work late is failing to recognize an important personal need. Conversely, a supervisor who makes certain accommodations for vegetarian or diabetic employees at a department lunch is communicating their recognition of certain individual needs. Such recognition is likely to make the employee feel supported and to foster strong emotional

bonds. Treating individuals with fairness and respect elicits reciprocal behaviours that help strengthen the relationship between an organization and its employees.

Recognition of Achievement. This is probably the most widely-known dimension. It involves recognizing the tangible outcomes or products of an employee's work. For example, supervisors may recognize instances when an employee meets or exceeds a production target by making a public announcement congratulating the employee. Such instances of recognition communicate to the employee that their achievement has been noticed and that this contribution is valued by others. Like all other dimensions of recognition, this provides information that is essential in helping employees evaluate the value of their work, and of themselves, to the rest of their organization. Employees who feel that the results they achieve go unnoticed could simply stop investing as much effort into work they feel serves no purpose for the organization. From a purely behavioural standpoint, the pleasant experience of recognition becomes a reward for achieving results. When this reward is absent, the behaviours leading to the results may gradually become extinguished. While it is important to recognize the results employees achieve, focusing exclusively on these can foster jealousy and unhealthy competition among employees (Brun & Dugas, 2008). As such, the recognition of results should be but a part of a more holistic approach to employee recognition.

Recognition of Work Performance. This dimension focuses on *how* an employee does his or her job, as opposed to the results of their work. It is important to recognize the training, skills, expertise and professional qualifications that allow an employee to perform his or her job (Brun & Dugas, 2008). Along similar lines, an employee who has advanced training in information technology should be recognized as possessing a valuable set of skills and expertise and these should be put to optimal use. If this employee is relegated to changing user names and passwords all day, he or she will certainly feel that the employer is failing to recognize certain key aspects of what the employee has to offer. Again, with a holistic approach to recognition in mind, it is essential that employees feel that their inputs do not going unnoticed. Although concrete results are certainly important for the bottom line, it is also important to pay attention to all the individual factors that drive an employee's performance, not simply those that result in achieving performance targets.

Recognition of Dedication. Since a large number of personal and environmental factors may contribute to the results an employee achieves, there are many instances where diligence and perseverance do not guarantee a positive outcome. The fourth dimension, recognition of an employee's job-dedication, focuses on factors that help drive an employee's performance such as commitment, loyalty and effort. This dimension goes well beyond simply rewarding seniority within an organization. The effort and dedication required to perform a job often go unnoticed by supervisors and organizations (Brun & Dugas, 2008). The same can be said about persistent effort in sometimes harsh working conditions, including rough weather, dangerous working environments, and difficult customers to deal with. Individuals who invest time and

effort - essential parts of themselves – expect to see their inputs recognized. For example, an employee who works hard to develop and propose a novel strategy that is not retained in the end should nonetheless be recognized for the effort and ingenuity they have shown. Conversely, an employee who must spend a day out in the rain fixing a piece of machinery will feel unappreciated if their perseverance goes unnoticed.

At this point, it is worth noting that Brun and Dugas (2008) do not seem to overtly include organizational commitment, in its widely-used sense, as part of the job-dedication dimension. The latter dimension focuses more on effort and perseverance, while organizational commitment refers more to an employee's lasting investment of themselves into a relationship with the organization. Given its importance to organizational outcomes (Tett & Meyer, 1993; Meyer et al., 2002), it seemed that recognition for organizational commitment should be included in the broad conceptualization of employee recognition. As such, the measure of recognition included items pertaining specifically to recognition of organizational commitment.

While these dimensions may be inter-related, they nonetheless appear to possess sufficient conceptual independence to represent distinct facets of employee recognition. For example, an employee who surpasses production targets may also have been performing their job with significant effort and have been employing effective and innovative techniques. This employee could thus be recognized for his/her achievement, work performance or job dedication, or a combination of each. Despite this relationship, the communication of recognition for achievement will not be the same as for recognition of job-dedication. As of yet, there appears to be no empirical investigation of the factorial structure of employee recognition. Thus, the primary goal

of this research program was to develop a measure that would allow for this type of research to proceed.

Recipient and Source of Recognition

A second important aspect to consider is the *recipient* of the recognition. While this aspect of recognition is not directly related to the empirical research project at hand, it nonetheless remains an integral aspect of recognition that must be taken into consideration. Employees may receive individual recognition, or recognition as part of a team, department, or as an organization. Thus, while employees in a department may receive sufficient recognition as a whole, the individual employees may not be satisfied with the amount of individual recognition they receive. These are important nuances for organizations to consider, since relying exclusively on common practices such as an employee appreciation breakfast, while pleasant, may fail to generate the feelings of recognition that can help drive employee motivation, commitment and well-being. In order to facilitate the development and validation process, the scale in this project focused specifically on individual-level recognition.

Source of Recognition. Brun and Dugas's (2008) proposed framework also includes the nature of the recognition relationship. According to these authors, these interactions can take a number of different forms, such as horizontal (recognition between peers) or vertical (recognition from supervisors or company CEO), to name but a few. While the nature of the interaction is important to take into consideration, it may be more practical to consider the source and recipient of recognition as two separate sub-factors of employee recognition. The various combinations of source and recipient represent each interaction type described by Brun and Dugas (2008), but

provide further measurement specificity that stands to benefit researchers and practitioners alike.

Recognition can come from a number of sources including co-workers, subordinates, supervisors, the organization's leadership, and even society as a whole (Brun & Dugas, 2008). For example, an individual who works for a debt-collection agency may feel they receive adequate recognition from their supervisors, but may be dissatisfied with the recognition they garner from society, which may impact their well-being and turnover intention. Although the source of recognition has been taken into consideration in some studies (ie: Godkin, Parayitam & Natarajan, 2010), relatively little research has focused on the specific impact that different sources have on individual perceptions of employee recognition.

Supervisor Recognition. Given the importance of social proximity to the source of recognition, it seems reasonable to focus on recognition from employees' immediate supervisors, since they are often in the best position to observe employees and provide recognition for meaningful contributions (Godkin, Parayitam & Natarajan, 2010). As such, the measure focused on individual perceptions of supervisor recognition for each of the four dimensions described above. Because monitoring an employee's performance is part of a supervisor's job, they are particularly well suited to provide recognition for various aspects of an employee's performance. Colquitt et al. (2013), outline a number of reasons why supervisor justice may be more influential than organizational justice for certain outcomes, all of which can easily be applied to employee recognition. First of all, recognition from a supervisor may be perceived as more discretionary than organizational recognition (which will tend to be more

impersonal and formalized). Second, recognition from supervisors may be more salient

and available to employees than organization-level recognition. Finally, employees tend

to perceive their supervisors as representatives of the organization (Eisenberger et al.,

2010). As such, recognition from the supervisor likely guides employee perceptions of

the organization-level recognition.

Having briefly introduced only three aspects of employee recognition (i.e.,

source, recipient, object), we can already see just how complex this construct is. While

this is merely speculative, employee recognition could generally be understood as a

hierarchical structure consisting of a single higher-order employee recognition factor at

the apex. In the second level of the hierarchy are 4 facets representing the *object* of

recognition, while the third level contains the sub-dimensions representing the *recipient*

of recognition, and, finally, the base of the pyramid, representing the *source* of

recognition.

Figure 1. Conceptual levels of employee recognition
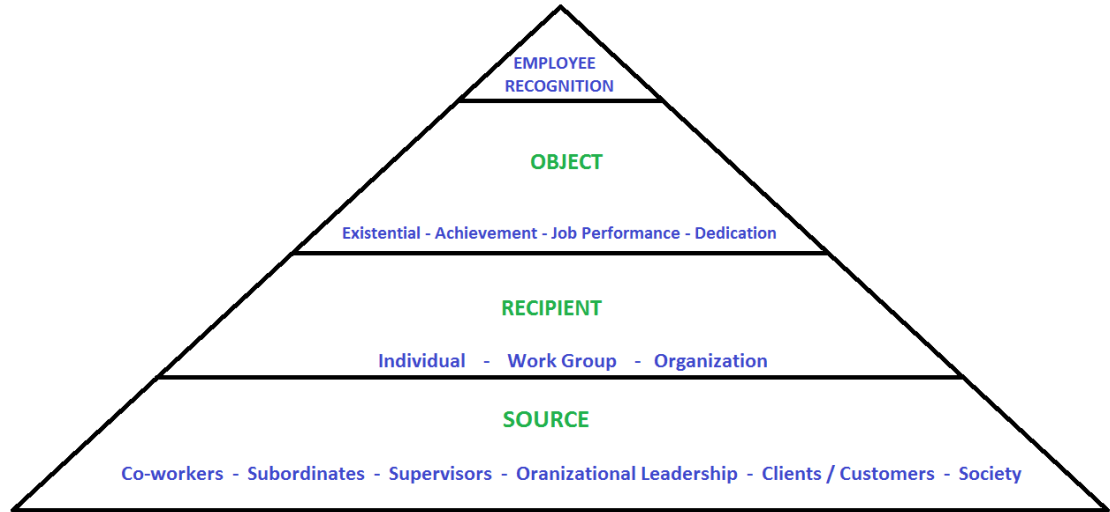
Study 1a: Scale Development

One of the main goals of this research project was to develop a measure of recognition that could be used by researchers. It was my hope that the use of a common measure would allow for a better integration of future research, thereby leading to a more solid body of knowledge on the construct of recognition. As we have already seen, recognition can come from a variety of sources (ie: colleagues, supervisors, senior leaders, etc.), be directed at a variety of recipients (ie: individual, team, organization, etc.) and recognize a variety of objects (person, achievement, work process and dedication). It can even take various forms (tangible vs. interpersonal). Because of the inherent challenges in developing a practical survey that could be used in research and would encompass all of these aspects, it was necessary to narrow the scope of the survey. As such, the survey was specifically designed to assess recognition received by an individual from an immediate supervisor.

Because of the relatively close social proximity which most workers have with their immediate leaders, the actions of these leaders have a substantial impact on employee outcomes. This level of interaction should thus be of interest to researchers hoping to understand how individual recognition impacts outcomes such as motivation, job-performance and employee well-being. Further, this is an important aspect of recognition since immediate leaders are in a unique position to deliver recognition on a regular basis. The survey specifically assessed interpersonal examples of recognition rather than financial recognition or rewards. Although tangible rewards are an important incentive for job performance, and while the impact of financial forms of recognition certainly deserves attention, especially given advances in fields such as behavioral

economics, this aspect fell outside the scope of this research program. Given the current

focus on Social Exchange Theory, interpersonal forms of recognition seemed more

directly linked to the theoretical basis of this research project. Therefore, this survey

would best be suited to research investigating recognition in the context of an ongoing

relationship, playing an integral part in fostering positive exchanges between

individuals and their leaders. Items in the survey were written to assess the extent to

which individuals felt that they were recognized by their immediate leaders.

Method

Scale Development

Using the descriptions of each dimension of employee recognition provided by

Brun and Dugas (2008), a pool of items was developed as the preliminary version of the

scale. Items were written to assess different aspects of each facet of recognition

described earlier: Personal, Achievement, Work Performance and Dedication. A total of

28 items were written (7 assessing each facet). These were written in such a way that

individuals could respond by rating their level of agreement with a statement about

their interactions with their immediate supervisor. For example, recognition of

dedication could be assessed by items such as "My supervisor acknowledges my loyalty

to our team / department" or "My supervisor takes the time to thank me for the amount

of effort I put into my work."

Sorting Task

These items were submitted to a sorting task by a group of 5 subject-matter experts (graduate students in Industrial / Organizational Psychology). At this time, items assessing recognition of commitment were not yet included in the scale, however an item was later included to assess this since it seemed to be an integral aspect of recognition for one's dedication. The SMEs were asked to read each item (which had been placed in random order) and indicate which facet of recognition seemed to be most closely related to the item.

Result of Sorting Task

Results from the sorting task appear in *Appendix C* and generally supported the content of the developed items. It had been decided that any item which was sorted into the wrong category by 3 or more raters would either be deleted or significantly modified. Based on these results, which appear in Table 1 below, three items were dropped from the survey and slight modifications were made to other items in order to clarify the wording. Following the review and modification of the initial items, 25 items remained, assessing 4 facets of recognition. All of these items consist of statements regarding personal experiences of recognition and respondents' level of agreement is rated according to a 7-point Likert-type scale.

A possible limitation to the results of the sorting task is that instructions included the possibility of sorting items into 5 categories, one representing each facet, and one representing a more global level of recognition. This global category was not

included in the final survey. However, certain sorters did judge that some of the items

fit this general category. As such, this may have taken away from the accuracy of the

overall sorting task. Nonetheless, most items which were retained achieved a

considerable level of consensus.

Table 1.

Results from item sorting task

Dimension A:	Personal
AAAAA	I am respected as an individual person by my supervisor.
AAACE	My supervisor keeps me "in the loop" (informed) of what is going on in our department / organization.
AAAAA	My personal well-being is important to my supervisor.
AAAAA	My supervisor routinely exhibits acts of civility (ie: saying hello, thank you, etc.) towards me.
AAAEE	My supervisor makes me feel that I matter *to our team / department.*
ACCCC*	My supervisor allows me to make decisions with regards to *how I do my work.*
Dimension B:	Results
BBBBE	I receive congratulations from my supervisor when I reach specific goals.
BBBEE	My supervisor takes time to publicly acknowledge my successes.
BBBBB	My supervisor provides incentives, bonuses or other rewards for outstanding performance.
BBBEE	My supervisor sends emails / notes highlighting my achievements.
BBBEE	My supervisor personally comments on my successes at work.
BBBBB	The results of my work are noticed by my supervisor.
BBBBB	I receive praise from my supervisor when I successfully reach performance goals or other targets.
Dimension C:	Work Performance
CCCDC	My supervisor notices the *diligent* work I do.
CCCCC	My supervisor acknowledges my professional training and qualifications.
CBEEE*	My supervisor lets me know when I am *doing a good job.*
CCCCC	My supervisor assigns me work that *fits* with my level of qualification.
CCCCA	My supervisor is aware of my abilities and makes good use of these.
BBBEE*	I sometimes receive personal messages or emails from my supervisor highlighting the quality of the work that I do.
CCCCC	My supervisor appreciates my skills and knowledge.
CCCCC	My supervisor comments on the level of professionalism I exhibit.
Dimension D	Dedication
DDDDE	My supervisor expresses gratitude for my loyalty.
DDDDD	My hard-work and dedication are noticed by my supervisor.
DDEEE*	My supervisor has initiated a round of applause to commemorate the time and effort I have dedicated to a specific task or project.
DDDDC	My supervisor makes remarks about the amount of perseverance I show at work.
DDDEE	My supervisor has sent emails / notes highlighting my dedication and tenacity.
DDDDA	My supervisor acknowledges my ideas and effort, even when these do not necessarily lead to successful results.
DDDDD	My supervisor comments on the amount of effort I put into my work.
Not included in item sort	My individual needs and characteristics are taken into consideration by my supervisor.

*Items removed or modified following sorting task due to lack of consensus

Note: E = represented other overall recognition dimension which was not included in the scale

Study 1b: Survey Validation Study

This study was conducted to test the factor structure of the recognition scale, as well as its psychometric properties and its relationship with measures of transformational leadership, leader-member exchange (LMX), commitment, self-reported OCB and emotional well-being. Based on Brun and Dugas' (2008) proposed definition of employee recognition I expected a structure consisting of a higher-order recognition factor with four distinct second-order factors representing the four proposed facets of recognition. Thus, while various aspects of an individual's contribution can be recognized, all of these contribute to a global impression of recognition. This is similar to the originally proposed factor structure of the Multifactor Leadership Questionnaire (MLQ; Avolio & Bass, 1999), a widely used measure of leadership. The structure of the MLQ is generally thought of as containing 3 correlated higher-order factors with 6 second-order factors. One of these higher-order factor in the MLQ, transformational leadership, is assessed by three lower-order factors (charisma, intellectual stimulation, individualized consideration). I expected to find a similar structure for recognition, with a single higher-order recognition factor being assessed through 4 second-order factors representing recognition of the individual, achievement, work performance and dedication.

In one of the original applications of the term "transformational leader", Burns (1978) contrasted transactional leaders (those who approach their relationship with followers with a quid pro quo attitude) from transformational leaders who cultivate relationships based on mutual engagement and development. In this sense, transformational leaders foster the growth of individuals. Recognizing individual

contributions provides these individuals with guidance and positive feedback, which makes recognition a key aspect of fostering growth. It is thus no surprise that highly effective leaders recognize individual employees regularly. In fact, individual consideration is an essential component of transformational leadership (TFL). This includes (but is not limited to) providing recognition to the individual for their contributions through personal attributes, achievements, work ethic / style and dedication. Individual consideration refers to "understanding the needs of each follower and work(ing) continuously to get them to develop to their full potential", which extends beyond recognition behaviors (Avolio, Bass & Jung, 1999, p.444). Thus, while transformational leadership certainly involves recognizing each individual's contributions, recognition and TFL should be seen as two conceptually distinct constructs, although they are likely highly correlated because of both conceptual overlap and the fact that leaders who tend to engage in recognition will likely tend to engage other transformational behaviors as well. As such, I hypothesized that I would find a strong positive correlation between recognition and TFL. To what extent these concepts were statistically distinct was of interest, although it would have been premature to hypothesize about the nature of this relationship beyond the fact that a strong positive correlation was expected.

LMX theory rests heavily on the notion that leaders pay particular attention to certain employees based on their appraisals of these individual (Scandura & Graen, 1984). In high exchange dyads, "the superior can offer outcomes of increased job latitude, influence decision making, open communications, support of the member's actions, and confidence in and consideration for the member. The member can

reciprocate with greater availability." (Scandura & Graen, 1984, p.428). The ongoing

nature of the relationship is central to LMX. When employees make certain

contributions, the leader responds in a variety of positive ways. One of the components

of LMX that was noted above is confidence in and consideration for the individual

(treated as a single component in the description). This is the component which is

conceptually closest to recognition since individuals who make certain contributions are

rewarded with an awareness (consideration) of and positive outcome (confidence) for

this contribution. However, it is again important to note that the description of leader

behaviors in LMX noted above goes well beyond employee recognition. Again, there

appears to be overlap between recognition and LMX both in terms of conceptual

definition since leaders who recognize individual employees are engaging in high

quality exchanges with employees, and statistically, since individual leader who

recognize employees will likely also receive high scores on LMX. As such, individuals

reporting higher levels of employee recognition from their supervisor were expected to

report correspondingly higher levels of LMX (i.e.: a strong positive correlation).

An individual's immediate leader is also an important representative of the

organization as a whole. As such, leaders are in a unique position to recognize

individual contributions. If individuals feel that these contributions are not being

recognized, they may feel less committed to the leader and the organization. Previous

research by Grawitch et al. (2007) demonstrated that recognition had a correlation of

0.39 ($p < .05$) with commitment. Thus, I hypothesized that employees who experienced

higher levels of recognition would report higher levels of commitment to the

organization. Commitment generally consists of three sub-dimensions, namely affective

commitment, normative commitment and continuance commitment (Allen & Meyer, 1996). Affective commitment refers to the fact that individuals who feel an emotional connection to their organization, its goals and its values are more likely to remain with the organization, rather than leave to seek employment elsewhere. The affective aspect of commitment should not be understated, since affect plays a significant role in the leader-follower relationship according to social-exchange theory (Colquitt et al., 2013). When employees feel that their contributions are being recognized, they are more likely to experience a positive emotional state. Therefore, I hypothesized that recognition scores would have a moderately high correlation with affective commitment. Normative commitment implies that an individual remains with an organization because it is the right thing to do (Allen & Meyer, 1996). Again, the reciprocal nature of the relationship between an individual and their leader or organization is essential to this dimension of recognition. As such, I hypothesized that individuals who reported higher levels of recognition would also report experiencing higher levels of normative commitment. Finally, continuance commitment refers to situations where individuals remain with their organizations because they have no suitable alternative elsewhere, or because the costs associated with leaving the organization would be too high. Because individuals who feel they are recognized will tend to have a strong psychological bond with their leaders and organization, continuance commitment is unlikely to play a strong role in retaining the individual. As such, I expected a moderate negative relationship between recognition and continuance commitment. A significant negative correlation in this case would also provide support for the divergent validity of the recognition scale, since scores on the scale would have a positive relationship with 2

dimensions of commitment, but a negative relationship with the continuance dimension.

Given the above stated connection between recognition levels and commitment, I also expected individuals who experienced low levels of recognition to have a higher likelihood of intending to leave the organization, possibly due to feelings that their contributions are not being adequately recognized.

One of the key outcomes of interest in Colquitt et al.'s (2013) model is organizational citizenship behaviors (OCB). These types of extra-role contributions are intricately tied to the social-exchange framework, since individuals who engage in OCBs do so because they feel an interpersonal attachment with their coworkers, leaders and organizations. Individuals who felt that they were appropriately recognized for their contributions were therefore expected to report higher levels of OCB.

The primary force behind employee recognition has been its potential for driving employee performance. Effective leaders deliver appropriate recognition for individual contributions. Because this recognition has a reinforcing effect on positive behaviors, employees who are recognized can be expected to engage in behaviors that drive higher levels of performance. As such, I hypothesized that scores on the recognition survey would be positively associated with self-rated level of job performance.

Recognition is a central component of psychologically healthy workplaces (Grawitch, Gottschalk & Munz, 2006). Individuals who feel that their contributions are recognized at work will experience more positive affective states. These positive emotional experiences are important, since they are related to job satisfaction as well as physical symptoms (Van Katwyk, Fox, Spector & Kelloway, 2000). I hypothesized that there would be a positive correlation between recognition scores and affective well-being.

In models proposed by Colquitt et al. (2013), an individual's level of trust in their supervisor is indicative of the quality of the social exchange relationship. Trust is based on a perception that another individual will act in a way to ensure one's well-being. Leaders who recognize the contributions of individuals under their supervision are behaving in a way that fosters employee well-being. As such, I expected that individuals who perceived their leader as providing appropriate recognition would in turn experience higher levels of trust in their leader. A moderate positive correlation was expected.

Another key variable in determining the quality of the social exchange between individual and leader is the level of perceived organizational support (POS) (Colquitt et al., 2013). Because of their proximal relation to individuals, immediate leaders often play an important role in representing the organization. As a representative of the organization, the immediate leader is also often tasked with providing recognition, even when that recognition comes from the organization itself. For example, an individual receiving a certificate for 5 years on the job with no safety incidents may receive this from their immediate leader, even though the organization is the entity initiating the

recognition. Therefore, I expected that individuals who feel they are recognized by their leader would be more likely to experience higher levels of perceived organizational support. However, because of the relatively indirect nature of the relationship between POS and recognition, I expected to find a modest positive relationship.

The model developed by Colquitt et al. (2013), which heavily influenced the conceptual development of this study used a social exchange theory (SET) framework to understand the relationship between organizational justice and outcomes such as OCB and task performance. Because receiving fair recognition for one's contributions is an integral aspect of a just workplace relationship, I expected a moderately strong correlation between perceived leader justice and recognition.

Because recognition was expected to correlate substantially with TFL and LMX, I decided to conduct additional linear regression analyses to assess how much unique predictive ability the recognition score would contribute beyond TFL and LMX. I expected to find that recognition would contribute a small but significant amount of additional prediction beyond these leadership factors.

Recognition and the perception that a leader is just are likely to be closely linked factors. After all, providing recognition is a key aspect of distributive justice. As such, I decided that the use of a linear regression analysis would be warranted to see what, if any, predictive ability recognition retained when controlling for justice and TFL. I expected that recognition would only contribute a modest amount of additional predictive ability.

To summarize, the following hypotheses were developed regarding the reliability, validity and factor structure of the recognition survey. I expected:

Hypothesis 1: A solution with a higher-order recognition factor and four

recognition factors representing personal, achievement,

performance and dedication.

Hypothesis 2: A high level of internal reliability for each dimension of the

recognition scale.

Hypothesis 3: A strong positive correlation between recognition scores and

transformational leadership.

Hypothesis 4: A strong positive correlation between recognition scores and

leader-member exchange (LMX) scores.

Hypothesis 5a: A strong positive correlation between recognition scores and

affective commitment.

Hypothesis 5b: A moderate positive correlation between recognition scores and

normative commitment.

Hypothesis 5c: A modest negative relationship between recognition scores and

continuance commitment.

Hypothesis 6: Recognition scores would have a moderate negative relationship

with turnover intention.

Hypothesis 7: A moderate correlation between recognition scores and

organizational citizenship behaviors (OCB).

Hypothesis 8: A moderate correlation between recognition scores and self-rated

performance.

Hypothesis 9: A strong positive relationship between recognition and affective

well-being.

Hypothesis 10: A modest positive correlation between recognition and perceived

organizational support (POS).

Hypothesis 11: A moderately strong positive correlation between recognition

and organizational justice.

Hypothesis 12: A moderately strong positive correlation between recognition

and trust in the leader.

Hypothesis 13: When added in the second step of a linear regression with TFL

and LMX entered together in the first step, recognition would

contribute a modest but significant amount of prediction for the

various correlates described above.

Hypothesis 14: A modest amount of prediction for correlates such as

organizational citizenship behavior when controlling for

organizational justice.

Method

Participants

The sample consisted of 428 working North-American adults who were

recruited from a bank of volunteers through an online service (Qualtrics) to complete an

electronic survey. Participants received $5 as an incentive to complete the survey. The

average age of participants was 44.1 years, and there were 219 females and 208 males

(1 missing). Participants had worked for their current organization for an average of

roughly 9.8 years (118 months, $SD = 232$). On average, participants worked 42.65

hours per week ($SD = 7.35$). Interestingly, the average participant had worked under the

supervision of their current immediate leader for an average of roughly 4.5 years (53.7

months, SD = 83), indicating the relationships had existed long enough to be able to

accurately answer questions regarding their interactions with their leaders.

Measures

All surveys were rated using a 7-point Likert scale. The only exceptions were

the perceived organizational support survey, LMX and the demographic survey. The

latter asked participants about their age, gender, organizational tenure and number of

years of full-time employment. Items for the employee recognition scale appear in

Appendix A, while items from all other scales appear as *Appendix B*. Overall, the global

recognition scale exhibited a high level of internal reliability ($α$ = .98). High internal

reliability was also observed for the facets of Personal ($α$ =.94), Achievement ($α$ = .93),

Work Performance ($α$ =.91) and Work Dedication (.97), thus supporting hypothesis 2.

Transformational Leadership. Items from Carless, Wearing and Mann's

(2000) Global Transformational Leadership scale were modified for use in this survey.

The 7 items were rated on a 7-point scale ranging from 1 (strongly disagree) to 5

(strongly agree). The reliability of the TFL scale was .96.

Leader-Member Exchange (LMX). A modified version of Scandura and

Graen's (1984) measure was used to assess LMX. This is a uni-dimensional scale with

high internal reliability ($α$=.89; Wayne et al., 2002). It consists of 7 statements

regarding an employee's perceived relationship with their immediate supervisor.

Responses were rated using a 4-point scale where 4 represents an optimal relational

level and 1 represents the lowest level of relationship quality.

Trust in the Supervisor. Respondents' trust in their immediate supervisor was

evaluated using a scale that assesses both cognitive-based trust (using available

knowledge about supervisor's reliability and dependability; 6 items) and affect-based

trust (strength of emotional bond with immediate supervisor; 6 items)

(McAllister,1995). Both subscales have high internal reliability (cognitive α=.91;

affective α=.89) and are moderately correlated with each other ($r = .63$, p<.001).

Depending on results from Study1, these subscales may be treated as a single variable

or as individual variables.

Perceived Organizational Support (POS). A modified version of Eisenberger

et al.'s Survey of Perceived Organizational Support (1986) was used to assess POS.

This is generally considered a uni-dimensional scale with high internal reliability

(α=.92; Wayne et al., 2002). The 6 items with the highest factor loadings (all above .80)

were selected for this survey (Eisenberger et al., 1986).

Organizational Commitment. Commitment to the organization was evaluated

using 9 items from a measure that assesses 3 sub-dimensions of commitment: affective,

normative and continuance (Allen & Meyer, 1990). Each sub-scale has been

demonstrated to have acceptable internal consistency (α=.73 - .85) (Allen & Meyer,

1990). This measure of organizational commitment has received strong psychometric

support from a number of studies (ie: Allen & Meyer, 1996).

Emotional Well-Being. Emotional well-being was assessed using items from

the *Job Affective Well-being Scale (JAWS)* (Van Katwyk et al., 2000). This scale has

been widely used and has acceptable dimensional consistency (Van Katwyk et al.,

2000). It has also been shown to correlate with measures of job stressors, job-

satisfaction and physical symptoms related to stress (Van Katwyk et al., 2000).

Organizational Citizenship Behaviours (OCB). Organizational citizenship

behaviors were measured using a scale developed by Podsakoff et al. (1990) that was modified to evaluate the extent to which individuals report engaging in extra-role behaviors that benefit the organization either directly or indirectly.

Turnover Intention. This was assessed using 5 items based on those originally developed by Walsh, Ashford and Hill (1985). This scale generally has a high level of internal reliability (α=.90; Walsh, Ashford & Hill, 1985).

Self-Rated Performance. This was assessed using modified items from Wayne and Ferris (1990). Using a similar approach to Schat and Frone (2011), the items were modified to ask participants to rate their own performance from the perspective of their supervisor. This approach has been supported as a valid alternative to archival performance data (see Schoorman & Mayer, 2008). A sample item would be: Considering all of your job duties and responsibilities, how would your supervisor or boss rate your level of dependability during the past 3 months?

Justice. This was assessed using modified items from Colquitt's (2001) measure of organizational justice that focuses on four dimensions: procedural, distributive, informational and interpersonal justice. The items were modified so that the object of the statements became the respondent's leader considered individually. This scale has been used by a number of researchers and its psychometric properties have been demonstrated in a variety of contexts. The internal reliability of the 4 sub-scales ranged from .78-.92 in an initial validation study, and .90-.93 in a subsequent study (Colquitt, 2001).

Procedure

The online survey included a brief demographic questionnaire, the employee

recognition measure and a variety of brief surveys described below. After completing

the survey, participants received a debriefing message explaining the nature of the

study.

The sample was randomly split into two groups. Sample A (*n = 214)* was used

to conduct an exploratory factor analysis in SPSS, while Sample B (*n = 214)* was used

to conduct a confirmatory factor analysis using M+ to verify the findings from Sample

A.

Results

Factor Structure

Exploratory Factor Analysis. A principal components analysis (PCA) was used to assess the factor structure of the recognition scale. The PCA was conducted with no specified number of factors (extraction based on Eigenvalues). No factor rotation was needed as a single-factor solution emerged from the PCA. Loadings ranged from .82-.91 (see Table 2). These results suggest that recognition may operate as a single overarching factor, despite the theoretical basis for 4 distinct sub-dimensions.

Table 2

Factor loadings from Principal Component Analysis with oblimin rotation (Sample 1)

Survey Item	Factor Loadings	
	Factor 1 (Recognition)	Factor 2
My individual needs and characteristics are taken into consideration by my supervisor. (Personal)	.82	
I am recognized as an individual person by my supervisor.	.78	
My supervisor keeps me "in the loop" (informed) of what is going on in our organization. (Personal)	.80	
My personal well-being is important to my supervisor. (Personal)	.85	
My supervisor is usually respectful towards me. (Personal)	.78	.36
My supervisor makes me feel that I matter. (Personal)	.86	
My supervisor allows me to make decisions on my own. (Personal)	.63	
My supervisor is sensitive to my needs. (Personal)	.88	
I receive congratulations from my supervisor when I reach specific goals. (Achievement)	.87	
My supervisor takes time to publicly acknowledge my successes. (Achievement)	.87	
My supervisor provides incentives, bonuses or other rewards for outstanding performance. (Achievement)	.76	-.40
The results of my hard work are noticed by my supervisor. (Achievement)	.90	
My supervisor thanks me when I successfully reach performance goals or other targets.	.85	
My supervisor recognize(s) the quality of the work that I do. (Performance)	.86	
My supervisor assigns me work that fits with my level of qualification. (Performance)	.69	.34
My supervisor acknowledges my professional training and qualifications. (Performance)	.78	
My supervisor appreciates my skills and knowledge. (Performance)	.83	
My supervisor comments on the level of professionalism I exhibit through my work. (Performance)	.87	
My supervisor acknowledges my loyalty to our team / department. (Dedication)	.88	
My hard-work and dedication are noticed by my supervisor. (Dedication)	.89	
My supervisor recognizes my ideas and effort, even when these do not necessarily lead to successful results. (Dedication)	.88	
My supervisor takes the time to thank me for the amount of effort I put into my work. (Dedication)	.90	
I feel my supervisor appreciates how devoted I am to my job.	.90	
My supervisor acknowledges my commitment to our organization. (Dedication)	.91	
The amount of time I have been with my organization is noticed by my supervisor. (Dedication)	.86	
My supervisor expresses recognition for my continued loyalty to the organization. (Dedication)	.87	

Note: Factor loadings below .30 suppressed

An additional Principal Component Analysis (PCA) was conducted forcing a 4-factor solution (see Table 3). This generated mixed results with a number of cross-loadings, although the majority of cross-loading items had one loading below .40. Generally speaking, items assessing Personal Recognition tended to cluster together, with loadings ranging from .66 - .98. One important exception was an item asking to what extent one's supervisor keeps them informed, which had cross-loadings of .33 and .43, suggesting this item may not in fact be measuring recognition (possibly tapping into informational justice rather than personal recognition).

Table 3

Factor loadings from Principal Component Analysis with promax rotation (Sample 1)

	Factor Loadings			
Survey Item	1	2	3	4
My individual needs and characteristics are taken into consideration by my supervisor. (Personal)		.71		
I am recognized as an individual person by my supervisor. (Personal)		.66		
My supervisor keeps me 'in the loop' (informed) of what is going on in our organization. (Personal)	.33	.43		
My personal well-being is important to my supervisor. (Personal)		.88		
My supervisor is usually respectful towards me. (Personal)		.98		
My supervisor makes me feel that I matter. (Personal)		.83		
My supervisor allows me to make decisions on my own. (Personal)				.80
My supervisor is sensitive to my needs. (Personal)		.70		
I receive congratulations from my supervisor when I reach specific goals. (Achievement)	.76			
My supervisor takes time to publicly acknowledge my successes. (Achievement)	.89			
My supervisor provides incentives, bonuses or other rewards for outstanding performance. (Achievement)	1.07			
The results of my hard work are noticed by my supervisor. (Achievement)	.44	.39		
My supervisor thanks me when I successfully reach performance goals or other targets.	.67			
My supervisor recognize(s) the quality of the work that I do. (Performance)		.66		
My supervisor assigns me work that fits with my level of qualification. (Performance)			.88	
My supervisor acknowledges my professional training and qualifications. (Performance)			.81	
My supervisor appreciates my skills and knowledge. (Performance)		.49		
My supervisor comments on the level of professionalism I exhibit through my work. (Performance)	.60		.33	
My supervisor acknowledges my loyalty to our team / department. (Dedication)	.66			
My hard-work and dedication are noticed by my supervisor. (Dedication)	.40	.67		
My supervisor recognizes my ideas and effort, even when these do not necessarily lead to successful results. (Dedication)	.60	.41		
My supervisor takes the time to thank me for the amount of effort I put into my work. (Dedication)	.79			
I feel my supervisor appreciates how devoted I am to my job. (Dedication)	.69	.32		
My supervisor acknowledges my commitment to our organization. (Dedication)	.68	.32		
The amount of time I have been with my organization is noticed by my supervisor. (Dedication)	.72			
My supervisor expresses recognition for my continued loyalty to the organization. (Dedication)	.84			

Note: Factor loadings below .30 suppressed

The results of both exploratory factor analyses seemed to suggest that a single-factor solution may in fact be the best fit for this data, a notion further supported by the

considerable correlations between the four recognition dimensions (.83-.91), as well as

the high correlations between dimensions and global recognition (.93.-.97).

Table 4

Recognition Scale Intercorrelations

	Recognition Global	Personal	Achievement	Performance	Dedication
Recognition Global	-				
Personal	.90	-			
Achievement	.90	.83	-		
Performance	.91	.87	.85	-	
Dedication	.93	.87	.89	.89	-

Facet-Global correlations represent a global factor calculated without the facet scale in question
All correlations significant at p = .001

Confirmatory Factor Analysis. Following the above exploratory analyses, Sample B

($n = 214$) was used to conduct a confirmatory factor analysis (CFA). Based on the

exploratory results, three models were tested: a single-factor solution, a 4-factor

solution, and a model comprising of a higher-order recognition factor with the 4

second-order recognition factors.

Besides the chi-square statistic, four fit indices were used to assess the model:

SRMR, CFI, TLI and RMSEA. The standardized root mean square residual (SRMR)

represents an estimate of the average difference between variances and covariances

observed in the sample, and the variances and covariances expected in the population

(Tabachnik & Fidell, 2007). A lower SRMR indicates that the sample and population

variances and covariances are close, thus suggesting a model that fits the data well. An

SRMR of .08 or lower is usually indicative of a model with good fit (Hu & Bentler,

1999). The Tucker Lewis Index (TLI) is a fit index that is relatively independent of

sample size, with TLIs above 0.90 usually indicating a model with good fit. The

comparative fit index (CFI) assesses the fit of a model relative to a model with no

relationship between the variables (i.e.: independence model) (Tabachnik & Fidell,

2007). Higher CFI values suggest a better fitting model, with a commonly accepted

standard of .95 or greater indicating good fit (Hu & Bentler, 1999). The root mean

square error approximation (RMSEA) estimates the lack of fit in the model as

compared to a perfect model (Tabachnik & Fidell, 2007). Thus, lower values indicate a

good fit. Values of .06 or less are commonly accepted as representing a good fit (Hu &

Bentler, 1999). The CFI and RMSEA are the most commonly used fit indices

(Tabachnik & Fidell, 2007).

Table 5

Results from Confirmatory Factor Analysis

Model	CFI	TLI	SRMR	RMSEA	χ^2 p $d.f.$
Single Factor	.90	.89	.04	0.10	902.33 $p < .001$ 299
4-Factor	.94	.93	.03	.08	677.75 $p < .001$ 293
Higher-Order Recognition	.94	.93	.03	.08	680.60 $p < .001$ 295

Results from the CFA indicate that both the 4-Factor and Higher-Order models had better fit than the Single-Factor model. The single-factor model is nested within the 4-factor model. A chi-square difference test ($\chi^2_{diff.} = 224.58$, *d.f.* $_{diff} = 6$) indicated that the 4-factor model had significantly better fit than the single factor model. The latter model also had a TLI below the .90-.95 range that is usually the minimum for acceptable fit. Further, the RMSEA was substantially above the .06 level. Thus, it appears that the Single-Factor model is in fact the worst fitting of the three options.

A chi-square difference test ($\chi^2_{diff.} = 2.85$, *df* $_{diff} = 2$) showed there was no significant difference between the 4-factor and higher-order solutions, since the obtained difference was less than the critical value required ($\chi^2_{crit.}$ 5.99, *p* < .05). While the most parsimonious model would be the 4-factor model, previous exploratory factor analysis results combined with the high inter-correlations between sub-dimensions (.83-.91) suggested that the higher-order model of employee recognition may in fact be the best representation of the actual construct. Thus, while it may be

worthwhile to conceive of recognition as consisting of 4 sub-dimensions, recognition can nonetheless be measured as a higher-order factor for research purposes.

Relation of Recognition to Various Outcomes

For comparison purposes, Table 6 contains the correlation coefficients between recognition and a variety of important correlates. Overall, results indicate recognition was moderately correlated with key individual variables, including emotional well-being (.70) turnover intention (-.71), commitment (.41). Further, recognition was strongly correlated with key attitudes regarding the leader and organization, including perceived organizational support (.71), trust in the leader (.85), perceived leader justice (.84), TFL (.88) and LMX (.85). Clearly, these results indicate that employee recognition is an important predictor of important individual outcomes and is closely related to other leadership factors.

Table 6

Bivariate correlations between recognition and key variables

	Recognition	JAWS	LMX	TFL	Trust	Perceived Org. Support	Turnover Intention	OCB	Performance	Commitment	Justice
Recognition	-										
JAWS	.70	-									
LMX	.85	.67	-								
TFL	.88	.70	.85	-							
Trust	.85	.67	.85	.88	-						
Perceived Org. Support	.71	.71	.71	.72	.70	-					
Turnover Intention	-.71	-.59	-.48	-.45	-.47	-.51	-				
OCB	.43	.42	.38	.43	.37	.37	-.15	-			
Performance	.43	.40	.46	.39	.40	.31	-.25	.50	-		
Commitment	.41	.36	.36	.37	.36	.42	-.23	.27	.18	-	
Justice	.84	.69	.86	.87	.82	.71	-.51	.46	.49	.36	-

All correlations significant at the 0.01 level (2-tailed).

Table 7 contains the correlations between all variables, including specific sub-dimensions of variables such as recognition, commitment and justice. This table demonstrates that the sub-dimensions of recognition had significant positive correlations with practically every outcome, with the exception of turnover intention (-0.48 to -0.51) and continuance commitment (-0.22 to -0.25). These negative relationships demonstrate how important employee recognition is for maintaining a workforce that is committed to the organization.

Table 7

Overall bivariate correlations between recognition and all other variables

	Recognition Global	Recognition Personal	Recognition Achievement	Recognition Performance	Recognition Dedication	JAWS	LMX	TFL	Trust	Perceived Org Support	Turnover Intention	OCB	Performance	Commitment Cont	Commitment Norm	Commitment Affective	Commitment Global	Justice Procedural	Justice Distributive	Justice Interactional	Justice Informational	Justice Global
Recognition Global																						
Recognition Personal	,95																					
Recognition Achievement	,94	,83																				
Recognition Performance	,93	,85	,85																			
Recognition Dedication	,97	,88	,91	,87																		
JAWS	,69	,65	,64	,66	,69																	
LMX	,87	,84	,80	,81	,82	,66																
TFL	,87	,83	,81	,80	,84	,71	,85															
Trust	,83	,83	,75	,76	,79	,66	,84	,87														
Perceived Org Support	,72	,66	,68	,68	,69	,68	,71	,73	,71													
Turnover Intention	-,54	-,51	-,48	-,51	-,51	-,63	-,55	-,56	-,54	-,56												
OCB	,38	,36	,34	,41	,37	,38	,41	,42	,36	,32	-,18											
Performance	,39	,38	,35	,41	,35	,39	,46	,39	,38	,31	-,27	,51										
Commitment Continuance	-,23	-,24	-,25	-,24	-,22	-,38	-,31	-,31	-,29	-,34	,32	-0,13	-0,12									
Commitment Normative	,36	,33	,35	,33	,35	,29	,32	,42	,40	,34	-,26	,32	,17	,04 ns								
Commitment Affective	,68	,60	,65	,62	,68	,71	,63	,68	,63	,70	-,56	,36	,28	-,20	,46							
Commitment Global	,44	,36	,40	,38	,44	,33	,34	,41	,39	,38	-,27	,28	,17	,47	,73	,69						
Justice Procedural	,72	,71	,68	,66	,68	,61	,74	,75	,67	,63	-,51	,43	,44	-,26	,28	,61	,34					
Justice Distributive	,77	,70	,78	,68	,74	,66	,75	,77	,68	,67	-,51	,32	,35	-,33	,25	,62	,30	,73				
Justice Interactional	,67	,69	,57	,64	,63	,56	,69	,73	,71	,54	-,48	,41	,40	-,25	,31	,44	,26	,59	,55			
Justice Informational	,76	,76	,69	,70	,72	,60	,78	,81	,76	,65	-,56	,42	,38	-,26	,33	,56	,33	,69	,69	,79		
Justice Global	,84	,82	,79	,77	,79	,70	,85	,86	,80	,72	-,59	,45	,46	-,31	,33	,65	,36	,90	,87	,81	,89	

Correlations significant at the 0.01 level (2-tailed).

Linear Regression Analyses

In the way they are defined, transformational leadership and LMX both encompass aspects of employee recognition (although this recognition is limited to a select group in LMX theory). This begs the question of whether employee recognition is merely a behavioral manifestation of TFL and LMX, or whether it possesses predictive power beyond these well-established leadership factors. To this end, a series of linear regression analyses were conducted, with TFL and LMX entered at the first step and recognition entered at the second. Results from these analyses are outlined in Table 8.

Table 8

Linear regression results with TFL and LMX entered in 1st step and Recognition in second step

Independent Variables	OCB			Commitment			JAWS			Performance			OCB			Justice		
	ΔR^2	ΔF	p	ΔR^2	ΔF	p	ΔR^2	ΔF	p	ΔR^2	ΔF	p	ΔR^2	ΔF	p	ΔR^2	ΔF	p
TFL LMX	.19	44	.000	.16	32.26	.000	.53	204.25	.000	.23	55.23	.000	.18	92.93	.000	.81	813.92	.000
TFL LMX Recognition	.01	2.80	.01	.01	5.97	.02	.01	7.54	.006	-	-	ns	-	-	ns	.004	7.98	.005

Results from these linear regression analyses generally suggested that recognition added little, if any, significant prediction beyond TFL and LMX. It added the most contribution to OCB and commitment, predicting an additional 1% of variance. Further, results suggested some amount of multicollinearity may have been present. Tolerance levels below 0.1or 0.2 may indicate collinearity, as well as a Variable Inflation Factor (VIF) above 5 - 10 (O'Brien, 2007). In the current context, recognition had a tolerance level of .19 and a VIF of 5.21 – 5.27 (depending on the dependent variable). Overall, these results indicate that recognition may have some level of collinearity with TFL and LMX.

Relationship between Recognition and Justice

Along with TFL and LMX, the leader's perceived level of justice was also highly correlated (.84) with recognition. Recognizing employees fairly is an important aspect of justice. As such, it was important to evaluate whether measuring recognition provides any value over and above leader justice. Table 9 allows us to compare the correlations between recognition and a number of outcomes at the zero-order level, controlling for justice and controlling both justice and transformational leadership (both samples combined).

Table 9

Zero-order and partial correlations

	JAWS	LMX	Trust	POS	Turnover Intention	Commitment	OCB	Performance
Recognition	.70	.85	.85	.71	-.44	.41	.43	.43
Recognition (controlling for Justice)	.26	.47	.50	.25	ns	.16.	ns	ns
Recognition (controlling for Justice & TFL)	.15	.34	.27	.13	ns	.12	ns	ns

All correlations significant at $p \leq .05$

Recognition has a relatively strong zero-order relationship with emotional well-being, LMX, trust and perceived organizational support (.70 - .85) as well as more moderate correlations with turnover intention, commitment, OCB and performance (.41- .44). However, most of these relationships undergo a substantial drop in magnitude when controlling for the relationship between justice and recognition. In fact, the relationships for turnover intention, OCB and performance all become non-significant. The magnitude of most correlations becomes quite modest (.11-.27) when

both justice and TFL are controlled for, although the results do indicate that recognition

provides a unique (albeit small) amount of predictive power over justice and TFL. One

interesting result was that recognition maintained a correlation of .27 with trust even

when controlling for TFL and justice, suggesting that adequate employee recognition

may have one of its strongest effects at the interpersonal level, helping to foster a

trusting relationship between subordinate and supervisor.

Evidence of Discriminant Validity

In order to provide an evaluation of the recognition scale's discriminant ability, I

turned my attention to the 3 sub-dimensions of organizational commitment (affective,

normative and continuance). It was also reasonable to expect there might be a positive

relationship with affective commitment and normative, while the relationship with

continuance commitment would be negative (or non-significant). The bivariate

correlations in Table 10 below support these expectations (samples combined).

Recognition had a zero-order correlation of .66 with affective commitment, of .39 with

normative commitment and of -.31 with continuance commitment. These results

provide support for the discriminant ability of our recognition scale. Not only did the

recognition measure have a negative relationship with the expected variables, it also

had a small correlation with normative and continuance commitment, and a relatively

strong correlation with affective commitment. Given my expectations about the

relationship between recognition and affective commitment, this supported the

measures ability to help discriminate between different facets of commitment.

Table 10

Zero-order and partial correlations between recognition and commitment when controlling for TFL

	Continuance	Normative	Affective	Commitment (Global)	Turnover Intention
Recognition	-.31	.39	.66	.41	-.44
Recognition (controlling for TFL)	*ns*	*ns*	.24	.15	*ns*

All correlations significant at p ≤ .05

Interestingly, when controlling for TFL, the correlation between recognition and affective commitment drops to .24, while the correlations between recognition and normative and continuance commitment become non-significant. This suggests that recognition predicts a modest amount of variance in affective commitment beyond what TFL predicts. It also supports the discriminant ability of the recognition scale. The bivariate correlation of -.44 between recognition and turnover intention also becomes nonsignificant when controlling for TFL.

Overall, results from this study indicate that recognition operates as a single higher-order factor, that it consistently predicts key individual outcomes, and that it is closely related to TFL and organizational, but nonetheless remains a distinct construct that provides small to moderate amounts of unique prediction, depending on the outcome.

Discussion: Survey Validation Study

The primary goal of this study was to investigate the properties of the recognition survey that had been developed based on Brun and Dugas' (2008) definition. I had hypothesized a factor solution consisting of a higher-order recognition factor and four correlated second-order factors representing the different facets of recognition. Results from the EFAs suggested that the items in the recognition scale generally assessed a single factor. A principal components analysis (PCA) using extraction based on eigenvalues suggested a single factor with 3 items containing cross loadings ranging from .34-.40. While these cross-loadings suggest attention needs to be paid to these items, these three items loaded on the recognition factor with loadings ranging from .68-.78, indicating they nonetheless loaded primarily on recognition. Another item of concern assessed the extent to which a supervisor allowed the individual to make decisions on their own and had a loading on .63 on the recognition factor, with no substantial cross-loading. Again, this loading was high enough to suggest the item is related to recognition, although it appears this item may pertain more to decisional autonomy, which may simply be related to recognition. Other than these 4 items, the other 20 items of the recognition scale loaded onto a single factor with loadings ranging from .78-.91, suggesting substantial cohesion.

A second PCA forcing the extraction of 4 factors yielded confusing results with a number of cross-loadings. This solution yielded one factor consisting of 4 items from the achievement, performance and dedication facets, with loadings ranging from .66-.89. Six items assessing the personal and work performance facets loaded onto a second factor (.66-.98). Two other items assessing performance loaded onto a third factor and a

single item assessing decisional autonomy loaded onto the fourth factor. This solution

yielded a number of cross loadings. In light of this, and the fact that the pattern of factor

loadings was inconsistent with the theory underlying the measure, it appears that the

single factor solution obtained with the first PCA was the best fit to the data.

Interestingly, the solution with a single recognition factor had the worst fit to

data from the confirmatory factor analyses. The two other solutions, one consisting of 4

distinct factors (4-factor solution) and the other consisting of a higher-order factor with

4 second-order factors (higher-order solution). Fit indices for both of these models were

nearly identical, with both solutions having a generally good level of fit with the data. I

had originally hypothesized a factor structure consisting of a higher-order recognition

factor and 4 second-order correlated factors representing the facets of recognition.

Although the 4-factor solution is nested within the higher-order solution and is

therefore more parsimonious, it nonetheless appears that the higher-order solution fit

both the theory and reality of the data more clearly. Given the considerable

intercorrelations between the facets of recognition (.83-.89), the 4-factor solution makes

little statistical sense, since there is little value in considering factors individually when

they share roughly 70-80% variance with each other. This led me to accept the

originally hypothesized higher-order solution as the best representation of the

recognition survey's factor structure. Of course considerably more research will be

needed to test this solution with other samples.

The factor structure has several important implications. First, the presence of a

single higher-order factor allows for the creation of a briefer version of the recognition

scale, since it can be measured as a unitary concept in the research setting. However, it

is important to understand whether recognition operates as a single factor statistically

because of its inherent conceptual nature, or whether this is a by-product of the way

recognition was being measured. In order to further investigate this, a vignette study

was developed that assessed whether individuals perceive the presence of a specific

facets of recognition over another, or whether any act of recognition simply counts as

an instance of recognition, with no further distinction being made (see Vignette Study

for additional information).

Results indicate that this is a reliable measure of interpersonal recognition from

one's supervisor ($\alpha = .98$). The extremely high internal reliability of the scale reflects

the high covariance levels between the different facets of recognition, which all had

high correlations with global recognition (.90 - .93) and with each other (.83-.89).

Questions in the recognition survey asked about considerably different aspects of the

leader`s behavior. For example, recognizing an employee who reaches sales targets

(achievement) is very different from recognizing an employee's loyalty to the

organization (dedication). Despite this, the scales measuring these seemingly distinct

facets have a correlation of 0.89. In a sense, this lends further support to the idea that,

while recognition may be conceptualized as consisting of four facets, these are so

highly correlated that it may be more meaningful to interpret recognition as a higher-

order factor. This high level of covariance also led to other important questions. Are the

facets of recognition so highly correlated because leaders who tend to recognize one

facet also tend to recognize the others? Is it possible that individuals perceive

recognition as a global characteristic of the leader, rather than distinguishing between

these facets? These questions led to the development of the following study, which used

a vignette approach to investigate whether individuals distinguish between the different facets of recognition.

The high facet intercorrelations (.83-.89) and extremely high overall internal reliability (α = .98) suggest that in practice, it may be more appropriate to consider recognition at the single-factor (higher-order) level. The Multifactor Leadership Questionnaire (MLQ) is a good example of another scale that is designed to measure several higher-order and second-order factors, but is probably best considered as measuring a single higher-order factor. Research by Carless (1998) found that the subscales of the MLQ had such high intercorrelations that the MLQ appears to measure a single over-arching transformational leadership factor. Interestingly enough, results from a confirmatory factor analysis indicated that a single factor solution did not fit the data as well as a first-order multi-dimensional model or a higher-order model of transformational leadership. Nonetheless, the high scale intercorrelations led Carless (1998) to conclude that the MLQ "does not measure separate transformational leader behaviours, instead, it appears to assess a single, hierarchical construct of transformational leadership. Thus, there is little evidence to justify interpretation of individual subscale scores" (p. 357). This situation is very similar to the results I obtained for the recognition survey, which also had a higher-order solution that fit better than a single-factor solution. As was the case in Carless' research, the high facet intercorrelations on the recognition scale suggest that despite the results of the CFA, it is probably more practical in this case to measure recognition as a single higher-order factor. Avolio and Bass (1999) argue that "although the transformational leadership components were still positively intercorrelated, for assessment, counselling and

training purposes, it is probably more useful to assess the lower and higher-order

constructs as separate factors" and also added that "instead of limiting future leadership

research and practice to a single global transformational leadership construct,

researchers and practitioners ought to continue to at least include each of these

components comprising transformational leadership... " (p. 459). Thus, it appears that

Avolio and Bass (1999) agree that the MLQ may measure TFL as a higher-order factor,

but maintain the usefulness of assessing the various types of transformational behaviors

these leaders engage in.

This also applies to the recognition survey being studied here. The best fitting

solution consisted of a single higher-order factor with four second-order facets.

However, given the high scale intercorrelations, it appears recognition may be more

practically treated as a single recognition factor. Despite this, recognition can occur

through a variety of leader behaviors and so a functional survey of recognition should

appropriately represent the facets of recognition. In light of these results, I decided to

create a shorter version of the recognition survey to be used in subsequent studies. This

survey would measure recognition as a higher-order factor, but would still evaluate

recognition behaviors representing all four facets of recognition (see Study 1 c).

Overall, results also highlighted the fact that employee recognition is an

important predictor of numerous key organizational outcomes. However, they also

indicated that recognition is closely related to leader-member exchange,

transformational leadership and organizational justice. This is not surprising since the

three concepts are inherently linked to each other. Transformational leaders tend to

recognize employee contributions and also tend to foster a culture of justice.

Interestingly, even when these covariates were controlled for, recognition still had a

correlation of .34 with LMX, suggesting it may share variance with LMX that it does

not share with TFL, perhaps explaining its high level of multicollinearity with these two

variables. Thus, it appears that this measure of employee recognition could be included

in organizational research involving the above outcomes, since it may help to predict

unique variance that the more commonly used measures may not be picking up.

However, the true value of this measure of recognition would be in research focused

specifically on recognition. Although it appears that the scale contains a higher-order

factor, its items nonetheless assess a variety of forms of recognition. In a situation

where researchers wish to measure recognition from the leader, this could be a useful

survey that assesses recognition and can be used to predict ratings of the leader on other

measures of leadership quality (i.e.: TFL and LMX).

It was not surprising to find that recognition predicted only a modest amount of

variance when controlling for TFL and justice, since the three are so conceptually

intertwined. By definition, a transformational leader provides individualized

consideration, recognizing an individual's needs, capacities and achievements. Fairly

recognizing an individual's contributions, effort and dedication are also essential in a

culture where organizational justice pervades. Thus, the small unique contributions of

recognition should not be taken as a disappointment, but rather, they are indicative that

recognition is a key aspect of fair leadership and thus warrants further scrutiny.

Development of Shortened Recognition Survey

Although the exploratory and confirmatory factor analyses yielded somewhat

mixed results, it nonetheless appeared that recognition could be functionally measured

as a higher-order factor. With parsimony in mind, a shortened version of the initial scale was developed. Because one of the primary goals of the survey validation study was to provide a tool for researchers, developing a shorter version of the recognition scale seemed important and well aligned with the initial research goals.

Results from the entire initial survey group ($n= 428$) were used in a factor analysis. Items which had the highest loadings in the exploratory factor analysis with single factor solution conducted in the survey validation study (Study 1.b) were selected for a briefer version of the recognition survey. Along with high factor loadings, I looked for items that represented various types of recognition. Because recognition can take many forms, I felt it was important that the survey ask about a broad array of examples of leader recognition. A total of 11 items were retained for the brief version. These items generally represented the 4 facets of recognition (Personal: 3, Achievement: 2, Performance: 2, Dedication: 4). More items were retained for the Dedication facet based on high factor loadings (.87-.90) and the fact that items in this facet assess recognition of one's dedication to the work, the level of dedicated effort and loyalty to the organization, among others. While it is important to measure all four facets of recognition as accurately as possible, results from Study 1 supported the existence of a higher-order factor with four second order factors. The brief version was designed to measure recognition at this higher-order level by asking about a sample of leader recognition behaviors.

An exploratory factor analysis was conducted using principal component analysis (PCA). Extraction was based on Eigenvalues. This exploratory factor analysis resulted in a single factor solution with loadings ranging from .84 - .90 (see Table 11

below). These loadings suggested that all items had a high loading on a single factor,

supporting the use of this scale as a brief measure a single higher-order recognition

factor. The scale had a very high level of internal reliability ($\alpha = .97$).

Table 11

Results from Principal Component Analysis (no rotation) of shortened Recognition

survey

Survey Item	Factor Loadings Recognition
My personal well-being is important to my supervisor.	.84
My supervisor makes me feel that I matter.	.88
My supervisor is sensitive to my needs.	.88
I receive congratulations from my supervisor when I reach specific goals.	.86
My supervisor thanks me when I successfully reach performance goals or other targets.	.86
My supervisor recognize(s) the quality of the work that I do.	.88
My supervisor comments on the level of professionalism I exhibit through my work.	.86
My hard-work and dedication are noticed by my supervisor.	.90
My supervisor takes the time to thank me for the amount of effort I put into my work.	.89
I feel my supervisor appreciates how devoted I am to my job.	.90
My supervisor acknowledges my loyalty to our team / department.	.87

The preceding studies allowed me to develop a valid and reliable measure of recognition. In light of the high facet intercorrelations which were observed, it appears that while the best fitting factor structure consisted of a single higher-order recognition factor with 4 second-order factors, recognition can be practically measured as a higher-order. In light of these results, I decided to develop a shorter version of the survey which could be used to quickly and reliably measure recognition. This measure had a high level of internal reliability and, while it was designed to be used to compute a single recognition score that represents the higher-order recognition factor, it nonetheless contains 14 items aimed at assessing behaviors from the four proposed facets of recognition.

Much future research will be needed to clarify the factor structure of recognition. The results from the previous study by no means settle the issue, but that was never the goal of this research project. Rather, my initial goal was to provide future researchers with a common ground to conceptualize and measure recognition. As was the case with transformational leadership, it will likely take years of additional research to confirm the precise factor structure of the construct of employee recognition.

One issue which required further attention was the question of whether the facets of recognition were highly intercorrelated because leaders who tend to be high in one facet also tend to be high in the others, or whether the high covariance may have been due to the fact that individuals may not be able to distinguish between the different facets of recognition and therefore simply develop a global impression of a leader's level of recognition. In order to further investigate this issue, a vignette study was developed.

Study 2: Vignette Study

Results from the initial survey study indicated that recognition is best thought of as a higher-order factor with 4 second-order factors representing each facet. However, results from Study 1 also indicated that the facets of recognition were so highly correlated that it made little meaningful contribution to consider them individually and so recognition may in fact more practically be measured at the higher-order level (as a global factor). These high intercorrelations raised the question of whether recognition operates as a single factor because people perceive 4 distinct sub-dimensions of recognition that nonetheless load together as a single factor, or whether it is possible that individuals do not distinguish between different forms of recognition.

Research on other concepts indicates that it can be difficult for people to distinguish between different facets of certain constructs. For example, research by Barling, MacEwan and Pratt (1988) suggests that individuals could not accurately distinguish between different sources of social support (i.e.: social support is social support regardless where it comes from). While some constructs may contain a number of second-order dimensions, these may be of little practical use in some situations. For example, an individual may be exposed to social support from peers or from a leader. While theory would indicate that these are distinct sources, the reality appears to be that these different sources may not necessarily be distinguishable to the individual and may in fact contribute to a higher-order factor of social support. Thus researchers hoping to assess the individual effects of social support would be well-advised to ask about a variety of sources so as to sample a range of individual experiences, while keeping in mind that for the individual, the impact may come from experiencing social support,

not from the specific source of that support.

Such results (i.e.: Barling, MacEwan & Pratt, 1988) have important implications for the recognition scale developed in Study 1. Unfortunately, results from the CFA in Study 1 were somewhat mixed. The most parsimonious acceptable model was the 4-factor solution. However, the solution with a higher-order recognition factor and 4 second-order factors was aligned with both the existing theory and the fact that facet intercorrelations were quite high. Given that the primary goal of Study 1 was to develop a scale of recognition to be used primarily in research contexts, measuring recognition as a higher-order factor may prove to be more practical.

To clarify the nature of the single-factor solution I obtained in Study 1, I developed a vignette study to manipulate which dimension of recognition individuals were specifically exposed to and to evaluate whether scores on sub-scales of the recognition survey, as well as on other outcomes, would reflect these manipulations. In other words, one of the goals was to see whether an individual who read a vignette containing recognition for reaching a performance target would in turn provide higher ratings on the facet of achievement recognition than on the other facets which were not specifically present. Vignette studies provide a useful opportunity to manipulate specific aspects of a social interaction experimentally. For example, Martin (2012) used a vignette approach to study aspects of privacy expectations experimentally. Although the type of vignette used was different from ours, this study is relevant to the current research because it successfully used a vignette approach to study individual attitudes in the context of a social interaction.

My hypotheses for this study were that:

Hypothesis 1: Individuals who read vignettes that do not included examples of

employee recognition would give significantly lower overall recognition

ratings than individuals in all other conditions.

Hypothesis 2: Individuals who read vignettes that included an incidence of employee

recognition would provide higher ratings for the facet of recognition

included in their vignette than they would for other facets of employee

recognition

Hypothesis 3: Individuals who read vignettes depicting any facet of employee

recognition would have higher satisfaction scores than would individuals

who read vignettes that did not include recognition.

Methods

Participants

Participants were all North American adults recruited via online snowball

method. I sent an email invitation to roughly 50 or so personal contacts and posted an

invitation on Facebook. Approximately 76 adults completed the study. There were 47

female and 29 male respondents, ranging in age from $23 - 88$ years old (*mean age =*

39.43; $\sigma = 14.5$).

Procedure and Measures

The study was conducted using an online survey that allowed for randomization

between different vignette scenarios. After completing a few demographic items,

participants read a brief scenario describing a gender-neutral employee (Alex) working

in a mid-sized call center. Each participant was then randomly exposed to one of five

vignette scenarios depicting a brief interaction between the employee and the

departmental manager. The general scenario and vignette scenarios appear in *Appendix*

D. The type of recognition statement was manipulated so that participants read about an

interaction that contained either: no recognition (neutral statement), personal

recognition, recognition of a recent achievement, recognition or work performance or

recognition of the employee's dedication.

After reading their respective vignettes, participants were asked to answer a

series of questions from the perspective of Alex, the fictional employee. Participants

completed the brief 11-item scale assessing perceived levels of employee recognition

(see *Appendix A*). The recognition scale had an adequate reliability level in most

conditions. Internal reliability was high for the control ($\alpha = .96$), achievement (.97) and

dedication (.88) but somewhat lower for personal recognition ($\alpha = .78$) and recognition

of work performance (.80) levels of the independent variable. Other than sampling error

or issues with the way the items were written, it is difficult to explain why the personal

recognition condition had such lower reliability level. However, this level of reliability

is at an acceptable level for a scale being used for research purposes.

Participants then completed a modified version of Carless' (2000)

transformational leadership (TFL) questionnaire (see description in *Methods* section for

survey study). The TFL scale had an adequate reliability level in each condition (α: .67

- .95). Again, the personal (.67) and work dedication (,72) conditions had the lowest

reliability levels. Finally, participants also completed 4 questions designed to assess

their perceived level of satisfaction with the supervisor (α: .71-.90). It appears that

responses in the personal recognition condition may have been somewhat unreliable. As

we will see in the results section, this may be due to issues with the vignette for that condition which may not have achieved the level of manipulation I had initially hoped for.

Results

Mean Scale Ratings

Overall, results suggested that individuals in the control condition tended to report lower levels of global recognition, transformational leadership (TFL) and perceived job satisfaction. However, further analyses were needed to confirm the significance of these differences. Mean scores and standard deviations appear in Table 12 below.

Table 12

Mean ratings for Recognition, Transformational Leadership and Satisfaction

Condition	Recognition	TFL	Satisfaction
Control ($n = 13$)	3.83 (.98)	4.23 (.90)	3.63 (.79)
Personal Recognition ($n = 16$)	4.39 (.59)	4.25 (.50)	4.13 (1.10)
Recognition of Achievement ($n = 15$)	5.19 (1.40)	4.61 (1.06)	5.18 (1.17)
Recognition of Performance ($n = 14$)	5.84 (.54)	4.80 (.58)	5.38 (.71)
Recognition of Dedication ($n = 18$)	5.39 (.75)	4.99 (.86)	5.44 (.92)

Note: Scale rated 1 (Strongly Disagree) – 7 (Strongly Agree)
Standard Deviations in parentheses unless otherwise indicated

Facet-level scores for the recognition scale appear in Table 13. The control condition had lower scores than the other conditions on all facets of recognition. Interestingly, the participants exposed to personal recognition had the highest score on

this facet. The Individuals who read a scenario containing recognition of achievement gave higher ratings on this facet (5.6) than all other condition (mean of 5.02). This trend also held for the scenarios representing recognition of work performance and work dedications. In both conditions, scores on the corresponding facet of recognition were higher than all other conditions. Of course, additional analyses were necessary to see whether these differences were significant.

Table 13

Mean ratings for each facet of recognition

	Facet				
Vignette Condition	Personal	Achievement	Work Performance	Dedication	Global Recognition
Control (*n* = 13)	3. 74 *(1.04)*	3.65 *(1.03)*	3.79 *(1.02)*	3.96 *(1.17)*	3.83 *(.98)*
Personal Recognition (*n* = 16)	4.58 *(.94)*	4.03 *(.96)*	4.41 *(.74)*	4.40 *(1.07)*	4.39 *(.59)*
Recognition of Achievement (*n* = 15)	4.97 *(1.52)*	5.60 *(1.24)*	5.23 *(1.52)*	4.67 *(1.54)*	5.19 *(1.4)*
Recognition of Performance (*n* = 14)	5.07 *(.95)*	5.93 *(1.00)*	6.41 *(.52)*	5.79 *(.58)*	5.84 *(.54)*
Recognition of Dedication (*n* = 18)	4.93 *(1.21)*	5.67 *(86)*	5.60 *(.79)*	5.42 *(.79)*	5.39 *(.75)*

Note: Scale rated 1 (Strongly Disagree) – 7 (Strongly Agree)
Standard Deviations in parentheses unless otherwise indicated

A word of caution is warranted at this point. Each facet scale contained very few items: Personal (3), Achievement (2), Work Performance (2) and Dedication (4). The limited number of items may be related to the lower levels of internal consistency observed for the Personal Recognition scale. As such, facet results should be interpreted with caution. It is nonetheless interesting that scores for each condition were higher on the corresponding facet of recognition than every other condition.

Manipulation Check

Results from a multivariate analysis of variance (MANOVA) indicated there

were significant differences between vignette conditions on all recognition facets, as well as global recognition.

Table 14

Between-group differences on recognition facet and global scores

Dependent Variable	df	F	Significance
Personal Recognition	4	2.49	.05
Recognition of Achievement	4	15.47	.00
Recognition of Performance	4	15.17	.00
Recognition of Dedication	4	6.64	.00
Global Recognition	4	11.27	.00

Results from the LSD post-hoc test indicated that participants in the control condition generally perceived significantly lower levels of global recognition than the other conditions (with the exception of the personal recognition condition; see discussion below). This was also the case for scores on every facet. In each case the control condition had significantly lower scores than all other conditions, with the exception of personal recognition (See Post-hoc results in *Appendix F*). These results suggest that the vignette-based manipulation of recognition was generally effective. However, the manipulation in the personal recognition condition may not have been strong enough since individuals in this condition did not appear to have significantly different scores than the control condition for every dimension of recognition (see discussion below).

Multivariate Analysis of Variance

A multivariate analysis of variance was conducted to assess whether scores on recognition sub-dimensions would vary significantly between conditions. Results indicated a statistically significant difference in recognition facet scores based on an individual's vignette condition, $F(16, 208) = 5.62$, $p < .0005$; Wilk's $\Lambda = 0.33$, partial $\eta^2 = .24$. More specifically, individuals exposed to a specific sub-dimension of recognition were generally more likely to report higher ratings on that dimension than individuals exposed to different dimensions or no recognition. Scores for Personal Recognition ($F(4, 72)) = 2.49$, $p = .05$), Achievement ($F(4, 71)) = 15.47$, $p < .001$), Performance ($F(4, 72)) = 15.17$, $p = .001$), and Dedication ($F(4, 72)) = 6.64$, $p = .001$), as well as scores for global recognition ($F(4, 72)) = 11.27$, $p = .001$) all had significant between-group differences.

Table 15

Between-Condition Differences on Recognition facet scores from MANOVA

Dependent Variable	Eta^2	F	df	Sig.
Personal Recognition	.12	2.49	4	.051
Recognition of Achievement	.46	15.47	4	.000
Recognition of Work Performance	.45	15.17	4	.000
Recognition of Dedication	.27	6.64	4	.000
Recognition Global	.39	11.27	4	.000

Post-hoc Results.

LSD Post-hoc analyses indicated that every condition except personal recognition had significantly higher overall recognition scores than the control condition (Post-hoc results appear in *Appendix E*). Further supporting the idea that the

personal recognition condition's manipulation was too weak, this condition also had significantly lower overall recognition scores than all other conditions ($p < .05$). It is interesting to note that recognition of performance yielded higher overall recognition scores than recognition of achievement ($p < .05$).

The primary exception to this was the personal recognition. Between-condition scores for the personal facet marginally achieved significance ($p = .051$), post-hoc results indicated that individuals exposed to a personal recognition vignette did not score significantly higher on this facet than any of the other conditions.

Individuals exposed to a vignette describing recognition of a specific achievement had significantly higher scores on the corresponding sub-scale than individuals in the control and personal recognition conditions ($p < .001$), but not significantly different from those in the Performance and Dedication conditions. This highlights the somewhat mixed nature of our results.

Results were clearer for the Performance condition, where individuals scored significantly higher on the Performance sub-scale than all other conditions ($p < .05$). Interestingly, this highlights the importance of distinguishing recognition of achievements from recognizing of work performance.

A similar trend was observed for the Recognition of Dedication subscale. Again, individuals in the corresponding condition had significantly higher facet scores than the other conditions ($p \leq .05$), with the exception of recognition of work performance. These results provide somewhat mixed support for the distinction between the facets of recognition.

Overall, post-hoc results provided mixed results regarding individuals' ability to

distinguish between the facets of recognition. Generally speaking, these results suggest that people may not be accurate enough in perceiving recognition facets to warrant recognition being measured at the facet level.

Another popular post-hoc analysis that is recommended by Tabachnick and Fidell (2007) following a significant MANOVA result was conducted. Developed by Roy and Bargmann (1958) and based on the General Linear Model (GLM), this analysis allows one to evaluate the effect of an independent variable on multiple dependent variables while entering these DVs as covariates of subsequent DVs (Finch, 2007). Dependent variables are entered in descending order of theoretical importance (Finch, 2007), which allows researchers to evaluate whether the effects of the independent variable might be fully mediated by another (covariate) DV. In this case, TFL was entered first, followed by the various recognition facets and, finally, satisfaction.

Table 16

Roy-Bargman Post-hoc Results

		Roy-Bargman Step-down F - tests				
Variable	Hypoth. MS	Error MS	Step-Down F	Hypoth. DF	Error DF	Sig. of F
TFL	1,63	,57	2,83	4	67	,031
Personal Rec.	1,05	,84	1,25	4	66	,299
Rec. of Achievement	6,77	,60	11,30	4	65	,000
Rec. of Performance	2,01	,35	5,71	4	64	,001
Rec. of Dedication	,64	,29	2,18	4	63	,081
Satisfaction	,52	,40	1,31	4	62	,277

Results from the analysis indicated that TFL ratings varied significantly from one condition to the next. Because previous studies had demonstrated the close relationship between recognition and TFL, the latter was then used as a covariate when assessing the effect of condition on the various recognition facets. Significant between-condition differences existed for recognition of achievement ($p < .001$), and recognition of performance ($p < .005$), with results for recognition of dedication approaching, but not achieving significance ($p = .08$). Overall, these results suggest that individuals exposed to different recognition facets varied significantly in their perception of TFL and some of the recognition facets.

It is interesting to note that there was no detected effect of condition on ratings of satisfaction when TFL and the recognition facets were entered as preceding covariates. However, when tested alone using a one-way ANOVA, significant differences were detected between conditions ($F(4, 70) = 10.63, p \leq .000$). As illustrated in Table 17 below, LSD post-hoc analyses revealed that every condition except personal recognition had significantly higher satisfaction ratings than the control condition. Satisfaction scores were not significantly different for the Achievement, Performance and Dedication conditions, but all three of these had significantly higher satisfaction ratings than the personal and control conditions.

Table 17

LSD Post-Hoc results for effect of condition on Satisfaction ratings (conditions compared to control)

Condition	Mean Difference (control$_{cond}$ - condition)	Standard Error	Sig.
Personal	-.49	.36	.175
Achievement	-1.54	.37	.000
Performance	-1.74	.37	.000
Dedication	-1.81	.35	.000

Discussion: Vignette Study

Results indicated that participants who had been exposed to a neutral message without any recognition (control condition) tended to give significantly lower ratings of overall recognition than participants in most experimental conditions (with personal recognition narrowly achieving significance after rounding), generally supporting my first hypothesis. This largely supports the validity of the vignette manipulation in studying employee recognition. Taken together however, the results suggest that the manipulation for the personal recognition condition may simply not have been powerful enough. The actual statement was: "... I would really like to hear your opinion about what we will be discussing.*"* Perhaps a statement such as "...you tend to have very good ideas so I would really like to get your input at the meeting" would have been more effective. Despite these issues, individuals exposed to the personal recognition vignette did technically provide significantly higher ratings of perceived recognition than control participants, but not significantly higher than the other experimental

conditions. It thus appears that individuals in the personal recognition condition realized that recognition had taken place, but may not have been able to specifically identify what type of recognition it was.

The second hypothesis was that each condition would provide significantly higher ratings than all other conditions on its corresponding facet. Thus, I expected individuals who were exposed to a vignette where an employee is recognized for the level of professionalism exhibited in recent work would have significantly higher scores on the work performance facet than individuals in the other conditions. Descriptive statistics showed that each condition had the highest score on its related recognition facet, with the control condition having the lowest scores on all facets. Again, the personal recognition facet was the exception. Individuals in this condition provided personal recognition ratings that were not significantly different from any of the other conditions. Individuals in the recognition of work performance condition, on the other hand, had significantly higher scores on this facet than all other conditions. Facet scores for recognition of achievement were significantly higher in the corresponding condition than scores for the control and personal conditions, but not different from the work performance or dedication conditions. The recognition of dedication condition had higher facet scores than all conditions other than the work performance condition, which was not significantly different on the work performance facet.

Thus, results were mixed, only partially supporting the second hypothesis. It generally appears that individuals may be able to identify specific types of recognition, but not accurately enough to warrant measuring recognition at the facet-level. Although

mixed, these results provide some support for the higher-order factor CFA solution obtained in Study 1b. Individuals do perceive the difference between facets to a certain extent. Therefore, it appears that these facets are conceptually distinct enough that different people can make similar distinctions. However, if the goal is to measure recognition in order to make consistent predictions about key outcomes, it appears that measuring recognition at the higher-order level is more appropriate.

As noted already, the small number of items representing the facets may have contributed to the mixed results that were observed. In research where the goal was to measure specific differences between facets, it may be necessary to use a longer version of the survey to allow meaningful interpretation of facet scores. However, results from Study 1b suggest that these facets are so highly correlated (sharing 70-80% variance) that it would be difficult to detect significantly different relationships between the facets and various outcomes. As such, a measure assessing the higher-order recognition factor may be more conducive to research on the topic. The shortened (11 item) survey which was used in Studies 2 and 3 appears to be appropriate in this context since it attempts to meaningfully assess the four facets of recognition, and is also brief enough to be practical because it is used to measure recognition at the higher-order level.

It also appeared that condition did not have a major significant effect on the individuals' perception of transformational leadership. Even if individuals did perceive the distinction between certain dimensions of recognition, it seems that being exposed to one dimension over another had limited differential effect on their perception of their leader's transformational ability. This result is not necessarily surprising, since individual consideration is a key dimension of transformational leadership and all four

facets fall under this category. Thus, regardless of which facet of recognition a leader

engages in, the perception that this is a transformational leader should increase. This

further supports the idea that while recognition does consist of 4 important second-

order facets, it may be more practical to measure it at the higher-order level.

Results from the Roy-Bargmann stepdown analysis indicated significant

differences across vignette condition for TFL, recognition of achievement and

performance (with dedication approaching but not achieving significance). The fact that

the between-group differences persisted after TFL had been entered as a covariate

suggests that exposure to a specific facet of recognition has effects on recognition

scores beyond what is shared by TFL.

One of the limitations of this study was that it used a between-subjects design to

evaluate differences in perceptions. It is likely that a within-subjects design would

provide more convincing evidence of any effect that recognition may have on key

attitudinal and behavioral outcomes. That being said, a between-subjects design was

preferred in the current study because of concerns that the vignette manipulation would

be impaired by exposure to more than one condition. Additional research is clearly

needed to help clarify whether individuals can consistently perceive differences

between different facets of employee recognition.

Another limitation in this study was the low reliability of the personal

recognition facet. It is possible that some of the items may not be clear enough. This

may be due to the fact that personal recognition is more diffuse than the other facets in

the way it is defined. As such, it also overlaps with a number of other constructs such as

job control, social support and justice. The items measuring this facet would need to be

further reviewed in order to develop a measure that can be used to accurately measure recognition at the facet level. Alternatively, it is possible that the low scale reliability may be due to the problem with manipulation of the vignette. As mentioned previously, it is possible that the vignette scenario may not have been powerful or clear enough in its portrayal of personal recognition. Whether the problem lies with the items, the manipulation or both, additional research is certainly warranted in order to gain a proper understanding of the personal recognition facet. That being said, the shortened measure of recognition does provide an accurate measure of recognition at the higher-order level. As such, the same version that was used in the Vignette Study was used to obtain a brief measure of higher-order recognition in the Diary Study.

Study 3: Diary Study

Results from the previous studies suggested that recognition may be most practically measured as a higher-order factor with 4 second-order factors. Further, I knew that recognition is closely related to TFL and organizational justice, but that it is nonetheless a distinct construct worth measuring in leadership research. Thus, after investigating what recognition is, what it relates to and establishing that it can be manipulated experimentally, I turned my attention to the longitudinal relationship between recognition and key outcomes such as OCB, performance and emotional well-being.

The temporal nature of a relationship is important in Social Exchange theory (SET). Rather than being purely linear in nature, relationships are conceived of as evolving over time as one party responds to another's action, setting in place a process of ongoing social exchanges that come to represent the overall relationship. The focus

of this research program was on interpersonal forms of recognition. It is the underlying

assumption that individuals who feel they are being recognized by their leader will

respond with certain attitudes and behaviors. Study 1 established that recognition is

linked to a number of important outcomes including job satisfaction, commitment and

organizational citizenship behaviors (OCBs). However, relatively little was known

about the longitudinal relationship between recognition and these outcomes. If

employees engage in higher levels of OCB when they have been recognized for their

contribution, will this level of OCB drop during periods where they do not feel they are

being recognized? Thus, recognition level can have both a between-subjects effect and

a within-subjects effect. I hypothesized that:

Hypothesis 1: There would be a positive longitudinal relationship between recognition

and key outcomes such as affective well-being and OCB. In other words,

a within-subjects effect was expected for recognition.

Hypothesis 2: There would be a positive between-subjects effect such that individuals

who reported higher levels of recognition would also tend to report

higher levels of affective well-being and OCB.

In order to test these hypotheses, I conducted an 8-week diary study, obtaining

data from working adults on 4 occasions (every 2 weeks). This allowed me to assess

whether individuals who reported higher levels of recognition would also experience

higher levels of OCB and affective well-being. This approach also allowed me to obtain

a sample of individuals' experiences over time, thereby allowing me to evaluate

whether changes in the amount of recognition one received over a relatively brief

period of time translates into changes in OCB and affective commitment levels.

Method

Participants

Recruitment. Participants were all working Canadian adults recruited via snowball method by sending an invitation to personal contacts and asking them to transmit the invitation to eligible people. Individuals received an email invitation containing a link to an online registration survey where they could read the terms of the study, provide informed consent and provide their contact information for subsequent communication. The invitation specifically communicated the eligibility criteria (adult Canadian working minimum 20 hours per week). After obtaining consent and contact information, participants were sent an email containing a link to the first survey.

Descriptive Information. A total of 43 working adults completed a series of 4 surveys over a period of 8 weeks between February and May, 2014. The average age was approximately 37 years ($SD = 9.7$ yrs.), with the youngest participant being 24, and the oldest 61 years old. There were 17 males and 26 females.

On average, participants had been working for the same organization for an average of 8.29 years ($SD = 6.95$ years), with a minimum tenure of 1 year, and a maximum of 27 years. Participants worked an average of roughly 39 hours every week ($SD = 6.67$ hrs), with a minimum of 20 and a maximum of 50 hrs./week. When asked how often participants interacted with their supervisors using a scale ranging from 1 (never) to 7 (all the time), participants had an average score of 4.9 ($SD = 1.14$), suggesting most participants interacted with their supervisor on a regular basis in the course of a typical week.

Attrition. Participants were sampled using an email-based "snowball"

technique, making it impossible to establish an initial response rate. A total of 54

respondents completed the first survey, 49 completed the second and 43 completed the

third and fourth surveys. This represents an approximate attrition rate of 9.3% from

Survey 1 to Survey 2, and a rate of 12.25% from Survey 2 to Survey 3. Only results

from participants who completed all 4 surveys were retained for analysis.

Measures

Because recognition was being treated as a single factor, participants completed

the same shortened 11-item recognition scale that was used in the vignette study (see

Appendix A). The scale demonstrated high internal reliability in each of the 4 data

collection waves (.96-.97). Participants also completed the same measure of

transformational leadership (Carless, 2000), emotional well-being (Jaws; Van Katwyk

et al., 2000) and organizational citizenship behaviors (Podsakoff et al., 1990) that were

used in the previous studies (see *Appendix B* for items). Respondents also completed a

self-report measure of performance similar to that used in Study 2 and that was also

developed based on the approach used by Schat and Frone (2011). Reliabilities for all

scales in the diary study appear in Table 18 below, arranged by data-collection wave.

Table 18

Internal reliability coefficients (Chronbach's alpha)

	Recognition	JAWS (global)	JAWS (neg.)	JAWS (pos.)	TFL	OCB	Performance
Wave 1	.96	.88	.77	.87	.89	.79	.76
Wave 2	.97	.90	.79	.91	.96	.88	.90
Wave 3	.97	.94	.81	.91	.95	.80	.87
Wave 4	.97	.96	.84	.88	.96	.85	.92

Procedure

Participants were emailed a link to the online survey for each wave of data collection. If participants had not completed the survey after roughly 48 hours, they received an email reminder every 48 hours (max. 3 reminders). A minimum period of roughly 14 days elapsed following the completion of surveys before the invitation for the next survey was sent. This was done to increase the likelihood that changes in recognition and other outcomes would have time to take place. Once they accessed the online survey, they simply completed the abovementioned scales. Data were automatically downloaded from the website once all surveys had been completed.

Results

As a group, respondents indicated relatively favorable exchanges with their immediate leaders. Overall responses indicated general agreement with positive statements regarding the respondent's experiences of recognition, as well as self-reported OCB, performance and affective well-being (descriptive statistics appear in Table 19).

Table 19

Descriptive statistics for recognition and correlates over four data collection periods

Time	Recognition	Jaws	TFL	OCB	Performance
1	5.64 (1.9)	4.42 (.93)	5.32 (1.12)	5.62 (.66)	5.98 (.59)
2	4.60 (1.53)	4.18 (1.29)	4.82 (1.54)	5.52 (.44)	5.78 (1.36)
3	4.52 (1.78)	3.91 (1.42)	4.55 (1.98)	5.91 (.59)	5.82 (1.61)
4	4.72 (.92)	4.67 (1.33)	4.10 (.81)	5.94 (.88)	6.33 (.58)

Overall bivariate correlations for the variables appear in Table 20. Recognition had a moderate positive relationship with affective well-being (.66), TFL (.68) and performance (.32), but not OCB.

Table 20

Overall correlations between recognition and other variables

	Recognition	Jaws	TFL	OCB	Performance
Recognition	-				
Jaws	.66	-			
TFL	.68	.44	-		
OCB	*ns*	*ns*	*ns*	-	
Performance	.32	.40	*ns*	*ns*	-

All correlations significant at p ≤ .01

Mixed Model

A mixed model analysis using SPSS was conducted in order to evaluate both the within- and between-person effects of recognition, as well as to investigate its relationship to TFL insofar as both are covariate predictors of important outcomes. Mixed modelling was selected as the method of analysis because it allows us to assess

both within and between-subject effects in the same analysis. Further, it is more robust

than other techniques in situations where the relationship between variables may not be

perfectly linear. Additional results from the mixed-modelling analyses appear in

Appendices F – J.

Analyses were conducted in SPSS by entering a selected dependent variable

(OCB, performance or JAWS) and creating predictive terms to represent recognition

changes between-individuals and within-individual over time. For affective well-being,

analyses were conducted by separating the JAWS scale in two factors (positive vs.

negative emotions). However, analyses were also conducted using the global JAWS

score (using reversal for scoring ratings of negative emotions).

A significant *time x recognition* interaction would suggest that within-person

changes in recognition over time are associated with proportional changes in the

dependent variable over the same time period. Based on results from the survey study, I

decided to include TFL as a covariate predictor of recognition. Organizational

citizenship behavior was selected as the first DV.

Table 21

Mixed-model results for Time, Recognition and TFL predicting OCB

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	163	105.54	.000
Time	1	124.36	8.21	.005
Recognition	1	139.56	5.76	.018
Time * Recognition	1	127.96	5.98	.016
TFL	1	138.38	2.74	.100
Time * TFL	1	128.06	1.34	.249

Dependent Variable: OCB

Results indicated a significant effect for time ($F(1, 124) = 8.21$, $p < .05$), suggesting there may have been significant changes in OCB levels over time that were not directly attributable to recognition or TFL. There was also a significant effect for recognition ($F(1, 140) = 5.76$, $p < .05$), indicating it was a predictor of between-subjects differences in OCB. There was also a significant *time x recognition* interaction ($F(1, 128) = 5.98$, $p < .05$), indicating that changes in recognition predicted longitudinal within-person changes in OCB. However, the terms for TFL and time x TFL were non-significant, indicating that in this case, changes in TFL did not predict any within or between-person changes in OCB, over and above what may already have been predicted by recognition.

The above analysis was repeated substituting performance as the DV. Results were similar to those for OCB, with significant terms for both recognition ($F(1, 146) = 10.75$, $p < .001$) and *time x recognition* ($F(1, 130) = 6.18$, $p < .05$). There was also a significant *time x TFL* interaction, whereby changes in TFL behaviors predicted within-subjects changes in performance over time ($F(1, 130) = 4.00$, $p = .048$).

Table 22

Mixed-model results for Time, Recognition and TFL predicting Performance

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	164.71	99.02	.000
Time	1	123.88	1.36	.246
Recognition	1	146.45	10.75	.001
Time * Recognition	1	129.75	6.18	.014
TFL	1	144.92	.87	.352
Time * TFL	1	129.93	4.00	.048

Dependent Variable: Performance

Finally, emotional well-being (JAWS measured as a single factor) was entered as the dependent variable. TFL was the only significant predictor in this case (F (1, 138) = 20.67, $p < .001$), despite the fact that recognition was found to be significant when entered without TFL in a previous analysis.

Table 23

Mixed-model results for Time, Recognition and TFL predicting JAWS

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	52.87	1887.81	.000
Time	1	48.14	.17	.686
TFL	1	138.09	20.67	.000
Recognition	1	138.46	.45	.502
Time * TFL	1	76.87	.003	.959
Time * Recognition	1	72.15	.64	.427
TFL * Recognition	1	159.37	1.68	.197

Dependent Variable: JAWS

To further evaluate the relationship between recognition and emotional well-

being, the JAWS scale was divided in two, resulting in a facet representing positive

emotions and one representing negative emotions. For the positive emotion dimension

of the Jaws, results were very similar to those obtained for the uni-dimensional JAWS

variable, with TFL coming out as the only significant predictor of changes in positive

emotions.

Table 24

Mixed-model results for Time, Recognition and TFL predicting JAWS (Positive)

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	79.13	1423.70	.000
Time	1	64.91	.01	.922
TFL	1	142.11	25.42	.000
Recognition	1	146.41	.01	.918
Time * TFL	1	101.26	.01	.943
Time * Recognition	1	96.99	.25	.615
TFL * Recognition	1	161.11	1.26	.263

Dependent Variable: JAWS (Positive)

Results for the negative affect facet were slightly different (see Table 25). TFL

again emerged as a significant predictor of Jaws (negative), along with a significant

recognition x TFL interaction *(p< .001),* again highlighting the close conceptual

relationship between recognition and TFL.

Table 25

Mixed-model results for Time, Recognition and TFL predicting JAWS (Negative)

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	53.38	690.26	.000
Time	1	48.86	.24	.627
TFL	1	141.80	7.02	.009
Recognition	1	142.08	.62	.432
Time * TFL	1	80.17	.25	.617
Time * Recognition	1	77.09	.05	.822
TFL * Recognition	1	153.45	11.14	.001

Dependent Variable: JAWS (Negative)

Taken together, results from these analyses suggest recognition is a significant predictor of within-subject (longitudinal change) and between-subjects differences in both OCB and job performance.

Discussion: Diary Study

The primary goal of this study was to confirm the nature of the relationship between recognition and key individual outcomes such as organizational citizenship behaviors, performance and emotional well-being over time. Previous studies had already demonstrated a higher-order factor structure, allowing for the development of a relatively brief measure of employee recognition to be used in a diary study spanning approximately eight weeks. Supporting the importance of measuring employee recognition in organizational research, recognition scores predicted between-subjects differences in OCB and performance, but not in emotional well-being when TFL was included in the analysis. Individuals who feel they are being recognized by their

supervisors are thus more likely to engage in positive extra-role behaviors and to report performing at higher levels on the job. These results clearly suggest that organizations that foster an environment where leaders recognize individual employees on a regular basis will have a workforce that is invested in the workplace and driven to perform at higher levels. The potential benefits of recognition are made all the more enticing when the relative cost is taken into account: it costs nothing but a few moments for a leader to make an employee feel appreciated and thereby more invested in their work.

Another important finding was that recognition also predicted within-subject changes in OCB and job performance. Thus, during periods when employees felt they had been recognized for their contributions, they also reported engaging in more positive extra-role behaviors, as well as achieving higher levels of job performance. Conversely, if an employee felt that their contributions were overlooked their level of OCB and performance was likely to drop in a following week. This has particular implications in terms of the need for continuous recognition from leaders. All too often, employees are recognized (if at all) in relatively isolated moments (i.e.: Christmas gala, anniversary, annual reviews, etc.). If recognition becomes but an isolated incident, so too will the important outcomes this study has demonstrated relate to recognition. This implies that organizations may have much to gain from moving away from a model of recognition that focuses on annual performance, towards an approach that trains leaders to recognize and utilize opportunities to make employees feel recognized in their workplace.

It is somewhat surprising that within-subject effects of recognition were only detected for OCB and performance but not emotional well-being, especially given the fact that recognition was not a significant unique predictor of OCB when TFL was controlled for in the Survey Study. It is possible that recognition may not have predicted within-person changes in emotional well-being because there were none. Measurement waves were separated by approximately 14 days. It is possible that employees may have been able to change their discretionary behavior (i.e.: OCB) and performance levels as a result of supervisor recognition, while their overall emotional well-being may not have had time to change. Regardless, this highlights an obvious need for additional research into the relationship between recognition and a variety of outcomes, especially longitudinal research that monitors these outcomes for extended periods of time (i.e.: 12+ months). Hopefully, the use of a common conceptualization and measure of recognition will help future researchers to shed light on how exactly recognition impacts individual employees. According to Social-Exchange Theory, reciprocity may be playing an important role here. Individuals who feel that their leaders care enough to provide recognition reciprocate with higher levels of both task performance and extra-role performance. Again, studying the effects of recognition over an extended period of time may allow researchers to understand how recognition can put in motion a cycle of reciprocity whereby positive behaviors lead to recognition which in turn generates reciprocal positive behaviors and so on.

Following the results of the Survey Study (Study 1), it was essential to further investigate the relationship between TFL and recognition. The results of the mixed model analyses demonstrated that TFL and recognition are indeed closely related.

Nonetheless, recognition did provide unique prediction of between-subjects differences in OCB and performance. Recognition also predicted unique within-person variance in OCB and performance. Again, this supports the importance of including recognition as a distinct concept in organizational research. Interestingly, recognition did not predict emotional well-being when TFL was included in the equation. This suggests that TFL may in fact mediate most of the relationship between recognition and emotional well-being.

Taken together, the results of this analysis suggest that recognition may play more of a motivating role, driving employees to engage in higher levels of OCB and task performance, while the more interpersonal nature of TFL drives outcomes such as emotional well-being. In this situation, leaders who recognize their employees are perceived as more transformational and thus foster higher levels of emotional well-being. Again, more research is needed to clarify the exact nature of the relationship between recognition and various outcomes. The presence of organizational citizenship behaviors and higher performance levels suggests employees who are engaged in their work and invested in their organization. Recognition is, by its very nature, a form of positive feedback or reinforcement. It should thus not be too surprising that its primary effect seems to be as a motivational force, while its effects on emotional well-being may be more indirect.

These results also highlight another important aspect of leader behaviors. Although TFL was treated as a covariate of recognition in every study, it could also be conceived as an outcome. Leaders who engage in recognition behaviors will be perceived as more transformational by their employees. Thus, training leaders to

effectively recognize employee contributions may be an effective way to boost the level

of transformational leadership within an organization and of reaping the vast rewards

that increased TFL levels have been demonstrated to bring time and time again.

Conversely, it is possible that a leader's transformational behaviors (especially those

involving individual consideration) may lead to the perception of the leader as

effectively recognizing individual contributions. Thus, the relationship between

recognition and TFL may be somewhat circular in nature. Statistically speaking, this

point is somewhat moot since the two share 75% variance. Thus, it may be difficult to

ever say with certainty which causes which. Regardless of this, recognizing employees

is an essential aspect of effective leadership.

General Discussion

Recognition Scale. This research project aimed to help cement employee

recognition in the realm of scientific organizational research. While few would argue

that employee recognition is a bad thing, only a scarce amount of research had been

dedicated to further understanding how recognition impacts individual employee

outcomes. As such, one of the primary goals here was to develop a scale of recognition

based on existing theory (Brun & Dugas, 2008) in order to investigate the construct of

recognition. This appears to have been achieved. A 25 item and an 11 item scale have

been developed, both possessing adequate reliability and predictive validity when it

comes to outcomes such as emotional well-being, OCB, performance, commitment and

trust. Hopefully, these two versions of the scale will provide future researchers with a

common definition and measure of recognition that will help to advance our

understanding of this essential concept by allowing findings from various studies to be

integrated together.

Factor Structure. A related and equally important endeavour here was to investigate the factor structure of recognition. Based on the results from the survey and vignette studies, it appears that recognition is most effectively measured as a higher-order factor with four second-order facets that are highly intercorrelated. While the results of the Vignette Study suggest that individuals may differentiate between the different dimensions of recognition to a certain extent, there is little evidence that these operate distinctly on outcomes of interest. Despite the fact that this measure of recognition appears to assess a higher-order factor, there may be situations where measuring recognition at the facet level could prove to be beneficial. The Diary Study provided evidence that experiencing recognition may lead to increased levels of job performance and organizational citizenship behavior. One could argue that the facets of recognition might not relate to both outcomes in the same way. For example, personal recognition and recognition of dedication may be more closely related to OCB, while recognition of achievement and work performance may be more closely related to job performance. In research where this type of distinction is important, the use of a longer measure of recognition would need to be revisited. Such a scale would need to have substantially lower scale covariance in order to make meaningful distinctions. Nonetheless, such a scale could prove useful in broadening our understanding of recognition and its effect on key employee outcomes such as job performance and organizational citizenship behaviors.

Further, the within-subject effects of recognition again support the effectiveness of conceiving recognition as a higher-order factor. While the facets may not be

statistically distinct (according to the factor analyses in the Survey Study), individuals

may nonetheless distinguish between them to a certain extent (according to MANOVA

results in Vignette Study). Thus, employees may react equally favorably to recognition

behaviors that fall into different dimensions, so long as they feel they are being

recognized in some way. A measure that fails to take the complete spectrum of

recognition facets into consideration may thus fail to measure important examples of

recognition, while allotting too much importance on other types of recognition that may

not be as present in a given work environment. If employee recognition is to become a

well-defined and useful construct in organizational research, it must be measured

adequately. I sincerely hope that the scales developed herein will help to achieve this

goal.

Recognition and Social Exchange Theory. Finally, the overall results from the

three studies support using the framework of social exchange theory (SET) to study

recognition. The recognition scale that was developed here primarily assesses non-

financial recognition. Although financial bonuses and other incentives are also effective

motivators, the focus here was on the more interpersonal aspect of recognition. Results

indicated that recognition has a unique effect on both within-person changes in OCB

and performance over time, suggesting these occur as a response to supervisor

recognition. The notion of reciprocity and of the "give and take" nature of relationships

is central to social exchange theory. Within this theoretical context, we can understand

that as an employee's previous investment (in terms of achievement, performance,

dedication or personal investment) is recognized by the supervisor, additional extra-role

behaviors and task performance are more likely to occur in the future. There is

considerable evidence that employees who feel emotionally supported by a person or entity reciprocate with commitment to that specific person / entity (see Bishop et al., 2005). Further, meta-analytic evidence demonstrates that trust in one's supervisor is positively related to task performance (.32) and organizational citizenship behaviours (.48) (Colquitt et al., 2013). Because the current research demonstrated that recognition is an important predictor of all of these, there appears to be a strong rationale for using SET to further understand the effects of employee recognition. While it may be tempting to think of employee recognition as a purely linear process, it is in fact cyclical. Employees who know that their efforts and sacrifice will be recognized will be more willing to invest themselves in their relationship with both their supervisor and organization. In a way, recognition is one of the guiding principles of the workplace social contract.

Future research into recognition should aim to build on existing knowledge and relationships that have been established in the SET literature. One example is organizational justice, which the current research showed is closely linked to employee recognition. As illustrated in the conceptual model below (Figure 3), the relationship between justice and reciprocal behaviours is mediated by two important factors: the quality of the social exchange relationship and state affect in individual employees. Thus, employees who are treated fairly feel compelled to reciprocate because they: a) trust the organization and supervisors whom employees perceive as supporting their well-being ; and b) the fair treatment and quality social exchanges foster positive emotions in employees.

Figure 3

Conceptual model using Social Exchange Theory framework
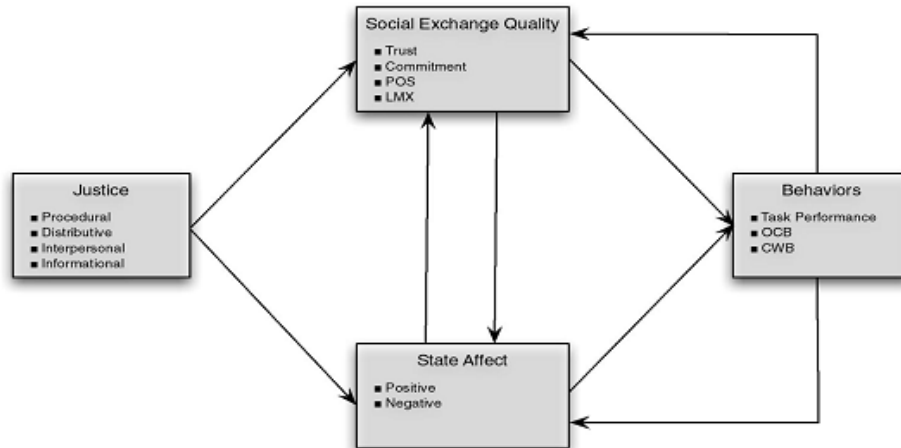
Conceptual model of relationship between justice and individual behaviours, including social exchange quality and state affect as mediators (Colquitt et al., 2013, p. 221)

This model is based on results from a comprehensive meta-analysis and it provides solid conceptual grounds on that to develop a more complete theory of employee recognition. Because social exchange quality and state affect have been established as essential mediators in this type of reciprocal relationship, they appear to be particularly well-suited to studying recognition. This social-exchange model could thus provide some much needed theoretical direction for future research into employee recognition. The above conceptual model could be very useful in developing hypotheses about how exactly recognition affects outcomes such as emotional well-being, trust, OCBs and performance.

Limitations

While the issue was already covered in the Vignette Study discussion, the personal recognition facet remains somewhat problematic. Because it is one of the more loosely defined and abstract facets of recognition, it is difficult to draw a clear limit between personal recognition and other related concepts such as justice, job control and even civility. This unclear conceptual definition may have contributed to the facet scale's low reliability levels and inconsistent relationships. It is also possible that the items used to assess this facet may require some revision. However, before the items can be revised, the definition of the facet may need to be revisited to identify exactly what personal recognition entails and, more importantly here, what it does no. These mixed results should not take away from the importance of personal recognition, since it remains an important component of recognition which is easy to overlook both in practice and in research.

Another potential limitation was the use of written vignettes to assess recognition. Although results from the Vignette Study demonstrate that the vignette manipulation was generally effective, recognition is best experienced from the first person point of view. Other means may be more effective for studying recognition experimentally. For example, researchers could have individuals work on a specific task and manipulate the type of recognition the individual receives. This may make it easier for more nuanced facets such as personal recognition to be manipulated.

A limitation of the Diary Study was the relatively short period of time between data collection (2 weeks). Because of time constraints on the overall project and risk of attrition, it was difficult to make the periods any longer. Given the within-person effects

observed in the Diary Study, it would be interesting to study how changes in recognition over longer periods of time affect key outcomes.

Finally, the substantial correlation between recognition and transformational leadership was a limitation in most studies. A high level of covariance was expected because the individual consideration dimension of TFL is so closely related to recognition. However, the two factors were so closely correlated that multicollinearity was an issue in the Survey Study. This does not preclude the use of a recognition measure in research. However, its applications may be most effective in situations where the primary variable of interest is a leader's level of recognition, as opposed to his or her level of transformational ability. This is also true of LMX. In the Survey Study, the correlation between recognition and TFL was .88 while the correlation between LMX and TFL was .85. In both cases, the variables shared roughly 75% variance. The high covariance between LMX and TFL does not preclude the use of a measure of LMX. Rather, it simply becomes more important to select the measure of effective leadership which most closely relates to the question at hand. For example, research questions based on Social Exchange Theory may be best evaluated using a measure of LMX, which was a key factor of high quality social exchanges in Colquitt et al. (2013). Conversely, research evaluating the impact of a leader's behavior on the skill development or motivation of employees may benefit from using a measure of transformational leadership. In the same way, the recognition measure can provide quick, effective measurement of recognition and may be quite useful in research geared specifically towards recognition.

Avenues for Future Research

Now that a definition and measure of recognition are available and that its factor structure suggests it can be measured and treated as a single higher-order factor (facilitating brief measurement), researchers will have to turn their attention to studying the impact of recognition over extended periods in order to properly understand how recognition affects key employee behaviors and attitudes over time. Another key limitation was the reliance on self-reports of OCB and performance. While there is ample evidence that these can be valid and reliable measures, future research should attempt to obtain third party data on individual performance to establish the benefits of recognition more clearly.

Further research is also needed in order to understand the precise nature of the relationship between recognition and other established predictors such as TFL and justice. Results from this project clearly demonstrate that TFL and justice are closely related to recognition and that they may in fact mediate at least some of the relationship between recognition and the outcomes of interest. Thus, additional research will need to assess further the added value of including a measure of recognition over and above other well established predictors such as TFL and justice. Theory would suggest that leaders who recognize their employees are perceived as transformational and just. Although it fell outside the scope of the current project, future research should focus on developing and testing structural equation models that will help to shed light on the intertwined relationship that exists between recognition, TFL and justice.

Research is also warranted into the differences between financial and interpersonal recognition. While the current project has clearly demonstrated that

interpersonal recognition affects key individual attitudes and behaviors resulting in higher quality relationships with the leader and organization, it is not immediately clear to what extent financial bonuses would accomplish the same. In the same way, while interpersonal recognition was positively and relatively strongly correlated with affective commitment, to what extent financial rewards would increase affective commitment levels remains unclear. However, financial recognition may foster other types of outcomes, such as continuance commitment, since it may raise the relative costs of leaving the organization, therefore motivating the employee to stay for different reasons. This line of research will have important practical implications, since findings could be used to guide the implementation of employee recognition programs in organizations. In the meantime, organizations should focus on integrating financial recognition programs and leadership development that helps leaders to integrate employee recognition into their daily leading behaviors.

Further research should also focus on other sources of recognition. While immediate supervisors were a logical choice for early research because of their unique position with regards to employees, recognition can also come from the organization, from coworkers or from members of the public or other client organizations. Researchers need to turn their attention to these other sources, since different sources of recognition may affect various outcomes differently.

Conclusion

My greatest hope is that this research project will lay the groundwork for a much needed body of research on employee recognition. Organizations spend tremendous amounts of money on fostering a healthy and engaged workforce. The

types of recognition behaviors that were studied here can generally be done in only a few seconds, requiring only a little forethought and timing on the part of the leader. Thus, it represents an important strategic tool for organizations looking to improve employee-level outcomes, since the minimal financial investment means the returns have the potential to be quite high. As such, it is my hope that the recognition scale that was developed in this project, as well as the results of the research will help build a strong base of empirical evidence for the value of employee recognition, so that organizations will be able to see the tremendous rewards of fostering a leadership culture that recognizes the unique contribution of each individual in the organization.

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Appendix A – Employee Recognition Scale (25 items)

Employee Recognition Scale
In the section below, you will find a number of statements related to your immediate supervisor or leader. Using the response options listed below, please indicate your level of agreement with each of the statements, as they apply to your immediate supervisor. If you feel that a particular statement does not apply to you, simply select N/A (Does not Apply).
1 = Strongly Disagree   2 = Disagree   3 = Neither Agree / Disagree   4 = Agree   5 = Strongly Agree   N/A = Does not Apply

Personal	
	My individual needs and characteristics are taken into consideration by my supervisor.
	I am recognized as an individual person by my supervisor.
	My supervisor keeps me "in the loop" (informed) of what is going on in our organization.
	My personal well-being is important to my supervisor.
	My supervisor routinely exhibits acts of civility (ie: saying hello, thank you, etc.) towards me.
	My supervisor makes me feel that I matter.
	My supervisor allows me to make decisions on my own.
Achievement	
	I receive congratulations from my supervisor when I reach specific goals.
	My supervisor takes time to publicly acknowledge my successes.
	My supervisor provides incentives, bonuses or other rewards for outstanding performance.
	The results of my hard work are noticed by my supervisor.
	My supervisor thanks me when I successfully reach performance goals or other targets.

Job Performance	
	My supervisor recognize(s) the quality of the work that I do.
	My supervisor assigns me work that fits with my level of qualification.
	My supervisor acknowledges my professional training and qualifications.
	My supervisor appreciates my skills and knowledge.
	My supervisor comments on the level of professionalism I exhibit through my work.

Job Dedication	
	My supervisor acknowledges my loyalty to our team / department.
	My hard-work and dedication are noticed by my supervisor.
	My supervisor recognizes my ideas and effort, even when these do not necessarily lead to successful results.
	My supervisor takes the time to thank me for the amount of effort I put into my work.
	I feel my supervisor appreciates how devoted I am to my job.
	My supervisor acknowledges my commitment to our organization.
	The amount of time I have been with my organization is noticed by my supervisor.
	My supervisor expresses recognition for my continued loyalty to the organization.

Shortened Recognition Items

(treated as single higher-order factor)

1. My personal well-being is important to my supervisor.
2. My supervisor makes me feel that I matter.
3. My supervisor is sensitive to my needs.
4. I receive congratulations from my supervisor when I reach specific goals.
5. My supervisor thanks me when I successfully reach performance goals or other targets.
6. My supervisor recognize(s) the quality of the work that I do.
7. My supervisor comments on the level of professionalism I exhibit through my work.
8. My hard-work and dedication are noticed by my supervisor.
9. My supervisor takes the time to thank me for the amount of effort I put into my work.
10. I feel my supervisor appreciates how devoted I am to my job.
11. My supervisor acknowledges my loyalty to our team / department

Appendix B – Other Measures for Study 1(80 items total)

<u>JAWS</u> (6items; Van Katwyk et al., 2000)
Thinking of the past few weeks, how much of the time has your job made you feel each of the
following...

<center>

1= Never   2= Rarely   3= Not very often
4= Some of the time
5= Most of the time   6= Nearly all of the time   7= All of the time

</center>

    Tense
    Worried
    Calm
    Gloomy
    Enthusiastic
    Optimistic

<u>LMX Items</u> (7 items; Scandura & Graen, 1984)

1 Do you usually feel that you know where you stand with regards to how satisfied your immediate supervisor is with what you do?
Always know where I stand (4)
Usually know where I stand (3)
Seldom know where I stand (2)
Never know where I stand (1)

2 How well do you feel that your immediate supervisor understands your problems and needs? *Completely* (4)
Well enough (3)
Some but not enough (2)
Not at all (1)

3 How well do you feel that your immediate supervisor recognizes your potential1?
Fully (4),
As much as the next person (3)
Some but not enough (2)
Not at all (I)

4 Regardless of how much formal authority your immediate supervisor has built into his or her position, what are the chances that he or she would be personally inclined to use power to help you solve problems in your work?
Certainly would (4)
Probably would (3)
Might or might
not (2)

No chance (I)

5 Again, regardless of the amount of formal authority your immediate supervisor has, to what extent can you count on him or her to "bail you out" at his or her expense when you really need it?
Certainly would (4)
Probably would (3)
Might or might not (2)
No chance (1)

6 I have enough confidence in my immediate supervisor that I would defend and justify his or her decisions if he or she were not present to do so?
Certainly would (4)
Probably would (3)
Maybe (2)
Probably not (1)

7 How would you characterize your working relationship with your immediate supervisor?
Extremely effective (4)
Better than average (3)
About average (2)
Less than average (I)

The seven items are summed for each participant resulting in a possible range of scores from 7 to 28

Using the scale below, please rate how much you agree with each of the following
statements regarding your current job .

> *1= Strongly Disagree*
> *2= Disagree*
> *3= Slightly Disagree*
> *4= Neither Agree / Disagree*
> *5 = Slightly Agree*
> *6= Agree*
> *7= Strongly Agree*

Transformational Leadership (7 items; Carless et al., 2000)
My leader / supervisor...
    communicates a clear and positive vision of the future
    treats staff as individuals, supports and encourages their development

gives encouragement and recognition to staff

fosters trust, involvement and cooperation among team members

encourages thinking about problems in new ways and questions assumptions

is clear about his/her values and practises what he/she preaches

instills pride and respect in others and inspires me by being highly competent.

Supervisor Trust (6 items; McAllister, 1995)

Affect-based trust

We can both freely share our ideas, feelings, and hopes.

I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen. .

If I shared my problems with this person, I know (s)he would respond constructively and caringly.

Cognition-based trust

Given this person's track record, I see no reason to doubt his/her competence and preparation for the job.

Most people, even those who aren't close friends of this individual, trust and respect him/her as a coworker.

Other work associates of mine who must interact with this individual consider him/her to be trustworthy.

POS items (Eisenberger et al., 1986) (6)

The organization really cares about my well-being.

The organization is willing to extend itself in order to help me perform my job to the best of my ability.

Even if I did the best job possible, the organization would fail to notice.

The organization cares about my general satisfaction at work.

The organization cares about my opinions.

Organizational Commitment (9 items; Allen & Meyer (1990))

Right now, staying with my organizations is a matter of necessity as much as desire.

I feel I have too few options to consider leaving this organization.

One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.

--

I think that people these days move from company to company too often

Jumping from organization to organization does not seem at all unethical to me (R)

I feel a sense of moral obligation to remain with this organization.(mod)

--

I feel a strong sense of belonging to my organization (mod.)

I feel like "part of the family" at my organization (mod.)

I feel emotionally attached to my organization (mod.)

* last mods removed negative wording

<u>Turnover Intention</u> (5 items; <u>Walsh, Ashford & Hill, 1985)</u>
I am starting to ask my friends / contacts about other job possibilities
I am thinking about quitting my job.
I intend to leave this company within the next 6 months
I often look to see if similar positions in other organizations are open (mod *similar* instead of sales)
I have been consulted job-search website to see if other jobs are available. (new; replaces recruiter question)

<u>OCB</u> (24 items; <u>Podsakoff et al., 1990)</u>

My attendance at work is above the norm.
I do not take extra breaks.
I obey company rules and regulations even when no one is watching.
I am one of the more conscientious employees in my team / department.
I believe in giving an honest day's work for an honest day's pay.

I consume a lot of time complaining about trivial matters. (R)
I am always focuses on what's wrong, rather than the positive side. (R)
I tend to make "mountains out of molehills." (R)
I always finds fault with what the organization is doing. (R)
I am the classic "squeaky wheel" that always needs greasing. (R)

I attend meetings that are not mandatory, but are considered important.
I attend functions that are not required, but help the company image.
I keep abreast of changes in the organization.
I read and keeps up with organization announcements, memos, and so on.

I take steps to try to prevent problems with other workers.
I am mindful of how his/her behavior affects other people's jobs.
I do not abuse the rights of others.
I try to avoid creating problems for coworkers.
I consider the impact of his/her actions on coworkers.

I help others who have been absent.
I assist coworkers who have heavy workloads.
I orient new people even though it is not required.
I willingly help others who have work related problems.
I am always ready to lend a helping hand to those around me.

<u>Justice</u>

1 = to a small extent 2 = and 5 = to a large extent.

Procedural justice
The following items refer to the procedures used by your supervisor to arrive at decisions. To what extent:

Have you been able to express your views and feelings during those procedures?
Have you had influence over the decisions arrived at by those procedures?
Have those procedures been applied consistently?
Have those procedures been free of bias?
Have those procedures been based on accurate information?
Have you been able to appeal the decisions arrived at by those procedures?
Have those procedures upheld ethical and moral standards?

Distributive justice
The following items refer to your the rewards you receive from your supervisor. To what extent:
Do the rewards you receive from your supervisor reflect the effort you have put into your work?
Are the the rewards you receive from your supervisor appropriate for the work you have completed?
Do the the rewards you receive from your supervisor reflect what you have contributed to the organization?
Are the the rewards you receive from your supervisor justified, given your performance?

Interpersonal justice
The following items refer to your supervisor. To what extent:
Has (he/she) treated you in a polite manner?
Has (he/she) treated you with dignity?
Has (he/she) treated you with respect?
Has (he/she) refrained from improper remarks or comments?

Informational justice
The following items refer to your supervisor. To what extent:
1. Has (he/she) been candid in (his/her) communications with you?
2. Has (he/she) explained the procedures thoroughly?
3. Were (his/her) explanations regarding the procedures reasonable?
4. Has (he/she) communicated details in a timely manner?
5. Has (he/she) seemed to tailor (his/her) communications to individuals' specific needs?

Self-rated Job Performance (4 items)

responses:
1= poor   2= fair   3= good   4= very good   5= excellent

Considering all of your job duties and responsibilities, how would your supervisor or boss rate your **_overall performance_** at work during the past 3 months?

Considering all of your job duties and responsibilities, how would your supervisor or boss rate the **_quality of your work_** during the past 3 months?

Considering all of your job duties and responsibilities, how would your supervisor or boss rate your **_level of knowledge_** with regards to your work during the past 3 months?

Considering all of your job duties and responsibilities, how would your supervisor or boss rate your **_level of dependability_** during the past 3 months?

Appendix C – Results from item sorting

<table>
<tr><td colspan="2" align="center">**Sorting Results**
Employee Recognition Scale</td></tr>
<tr><td>*Dimension A*
PERSONAL</td><td>*Recognition of an employee's inalienable right to dignity, respect and well-being. Personal recognition involves taking the unique needs and characteristics of individuals into account, as well as making them feel that they are a valued part of the organization.*</td></tr>
<tr><td>*Not included in item sort*</td><td>My individual needs and characteristics are taken into consideration by my supervisor.</td></tr>
<tr><td>AAAAA</td><td>I am respected as an individual person by my supervisor.</td></tr>
<tr><td>AAACE</td><td>My supervisor keeps me "in the loop" (informed) of what is going on in our department / organization.</td></tr>
<tr><td>AAAAA</td><td>My personal well-being is important to my supervisor.</td></tr>
<tr><td>AAAAA</td><td>My supervisor routinely exhibits acts of civility (ie: saying hello, thank you, etc.) towards me.</td></tr>
<tr><td>AAAEE</td><td>My supervisor makes me feel that I matter *to our team / department.*</td></tr>
<tr><td>**ACCCC**</td><td>My supervisor allows me to make decisions with regards to *how I do my work.*</td></tr>
<tr><td>*Dimension B*
RESULTS</td><td>*Recognition of the tangible outcomes or products of an employee's work.*</td></tr>
<tr><td>BBBBE</td><td>I receive congratulations from my supervisor when I reach specific goals.</td></tr>
<tr><td>BBBEE</td><td>My supervisor takes time to publicly acknowledge my successes.</td></tr>
<tr><td>BBBBB</td><td>My supervisor provides incentives, bonuses or other rewards for outstanding performance.</td></tr>
<tr><td>BBBEE</td><td>My supervisor sends emails / notes highlighting my achievements.</td></tr>
<tr><td>BBBEE</td><td>My supervisor personally comments on my successes at work.</td></tr>
<tr><td>BBBBB</td><td>The results of my work are noticed by my supervisor.</td></tr>
<tr><td>BBBBB</td><td>I receive praise from my supervisor when I successfully reach performance goals or other targets.</td></tr>
<tr><td>*Dimension C*
WORK-</td><td>*Recognition of the manner in that employees carry out their duties, as well as their expertise, skills, and professional qualifications.*</td></tr>
</table>

PRACTICES	
CCCDC	My supervisor notices the <u>*diligent*</u> work I do.
CCCCC	My supervisor acknowledges my professional training and qualifications.
CBEEE	My supervisor lets me know when I am <u>*doing a good job.*</u>
CCCCC	My supervisor assigns me work that fits with my level of qualification.
CCCCA	My supervisor is aware of my abilities and makes good use of these.
BBBEE	I sometimes receive personal messages or emails from my supervisor highlighting the quality of the work that I do.
CCCCC	My supervisor appreciates my skills and knowledge.
CCCCC	My supervisor comments on the level of professionalism I exhibit.
Dimension D *JOB-* *DEDICATION*	*Recognition of an employee's level of effort and commitment to the work process, regardless of whether these result in the desired outcome.*
DDDDE	My supervisor expresses gratitude for my loyalty.
DDDDD	My hard-work and dedication are noticed by my supervisor.
DDEEE	My supervisor has initiated a round of applause to commemorate the time and effort I have dedicated to a specific task or project.
DDDDC	My supervisor makes remarks about the amount of perseverance I show at work.
DDDEE	My supervisor has sent emails / notes highlighting my dedication and tenacity.
DDDDA	My supervisor acknowledges my ideas and effort, even when these do not necessarily lead to successful results.
DDDDD	My supervisor comments on the amount of effort I put into my work.
E = other overall dimension not included in scale	

Appendix D. Employee Recognition Vignette Study (Study 2) Scenarios

Instructions

        For this study, we would like you to place yourself in the role of Alex, whom you will be introduced to in the section below. When answering questions, please answer them as if you are Alex.

        Alex is a 28 year old employee of TransComm Services, a medium-sized company based in Halifax, Nova Scotia. Alex works in the customer service department at Transcomm, providing after-purchase support to customers over the phone and internet.

        At the end of each day, Alex must prepare a summary report detailing specific incidents that will need to be followed-up on, as well as a general tally of different types of requests made by customers that day.

        While arriving at work on Wednesday morning, Alex crosses the department's manager who says:

Vignette Scenarios

Control

        Good morning Alex. There will be a staff meeting tomorrow from 4:30-5:00 so please make sure to clear your schedule. I'd like to make sure we have a good turnout as there are a number issues to discuss. Have a nice day.

Personal Recognition

        Good morning Alex. There will be a staff meeting tomorrow from 4:30-5:00 so please make sure to clear your schedule since I would really like to hear your opinion about what we will be discussing. Have a nice day.

Achievement Recognition

        Good morning Alex. There will be a staff meeting tomorrow from 4:30-5:00. Please make sure to clear your schedule. By the way, I noticed that your customer satisfaction ratings been above target lately. Keep it up! Have a nice day.

Recognition of Job Performance

        Good morning Alex. There will be a staff meeting tomorrow from 4:30-5:00. Please make sure to clear your schedule. By the way, the reports you have been submitting show a-lot of professionalism and attention to detail. Keep it up! Have a nice day.

Recognition of Job Dedication

Good morning Alex. There will be a staff meeting tomorrow from 4:30-5:00. Please make sure to clear your schedule. By the way, I noticed you have been very helpful with some of the new employees in the department lately. Keep it up! Have a nice day.

Appendix E. Manova Post-hoc results for between-group differences (Study 2)

LSD post-hoc test for Global Recognition Score

(I) Condition	(J) Comparison Condition	Mean Difference (I-J)	Std. Error	Sig.
Control	Personal Rec.			ns
	Achievement	-1.28	.34	,00
	Performance	-2.01	.34	,00
	Dedication	-1.56	.32	,00
Personal Recognition	Control			ns
	Achievement	-.72	.32	,03
	Performance	-1.45	.32	,00
	Dedication	-1.00	.30	,00
Recognition of Achievement	Control	1.28	.34	,00
	Personal	.72	.32	,03
	Performance	-.73	.33	,03
	Dedication			ns
Recognition of Performance	Control	2.01	.34	,00
	Personal	1.45	.32	,00
	Achievement	.73	.33	,03
	Dedication			ns
Recognition of	Control	1.56	.32	,00

Post-hoc differences between Personal condition and other conditions on Personal facet

Dependent Variable	(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.
Personal Recognition	Personal Rec.	Control Condition	,7372	.43	.09
		Achievement	-,3278	.41	.43
		Performance	-,4881	.42	.25
		Dedication	-,3426	.39	.39

Post-hoc differences between Achievement condition and other conditions on Achievement facet

Dependent Variable	(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.
Recognition of Achievement	Recognition of Achievement	Control Condition	1.95	.39	.00
		Personal	1.57	.37	.00
		Performance	-.33	.38	.38
		Dedication	-.07	.36	.85

Post-hoc differences between Work Performance condition and other conditions on Work Performance

Dependent Variable	(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.
Recognition of Work Performance	Recognition of Work Performance	Control Condition	2.60	.38	.00
		Personal	2.00	.36	.00
		Achievement	1.18	.37	.00
		Dedication	.82	.35	.02

Post-hoc differences between Dedication condition and other conditions on Dedication facet

Dependent Variable	(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.
Recognition of Dedication	Recognition of Dedication	Control Condition	1.42	.39	.00
		Personal	1.01	.37	.01
		Achievement	.75	.38	.05
		Performance	-.37	.39	.34

Appendix F. Mixed Model Results: Recognition predicting OCB

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	65,58	2874,89	,000
Time	1	59,56	,27	,604
Recognition	1	154,30	34,74	,000
Time * Recognition	1	76,53	5,67	,020

Dependent Variable: OCB.

Estimates of Fixed Effects

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	5,59	,10	65,58	53,62	,000	5,38	5,80
Time	,02	,03	59,56	,52	,604	-,05	,09
Recognition	,36	,06	154,30	5,89	,000	,24	,48
Time * Recognition	-,069	,03	76,53	-2,38	,020	-,13	-,011

Dependent Variable: OCB

Estimates of Covariance Parameters

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	,23	,04	5,77	,000	,16	,32
	AR1 rho	,19	,14	1,42	,155	-,08	,44
Intercept	Variance	,28	,08	3,44	,001	,16	,50

Dependent Variable: OCB

Appendix G. Mixed Model Results: Recognition predicting Performance

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	64,96	2933,17	,000
Time	1	60,98	2,09	,154
Recognition	1	160,74	15,62	,000
Time * Recognition	1	74,44	1,33	,252

Dependent Variable: Performance

Estimates of Fixed Effects

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Intercept	5,92	,11	65	54,16	,000	5,70	6,14
Time	-,05	,03	61	-1,45	,154	-,12	,02
Recognition	,29	,07	161	3,95	,000	,15	,44
Time * Recognition	-,04	,03	74	-1,15	,252	-,10	,03

Dependent Variable: Performance

Estimates of Covariance Parameters

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Repeated Measures	AR1 diagonal	,29	,04	7,649	,000	,23	,38
	AR1 rho	-,15	,12	-1,267	,205	-,38	,09
Intercept	Variance	,33	,09	3,726	,000	,20	,57

Dependent Variable: Performance

Appendix H. Mixed Model Results: Recognition predicting JAWS

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	66,98	1874,311	,000
Time	1	70,77	,018	,893
Recognition	1	162,28	34,987	,000
Time * Recognition	1	84,29	,941	,335

Dependent Variable: Jaws

Estimates of Fixed Effects

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	4,49	,10	66,98	43,29	,000	4,28	4,69
Time	-,004	,03	70,77	-,14	,893	-,07	,06
Recognition	,41	,07	162,28	5,92	,000	,28	,56
Time * Recognition	-,03	,03	84,29	-,97	,335	-,09	,03

Dependent Variable: Jaws

Estimates of Covariance Parameters

						95% Confidence Interval	
Parameter		Estimate	Std. Error	Wald Z	Sig.	Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	,27	,03	7,740	,000	,21	,35
	AR1 rho	-,14	,10	-1,359	,174	-,34	,07
Intercept	Variance	,29	,07	3,774	,000	,18	,50

Dependent Variable: Jaws

Appendix I. Leadership & Recognition as Covariate Predictors of OCB

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	163,000	105,54	,000
Time	1	124,362	8,21	,005
Recognition	1	139,564	5,76	,018
Time * Recognition	1	127,962	5,98	,016
TFL	1	138,380	2,74	,100
Time * TFL	1	128,061	1,34	,249

Dependent Variable: OCB

Estimates of Covariance Parameters

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Repeated-Measures	CSR diagonal	,21	53,74	,004	,997	5,37E-218	8,30E+215
	CSR rho	,16	214,76	,001	,999	-1,000	1,000
Intercept	Variance	,31	53,73	,006	,995	8,136E-148	1,19E+146

Dependent Variable: OCB

Appendix J. Leadership & Recognition as Covariate Predictors of Performance

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	164,71	99,019	,000
Time	1	123,88	1,360	,246
Recognition	1	146,45	10,752	,001
Time * Recognition	1	129,75	6,183	,014
TFL	1	144,92	,871	,352
Time * TFL	1	129,93	4,002	,048

Dependent Variable: Performance

Estimates of Covariance Parameters

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Repeated-Measures	CSR diagonal	,30	25,54	,012	,991	6,97E-73	1,32E+71
	CSR rho	-,01	84,87	,000	1,00	-1,000	1,000
Intercept	Variance	,33	25,54	,013	,990	5,43E-68	1,95E+66

Dependent Variable: Performance

Appendix K. Leadership & Recognition as Covariate Predictors of Emotional Well-Being

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	52,87	1887,81	,000
Time	1	48,14	,17	,686
TFL	1	138,09	20,67	,000
Recognition	1	138,46	,45	,502
Time * TFL	1	76,87	,003	,959
Time * Recognition	1	72,15	,64	,427
TFL * Recognition	1	159,37	1,68	,197

Dependent Variable: Jaws

Estimates of Covariance Parameters

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated-	AR1 diagonal	,19	,029	6,52	,000	,138	,252
Measures	AR1 rho	-,28	,14	-2.00	,046	-,531	,011
Intercept	Variance	,30	,08	3,81	,000	,181	,507
Time	Variance	,01	,01	,82	,412	,001	,085

Dependent Variable: Jaws