Willingness to Share Knowledge with the Workgroup: Contextual

Antecedents, Instrumental and Relational Motivational States

by

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This is to certify that I have examined this copy of a master's thesis by

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STATEMENT OF AUTHORSHIP

This thesis contains no material which has been accepted for any award or any other degree or diploma in any university or other institution. It is affirmed by the candidate that to the best of her knowledge, the thesis contains no materials previously published or written by another person, except where due reference is made in the text of the thesis.

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ABSTRACT

This study aimed at examining the relationships between perceived contextual factors and individuals' willingness to share knowledge and actual knowledge sharing with their workgroups. Instrumental and relational motivational states, through which contextual variables were related to knowledge sharing willingness, were investigated. Instrumental motivational states involved positive and negative outcome expectancies of individuals regarding knowledge sharing, whereas relational motivational states included workgroup identification and workgroup-based self esteem. Survey data were collected from 218 white-collar employees, each working in different workgroups in 24 different private business organizations in Turkey. Proposed model was tested through structural equation modeling (SEM). The model provided a good fit to the data with minor modifications (χ^2 /df = 1.80, p=.00, GFI = .94, AGFI = .86, TLI = .91, CFI = .95, RMSEA= .06). Results revealed that workgroup norms were associated with knowledge sharing willingness through the mediation of positive and negative outcome expectancies, as proposed. As hypothesized, workgroup-based self-esteem mediated the relationship between transformational leadership and knowledge sharing willingness. Even though not hypothesized, procedural justice was related to instrumental rather than the proposed relational motivational states. The willingness to share knowledge was a strong predictor of the actual knowledge sharing behavior. This study was the first attempt to identify key motivational states through which contextual variables were related to knowledge sharing willingness. The study also had practical implications for workgroup leaders such that practicing transformational leadership and providing support in creating positive workgroup norms regarding knowledge sharing were important in eliciting knowledge sharing willingness and actual sharing behavior.

Keywords: knowledge sharing willingness, contextual factors, motivational states, SEM.

ÖZET

Bu çalışma, bireylerin algıladıkları bağlamsal faktörler ile çalışma gruplarındaki iş arkadaşlarıyla bilgi paylaşma isteklilikleri arasındaki ilişkileri araştırmayı amaçlamıştır. Aynı zamanda, bağlamsal değişkenleri, bilgi paylaşımı istekliliğine bağlayan araçsal ve ilişkisel motivasyon durumları da incelenmiştir. Araçsal motivasyon durumları, kişinin bilgisini paylaştıktan sonra olacaklar hakkında olumlu ve olumsuz beklentilerini, ilişkisel motivasyon durumları ise kişinin çalışma grubuyla özdeşleşmesini ve çalışma grubu bağlamındaki özgüvenini kapsamaktadır. Anket verileri, Türkiye'deki 24 özel sektör kuruluşunda, her biri farklı çalışma grubunda istihdam eden 218 beyaz-yaka çalışandan toplanmıştır. Önerilen model, yapısal denklem modellemesi (YDM) metodu ile test edilmiş ve modelde yapılan minör değişikliklerle verilerin modele uyum sağladığı görülmüştür (χ^2/df = 1.80, p=.00, GFI = .94, AGFI = .86, TLI = .91, CFI = .95, RMSEA= .06). Araştırmanın sonuçlarına göre çalışma grubunun bilgi paylaşımı ile ilgili normları, bilgi paylaşımı istekliliği ile ilişkilidir. Bu ilişkiye, bilgi paylaşımı sonucunda oluşabilecek olumlu ve olumsuz beklentiler aracılık etmiştir. Hipotez edildiği üzere çalışma grubu bağlamındaki özgüven, dönüştürücü liderlik ile bilgi paylaşımı istekliliği arasındaki ilişkiye aracılık etmiştir. Prosedürel adalet algısı, hipotez edilen ilişkisel motivasyon durumları yerine araçsal motivasyon durumları ile ilişkili bulunmuştur. Araştırma bulguları bilgi paylaşma istekliliği ile bilgi paylaşma davranışı arasındaki ilişkiyi desteklemektedir. Bu çalışma bağlamsal faktörler ile bilgi paylaşma istekliliği arasındaki ilişkiyi, motivasyon durumları aracılığıyla inceleyen ilk çalışma olmuştur. Araştırmanın pratiğe yönelik katkıları da vardır. Sonuçlar, çalışma grubu yöneticilerinin dönüştürücü liderlik uygulamalarını benimsemelerinin, ve bilgi paylaşımını destekleyen grup normlarının oluşması ve devam etmesi için destek vermelerinin, çalışan bireylerde bilgi paylaşımı istekliliğini ortaya çıkarmadaki önemine dikkat çekmektedir.

Anahtar sözcükler: Bilgi paylaşımı istekliliği, bağlamsal faktörler, motivasyon durumları, yapısal denklem modellemesi (YDM)

To my dearest parents, Yıldız and Lokman Dağlı…

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I wholeheartedly believe that life is full of coincidences and consequent choices. These coincidences may be good or bad, but turning bad into good can be accomplished by goodwill and motivation. I guess my journey to this MA program can be summarized like this. Thinking about my decision of ending my chemical engineering career for the love of studying I-O psychology at Koç University and moving to Istanbul, I regret not a single thing. In fact, I believe that the two years I spent in the program and the process of writing this thesis was the most exciting, fun and challenging stage of my life. Although in the same two years I was not so lucky with my personal life, I managed to stay straight with the joy and challenge of the process, but most importantly with the support of old and new people in my life, whom I would like to acknowledge.

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I would like to thank Asst. Prof. Mahmut Bayazıt for his valuable suggestions and contributions to this thesis. He was so enthusiastic and supportive throughout the thesis process. I would also like to thank him for supporting and believing in me from the day I met him, that is when I came to ask for advice for admissions to this MA program.

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I can never pay back for my parents' unconditional love and support during this stage, as was present throughout all my life. I hope dedicating this thesis to them could indicate the

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INTRODUCTION

1.1. General Overview

In today's globalized business world, knowledge has become the most important asset that contributes to the competitive advantage of organizations among other traditional assets, such as land and machinery (Davenport & Prusak, 1998). The organizations that can facilitate and enhance knowledge sharing practices are gaining advantage over their competitors. It is becoming more and more apparent that the human and intellectual capital embedded in the organization can not contribute to the optimum value, unless the inherent or created knowledge is shared within the organization (Nahapiet & Ghoshal, 1998). The knowledge that individuals possess must be transferred to others in the organization in order to create new knowledge (Nonaka & Takeuchi, 1995). This transfer is facilitated with the sharing of one's knowledge with other employees in the organization (Kogut & Zander, 1997). Knowledge sharing in organizations may help to integrate the dispersed knowledge, improve decision-making quality and as a result may facilitate the creation of new knowledge and innovative ideas (Nonaka & Takeuchi, 1995). In the present study, therefore, perceived contextual antecedents and motivational states through which these antecedents are related to knowledge sharing willingness are examined.

Knowledge sharing can occur at different organizational levels. Knowledge sharing between different departments of an organization is crucial in accomplishing organizational goals. However, the cooperation between different departments for achieving organizations' common goals may be hindered due to the competition between them for rewards, resources,

or status in the organization (Hinds & Pfeffer, 2003; Tsai, 2002). Knowledge sharing within the same department /workgroup can be considered as important as that of between departments. In organizations top management makes strategic decisions in order to maintain and improve the organization's positions among its competitors in the market. These decisions, then, are deployed to the departments/ workgroups of organizations such that, each of them has to make its own *operational decisions* accordingly and implement them to fulfill the requirements of the strategic decisions. Each department / workgroup utilizes its own human and intellectual capital in order to make effective decisions and implement them. Sharing of knowledge acquired from personal network, experiences and expertise among workgroup members is essential during the decision-making process and accomplishment of these decisions. If the members of the workgroup are reluctant to share their knowledge with each other, the overall workgroup performance may deteriorate (Zárraga & Bonanche, 2003), which may eventually have negative effects on the organizational performance.

Knowledge sharing within the workgroup is crucial for gathering knowledge that individuals possess. When knowledge is shared between the employees of the workgroup, it may give way to creation of new ideas and knowledge within the workgroup (Nonaka & Takeuchi, 1995). The quality of operational decisions related to workgroup / departmental goals may be enhanced due to the richness and diversity of experiences and expertise of each individual member. Consequently, it may positively affect the performance of the workgroup / department and its contribution to the achievement of organization's strategic goals. When knowledge is shared between the members of a workgroup, time and effort wasted on trying to explore previously experienced events and practices is reduced. This phenomenon can be

referred to as reducing the cost of 'reinventing the wheel' (Zack, 1999). As a result of increased knowledge sharing, members of the workgroup will develop transactive memory, which is about members knowing 'who knows what' in the workgroup (Argote, McEvily & Reagans, 2003; Moreland & Myaskovsky, 2000). Transactive memory provides members of the group to know more about one another, so that they can assign tasks to the people who will perform best in given situation (Moreland & Myaskovsky, 2000) and facilitates organizational learning by enhancing knowledge transfer (Argote et al., 2003; Borgatti & Cross, 2003). Coordination capabilities of the group may increase and group performance may be enhanced (Lee, 2005).

For employees to share their knowledge with others, they should have the ability, the opportunity and the motivation to do so (Argote et al., 2003; Kelloway & Barling, 2000). Ability to share knowledge refers to the knowledge and expertise individuals possess. It also refers to being able to express and transfer the knowledge to others effectively (Kelloway & Barling, 2000). Opportunity refers to providing time and space for employees so that they can talk with each other, share their knowledge and ideas. Davenport and Prusak (1998) mentions that the companies must hire bright people and let them talk, instead of isolating them or ignoring to provide them free time to talk to each other. Motivation and opportunity for sharing knowledge may be suggested as more prone to be influenced by the contextual factors, whereas ability to share knowledge is more related to individuals' characteristics. The accumulation and amount of knowledge and the ability to articulate the knowledge may differ from individual to individual, regardless of the context. Therefore, since this study examined the contextual factors, the motivational states for individual's knowledge sharing and their

opportunity to share knowledge with their workgroup was investigated, without including the ability component.

The existing literature identifies a number of organizational / contextual factors facilitating or inhibiting knowledge sharing. Group-based rewards and incentives (Cabrera & Cabrera, 2002), social norms favoring knowledge sharing (Bin & Hoon, 2001; Bock, Zmud, Kim & Lee, 2005), procedural justice (Kim & Mauborgne, 1998; Lin, 2006) transformational leadership (Kelloway & Barling, 2000), outcome interdependence (Lin, 2006) and formal and informal recognition systems (Davenport & Prusak, 1998) are some of the organizational antecedents, which were suggested to enhance the willingness for or intention to share knowledge. On the other hand, competitive environments (Hinds & Pfeffer, 2003) were proposed to impede knowledge sharing willingness of employees. Also, when there is lack of trust in top management about employment security, knowledge sharing is less likely to occur (Davenport & Prusak, 1998).

The individual level antecedents of knowledge sharing willingness are information self-efficacy, which is the "self-perceived value of a contributor's information" (Kalman, Monge, Fulk & Heino, 2002, p. 125) and connective efficacy, which is "the expectation that information contributed … will reach other members of the collective" (Kalman et al., 2002, p. 125). Sense of intellectual and emotional worth within the organization (Kim & Mauborgne, 1998), group identity and valuing collective interests (Cabrera & Cabrera, 2002); trust in the leader and commitment to the organization (Kim & Mauborgne, 1998) were individual-level antecedents which were not empirically tested. Expected contribution as a result of knowledge sharing (Bock & Kim, 2002; Cabrera & Cabrera, 2002), and anticipated

reciprocal relationships (Bock et al., 2005), perceived organizational climate, characterized by fairness, affiliation and innovation (Bock et al., 2005), perceived team climate, characterized by courage, mutual trust and active empathy between members (Zárraga & Bonanche, 2003) were the variables which were empirically tested and found to be significantly associated with knowledge sharing.

Although many studies have conceptually or empirically identified the contextual factors, and cognitive and affective processes influencing the knowledge sharing willingness, none of them attempted to explain the *motivational states* through which context is associated with individual's motivational states, and in turn, their knowledge sharing willingness. This is what the present study aimed at achieving.

The contextual antecedents of this study include procedural and interactional justice during operational decision making, transformational leadership, workgroup norms regarding knowledge sharing and, reward and feedback interdependence among group members. The *instrumental* motivational states involve individual's outcome expectancies associated with knowledge sharing, whereas the *relational* motivational states are the employees' identification with the workgroup and the workgroup-based self-esteem.

The proposed model is presented in Figure 1.1.

1.2. Expected Theoretical and Practical Contributions of the Study

This study is intended to be the first empirical study investigating the motivational mechanisms that underlie knowledge sharing willingness. In other words, it is set to find out how perceived contextual factors affect the individual motivational states, and how these motivational states play a role in eliciting knowledge sharing willingness in individuals. One of the most important contributions is that instrumental and relational motivational states are

Figure 1.1. *The proposed model*
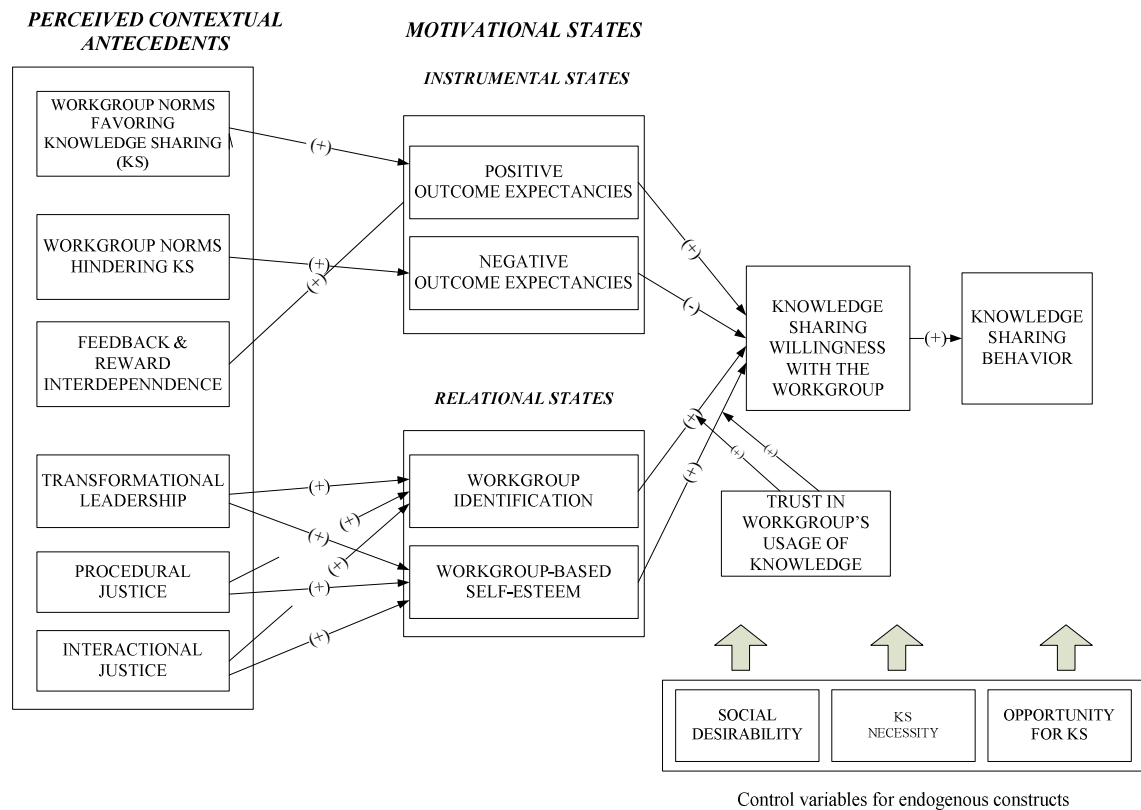
examined together.

Moreover, this study tests the predictions of several theories. For instance, propositions of Kim and Mauborgne's (1998) Intellectual and Emotional Recognition Theory were tested empirically. This theory suggests that fair procedures (including engagement, explanation and clarity of expectations) in decision making process bring out feelings of intellectual and emotional worth in individuals in a work context. When these individuals feel that their knowledge and value are recognized by the authorities, they do not hesitate to share their knowledge with the members of their workgroup. In this study, drawing parallels with

this theory, workgroup-based self-esteem is suggested as a mediator between justice (procedural and interactional) and knowledge sharing willingness.

Tenets of Group-Value Model by Lind and Tyler (1988) are taken into account in the present study in explaining the relationship between procedural justice and knowledge sharing willingness. This model suggests that procedural justice provides two important messages to the members of the group: The first message is that fair treatment signifies that the member is respected within the group, whereas the second one points to identity-relevant information, i.e. the members can feel proud of their membership in their groups (Tyler, Degoey & Smith, 1996). These feelings of respect and pride were suggested to result in group-oriented behaviors (Tyler, et al., 1996). In this research Lind and Tyler's (1988) model was examined through the proposed relationships of workgroup-based self-esteem and workgroup identification mediating the relationship between procedural justice and knowledge sharing willingness.

Finally, the proposed model of this research takes into account the leadership approach presented by Shamir, House and Arthur's (1993) Self-Concept Based Theory of Transformational Leadership. Shamir and colleagues' (1993) theory suggests that individuals are not only motivated by instrumental gains, but also motivated to enhance and maintain their self-esteem. They also motivated to be a member of and be identified with a collective (Shamir, et al., 1993). These motives, which were evoked by transformational leadership, were suggested to lead and transform individuals to perform group-oriented behaviors, rather than instrumental-calculative behaviors. The study model incorporates this theory by suggesting the mediating relationships of workgroup-based self-esteem and workgroup identification between transformational leadership and knowledge sharing willingness.

In addition to theoretical contributions, this study is expected to make significant practical contributions, too. Acknowledging the advantages of knowledge sharing in a workgroup, this study aims to provide insights for workgroup managers to motivate employees to share knowledge within the group. Not only it endeavors to illuminate the motivational mechanisms to create willingness for sharing knowledge, but also it wants to show which contextual factors have influence on creating such motivation eliciting perceptions on the employees. Provided that the hypotheses of the study are supported, the managers will gain insights about the factors encouraging knowledge sharing among their workgroup members.

For instance, if the predicted relationship between workgroup norms regarding knowledge sharing and knowledge sharing willingness is supported, then the managers of the workgroup will be informed that creating and sustaining group norms which facilitate rather than hinder knowledge sharing is important in creating individual willingness to share knowledge. Communication trainings or trainings on how to become an effective workgroup may be given to workgroup members in order to provide them opportunity to discuss the importance of knowledge sharing. This may be a starting point for the formation of positive group norms regarding knowledge sharing.

Given that the relationship between feedback and reward interdependence and knowledge sharing willingness finds empirical support, the organizations and leaders of workgroups may be suggested to offer feedback and rewards on workgroup basis and not on individual basis in order to motivate knowledge sharing among workgroup members.

Chapter 2

LITERATURE REVIEW

2.1. Knowledge Sharing: Conceptualization and Boundary Conditions

Knowledge sharing is considered as a *voluntary contribution*, which can neither be supervised nor forced (Kim & Mauborgne, 1998). Knowledge sharing behavior can also be considered as an *extra-role behavior*, since it requires an extra effort, energy and initiative to the best of one's abilities beyond the call of duty in order to reach organizational objectives (Kim & Mauborgne, 1998). Meyer, Becker and Vandenberghe (2004) state that sharing one's knowledge voluntarily is a *discretionary behavior*, which refers to an unspecified and unexpected type of behavior that can take various forms. Nobody can know what an individual knows; therefore nobody can expect or demand for one's own know-how and expertise, unless s/he reveals it. That is why knowledge sharing can be specified as a discretionary and a voluntary behavior. Knowledge sharing is also compared to organizational citizenship behaviors (OCBs). Connelly and Kelloway (2003) mentions the similarities between knowledge sharing and OCB as both of them can be directed towards individuals, groups and/or organizations, and both must be voluntarily performed.

Knowledge can be shared through different network types, i.e. interpersonally (Bordia, Irmer & Abusah, 2006), with the workgroup, with other workgroups / departments in the organization (Tsai, 2002), with the whole organization through knowledge repositories (Davenport & Prusak, 1998), i.e. company intranets (Bordia et al., 2006; Kalman et al., 2002) or with other organizations (Inkpen & Tsang, 2005). "Knowledge sharing with whom" is a very important question that sets the boundary condition in this study, because different

network types through which knowledge is shared may underlie different motivational

mechanisms (Inkpen & Tsang, 2005). Tsai (2002) investigated knowledge sharing between

departments, whereas Zárraga and Bonanche (2003) examined knowledge sharing among

members of self managed teams. In the present study, one's willingness to share knowledge

with the members of his/her workgroup directly (face-to-face) during formal and informal

meetings, via phone or e-mails, and/or through department database (if present) is examined.

The workgroup conceptualized in the present study is "made up of individuals who see

themselves and who are seen by others as a social entity,…who are embedded in one or more

larger social systems (e.g. community, organization), and who perform tasks that affect

others, such as customers or coworkers" (Guzzo & Dickson, 1996, p.308) and has a

supervisor.

The other boundary condition to be specified is the type of knowledge to be shared.

There are similar, and yet different categorizations of knowledge in the literature. For

instance, knowledge is classified into two types according to how well it can be articulated:

tacit knowledge vs. explicit knowledge (Nonaka & Takeuchi, 1995). Bock and colleagues

(2005) categorize knowledge as implicit vs. explicit. In their study, explicit knowledge is

conceptualized as work reports, official documents, manuals, whereas implicit knowledge is

experience, expertise, knowledge from education and trainings. Constant, Kiesler and

Sproull's (1994) classification of knowledge as tangible (e.g. written documents) and

intangible (e.g. expertise or skills) iss similar to the conceptualization of Nonaka and

Takeuchi's (1995) explicit and tacit knowledge, respectively.

Type of knowledge to be shared must be specified, since it may affect the motivational

process through which knowledge is shared. For instance, Constant and colleagues (1994)

investigated the antecedents of sharing different types of knowledge. According to the

findings of their experimental study, sharing tangible information might depend on prosocial

attitudes and norms of organizational ownership, while sharing expertise might depend on

people's own self-expressive needs.

The type of knowledge conceptualized in the present study is similar to Bock and

colleagues' (2005) conceptualization of implicit knowledge. In this study, knowledge is

defined as 'work-related personal know-how, which is acquired from education, trainings,

experiences and expertise, and hard-to-find information acquired through personal network'.

One's expertise on how to reduce the time for a work process, experiences about how to solve

a particular work-related problem, newly acquired information from a friend about

developments in the market or new ways to increase productivity learned during a work-

related training are all examples for the type of knowledge conceptualized in this study. This

conceptualization of knowledge is different from tacit knowledge specified by Nonaka and

Takeuchi (1995). They define tacit knowledge as knowledge which is hard-to-codify and

hard-to-transfer. The dilemma with tacit knowledge is that even though the individual has the

motivation to share it with others, s/he may not be able to do that due to her/his inability to

articulate this knowledge. Sharing of tacit knowledge requires not only the motivation to

share, but also the ability to put the knowledge in a way that others can understand. Tacit

knowledge is out of the scope of this study, since this study is only interested in the

motivational factors to be engaged in knowledge sharing, and not the ability for articulating

knowledge.

Moreover, the type of knowledge conceptualized in this study is work-related. In

workgroups where people are constantly communicating with each other, there may be other

types of information being shared between the members, such as gossip, jokes, information

not related to the work itself. This type of information may be fun, relaxing or strengthening

the social ties between group members, however is not part of this study. Moreover,

mandatory work reports and information that should be shared on a routine basis due to

necessities of operational work structure are not included in this study, since whether sharing

of knowledge may occur upon request or spontaneously, the emphasis of the sharing process

is on its *voluntary* nature.

   After presenting the operational definition of knowledge sharing and setting the

boundary conditions, the rest of the chapter is structured as follows: First, previous models

relating contextual factors to knowledge sharing will be reviewed. Second, a discussion on

how group norms regarding knowledge sharing and, reward and feedback interdependence is

associated with one's willingness to share knowledge through instrumental motivational states

will be presented. Third, the relational motivational states through which procedural and

interactional justice, and transformational leadership are related to one's willingness to share

knowledge will be explained. Fourth, the relationship between knowledge sharing willingness

and actual sharing behavior will be theoretically illustrated. Finally, the way in which trust in

workgroup moderates the relationship between relational motivational states and knowledge

sharing willingness will be discussed.

2.2. Previous Models on Contextual Factors Predicting Knowledge Sharing

   This section of the thesis aims at reviewing the previous models that examined the

relationships between contextual factors and knowledge sharing.

2.2.1. Zárraga and Bonanche's (2003) Model of Knowledge Transfer

Zárraga and Bonanche (2003) focused on presenting how contextual factors influenced a 'high care' team climate, which was a psychological climate and consequently encouraged transfer of knowledge within the team. They suggested that (1) an involved leader, (2) reward systems linked to knowledge sharing, (3) training on working in a team, and (4) social events in the company favored a 'high care' climate. This perceived climate was proposed to be composed of five factors: mutual trust between team members, empathy between team members, lenience in judgments in the team, level of courage of the members, and access to help in the work team. This type of climate was proposed to be significant in creating knowledge transfer within the team members.

The factor analysis of 'high care' climate resulted in three factors, which were: (1) active empathy and lenience in judgment in the team, (2) courage of the members in the team and (3) mutual trust and access to help in the team. The results revealed that, all of the three dimensions of high care climate were related with transfer of knowledge in the team. Also, the effects of the proposed contextual factors on the three dimensions of high care climate were investigated. The results showed that an involved leader, training on how to work in a team and social events had influences on at least one dimension of high care climate, however, reward systems linked to knowledge sharing had no influence on any dimensions of high care climate. The modified model and path coefficients of the Zárraga and Bonache's (2003) model are presented in Figure 2.1.

2.2.2. Bock and Colleagues' (2005) Model of Knowledge Sharing Intention

Bock and colleagues (2005) aimed to develop an integrative model to examine individuals' knowledge sharing intentions. Theory of Reasoned Action (Ajzen, 1991) was

Figure 2.1. *Zárraga and Bonanche's (2003) Model of Knowledge Transfer and Creation*

HIGH CARE CLIMATE

INVOLVED LEADER

REWARD SYSTEM LINKED TO KS

TRAINING TO WORK IN A TEAM

SOCIAL EVENTS IN THE COMPANY

ACTIVE EMPATHY and LENIENCE IN JUDGMENT

COURAGE

MUTUAL TRUST and ACCESS TO HELP

TRANSFER OF KNOWLEDGE IN THE WORK TEAM

CREATION OF KNOWLEDGE IN THE WORK TEAM

.13*   .45*   .21*   .11ᵗ   .17*   .31*   .32*   .20*   .34*   .11*

ᵗ p<0.10, * p<0.05
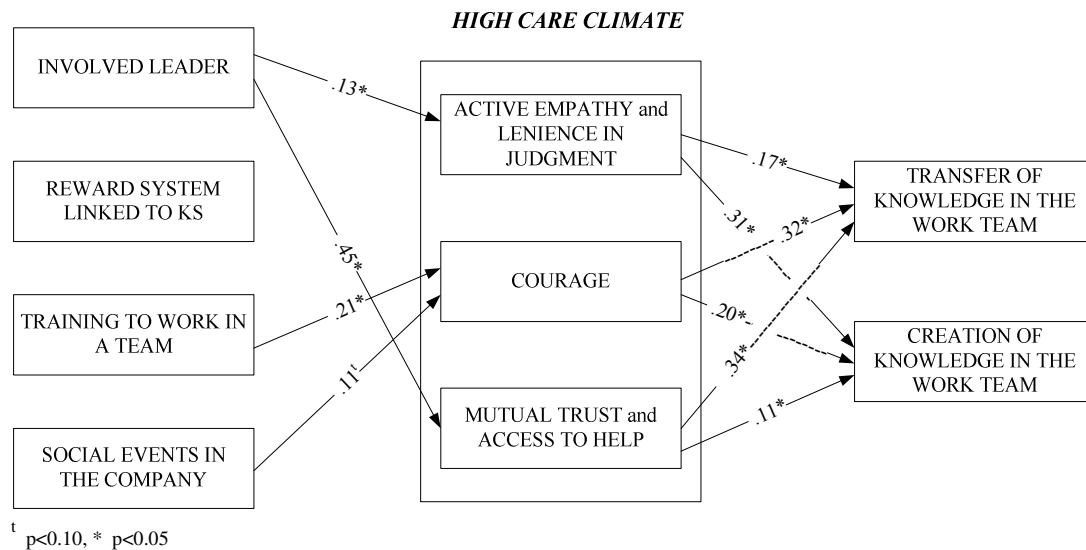
utilized as their theoretical framework. They suggested anticipated extrinsic rewards and reciprocal relationships as a result of sharing knowledge, sense of self-worth (self-esteem) related to knowledge sharing, perceived organizational climate characterized by fairness, affiliation and innovativeness were the exogenous variables which influenced attitudes and subjective norms on knowledge sharing, which consequently resulted in positive intentions for sharing knowledge. The most interesting finding of the study, which was also in line with Zárraga and Bonanche's (2003) findings, was that anticipated *extrinsic rewards* as a result of knowledge sharing did not elicit a favorable attitude toward knowledge sharing. On the contrary, it produced a negative attitude toward sharing knowledge.

The standardized coefficients of Bock and colleagues' (2005) model are presented in Figure 2.2.

Figure 2.2. *Bock et al's (2005) Model on Knowledge Sharing Intentions*
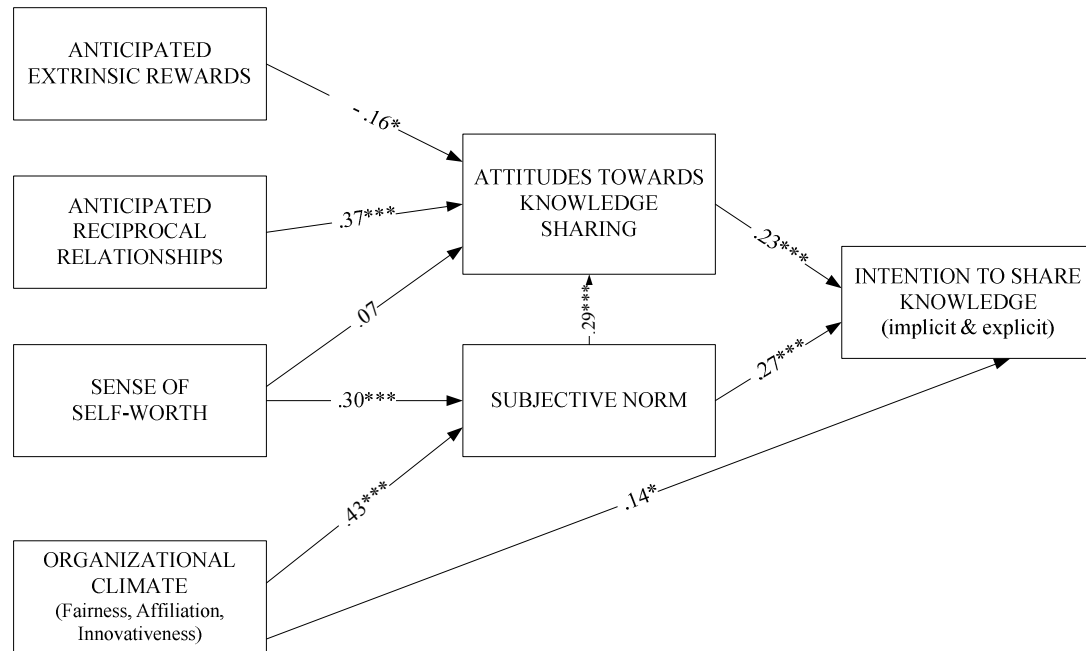
* p<0.10, ** p<0.05, *** p<0.01

2.2.3. Lin's (2006) Model of Knowledge Sharing

Lin (2006) proposed a model, in which coworker congruence, outcome interdependence, perceived organizational support and procedural justice influenced knowledge sharing through the mediation of social network ties. Two network types were suggested to mediate the relationships between the context-person influence factors and knowledge sharing: The first was expressive ties, i.e. friendship-based ties that existed within and outside work, whereas the second was instrumental ties that were active during performing work transactions and did not required to be friendship-based (Lin, 2006).

Results showed that the proposed model provided a good fit to the data (Lin, 2006). The two unsupported hypothesized relationships were: (1) the relationship between perceived organizational support and instrumental ties, and (2) the relationship between procedural

justice and expressive ties. Lin's (2005) Model of Knowledge Sharing and standardized

coefficients are presented in Figure 2.3.

Figure 2.3. *Lin's (2006) Model on Knowledge Sharing*

Organization-person influence

Social network ties
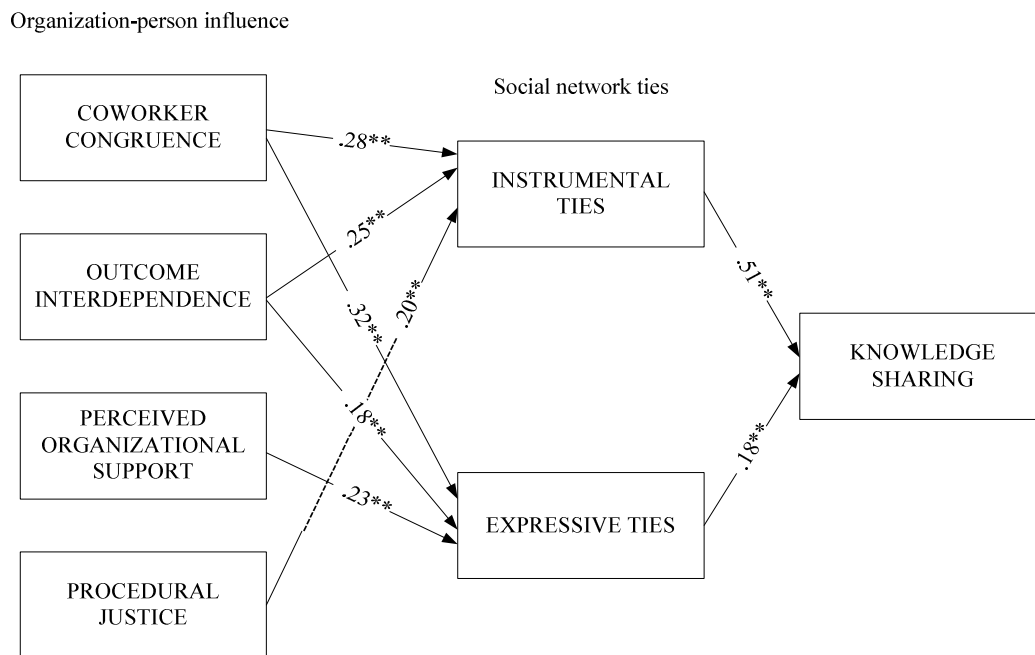
** p<0.01

     While proposing the relationships of the model in the present study, some of the

contextual factors that worked for the above-mentioned models (e.g. procedural justice,

outcome interdependence, norms regarding knowledge sharing) are again taken into account.

However, the proposed model still aims to have contributions to literature, since it proposes

links between perceived contextual factors and knowledge sharing willingness through

motivational states, which was not previously accomplished. Also, the present model

includes contextual variables, such as leadership and interactional justice, which were not

empirically tested before. Two motivational states suggested in the present study were:

instrumental and relational. These conceptualizations were drawn out from Tyler and Smith's

(1999) instrumental and relational explanations of procedural justice (see also Tyler, Degoey

& Smith, 1996). They suggested that 'instrumental' view would be related to attaining

personal outcomes, whereas the 'relational' view was associated with perceptions about group

membership. The context might have relational implications for individuals, since it informed

about the nature of their relationship with their groups (Tyler & Smith, 1999). These two

motives were predicted to shape one's willingness to cooperate with the group. In this case, it

is the sharing of one's knowledge with the group.

Although, Bock and colleagues (2005), and Zarrága and Bonanche (2003) did not find

empirical support for the relationship between extrinsic rewards and knowledge sharing,

instrumental motivational states were still included in the model for two reasons: First, it is

expected that only relational motivational states will not be sufficient to fully explain

individual willingness. Therefore, an instrumental explanation is also needed. Secondly,

instrumental motivational states in the present study includes more than the extrinsic rewards.

For instance, they involve other positive expectancies such as anticipated relationships with

other group members, and negative expectancies including costs, risks or being unnoticed

regarding knowledge sharing.

2.3. Instrumental Motivational States

Shamir (1990) asserts that one of the determinants explaining the individual

contribution to collective interests is the calculative considerations. In line with the self-

interest theories, when individuals perceive personal benefits for engaging in a behavior, they

are more likely to perform that behavior, whereas the opposite is true when they perceive

risks of engaging in a behavior (Wang, 2004). In the present study, calculative considerations

related to maximizing self-interests are referred to as 'instrumental motivational states'.

The personal benefits associated with knowledge may include; being noticed as a

result of sharing knowledge (Andrews & Delahaye, 2000), being rewarded for sharing

knowledge (Cabrera & Cabrera, 2002) and anticipated reciprocal relationships between the

members of a group (Bock et al., 2005). On the other hand, there are also costs and/or risks

associated with sharing one's knowledge, which may influence individuals to hoard their

knowledge. Some of the underlying reasons for hoarding behavior may be fear of losing

ownership and first authorship of knowledge (Andrews & Delahaye, 2000), losing a position

of privilege or superiority, not perceiving personal benefit as a result of sharing knowledge

(Cabrera & Cabrera, 2002), unwillingness to spend time or effort (Szulanski, 1996), etc.

Gupta and Govidarajan (2000) mentions about "knowledge is power syndrome", knowledge

may provide privilege to an individual, making him/her indispensable in the organization. In

organizational contexts, where individuals perceive that they may lose their jobs if they share

their expertise, knowledge sharing among employees will be less likely to occur (Hinds &

Pfeffer, 2003). Spending time and effort for sharing knowledge may be referred to as 'cost',

whereas losing first authorship of knowledge or losing one's job may be referred to as 'risks'

associated with sharing knowledge.

Also, an individual may perceive that his/her knowledge sharing goes unnoticed. In

this case, there may be no risk of sharing knowledge, however there is no benefit either. In

this case, it is reasonable to expect that the individuals do not share their knowledge, since

there is no benefit attached to the sharing behavior.

One of the ways for creating willingness for individuals to share their knowledge with their workgroup is through instrumental motivational process in which individuals perceive that sharing knowledge may increase the outcomes related with self-interests (expectations of positive outcomes). If knowledge sharing contradicts with one's self-interests, i.e. sharing is perceived to have cost, be associated with certain risks or that it may go unnoticed, the individual may be expected to hoard knowledge (expectation of negative outcomes).

> *Hypothesis 1a:* Positive outcome expectancies (benefit expectations) are positively related to one's willingness to share knowledge with one's workgroup.

> *Hypothesis 1b:* Negative outcome expectancies (cost and risk expectations, and expectations about knowledge sharing going unnoticed) are negatively related to one's willingness to share knowledge with one's workgroup.

The two contextual factors which are hypothesized to be associated with the personal outcome expectancies are workgroup norms favoring knowledge sharing and feedback and reward interdependence within the workgroup.

2.3.1. Workgroup Norms Regarding Knowledge Sharing

Group norms are actively (e.g. explicit statements) and passively (e.g. non-verbal behaviors or imitations) transmitted guidelines for acceptable and unacceptable behaviors (Ehrhart & Naumann, 2004). They are developed through interactions among group members and also agreed upon by group members (Ehrhart & Naumann, 2004). If the majority or all of the group members behave similarly in a given situation, it is more likely that the group members will view the behavior as appropriate, and are more likely to perform similar behavior (Cialdini & Trost, 1998; cited in Ehrhart & Naumann, 2004). In line with Bandura's (1977) Social Learning Theory, the members of the group vicariously learn from each other as other members receive social rewards for particular behaviors. Also, when group norms are

transmitted actively or passively, members of the group will receive the social (group) cues regarding that the specified behavior is well-accepted within the group (Ehrhart & Naumann, 2004).

This is also consistent with Salancik and Pfeffer's (1978) Social Information-Processing Theory, which emphasizes the importance of social cues in shaping individuals' attitudes, and consequently the willingness to engage in that behavior. Norms existing in a group about certain behaviors (i.e. in this case, knowledge sharing within the group) signal positive messages about the behavior by clarifying the expectations of engaging in that behavior (Ashford, Rothbard, Piderit & Dutton, 1998). For instance, when members of the group perceive norms that favor knowledge sharing, they may simultaneously perceive that sharing knowledge will be socially appropriate and well-recognized by other members. On the contrary, if members perceive proscriptive norms regarding knowledge sharing, they may think that sharing knowledge is not an appropriate behavior in that context, and thus knowledge sharing willingness and behavior will be hindered. An example for proscriptive norms is that if a member of the group perceived that sharing of knowledge is seen as arrogance in the workgroup, this may cause the willing person to stay away from sharing knowledge, since s/he may want to avoid being seen as too competent and arrogant (Comer, 1995). Another example is that, if the workgroup norms give social cues about sharing one's expertise and experiences as being too naïve, than a member would most probably want to hoard knowledge to avoid the sucker role (Comer, 1995).

Moreover, Expectancy Theory Model (Lawler, 1973, cited in Kanungo & Mendonca, 1994) suggests that communication from others and past experiences in similar situations are influential in the emergence of both effort to performance (expectancy) and performance to

outcome (instrumentality) expectancies. When it is considered that norms involve the

opinions of significant others, and also include actual past behaviors, which constitute the

experiences about what should be done in a similar situations (Ehrhart & Naumann, 2004), it

may be inferred that norms in a social context may influence the emergence of expectancy

and instrumentality.

Therefore, as a result, if the norms of the workgroup favor knowledge sharing, it is

expected that individual members of the group will have positive expectancies about the

outcomes of engaging in knowledge sharing. Whereas, if the norms are such that they are

hindering knowledge sharing as mentioned in the examples above, the members of the group

are expected to have negative expectancies as a result of sharing knowledge.

Hypothesis 2a: Perceived workgroup norms that favor knowledge sharing is positively associated with positive outcome expectancies.

Hypothesis 2b: Positive outcome expectancies mediate the relationship between workgroup norms favoring knowledge sharing and one's willingness to share knowledge with the workgroup.

Hypothesis 3a: Perceived workgroup norms that hinder knowledge sharing is positively associated with negative outcome expectancies.

Hypothesis 3b: Workgroup norms hindering knowledge sharing negatively relate to one's willingness to share knowledge with the workgroup through the mediation of negative outcome expectancies.

2.3.2. Reward and Feedback Interdependence

Reward and feedback interdependence (Campion, Medsker & Higgs, 1993), which is

also referred to as outcome interdependence (Wageman, 1995), is the degree of

interdependence of rewards and feedback individuals receive in a workgroup. It has been

found that rewards and feedback should be linked to group performance in order to motivate

group-oriented cooperative behavior (Gladstein, 1984; Pritchard, Jones, Roth, Stuebing, &

Ekeberg, 1988). Being evaluated and rewarded interdependently make the members of the

workgroup recognize that they are 'in the same boat', and if the group performs successfully,

they will 'float', but if it does not perform successfully, all of them will 'sink'. Therefore, the

interdependence of rewards and feedback will provide cues to the individual that cooperation

(i.e. sharing knowledge in this case) would produce more beneficial outcomes for one's self-

interests than acting uncooperatively. The perceived benefits of engaging in knowledge

sharing is expected to be more pronounced when compared to that of hoarding knowledge,

since as the workgroup's performance may increase with the cooperation of its members, the

success of the group will be reflected on the individual in some way.

> *Hypothesis 4a:* Perceived reward and feedback interdependence within the workgroup
> is positively related with positive outcome expectancies.

> *Hypothesis 4b:* Positive outcome expectancies mediate the relationship between
> perceived reward and feedback interdependence within the workgroup and one's
> willingness to share knowledge with the workgroup.

2.4. Relational Motivational States

All individual contributions to group interests can not only be elucidated by

calculative considerations (Shamir, 1990). Cooperating with the group, helping the members

of the group, or as in the present case, sharing personal knowledge with the workgroup may

reflect other motivational states, which are more affective and relational in nature. As

indicated in the present model, relational motivational states, such as identification with the

workgroup, as well as the workgroup-based self-esteem may explain some of the variance in

the knowledge sharing willingness with the workgroup.

Identification with the workgroup has been a concept which is acknowledged as

important, but not sufficiently researched (Riordan & Weatherly, 1999). Ashforth and Mael

(1989) suggest that research should also focus on identification with salient subgroups such as workgroups, as well as simply examining organizational identification. Workgroup identification is defined as "a personal cognitive connection between an individual and the workgroup. It is the individual's perception of oneness with the workgroup and the tendency to experience the group's successes and failures as one's own" (Riordan & Weatherly, 1999, p.311).

Christ, van Dick, Wagner and Stellmacher (2003) suggest that there are three foci of social identification, in which identification with the workgroup is one of them. They propose, in line with Social Identity Theory (Hogg & Abrams, 1998), that the particular forms of extra-role behaviors that correspond with different focus of identification will be influenced by an individual's identification with that focus. For instance, if an individual is identified with his/her workgroup, it can be predicted that the individual show extra-role behaviors directed toward the workgroup. Christ and colleagues (2003) found empirical support for their proposition that teachers' OCBs towards the group were associated with their identification with the workgroup. Consistent with the findings of Chris and colleagues' (2003) study and drawing upon the similarity between OCBs and knowledge sharing behavior, a positive relationship between identification with the workgroup and willingness to share knowledge with the workgroup is hypothesized in the present study.

> *Hypothesis 5:* One's identification with the workgroup is positively related to one's willingness to share knowledge with the workgroup.

Workgroup-based self-esteem (sense of self-worth in the workgroup) in the present study refers to a domain-specific self-esteem instead of global self-esteem. The domain is the workgroup as in the whole of the present study. This construct is adapted from Pierce,

Gardner, Cummings and Dunham's (1989) construct of organization-based self-esteem (OBSE). They defined OBSE as, "the degree to which organizational members believe that they can satisfy their needs by participating in roles within the context of an organization. People with high OBSE have a sense of personal adequacy as organizational members and a sense of having satisfied needs from their organizational roles in the past….employees with high OBSE should perceive themselves as important, meaningful, effectual, and worthwhile within their employing organization" (p. 625). The authors stated that similarity between the level of analysis of self-esteem and the behavior which it was expected to predict should exist. For instance, OBSE should predict organizational phenomena such as organizational commitment more strongly than any other domain-specific self-esteem or global self-esteem could (Pierce et al., 1989). Therefore, in the present study, since knowledge sharing in the *workgroup* is investigated, the domain of self-esteem is specified as the workgroup in order to be able to make a better prediction. The workgroup-based self esteem is defined in the present study as 'the degree to which members believe that they can satisfy their needs by participating in roles within the context of their workgroup'.

In line with the Need Theories (e.g. Alderfer, 1972), Pierce and colleagues (1989) predicted and found empirical support for the premise that employees who perceive themselves as valuable and worthy in a workgroup context would attempt to engage in behaviors that demonstrated and enhanced their worth in the same context. These behaviors could be any type of extra-role behaviors that would benefit the group. Subsequently engaging in these behaviors should reinforce workgroup-based self-esteem and in order to maintain cognitive consistency, employees with high workgroup-based self esteem were expected to continue engaging in OCBs (Pierce et al., 1989). Drawing upon the similarity

between OCB and knowledge sharing behavior, a positive relationship between workgroup-based self-esteem and willingness to share knowledge with the workgroup is expected in the present study.

> *Hypothesis 6:* One's workgroup-based self-esteem is positively related to one's willingness to share knowledge with the workgroup.

Procedural and interactional justice in the context of operational decision making within the workgroup, and transformational leadership (of the workgroup) are the contextual factors, which are hypothesized to be associated with knowledge sharing willingness through identification with the workgroup and workgroup-based self-esteem, in the present study.

2.4.1. Procedural and Interactional Justice in Operational Decision-Making Context

Operational decisions and implementation of these decisions in order to meet the workgroup goals are part of the everyday routine of workgroups. For instance, the top management may decide to launch a new product with given specifications to compete with other brands in the market. This strategic decision is deployed to the departments and/or workgroups such that each of them has to make operational decisions in order to accomplish this strategic decision. The research and development (R&D) department is expected to decide on the optimum formulation of the product, production department is expected to manufacture with highest possible efficiency, while the marketing department is expected to decide on the most effective ways to market this new product. For all departments to make effective decisions, the participation of employees with their knowledge is important. In order to facilitate the contribution of employees' knowledge, it is important that the employees perceive procedural justice (Kim & Mauborgne, 1998) and interactional justice during the decision-making process.

Procedural justice is the extent to which the procedures defined and enacted in a process are recognized as fair by the employees in an organization, regardless of the outcome of that process (Moorman, 1991). Procedural justice in the decision making context refers to the perceived fairness of procedures followed during a workgroup's decision making process about work related outcomes. In Kim and Mauborgne's (1997; 1998) qualitative studies, there were three criteria related to the perceived fairness in a decision making process which consistently emerged: engagement, explanation and clarity of expectations. *Engagement* is involving individuals in decision making process both by asking for their input and allowing them to discuss and refute one another's ideas. *Explanation* implies that everyone who are involved in and affected from the process understands why the final decision is made as it is and why some of the ideas and inputs had to be overridden. *Clarity of expectations* means that before, during and after the decision making process, employees have an understanding of what is expected of them.

Interactional justice refers to the fairness perceptions of the interactions with the authority figures enacting the procedure (Moorman, 1991). The way that the person, who enacts the procedures and explains the decisions, e.g. leader of the workgroup, manager of a department, is influential in evaluating the fairness of the procedure (Moorman, 1991) as well as the procedure itself.

When employees perceive the procedures related with work group decision-making process as fair, this fairness perception, consistent with the Social Exchange Theory (Blau, 1964), may increase extra-role behaviors and voluntary contributions, because the employees will be more likely to define their relationships with their organization and/or workgroup as one of social exchange (Moorman, 1991). Fair processes, enacted in workgroup /department,

signal important relational information with respect to one's standing within the group (Vermunt, van Knippenberg, van Knippenberg & Blaauw, 2001). Fair procedures communicate a positive social evaluation, such as respect and belongingness (Tyler & Lind, 1992; cited in De Cremer & van Knippenberg, 2002), and influence one's sense of self-worth (Koper et al., 1993) and group belongingness (Tyler, 1999). Consequently employees may be motivated to engage in cooperative behaviors even in social dilemmas, i.e. the situations that one needs to choose between self-interests and collective interests (Van Vugt & De Cremer, 1999). Therefore, it is meaningful to expect that perceived procedural justice during decision making process may be related to one's knowledge sharing willingness within the workgroup.

Interactional justice, i.e. the considerate and respectful manner that the explanations are made to the people in the decision-making process, is as important as procedural justice for the evaluation of fairness. Although an unfairness perception arises in some formal aspect of a procedure, the individual may tend to be concerned with the fact that they are treated unfairly by another person, e.g. her/his manager (Koper, van Knippenberg, Bouhuijs, Vermunt & Wilke, 1993). A study by Greenberg (1988) revealed that supervisors were more likely to be seen as fair if they communicated the fairness through *interactions* with their employees, rather than performing the fair behavior without active interactions.

According to the Group-Value Model (Lind & Tyler, 1988), procedural justice is important for individuals, since it gives two symbolic messages about their social connection to group authorities and the group itself. First, fair decision making indicates whether the member is respected within the group. This feeling of respect is very much related with one's self-esteem within the group (De Cremer & Tyler; 2005; Koper, et al., 1993). Pierce and colleagues (1989) found that managerial respect was an antecedent of OBSE. This finding

implies that interactional justice received from the workgroup manager may be associated with the sense of self-worth within the workgroup domain. Kim and Mauborgne's (1998) Intellectual and Emotional Recognition Theory proposes that if individuals feel recognized for their intellectual and emotional worth in a context, they demonstrate voluntary cooperation and are inspired to engage in active knowledge sharing within the same context. Second, fair treatment signals whether members can be proud of their membership to the group, which parallels with identification with the group (Tyler, et al., 1996).

Identification with a collective is one of the most important variables associated with the voluntary contribution for the interest of the collective (Brewer & Kramer, 1986; Kramer & Brewer, 1984; Van Vugt & De Cremer, 1999). In their experimental studies, Brewer and Kramer (1984, 1986) found that the individual, who identified with a group, was more likely to assign greater weight on that group's interests than her/his own self interests and chose to engage in cooperative behavior. Inclusion in a group might reduce the social distance among members, which made it less likely for them to make sharp distinctions between their own and others' welfare (Brewer & Kramer, 1986). In the study of O'Reilly III and Chatman (1986), identification was positively and significantly correlated with extra-role prosocial behaviors. Individuals, who felt pride (related with identification) and respect (related with self-worth) resulting from fair procedures, were more likely to engage in extra-role behaviors (Tyler et al., 1996). Drawing parallels between knowledge sharing and other cooperative behaviors, it is expected that identification with the workgroup and workgroup-based self-esteem mediate the relationship between perceived procedural and interactional justice and one's willingness to share knowledge with the workgroup.

Hypothesis 7a: Identification with the workgroup mediates the relationship between procedural justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.

Hypothesis 7b: Identification with the workgroup mediates the relationship between interactional justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.

Hypothesis 8a: Workgroup-based self-esteem mediates the relationship between procedural justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.

Hypothesis 8b: Workgroup-based self-esteem mediates the relationship between interactional justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.

2.4.2. Transformational Leadership

Transformational leaders are the leaders who inspire their followers to transcend their own self-interests by providing vision and sense of mission, communicating high expectations, promoting intelligence and questioning, and treating each follower personally (Bass, 1990). Theories of charismatic or transformational leadership assert that such leadership behaviors lead to the transformation of follower values, preferences and aspirations from self-interests to collective interests by bolstering a sense of group belongingness (Conger & Kanungo, 1987; Shamir, House & Arthur, 1993). Transformational leaders articulate messages, which contain references to followers' worth as individuals and as a collective. Self-Concept Based Theory (Shamir et al., 1993) suggests that by giving references to followers' worth as individuals and as a collective, transformational leaders increase the level of self-worth within a context. Idealized influence dimension of transformational leadership (Bass, Avolio, Jung & Berson, 2003) draws attention to the leader's messages involving moral values, related to general social norms of cooperation and contribution (Shamir, 1990), which may then be internalized by individuals over time. The

main source of intrinsic motivation for collective action may therefore depend not on the outcomes of such action, but on the effort of the contribution itself (House & Shamir, 1993). The effort will provide maintenance and improvement of self-worth through meanings drawn from moral correctness (Shamir, 1990).

Adopting the explanations above to knowledge sharing context, knowledge sharing is one of the ways in which employees may voluntarily contribute to a collective good and cooperate in collective action. When employees share their knowledge, expertise and experiences, they increase the quality of the collective knowledge, which builds up throughout the sharing process. Inspirational motivation dimension of transformational leadership in particular highlights the importance team spirit and providing meaning out of peoples' works (Bass et al., 2003). Therefore, it is expected that transformational leaders impose values and norms about cooperation and contribution of each employee to the collective, emphasizing on the meaningfulness of their contribution and cooperation with each other in a group. This value imposition may then be internalized by employees and employees may engage in a voluntary sharing of their knowledge to be able to maintain and/or improve their sense of self-worth.

Transformational leaders also draw followers' attention to collective (group) identity (Shamir, et al., 1993), where identification with the group may motivate individuals to make a contribution toward the achievement of the group success (Shamir, 1990). If leaders of workgroups or managers of departments draw their followers' interests to the group identity, it may be expected that individual followers may be motivated to contribute with their knowledge in group decisions and willingly incorporate their knowledge with the collective knowledge.

Transformational leaders are also sensitive to followers' needs (Conger & Kanungo, 1994). Individualized consideration dimension of transformational leadership emphasizes leader's attention to achievement and growth needs of individuals (Bass, et al. 2003). The expression of personal concern for the needs and feelings of followers may maintain a sense of emotional worth and consistent with the Social Exchange Theory (Blau, 1964), individual followers may need to reciprocate the concern of the leader by engaging in extra-role behaviors (Konovsky & Pugh, 1994). Therefore, it is expected to find positive relationships between transformational leadership and willingness to share one's knowledge with the workgroup. Workgroup identification and workgroup-based self esteem are expected to mediate this relationship.

> *Hypothesis 9:* Identification with one's workgroup mediates the relationship between transformational leadership (of the workgroup) and willingness to share one's knowledge with her/his workgroup.

> *Hypothesis 10:* Workgroup-based self-esteem (sense of self-worth within the workgroup) mediates the relationship between transformational leadership (of the workgroup) and willingness to share one's knowledge with her/his workgroup.

2.5. Knowledge Sharing Behavior

Although it is focused on the antecedents of willingness, actual knowledge sharing is also included in the present study for two reasons.

First, Ajzen (1991) contends that willingness is the intention to perform an action. There is plenty of evidence from literature that intentions are the one of the best predictors of behavior, along with perceived behavioral control and past behavior. (Trafimow, 1996; Conner & McMillan, 1999; Armitage & Conner 1999; Vincent, Peplau & Hill, 1998). In the meta-analysis by Armitage and Conner (2001), the correlation between intention and behavior

was found as .47. Therefore in this study, the relationship between individual's intention and

behavior is tested once more, in knowledge sharing context.

> *Hypothesis 11:* Knowledge sharing willingness is directly and positively associated
> with actual knowledge sharing behavior.

Second, actual knowledge sharing behavior is included in the study for methodological

reasons, i.e. to be able to control for the social desirability motives of participants. The

participants may tend to give socially desirable responses for willingness items. By asking the

frequencies of their actual knowledge sharing behaviors as well as their knowledge sharing

willingness, their responses regarding knowledge sharing are double-checked.

2.6. The Moderator: Trust in Workgroup regarding Knowledge Usage

Trust is known to be an important variable in cooperation and prosocial behavior

literature (e.g. Aryee, Budhwar & Chen, 2002; Jones & George, 1998; Pillai, Schriesheim &

Williams, 1999). Trusting a party refers to being vulnerable to that party who is believed to be

competent, open, concerned, and reliable (Mishra, 1996). Trusting the members of the

workgroup is suggested to be critical in knowledge sharing (Andrews & Delahaye, 2000;

Jones & George, 1998; Kim & Mauborgne, 1998). Trusting that members of the workgroup

are competent so that they are able to appraise and utilize the shared knowledge, and

believing in the members for being reliable and concerned, so that they use the knowledge for

the group's benefits rather than individual benefits are predicted to play an important role for

sharing knowledge.

The trust variable is proposed as a moderator, rather than as a mediator, since trust is

not necessarily have to be influenced by the perceived contextual factors. Whether the

members trust each other or not may depend on the individual and group processes going on,

independent of the context (e.g. past incidents and relationship experiences of the members).

Also, it is proposed to moderate the relationship between relational motivational states and

knowledge sharing willingness. Workgroup identification and workgroup-based self-esteem

may be significant for knowledge sharing, as well as for other prosocial behaviors toward the

group. However, trusting the members of the group that they will carefully consider the

shared knowledge and utilize it on behalf of the group is predicted to strengthen the effect of

the relational motivational states on knowledge sharing willingness. In other words, the

relationships between (1) workgroup identification and (2) workgroup-based self-esteem and

knowledge sharing willingness are predicted to enhance in the presence of trust in

workgroup's competence, reliability and concern, compared to that of in its absence.

> *Hypothesis 12a:* One's trust in workgroup moderates the relationship between one's
> identification with the workgroup and one's willingness to share knowledge with the
> workgroup, in such a way that in the condition of high identification with the
> workgroup, willingness to share knowledge is higher when trust in workgroup is also
> higher compared to when it is lower.

> *Hypothesis 12b:* One's trust in workgroup moderates the relationship between one's
> workgroup-based self-esteem and one's willingness to share knowledge with the
> workgroup, in such a way that in the condition of high workgroup-based self-esteem,
> willingness to share knowledge is higher when the trust in workgroup is also higher
> compared to when it is lower.

Chapter 3

METHOD

3.1. Pilot Study

Pilot study with forty five employees was conducted to have a preliminary assessment

of reliability estimates for the translated, adapted and newly constructed measures. It also

aimed to receive feedback about the clarity of explanations for items and section instructions;

appropriateness of the number of questions, page set up, font style and size, as well as

coverage of the scope of knowledge sharing in a workgroup context. For this purpose, a

feedback questionnaire (Appendix 1) form was designed on a 5-point Likert-type scale and an

additional open-ended recommendation section, and distributed to all of the participants, of

which 36 out of 45 were returned. The feedback received about clarity of items (M = 4.4,

SD = 0.5), coverage of the scope of knowledge sharing (M = 3.9, SD = 0.8), appropriateness

of number of questions (M = 3.9, SD = 0.9), page set-up (M = 4.5, SD = 0.6) and font style

and size (M = 4.6, SD = 0.6) was positive. There were some negative comments about the

clarity of section instructions (M = 3.6, SD = 1.5), which were taken into account and the

necessary modifications were made (Appendix 3).

Participants from Istanbul, Adana and Gaziantep were employed with snowball

sampling procedure from personal contacts. Surveys were sent and requested to be sent back

directly to the researcher via e-mail. Confidentiality was assured by the researcher.

The survey included translated measures (e.g. procedural and interactional justice) and

translated and adapted measures (e.g. workgroup-based self-esteem, knowledge sharing

willingness). Measures for workgroup norms favoring and hindering knowledge sharing, and

positive and negative outcome expectancies regarding knowledge sharing consisted of translated and adapted items, and also items which were created by the researchers. Trust in workgroup measure was created by the researchers. The internal reliabilities for the measures are presented in Table 3.1.

Table 3.1. Internal reliabilities of study measures in the pilot study

	# of items	α	α if item deleted	Item suggested to be deleted
Procedural justice	9	0.90		
Interactional justice	6	0.94		
Transformational leadership	20	0.96		
Knowledge sharing willingness	5	0.88		
Actual knowledge sharing	5	0.92		
Feedback & reward Interdependence	3	0.43	0.65	Kişilere verilen ödüller (prim, terfi, vb.) ağırlıklı olarak onların çalışma grubuna sağladıkları katkıya göre belirlenir.
Task interdependence	3	0.60	0.69	Çalışma grubunda farklı kişiler tarafından yapılan işler birbirleri ile bağlantılıdır.
Workgroup norms favoring KS	5	0.61	0.69	Çalışma grubum içinde bilgi paylaşılmaması pek hoş karşılanmaz.
Workgroup norms hindering KS	3	0.85		
Workgroup-based self-esteem	10	0.85		
Social desirability	10	0.67		
Positive outcome expectancies as a result of KS	9	0.73		
Negative outcome expectancies as a result of KS	9	0.79		
Trust in workgroup	4	0.91		
Workgroup identification	5	0.73		

The reliabilities for most of the scales, as shown in Table 3.1, were well above 0.60, which was the acceptable lower limit (Nunally, 1978). The internal consistencies of the measures, which were lower than 0.60, could be improved by deleting the suggested items presented in Table 3.1. However, these items were decided to be kept in the main study for the reliability estimates of the original measures to be tested with a larger sample.

3.2. The Main Study

3.2.1. Participants & Procedures

Data were collected from 232 white-collar employees working in departments,

workgroups or project groups and under the supervision of a leader (e.g. manager, supervisor,

etc.). Participants were from 24 private business organizations which were operating mostly

in textile, FMCG, chemical and automotive sectors and located in Northwestern and

Southwestern regions of Turkey. They were mostly selected from marketing, production and

research and development (R&D) departments on purpose due to these departments'

knowledge-intensive nature.

Participants were recruited through three channels. Firstly, personal acquaintances of

the researcher, who worked as white-collar employees, were contacted and informed about

the details of the study. Secondly, students who enrolled in the Introduction to Psychology

course in Spring 2006 semester were notified about the study and were asked if they knew

any contacts that could participate and ask their coworkers to participate in this study. The

contributions of the students were on voluntary basis, i.e. no credits were offered. After

students found the contacts, the researcher got in touch with these volunteering white-collar

employees to give further details of the study. Finally, general managers of two large-sized

organizations (whose contact information was obtained from personal contacts) were

contacted and informed about the study. Both of them were interested in involving, provided

that the results of the study were shared with them without violating the confidentiality of

their employees. They assigned authorized employees from their Human Resource

Departments to distribute the surveys randomly to white-collar employees from each

department upon their consent to participate. All of the contacts were requested by e-mails to

distribute the surveys to white-collar employees working in *different workgroups and under the supervision of different managers.* This application was necessary for the study's design in order to assure the variability of perceived contextual factors such as leadership and justice perceptions. Surveys were sent with cover pages attached (Appendix 2) and in open envelopes. On the cover page, participants were assured of confidentiality and requested to return the surveys to the person who distributed them after they enclosed it in the given envelope. The overall response rate was 83 %.

Out of 232 surveys received, eight of them were eliminated due to extensive missing data (survey was consisted of double-sided pages, however the back sides were not seen and completed) and six of them were eliminated since two employees from the same workgroup completed the survey (this inference was drawn upon the information in the demographic section, and one of the participants from the same workgroup was randomly taken out). Therefore, statistical analyses were performed with the remaining 218 surveys.

The participants were generally adults at their 30s. The percentage of gender distribution can be mentioned as balanced. The majority of the sample was university graduates or above. The departments that participants work in were mainly marketing, production and research and development (R&D) departments, as intended. The participants' overall demographic characteristics are presented in detail in Table 3.2.

3.2.2. Measures

The survey involved fourteen measures and a demographic section which inquired information regarding age, gender, education, sector, department, position, number of people in the workgroup, tenure in the organization, tenure in the workgroup, tenure with manager, whether the participant was working in the same location with his/her workgroup.

Table 3.2 Demographic characteristics of the participants

Age (years)		
	M	31.71
	SD	6.73
Gender (%)		
	Male	60.10
	Female	39.90
Education (%)		
	High school	8.30
	Academy	7.40
	University	63.90
	Graduate	20.40
Tenure in Organization (years)		
	M	5.29
	SD	5.42
Tenure with Manager (years)		
	M	3.07
	SD	3.45
Tenure with Workgroup (years)		
	M	3.62
	SD	4.12
Sector (%)		
	Textile	44.10
	Automotives	14.10
	Chemicals	13.60
	FMCG	12.70
	Engineering	8.90
	Retailing	3.30
	Banking / Auditing	3.30
Department (%)		
	Marketing / Product Management	23.60
	Production / Maintenance	17.60
	R&D / Projects	12.60
	Purchasing / Import / Logistics	12.60
	Accounting / Finance	10.10
	Sales / Export	8.00
	Information Technologies	5.00
	Human Resource	5.00
	Planning	3.00
	Quality	1.50
	Strategic Planning / Business Development	1.00

All of the measure translations into Turkish were carried out by the researcher, and reviewed independently by the thesis advisor and two MA students in Psychology Department of Koc University, unless otherwise was stated. Prior to the calculation of scale scores, exploratory factor analyses (EFAs) with Varimax rotation were carried out for each measure to assess their construct validity.

Procedural justice. A 9-item procedural justice measure by Moorman (1991) was utilized to assess the participants' procedural fairness perceptions in the workgroup. The instructions were given such that the participants were requested to evaluate fairness during *operational decision making processes* in their workgroups. The response scale was ranging from 1, "to a small extent," to 5, "to a large extent", in which higher scores indicated more perceived justice. A sample item was, "During operational decision making process, procedures are designed to hear the concerns of all those affected by the decision". The results of EFA revealed that the items loaded on a single factor explaining 61% of the total variance, as expected (Appendix 4). The internal consistency for the scale was .92 in the present study. Therefore, the scale score was computed using all of the nine items.

Interactional justice. Moorman's (1991) 6-item interactional justice measure was utilized to assess the perceptions of interactional justice regarding workgroup manager / supervisor during operational decision making process. The response scale was the same as the procedural justice measure. A sample item for interactional justice was, "During operational decision making process, your supervisor treats you with kindness and consideration." According to EFA results, as expected, all of the 6 items loaded on one factor explaining 70% of the total variance (Appendix 5). Cronbach alpha for the measure was .91 in

the present study. Since there was no problem with the factor structure, scale score was

calculated using all of the six items.

Transformational leadership. A standardized and validated Turkish version of

subordinate-rater form Multifactor Leadership Questionnaire (MLQ–Form 5X; Avolio &

Bass, 2002) was used to measure transformational leadership. This questionnaire also

included items regarding transactional leadership and laissez faire leadership, however only

the 20 items covering the four dimensions of transformational leadership – idealized

influence, individualized consideration, intellectual stimulation, inspirational motivation –

were utilized. The participants assessed their immediate supervisor on a 5-point Likert scale

ranging from 1 ("not at all") to 5 ("frequently, if not always"). The higher score indicated

higher perceived transformational leadership. Cronbach alpha of the 20-item composite

measure was reported to be .97 (Bass, et al., 2003). Idealized influence dimension was

measured with 8 items, including "My immediate supervisor specifies the importance of

having a strong sense of purpose". Individualized consideration was measured with 4 items. A

sample item for this dimension was "My immediate supervisor treats each of those s/he leads

as individuals with different needs, abilities, and aspirations". Intellectual stimulation was

measured with 4 items, including "My immediate supervisor seeks different perspectives

when solving problems". Finally, a sample item for inspirational motivation dimension, which

was measured with 4 items, was "My immediate supervisor talks enthusiastically about what

needs to be accomplished". EFA for the 20-item scale, resulted in a two-factor solution. The

explained variance was 63%. Results revealed that seven items loaded on the first factor, six

items loaded on the second factor and the remaining seven items loaded on both factors

(Appendix 6). This finding was contradictory to the expected 4-factor solution representing

the four dimensions of transformational leadership. As previously stated in literature,

although the MLQ has yielded high reliabilities, the factor structure of MLQ was found to be

problematic and inconsistent (Bass & Avolio, 1993; Bycio, Hackett & Allen, 1995; Pillai et

al., 1999). The universality of MLQ's factor structure was still remaining as a problem (Bass,

1999). A common strategy to cope with this problem has been to create a composite score

using all of the 20 items (Pillai et al., 1999, p.910). Therefore, in the present study, all of the

items were included in the composite score. We opted for this solution, also because the

version of Multifactor Leadership Questionnaire being used was standardized and validated

for Turkish sample. In the present study, Cronbach alpha was .96.

Workgroup norms favoring (prescriptive) and hindering (proscriptive) knowledge

sharing. These measures aimed at assessing three types of norms related to knowledge

sharing in a workgroup environment: subjective, descriptive and injunctive (Ehrhart &

Naumann, 2004). Subjective norm was related to what significant others thought about a

behavior (in this case knowledge sharing). Two items regarding subjective norm were taken

from Bock and colleagues' (2005) subjective norm measure items and the wording was

changed from 'organization' to 'workgroup'. A sample item was, "My colleagues think I

should share my knowledge with other members in the workgroup." Three new items to

measure prescriptive norms about knowledge sharing were included according to the

suggestions made by Ehrhart & Naumann (2004). In their conceptual paper, they mentioned

that besides subjective norms, there were also descriptive norms and injunctive norms.

Descriptive norms developed from watching what other members of the group do in certain

situations, where as injunctive norms developed when members want to get socially approved

(Ehrhart & Naumann, 2004). An example item given for descriptive norms in Ehrhart and

Naumann (2004) related to OCB concept was, "Members of my workgroup help fellow coworkers when needed". This item was adapted to knowledge sharing as, "Members of my workgroup share their knowledge with each other". An example item for injunctive norm regarding OCB was, "Members of my group advocate the importance of helping fellow coworkers". This item was changed as, "Members of my workgroup advocate the importance of sharing knowledge with each other" to be congruent with knowledge sharing concept. The final item, which was measuring injunctive norms, was "Hoarding knowledge is not welcomed in this workgroup." EFA results revealed that the items loaded on a single factor and the variance explained was 59% (Appendix 7). Scale score for prescriptive norms regarding knowledge sharing was computed with the original five items. The internal consistency of the scale was $\alpha = .83$ in this study.

Three more items were created in Turkish by the researcher to measure proscriptive group norms regarding knowledge sharing, or in other words, group norms hindering knowledge sharing. The items for proscriptive norms were, "Sharing knowledge in my workgroup is considered as arrogance", "My workgroup's members evaluates sharing knowledge as being naïve", "In this workgroup, every member is expected to find his/her own solutions to problems".

A 6-point Likert scale was utilized, in which 1 represented strong disagreement and 6 represented strong agreement with the statements. The higher score in prescriptive norms measure meant higher strength of perception of norms favoring knowledge sharing where as higher score in proscriptive norms measure indicated higher strength of perception of norms hindering knowledge sharing.

The results of the EFA revealed that all of the three items of the scale loaded on a single factor explaining 78% of the total variance, as expected (Appendix 8). The reliability of the scale was $\alpha = .86$ in the present study. Scale score was computed using all of the items.

Feedback and reward interdependence. The degree of feedback and reward interdependence in a workgroup was assessed using the 3-item scale of Campion and colleagues (1993). A sample item was, "Feedback about how well I am doing my job comes primarily from information about how well the entire team is doing". 5-point Likert-type response scale was utilized, ranging from 1-strongly disagree, 3-undecided to 5-strongly agree. The Cronbach alpha was reported as .59 (Campion, et al., 1993). This measure was translated to Turkish and used in a research conducted with Turkish blue-collar workers by Bayazit, Aycan, Aksoy, Dagli and Goncu (2006). The internal consistency for the translated scale was reported as .57 (Bayazit et al., 2006).

According to EFA results, the items loaded on a single factor explaining 60% of the total variance (Appendix 9). Therefore, the scale score was calculated using all of three items. In this study, Cronbach alpha of the scale was .67.

Workgroup identification. A translated measure, which was adapted from the original scale of Mael and Ashforth's (1992) organizational identification to assess workgroup identification in a research by Bayazit and associates (2006), was utilized. In this measure, the item "when a story in the media criticizes this organization, I would feel embarrassed" was eliminated, since the wording was not meaningful for the workgroup context. Participants responded using a 5-point Likert scale (1- strongly agree 3-undecided 5- strongly agree). A sample item was "My workgroup's successes are my successes."

EFA results revealed that four of the workgroup identification items unexpectedly loaded on two factors, and one of the items did not load on any of the factors (Appendix 10). The explained variance was 57%. This was an unexpected result, since in the previous studies accomplished in Turkey, all items loaded on a single factor and replicated the original structure. For instance, in the study by Bayazit and associates (2006) conducted with 293 participants in Turkey, all five items of the same scale loaded on a single factor explaining 57% of the total variance. In another research by Goncu (2006) conducted with 239 white-collar employees, organizational identification items (the same 5 items, with the exception of the context as 'organization' instead of 'workgroup') loaded once again on one factor, and the explained variance was 65%. This situation was considered a unique characteristic of the present sample. Therefore, the scale was forced into one factor solution (Appendix 11). When this strategy was carried out, the explained variance was 36%. The scale score was computed using all of the five items and internal consistency of the scale was .54 in the present study.

Workgroup-based self-esteem. Workgroup-based self-esteem was assessed with Pierce and colleagues' (1989) organization-based self-esteem scale (OBSE) by adapting it to workgroup context. The original scale was different from the generalized self-esteem scales, as it aimed at measuring self-esteem in the context of organization, i.e. how one feels about her/his sense of self-worth in the organization. As suggested in Pearce et al. (1989), it was important to frame self-esteem in the context consistent with the behavior, intention or attitude to be predicted. Since the context of knowledge sharing was operationalized as the *workgroup*, it was more appropriate to set the context of OBSE measure as workgroup. Therefore, the wording was changed from "around here" to "in this workgroup". A sample item was, "in this workgroup, I am important". The Cronbach alpha for the original scale was

reported as .93 (Pierce et al., 1989). A 5-point Likert scale was used, ranging from 1-strongly disagree to 5-strongly agree. The higher score indicated higher perceived self-worth within the workgroup.

EFA results indicate that 10 items of workgroup-based self-esteem scale loaded on two factors, explaining the 62% of the total variance. Five items loaded on the first factor, two items loaded on the second factor, and the remaining three items loaded on both factors (Appendix 12). The items which loaded on the second factor (9th and 10th items) were removed and the remaining items were again factor analyzed. This time all of the items loaded on one factor, explaining 56% of the variance (Appendix 13). Scale score was computed using eight items and the reliability for the scale was .89 in the present study.

Positive Outcome Expectancies (POEs). Positive outcome expectancies were measured with the combination of two measures from existing literature. One of them was related to *personal outcomes*, which was adapted to knowledge sharing context from Riggs and Knight's (1994) personal outcome expectancy scale's positively worded items. In other words, the wording of the original items reflected positive outcome expectancies as a result of performing good work, whereas in this adapted scale, the positive outcome expectancies regarding one's sharing knowledge with the workgroup were assessed. An example item was, "Sharing knowledge is a sure way to get ahead in this workgroup."

The other measure was more interpersonal rather than personal in nature. It was Bock and colleagues' (2005) anticipated reciprocal relationship scale and its items were adapted to workgroup context instead of organizational context. An example item was, "In this workgroup, my knowledge sharing would strengthen the ties between existing members and myself." The original scale's reliability was reported as .92 (Bock et al, 2005). A 6-point

Likert scale was utilized, ranging from 1-strongly disagree to 6-strongly agree, in which

higher score indicated higher perceived positive outcome expectancies as a result of engaging

in knowledge sharing toward the workgroup.

When factor analysis with Varimax rotation was carried out, the items loaded on two

factors, explaining 63% of the variance (Appendix 14). These two factors were composed of

the items of the two measures as mentioned above. Therefore, scale scores for the two

dimensions of POEs were computed. In this study, Cronbach alphas for POEs regarding

personal and interpersonal outcomes were .64 and .90, respectively. The splitting of positive

outcome expectancies into two dimensions was a modification on the proposed model and

was accomplished prior to model testing.

Negative Outcome Expectancies. This measure consisted of the negatively worded

(reverse coded) items of Riggs and Knight's (1994) personal outcome expectancy scale

(adapted to knowledge sharing context) to assess expectations related to knowledge sharing

going unnoticed. In other words, the wording was modified to assess negative expectancies as

a result of 'sharing knowledge with the workgroup' (instead of 'doing good work' as in the

original scale). Sample items for NOE for knowledge sharing going unnoticed were, "Most of

my knowledge sharing goes unnoticed" and "Sharing knowledge gets the same results as not

sharing knowledge".

Also, the researcher created six more items in Turkish to assess the *negative* outcome

expectancies (NOEs), which were expected to capture the cost and risks associated with

knowledge sharing with the workgroup. One item was created to assess the negative

expectancy regarding the cost of knowledge sharing. This item was "Sharing knowledge costs

a lot of time and effort". For assessing NOEs related to the risks associated with knowledge

sharing, the created items were, "In this workgroup, I feel that I can lose chance of being promoted if I share my knowledge", "If I share my knowledge, I am not indispensable any more", "If I share my knowledge with other members, I feel that I would abandon my power and privileges that my knowledge provides me", "I am uncomfortable when I share my knowledge, since members of my workgroup might use it without mentioning my name" and "I feel abused when I share knowledge, if none of the other members share their knowledge with me in return".

A 6-point Likert scale was used, in which 1 represented strong disagreement and 6 represented strong agreement with the statements. Higher score indicated, higher perceived negative outcome expectancies as a result of engaging in knowledge sharing toward the workgroup.

Similar to the expectations in POEs measure, NOEs measure was expected to load on single factor since the items all reflected *negative* expectancies. However, again the items loaded on two factors except one of the items that did not load on any of the factors. The item that did not load on any factors was the one related with 'expectancy regarding cost'. As a result, it was removed from the measure. The explained variance was 58%. Without the item that did not load on both factors, the factor structure was theoretically meaningful (Appendix 15). One of the factor reflected knowledge sharing being unnoticed by others in the workgroup, whereas the second one revealed risks associated with knowledge sharing. Therefore, scale score for NOEs regarding being unnoticed was computed with three items. Scale score for NOEs regarding risks was computed using all of the five items. In the present study, the internal consistencies for NOEs regarding being unnoticed and NOEs regarding risks were .76 and .80, respectively.

The EFA results of the outcome expectancies measure (regarding the positive and

negative expectancies together) was presented in Appendix 16.

Trust in Workgroup. The 4-item scale was created in Turkish by the researcher to be

used in this study. The items aimed to capture the trust perceptions of the participants toward

their workgroup that the workgroup was both capable and benevolent in utilizing the shared

knowledge. Two items for the scale were, "If I share my knowledge with my workgroup, it

will be utilized for the benefits of the group" and "In this workgroup, the knowledge shared is

taken into account and it is not wasted", "The workgroup well utilizes the knowledge that is

shared" and "I believe that if I share knowledge with this workgroup, it will be assessed and

utilized correctly." A 6-point Likert scale was utilized, ranging from 1-strongly disagree to 6-

strongly agree. Higher score indicated higher trust in the workgroup. Cronbach alpha was

computed as .91 in the pilot study, therefore it was decided to be used for the main study as

well.   EFA results revealed that, as expected, all of the four items loaded on a single factor,

explaining 77% of the variance (Appendix 17). The reliability of the scale was $\alpha = .90$ in the

main study.

Knowledge Sharing Willingness. The measure was adapted from Bock and colleagues'

(2005) intention to share implicit knowledge measure with few modifications. First, the

context was changed form organization to workgroup as in the whole study. Secondly, the

items were reframed according to the conceptualization of knowledge in the present study,

which was actually not so different from Bock and colleagues' (2005) definition of implicit

knowledge. In the present study, knowledge was defined as, "work-related personal know-

how, which is acquired from education, trainings, experiences and expertise, and hard-to-find

information acquired through personal network", therefore each item aimed to capture the

willingness to share one type of knowledge (i.e. experience, expertise, education, trainings

and hard-to-find information acquired from personal network, etc.). The response scale for

this measure was a 5-point Likert scale, ranging from 1-strongly disagree, 6-strongly agree, in

which the higher score was the indicator of higher willingness of sharing one's knowledge.

According to EFA results, five items loaded on one factor as expected (Appendix 18). The

explained variance was 70%. Cronbach alpha was as .89 in the present study.

Actual knowledge sharing. The actual knowledge-sharing behavior was measured with

a 5 item-scale constructed by the researcher. The items aimed to capture the actual behavior

by utilizing wording in present tense. An example item was, "I share the knowledge that I

have acquired through work-related trainings with the members of my group." The actual

knowledge sharing behavior measure, just as willingness measure, covered all of the five

knowledge types present in the operational definition of knowledge in this study. The

response scale for this measure was a 5-point frequency scale, ranging from 1-never to 5-

almost always, in which the higher score indicated sharing more knowledge when compared

to lower score. Internal consistency was $\alpha = .92$ in the pilot study.

Factor analysis results showed that, as expected, all of the items loaded on a single

factor and the explained variance was 65% (Appendix 19). Internal consistency of the scale

was $\alpha = .86$ in the present study.

Despite the risk of receiving socially desirable answers, self-report surveys have been

utilized as a common way to measure knowledge sharing construct (e.g. Bock & Kim, 2002;

Bock et al., 2005; Bordia et al., 2006). An alternative would be to ask the knowledge sharing

behavior to the individual's manager or peer in a matched sample, however asking only one

respondent (i.e. manager or peer) could also bias the results. Asking multiple respondents (e.g. manager and two peers) and taking the average score might be a good way of measuring the actual behavior, however due to time and resource limitations, this method was quite unfeasible in the present study. Therefore, in this study it was opted to assess the self-reported knowledge sharing behavior. However, "results from self-report measures might be unduly influenced by the individual's awareness, unconscious defenses, current emotional state, need for social acceptance, or to meet *social desirability* standards" (Savin-Williams & Jaquish, 1981, p. 333). To control for that, Social Desirability Scale by Crowne and Marlow (1964) was utilized.

Social Desirability. Short form of the Social Desirability Scale developed by Crowne and Marlow (1964) was used to assess social desirability motives of participants. In the 10-items scale, responses were in "true-false" format. The Turkish translation of this scale was used in a study by Aycan and Eskin (2005). Cronbach alpha of the scale was .67 in the present study.

Opportunity to Share Knowledge. Opportunity of the participants' to share knowledge with the other members of their workgroup was assessed by combining an item that asked the participants whether or not they work in the same location with the other members of their workgroup, and a continuous item "I have opportunity to share knowledge with members of my workgroup" on a 5-point Likert scale ranging from 1- strongly disagree and 5- strongly agree. Z-cores were computed for each of the two items and then scale score was calculated by taking their means. The correlation between the z-scores of the two items is -.11 (p=.12). This measure was used as a control variable.

Knowledge Sharing Necessity. This measured was composed of one item, asking 'to what extent knowledge sharing is necessary for the participants' workgroup to operate smoothly' of on a 5-point Likert-type scale ranging from 1- to a very small extent and 5- to a very large extent. This measure was also utilized as a control variable for exogenous constructs.

The source, number of items and reliability of the study measures are summarized in Table 3.3.

Table 3.3. The sources, number of items and reliabilities of study measures

Variables	# of items	Cronbach alpha	Source
Knowledge sharing willingness	5	.89	Bock et al. (2005)
Knowledge sharing	5	.86	items by researchers
Positive outcome expectancies (personal)	4	.64	Riggs & Kinght (1994) – adapted to knowledge sharing
Positive outcome expectancies (interpersonal)	5	.90	Bock, Zmud, Lee & Kim (2005)
Negative outcome expectancies (risks)	5	.80	items by researchers
Negative outcome expectancies (being unnoticed)	3	.76	Riggs & Kinght (1994) – adapted to knowledge sharing
Workgroup identification	5	.54	Mael & Ashforth (1992) – adapted to workgroup
Workgroup-based self-esteem	7	.89	Pierce, Gardner, Cummings & Dunham (1989) – adapted to workgroup
Workgroup norms favoring KS	5	.83	Bock et al. (2005) + items by researchers
Workgroup norms hindering KS	3	.86	items by researchers
Feedback & Reward Interdependence	3	.67	Campion, Medsker & Higgs (1993)
Transformational Leadership	20	.96	Avolio & Bass (2002); MLQ- Form 5X
Procedural Justice	9	.92	Moorman (1991)
Interactional Justice	6	.91	Moorman (1991)
Trust in workgroup	4	.90	items by researchers

Chapter 4

RESULTS

4.1. Hypotheses Testing

Prior to testing the mediated model and hypotheses; means, standard deviations and intercorrelations among the variables are presented in Table 4.1.

4.1.1. Testing the Mediated Model

Structural Equation Modeling (SEM) analysis using AMOS 4.0 was carried out to test the proposed mediated model. In order to evaluate if the proposed model provided a good fit to the data, the following fit indices were utilized: (a) χ^2/df ratio; (b) χ^2 statistics; (c) goodness of fit index (GFI); (d) adjusted goodness of fit index (AGFI); (e) Tucker Lewis Index (TLI) and (f) comparative fit index (CFI). χ^2/df ratio less than 2.0 is suggested to be satisfactory (Long, 1998). To be able to conclude that the hypothesized model fits the data, χ^2 should be nonsignificant. However, since it is known that χ^2 is sensitive to sample size and number of parameters in the structural model, it should not be used as the only fit index (Bentler, 1990). GFI evaluates "the relative amount of variances and covariances jointly accounted for by the model" (Maruyama, 1998; p. 243), whereas AGFI "adjusts the GFI index for the degrees of freedom of a model relative to the number of variables" (Schumaker & Lomax, 1996; p126). However, Mulaik, James, Van Alstine, Bennett, Lind and Stilwell (1989) argued that AGFI has problems that make it a less desirable fit index in model testing. TLI is a relative fit index and can be utilized to "compare a propose model against a null model" (Schumaker & Lomax, 1996; p127). CFI is also a relative goodness of fit index, which evaluates the improvement

Table 4.1. Means, standard deviations and intercorrelations among the study variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Knowledge sharing willingness	5.17	0.70	-	.63**	.17*	-.15*	.02	.15*	.00	.02	.22**	.43**	-.18**
2. Actual knowledge sharing behavior	4.18	0.58		-	.31**	-.24**	.08	.21**	.12	.14*	.27**	.35**	-.25**
3. Workgroup norms favoring knowledge sharing	3.89	0.68			-	-.62**	.24**	.43**	.44**	.46**	.30**	.36**	-.43**
4. Workgroup norms hindering knowledge sharing	2.13	0.95				-	-.11	-.31**	-.38**	-.29**	-.19**	-.29**	.48**
5. Feedback and reward interdependence	3.42	0.81					-	.26**	.19**	.19**	.31**	.06	-.31**
6. Procedural justice	3.11	0.81						-	.69**	.63**	.38**	.31**	-.58**
7. Interactional justice	3.44	0.89							-	.79**	.26**	.18**	-.52**
8. Transformational leadership	3.34	0.83								-	.31**	.16*	-.44**
9. Positive outcome expectancies (personal)	3.33	0.92									-	.31**	-.32**
10. Positive outcome expectancies (interpersonal)	4.57	0.86										-	-.35**
11. Negative outcome expectancies (being unnoticed)	3.05	1.11											-
12. Negative outcome expectancies (risks)	2.37	0.84											
13. Workgroup-based self-esteem	4.07	0.52											
14. Workgroup identification	3.92	0.53											
15. Trust in workgroup	4.21	0.94											
16. Social desirability	0.72	0.21											
17. Opportunity to share knowledge	0.15	0.60											
18. Knowledge sharing necessity	1.16	0.37											
19. Gender	1.40	0.49											
20. Age (years)	31.71	6.73											
21. Tenure in organization (years)	5.29	5.42											
22. Tenure in workgroup (years)	3.62	4.12											
23. Tenure with manager (years)	3.07	3.45											

Note *p< .05; **p< .01

Table 4.1. Means, standard deviations and intercorrelations among the study variables (continued)

	12	13	14	15	16	17	18	19	20	21	21	22
1. Knowledge sharing willingness	-.27**	.30**	.06	.24**	.16*	.28**	.28**	.13	.08	.07	.11	.10
2. Actual knowledge sharing behavior	-.33**	.32**	.10	.30**	.14*	.38**	.29**	.09	.04	.03	.03	.00
3. Workgroup norms favoring knowledge sharing	-.20**	.33**	.25**	.53**	.06	.17**	.14*	.12	-.06	.01	.12	.07
4. Workgroup norms hindering knowledge sharing	.28**	-.26**	-.15*	-.45**	-.03	-.01	-.08	-.05	.02	-.00	-.02	-.01
5. Feedback and reward interdependence	-.13	.11	.13	.21**	.23**	.14*	.06	-.18**	.05	.01	.02	.08
6. Procedural justice	-.17*	.33**	.17*	.51**	.20**	.21**	.11	-.04	-.15	-.04	.00	-.01
7. Interactional justice	-.20**	.37**	.22**	.42**	.12	.06	-.04	-.06	-.13	-.08	-.07	-.07
8. Transformational leadership	-.17*	.39**	.15*	.38**	.17*	.11	-.02	-.05	-.10	-.11	-.06	-.06
9. Positive outcome expectancies (personal)	-.05	.23**	.06	.29**	.15*	.10	.16*	-.07	-.03	-.01	-.03	-.05
10. Positive outcome expectancies (interpersonal)	-.26**	.25**	.27**	.56**	.03	.22**	.30**	.07	.09	.13	.12	.12
11. Negative outcome expectancies (being unnoticed)	.49**	-.32**	-.15*	.52**	-.19**	-.23**	-.11	.06	-.05	-.10	-.04	-.02
12. Negative outcome expectancies (risks)	-	-.17*	-.04	.17*	-.22**	-.16*	-.16*	-.08	-.13	-.12	-.10	-.05
13. Workgroup-based self-esteem		-	.23**	.29**	.02	.19**	.08	-.03	.12	.11	.08	.09
14. Workgroup identification			-	.21**	-.06	.11	.05	.07	.04	.03	.01	-.01
15. Trust in workgroup				-	.15*	.28**	.24**	.05	.06	.14*	.12	.08
16. Social desirability					-	.14*	-.03	-.01	.19**	.16*	.12	.15*
17. Opportunity to share knowledge						-	.16*	.08	.00	.09	.04	.02
18. Knowledge sharing necessity							-	.14*	-.07	-.01	-.03	-.03
19. Gender								-	-.19**	-.04	-.06	-.04
20. Age (years)									-	.74	.55**	.48**
21. Tenure in organization (years)										-	.74**	.64**
22. Tenure in workgroup (years)											-	..83**
23. Tenure with manager (years)												-

Note *p< .05; **p< .01

in noncentrality in going from the null model to restricted model (Schumaker & Lomax, 1996) and eliminates small sample size bias (Bentler, 1990). For GFI, AGFI, TLI and CFI; values close to .90 reveal a good fit (Maruyama, 1998). Root mean square error of approximation (RMSEA) index should be lower than .08 and close to .60 in order to represent a good fit (Schumacker & Lomax, 1996).

Once again it is necessary to mention that, prior to model testing, positive outcome expectancies regarding personal and interpersonal outcomes were treated as two constructs as suggested by the results of factor analysis. Also, although negative outcome expectancies were proposed to be a single construct, factor analysis results revealed that risks regarding knowledge sharing and negative expectancies regarding knowledge sharing going unnoticed had to be treated as different constructs. These were the two modifications accomplished before testing the model.

During the model testing social desirability, opportunity to share knowledge and knowledge sharing necessity were controlled by linking these control variables to endogenous variables, with which significant intercorrelations (p >.05) existed. The proposed model provided a moderate fit to the data. Three theoretically meaningful paths were included as suggested by the modification indices. These include; the paths between (1) feedback and reward interdependence and NOEs regarding being unnoticed, (2) procedural justice and NOEs regarding being unnoticed, and (3) procedural justice and POEs regarding personal outcomes. After the modification, the model provided a good fit the data, as presented in Table 4.2.

The model could be further improved a little by additional paths as suggested by the modification indices. These were the direct paths between positive and negative workgroup

Table 4.2. Goodness of fit indices for the proposed and modified model

Model	χ^2	df	χ^2/df	p	GFI	AGFI	TLI	CFI	RMSEA
Proposed	219.2	76	2.88	.00	.91	.81	.78	.88	.093
Modified	131.5	73	1.80	.00	.94	.86	.91	.95	.061

norms regarding knowledge sharing and the actual behavior(χ^2 = 117.7, df = 71, χ^2/df = 1.66,

p = .00, GFI = .94, AGFI = .88, TLI = .93, CFI = .96, RMSEA = .055). However, considering

the parsimony of the model and the small amount of increase in the fit indices when these two

paths were added, it was opted not to include the direct paths from workgroup norms to

knowledge sharing behavior.

The standardized and unstandardized estimates of the paths for the modified model are

presented in Table 4.3. The modified model with standardized path coefficients of significant

paths is presented in Figure 4.1. Hypotheses were evaluated according to the modified model.

Figure 4.1. Standardized Estimates of the Modified Model
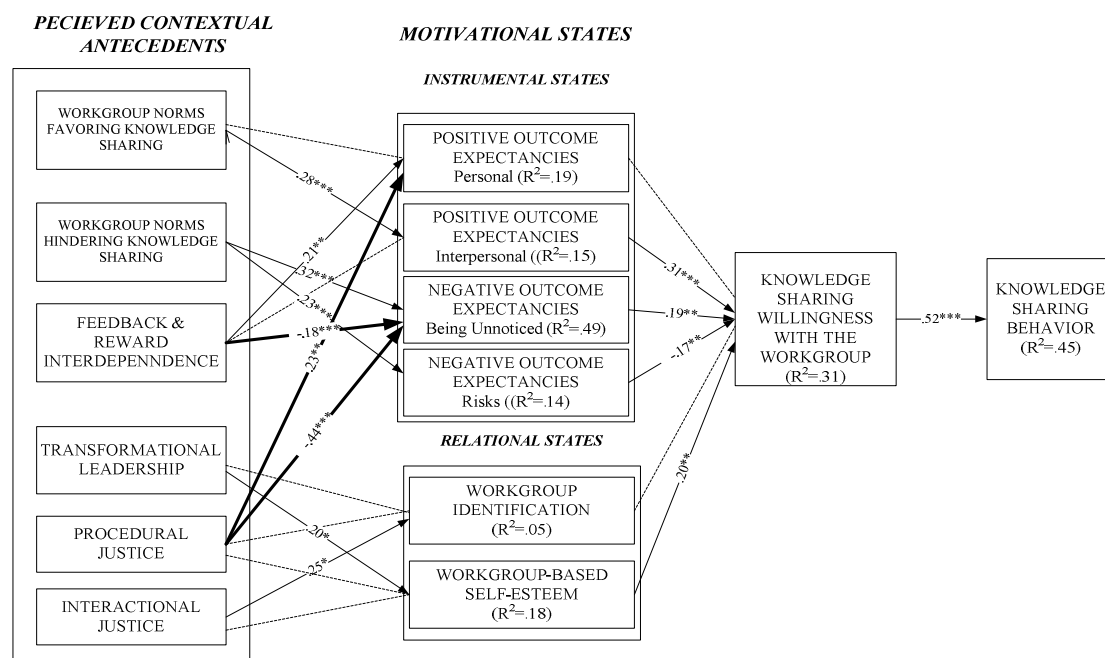
Note [1]* p<.05, ** p<.01, ***p<.001, ----- nonsignificant paths, ▬▬ additional paths

Table 4.3. Standardized and unstandardized regression weights

	Unstandardized Estimates	S.E.	Standardized Estimates
Workgroup Norms Hindering KS ↔ Procedural Justice	-0.23	0.05	-0.31***
Transformational Leadership ↔ Feedback & Reward Interdep.	0.12	0.05	0.19**
Workgroup Norms Hindering KS ↔ Transformational Leadership	-0.23	0.06	-0.29***
Workgroup Norms Favoring KS ↔ Workgroup Norms Hindering KS	-0.38	0.05	-0.58***
Workgroup Norms Favoring KS ↔ Feedback & Reward Interdep.	0.13	0.04	0.24**
Transformational Leadership ↔ Interactional Justice	0.59	0.06	0.79***
Interactional Justice ↔ Procedural Justice	0.50	0.06	0.69***
Workgroup Norms Hindering KS ↔ Interactional Justice	-0.32	0.06	-0.38***
Transformational Leadership ↔ Procedural Justice	0.43	0.05	0.63***
Workgroup Norms Favoring KS ↔ Transformational Leadership	0.28	0.04	0.49***
Workgroup Norms Hindering KS ↔ Feedback & Reward Interdep.	-0.09	0.05	-0.11
Interactional Justice ↔ Feedback & Reward Interdependence	0.13	0.05	0.19**
Procedural Justice ↔ Feedback & Reward Interdependence	0.17	0.05	0.26***
Workgroup Norms Favoring KS ↔ Procedural Justice	0.24	0.04	0.44***
Workgroup Norms Favoring KS ↔ Interactional Justice	0.29	0.05	0.48***
Workgroup Norms Favoring KS → Personal POEs	0.14	0.09	0.11
Workgroup Norms Favoring KS → Interpersonal POEs	0.34	0.08	0.28***
Workgroup Norms Hindering KS → NOEs regarding being unnoticed	0.37	0.06	0.32***
Workgroup Norms Hindering KS → NOEs regarding risks	0.20	0.05	0.23***
Transformational Leadership → Workgroup-based Self-esteem	0.13	0.07	0.20*
Transformational Leadership → Workgroup Identification	-0.03	0.07	-0.05
Interactional Justice → Workgroup-based Self-esteem	0.10	0.07	0.16
Interactional Justice → Workgroup Identification	0.15	0.07	0.25*
Procedural Justice → Workgroup Identification	0.00	0.06	0.00
Feedback & Reward Interdependence → Personal POEs	0.24	0.07	0.21**
Feedback & Reward Interdependence → Interpersonal POEs	-0.06	0.07	-0.06
Procedural Justice → Workgroup-based Self-esteem	0.06	0.06	0.09
Feedback & Reward Interdep. → NOEs regarding being unnoticed	-0.25	0.06	-0.18***
Procedural Justice → Personal POEs	0.26	0.07	0.23**
Procedural Justice → NOEs regarding being unnoticed	-0.59	0.07	-0.44***
Workgroup-based Self-esteem → Knowledge sharing willingness	0.26	0.08	0.20**
Workgroup Identification → Knowledge sharing willingness	-0.06	0.08	-0.05
NOEs regarding risks → Knowledge sharing willingness	-0.14	0.06	-0.17**
NOEs regarding being unnoticed → Knowledge sharing willingness	0.12	0.04	0.19**
Interpersonal POEs → Knowledge sharing willingness	0.25	0.05	0.31***
Personal POEs → Knowledge sharing willingness	0.07	0.05	0.09
Knowledge sharing willingness → Knowledge Sharing Behavior	0.44	0.05	0.52***

Note [t]p<.10, * p<.05, ** p<.01, ***p<.001

Hypothesis 1a suggested that positive outcome expectancies were positively related to willingness to share knowledge with the workgroup. Since POEs were split into two dimensions according to factor analysis results, which were regarding *personal* and *interpersonal* outcomes, each dimension's relationship with willingness to share knowledge was examined separately. POEs regarding personal outcomes were not significantly related to one's willingness to share knowledge, whereas POEs regarding interpersonal outcomes were positively and significantly associated with one's willingness to share knowledge. Therefore, Hypothesis 1a was partially supported.

Hypothesis 1b predicted that negative outcome expectancies were negatively related to one's willingness to share knowledge with one's workgroup. Similar to the case of POEs, NOEs were treated as two different variables as suggested by factor analysis results. The relationship between NOEs regarding risks was significantly negative, however the relationship between NOEs regarding being unnoticed and one's willingness to share knowledge was significant and positive contradicting the expectations. Thus, Hypothesis 1b was also partially supported.

Hypothesis 2a was partially supported, since workgroup norms that favor knowledge sharing was significantly and positively correlated with interpersonal POEs, but not significantly correlated with personal POEs. Hypothesis 2b was also partially supported, since only positive outcome expectancies regarding interpersonal outcomes mediated the relationship between workgroup norms favoring knowledge sharing and one's willingness to share knowledge with the workgroup.

Hypothesis 3a predicted that perceived workgroup norms that hinder knowledge sharing is positively related with negative outcome expectancies. This hypothesis was

supported, since the paths between workgroup norms that hinder knowledge sharing and both dimensions of NOEs were significant and positive. However, Hypothesis 3b, which suggested that workgroup norms hindering knowledge sharing negatively relate to one's willingness to share knowledge with the workgroup through the mediation of negative outcome expectancies was partially supported. This is due to the relationship between NOEs regarding being unnoticed and willingness to share knowledge was significantly positive, contradicting the expectations. The path between NOEs regarding risks and knowledge sharing willingness was significant in the expected direction.

Hypothesis 4a was partially supported, since the relationship between reward and feedback interdependence and POEs regarding personal outcomes was significant and positive, whereas the relationship between reward and feedback interdependence and POEs regarding interpersonal outcomes was not significant. Hypothesis 4b, which suggested that the relation between perceived reward and feedback interdependence within the workgroup and one's willingness to share knowledge with the workgroup was mediated by positive outcome expectancies, was not supported.

Hypothesis 5, which proposed that one's identification with the workgroup was positively related to one's willingness to share knowledge with the workgroup, was not supported.

Hypothesis 6 predicted that one's workgroup-based self-esteem was positively related to one's willingness to share knowledge with the workgroup. This hypothesis was supported.

Hypothesis 7a, which was a mediation hypothesis, was not supported, since the relationship between procedural justice and workgroup identification, and the relationship between workgroup identification and willingness to share knowledge were nonsignificant.

Hypothesis 7b predicted that workgroup identification mediates the relationship between interactional justice in operational decision making context and willingness to share one's knowledge with her/his workgroup. Since, the relationship between workgroup identification and knowledge sharing willingness was nonsignificant, this hypothesis was not supported even though the relationship between interactional justice and workgroup identification was significant and positive. Hypothesis 8a and 8b was not supported since the relationship between procedural justice and workgroup-based self-esteem, and also interactional justice and workgroup-based self-esteem were not significant.

Hypothesis 9 suggested that workgroup identification mediated the relationship between transformational leadership and willingness to share one's knowledge with her/his workgroup. This hypothesis was not supported, since neither the path between transformational leadership and workgroup identification, nor the path between workgroup identification and knowledge sharing willingness were significant. Hypothesis 10 proposed that workgroup-based self-esteem mediated the relationship between transformational leadership and willingness to share one's knowledge with her/his workgroup. This hypothesis was supported, since the relation between transformational leadership and workgroup-based self-esteem and the relation between workgroup-based self-esteem and knowledge sharing willingness were both significant and positive. Hypothesis 11 suggested that one's knowledge sharing willingness was positively associated with one's actual behavior. This hypothesis was also supported.

4.1.2. Moderation Testing

In order to test the moderating effect of trust in workgroup on the relationships between relational motivational states and knowledge sharing willingness, moderated

multiple regression (MMR) analysis was conducted on SPSS 14.0. This analysis has been

widely used in social science and management research, to test the interaction effect among

continuous variables (Aguinis, 1995). MMR is conducted in three steps. Aguinis (1995)

described the steps as follows: First a new interaction variable is created (predictor x

moderator). Secondly, hierarchical regression analysis is conducted with the predictor and

moderator variables to predict criterion variable. Thirdly, the interaction variable is entered in

the equation mentioned in second step. The significance of the F-statistics between R^2 values

resulted from the equations in second and third steps indicates the presence of interaction

between the predictor and moderator variables.

In the present study, social desirability, opportunity to share knowledge and

knowledge sharing interdependence were the control variables, therefore they were first

entered to the regression equation. All of the variables were centered in order to minimize

multicollinearity (Aiken & West, 1991). The results of MMR are presented in Table 4.4.

Table 4.4. MMR results for testing the moderating effect of workgroup trust between relational motivational states and knowledge sharing willingness

	St. β	R^2	R^2 change	F	F change
Criterion: Knowledge sharing willingness					
Predictor: Workgroup Identification					
Step 1. Social desirability	.137[*]	.147	.147	12.18[***]	12.18[***]
Opportunity to share knowledge	.212[**]				
KS interdependence	.247[***]				
Step 2. Social desirability	.141[*]	.149	.02	9.21[***]	.41
Opportunity to share knowledge	.207[**]				
KS interdependence	.246[***]				
Workgroup identification (predictor)	.041				
Step 3. Social desirability	.126	.159	.11	7.96[***]	2.68
Opportunity to share knowledge	.183[**]				
KS interdependence	.223[**]				
Workgroup identification (predictor)	.025				
Trust in workgroup (moderator)	.112				
Step 4. Social desirability	.126	.162	.02	6.71[***]	.54
Opportunity to share knowledge	.181[**]				
KS interdependence	.222[**]				
Workgroup identification (predictor)	.029				
Trust in workgroup (moderator)	.121				
Workgroup identification x trust in workgroup	.047				

Table 4.4 (continued)

	St. β	R^2	R^2 change	F	F change
Predictor: Workgroup-based self-esteem (WBSE)					
Step 1. Social desirability	.137[*]	.147	.147	12.18[***]	12.18[***]
Opportunity to share knowledge	.212[**]				
KS interdependence	.247[***]				
Step 2. Social desirability	.141[*]	.205	.058	13.63[***]	15.48[***]
Opportunity to share knowledge	.171[**]				
KS interdependence	.234[***]				
WBSE (predictor)	.245[***]				
Step 3. Social desirability	.135[*]	.208	.002	11.01[***]	.63
Opportunity to share knowledge	.161[*]				
KS interdependence	.224[**]				
WBSE (predictor)	.232[***]				
Trust in workgroup (moderator)	.054				
Step 4. Social desirability	.129[*]	.215	.008	9.57[***]	2.08
Opportunity to share knowledge	.153[*]				
KS interdependence	.219[**]				
WBSE (predictor)	.252[***]				
Trust in workgroup (moderator)	.069				
WBSE x trust in workgroup	.092				

[*] $p<.05$, [**] $p<.01$, [***] $p<.001$

According to the results, Hypothesis 12a and 12b were not supported. The summary

of hypotheses is presented in Table 4.5.

Table 4.5 Summary of Hypotheses

#	*Hypotheses*	*Status*
1a	Positive outcome expectancies (benefit expectations) are positively related to one's willingness to share knowledge with one's workgroup.	*PS*
1b	Negative outcome expectancies (cost and risk expectations, and expectations about knowledge sharing going unnoticed) are negatively related to one's willingness to share knowledge with one's workgroup.	*PS*
2a	Perceived workgroup norms that favor knowledge sharing is positively related with positive outcome expectancies.	*PS*
2b	Positive outcome expectancies mediate the relationship between workgroup norms favoring knowledge sharing and one's willingness to share knowledge with the workgroup.	*PS*

Note: S: supported, NS: not supported, PS: partially supported

Table4.5 (Continued)

#	Hypotheses	Status
3a	Perceived workgroup norms that hinder knowledge sharing is positively related with negative outcome expectancies.	*S*
3b	Workgroup norms hindering knowledge sharing negatively relate to one's willingness to share knowledge with the workgroup through the mediation of negative outcome expectancies.	*PS*
4a	Perceived reward and feedback interdependence within the workgroup is positively related with positive outcome expectancies.	*PS*
4b	Positive outcome expectancies mediate the relationship between perceived reward and feedback interdependence within the workgroup and one's willingness to share knowledge with the workgroup.	*NS*
5	One's identification with the workgroup is positively related to one's willingness to share knowledge with the workgroup.	*NS*
6	One's workgroup-based self-esteem is positively related to one's willingness to share knowledge with the workgroup.	*S*
7a	Identification with the workgroup mediates the relationship between procedural justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.	*NS*
7b	Identification with the workgroup mediates the relationship between interactional justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.	*NS*
8a	Workgroup-based self-esteem (sense of self-worth within the workgroup) mediates the relationship between procedural justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.	*NS*
8b	Workgroup-based self-esteem (sense of self-worth within the workgroup) mediates the relationship between interactional justice in operational decision making context and willingness to share one's knowledge with her/his workgroup.	*NS*
9	Identification with one's workgroup mediates the relationship between transformational leadership (of the workgroup) and willingness to share one's knowledge with her/his workgroup.	*NS*

Note: S: supported, NS: not supported, PS: partially supported

Table4.5 (Continued)

10	Workgroup-based self-esteem (sense of self-worth within the workgroup) mediates the relationship between transformational leadership (of the workgroup) and willingness to share one's knowledge with her/his workgroup.	*S*
11	Knowledge sharing willingness is directly and positively associated with actual knowledge sharing willingness.	*S*
12a	One's trust in workgroup moderates the relationship between one's identification with the workgroup and one's willingness to share knowledge, in such a way that in the condition of high identification with the workgroup, willingnes to share knowledge with the workgroup is higher when trust in workgroup is higher compared to when it is lower.	*NS*
12b	One's trust in workgroup moderates the relationship between one's workgroup-based self-esteem and one's willingness to share knowledge, in such a way that in the condition of high workgroup-based self-esteem, willingness to share knowledge with the workgroup is higher when the trust in workgroup is higher compared to when it is lower.	*NS*

Note: S: supported, NS: not supported, PS: partially supported

Chapter 5

DICCUSSION

The main goal of this study was to examine the influence of the perceived contextual variables on knowledge sharing willingness through the mediation of instrumental and relational motivational states. The findings revealed that workgroup norms regarding knowledge sharing and transformational leadership were the two most important contextual factors influencing knowledge sharing willingness through outcome expectancies and workgroup-based self-esteem. In other words, if norms present in a workgroup favored knowledge sharing, the employees of that workgroup might perceive that sharing knowledge was instrumental in building strong network and relationships with other members and also knowledge sharing did not constitute risks, such as losing power or first authorship of particular knowledge. These expectancies consequently evoked their knowledge sharing willingness. Moreover, if the leadership style of the workgroup leader was transformational, the employees of that workgroup felt worthwhile, effective and important in that workgroup and these feelings influenced their knowledge sharing willingness toward their workgroup.

5.1. Discussion of Findings

5.1.1. Relationships between Motivational States and Knowledge Sharing Willingness

It was suggested that positive outcome expectancies would be positively associated with knowledge sharing willingness. Findings revealed that POEs regarding interpersonal outcomes were significantly related to knowledge sharing willingness, however the relationship between POEs regarding personal outcomes and willingness was not significant.

The relationship between POEs regarding interpersonal outcomes (e.g. strengthening

the ties between members of the group) and knowledge sharing willingness was also tested in

Bock and colleagues' (2005) research carried out in Korea, which is known to be a country

high in collectivism (Hofstede, 1997). The name of the construct was "anticipated reciprocal

relationships" in their research, and it was significantly associated with knowledge sharing

intentions through the mediation of attitudes regarding knowledge sharing. This result of the

present research illustrates the importance given to the interpersonal relations among group

members in Turkey, which is also known to be high in collectivistic values (Hofstede, 1997).

POEs regarding personal outcomes, such as 'being rewarded as a result of sharing

knowledge', or 'knowledge sharing being influential in pay increase or promotion' were also

expected to be positively associated with knowledge sharing willingness. However, the results

showed that the expected relation was not significant. Indeed, this finding is not so surprising.

For instance, Zárraga and Bonanche's (2003) findings showed that there was no association

between reward systems linked to knowledge sharing and perceived 'high care' climate. Bock

and colleagues' (2005) findings revealed that anticipated extrinsic rewards, such as receiving

monetary reward, or additional points for promotion, were even negatively associated with

attitudes regarding knowledge sharing, which was sequentially positively related to intention

to share knowledge. Their explanation was that extrinsic rewards might have deteriorated the

intrinsic motivation attained from knowledge sharing itself. Also, they suggested that there

may be a mismatch between what employees and management perceive as appropriate

extrinsic rewards and future research should try to match employees' expectations of extrinsic

rewards. Therefore, in this study, the perceived personal benefits were tested with a different

measure. However, it is acknowledged that in the present study, there was again no significant

positive association between personal outcome expectancies (anticipated extrinsic rewards) and knowledge sharing willingness.

It was expected that negative outcome expectancies were negatively associated with knowledge sharing willingness. NOEs in the present study were defined as "expectancies associated with costs and risks regarding knowledge sharing, and knowledge sharing going unnoticed by the members of the workgroup". Factor analysis revealed two factor structures corresponding to expectancies of (1) risks regarding knowledge sharing and (2) knowledge sharing going unnoticed. The item about expectancies regarding cost of knowledge sharing did not load on any of the factors therefore it was removed. The relationship between risk expectations and willingness was negative and significant, as expected.

Moreover, it was anticipated that individuals' perceptions about their knowledge sharing as not being noticed and not taken into account by other members in the workgroup would lower their willingness to share knowledge. However, results showed that individuals were still willing to share knowledge despite the fact that it might go unnoticed. This is an interesting finding of the study. Because it was expected that if one's knowledge sharing was being ignored, this would be perceived as a negative punishment, and therefore willingness and consequent behavior would be expected to diminish. Nevertheless, it is not the case. One may speculate that when individuals' knowledge sharing attempts are being disregarded, this may threaten their self-esteem. They may still be willing to share knowledge to elevate their self-esteem. Another assumption can be that individuals may still show willingness to share their knowledge for the hope that one day their knowledge sharing may be recognized by the members of the group.

Among the relational motivational states, workgroup-based self-esteem was positively and significantly associated with knowledge sharing willingness. Being respected as a group member is influential in eliciting knowledge sharing willingness, as expected. In other words, the more you think that you are important, worthwhile, effective and taken into account in a workgroup, the more you will be willing to share knowledge with group members in order to display and enhance your worth in your group.

Following Tyler and colleagues' (1996) suggestions, it was proposed that identifying with the workgroup was also another important variable influencing voluntary and cooperative behaviors (i.e. knowledge sharing in this case) toward the workgroup. However, findings of this study showed that although WBSE was significantly related to knowledge sharing willingness, workgroup identification was not. That is to say, seeing workgroup's successes and failures as one's own, being interested in what others think of the workgroup did not play an important role in one's knowledge sharing willingness, whereas perceiving oneself as important and valuable. The following speculations may explain these findings regarding relational motivational states.

First of all, the validity and the reliability of the workgroup identification measure were lower than acceptable limits. This may be the main reason for the nonsignificant relationships between workgroup identification and other study variables.

Another reason for the findings regarding relational motivational states might be that the hypotheses regarding the relations between workgroup identification, WBSE and knowledge sharing willingness was proposed taking the similarities between knowledge sharing and other cooperative extra-role behaviors into account. However, knowledge sharing may be different from other prosocial behaviors in some respects. For instance, the

significant link between WBSE and knowledge sharing willingness and the non-significant path between workgroup identification and knowledge sharing willingness may indicate that individuals would be more prone to share knowledge to maintain and enhance their own worth rather than to do something good for their workgroup with which they identify themselves. Other prosocial behaviors such as helping without being asked, praising, supporting or encouraging workgroup members about work-related or personal issues may motivate the group members for achieving better results as a group and may be related to being identified with that workgroup. However, knowledge in the form of expertise, experiences, information acquired from personal network and work-related training is something more private and unique to the individual. In an organizational context, knowledge is an individual's capital, which can make person indispensable. When on the verge of deciding why one should share knowledge, he/she may choose being self-serving, rather than being self-transcending on behalf of his/her workgroup. To state it more clearly, an individual may feel that if sharing knowledge would increase his/her reputation, value and popularity in that workgroup, this may be a better reason than sharing it on solely for the sake of the workgroup that he/she identifies with.

To sum, positive outcome expectancies regarding interpersonal outcomes, negative outcome expectancies regarding being unnoticed and workgroup-based self-esteem were significantly and positively related to knowledge sharing willingness. Whereas, negative outcome expectancies were significantly and negatively associated with knowledge sharing willingness.

5.1.2. Relationships between Contextual Factors and Motivational States

Workgroup norms favoring knowledge sharing was significantly and positively associated with POEs regarding interpersonal outcomes, but not related to POEs regarding personal outcomes. This finding is understandable, since norms imply what other members think as appropriate and actually do (Ehrhart & Naumann, 2004). For instance, if individuals perceive that other group members believe and advocate that knowledge sharing is important, it is more likely that they perceive sharing their knowledge will help to build new relationships and strengthen the existing ties with other members. Group norms have direct implications on interpersonal relations. On the other hand, assuming perceived norms favoring knowledge sharing would elicit expectations of personal outcomes, such as being personally rewarded or promoted is not meaningful, since norms do not have direct implications on such personal benefits. Expectancies regarding being rewarded, being promoted or receiving an increase in pay are more related to organizational / departmental procedures rather than workgroup norms. Workgroup norms hindering knowledge sharing were hypothesized to be positively associated with NOEs regarding risks and being unnoticed as a result of knowledge sharing. Findings of the present study supported these expected relationships.

Feedback and reward interdependence was significantly and positively associated with expectancies regarding personal outcomes, while it was not significantly associated with expectancies regarding interpersonal outcomes. This is meaningful, since if an individual's feedback and rewards depend on the overall performance of the workgroup and his/her contribution to the group, then this type of interdependence is more readily to create expectations of personal benefits, such as pay increase, or promotion, rather than expectations

regarding strengthening the ties between group members. Interdependence of rewards and feedback will provide cues to the individual that cooperative behavior, such as helping, knowledge sharing, etc., would produce more favorable outcomes regarding one's self-interests. Individuals would perceive more personal benefits as a result of sharing knowledge in groups which are interdependent in rewards and feedback, since as the workgroup's performance may increase with the cooperation of its members, the achievements of the group will reflect on the individual as rewards and benefits.

Also, during model testing, a negative relation between feedback and reward interdependence and NOEs regarding knowledge sharing going unnoticed was suggested by the modification indices. This path was included in the model, since it is believed to be meaningful. For instance, if feedback and rewards are interdependent among workgroup members, individual members will be more likely to perceive that their knowledge sharing will be noticed and taken into account, since each member's contribution on workgroup's achievements will be valued by other members.

Procedural justice was expected to be related to knowledge sharing willingness through the mediation of WBSE and workgroup identification. These relations were anticipated considering Group-Value Model by Lind and Tyler (1988) and Kim and Mauborgne's (1998) Theory of Intellectual and Emotional Recognition regarding procedural justice. However, data in the present study did not provide empirical support for these relationships. Although it was not proposed, during model testing, modification indices suggested strong relationships between procedural justice and 1) POEs regarding personal outcomes, and 2) NOEs regarding knowledge going unnoticed (in negative direction). This is another interesting finding of the study, since procedural justice was found to be related to

instrumental motivational states rather than relational motivational states. A justification for this finding may be that rather than proposing the relationships according Group-Value Model of Procedural Justice (Lind & Tyler, 1988), Instrumental Model of Procedural Justice (Thibaut & Walker, 1975) may be utilized as a theoretical explanation. Instrumental Model of Procedural Justice (Thibaut & Walker, 1975) suggests that individuals are responsive to the efforts of others to control their behaviors and unwillingly submit themselves to external control by a third party authority (Tyler et al., 1996). When they relinquish control to authorities, they seek to maintain some indirect control over the authorities' decisions by at least presenting their concerns through 'voice' (Tyler et al., 1996). Adapting this explanation to this study's findings, in the presence of procedural justice during operational decision making, individuals may think that sharing knowledge will be useful for their self-interests in obtaining personal benefits, such as receiving rewards or promotions. Because fair procedures provide appropriate bases for individuals to discuss their know-how, experiences and expertise, individuals are more likely to perceive control over personal benefits. In other words, the individuals may shape the outcomes of decisions according to their self-interests which may eventually provide them beneficial outcomes. Moreover, they may feel that their knowledge sharing will not go unnoticed in the presence of fair procedures during decision making, since in such a work environment, individuals will be encouraged to share their knowledge and ideas.

Findings revealed a negative relationship between procedural justice and knowledge sharing willingness through the mediation of NOEs regarding knowledge sharing being unnoticed. As was also discussed in Section 5.1.1., a possible explanation for this unanticipated mediated relationship may be indviduals' attempts to correct the current

unfair situation. For instance, they may perceive that the decision-making procedures are not

fair. To be able to make their voices heard, they may still go on sharing their knowledge for

the hope that one day their knowledge, experience and expertise will be heard by the

workgroup leader and other members.

Among the hypothesized mediated relationships between transformational leadership,

justice perceptions and knowledge sharing willingness, only the mediation of WBSE between

transformational leadership and knowledge sharing willingness found empirical support.

Transformational leadership, procedural justice and interactional justice had considerably

high correlations among each other, therefore they competed with each other in model testing,

resulting in transformational leadership coming out as the strongest predictor among the other

two predictors.

Finally, the moderation testing revealed that trust in workgroup does not have an

interaction effect on knowledge sharing willingness, both with WBSE and workgroup

identification. Although, as a variable, trust in workgroup has quite high correlations with

almost all of the other study variables (see Table 4.1, column 15), the interaction hypotheses

were not supported. For future research, trust can be suggested to be included in the model as

a mediator.

5.2. Limitations of the Study and Suggestions for Future Research

The present study has some limitations to be mentioned. First of all, data regarding

knowledge sharing willingness and actual knowledge sharing were collected from the same

participant. In order to prevent same-source bias, actual knowledge sharing data could be

retrieved from the participant's colleagues and/or manager. Collecting data regarding actual

knowledge sharing both from the manager and a colleague would be even better, however not

practical. Moreover, to the best of the author's knowledge, data from multiple-source was not used in any of the previous knowledge sharing studies. Besides, Allen, Barnard and Rush (2000) stated that other raters may have difficulties in observing actual behavior and self-ratings do not necessarily have to be biased or inflated. Also, a moderate strength relation between willingness and actual behavior (r = .52, p<0.001) may be referred to indicate that same-source bias was not prominent on the results of the present study. Although, it would not be very easy and practical, future research should try to adopt 360-degree approach during data collection to improve methodological rigor. That is to say, knowledge sharing data can be collected from the individual, his/her manager, colleagues and employees (if present) and a composite score may be computed using data received from all sources.

Workgroup identification measure was slightly problematic with respect to its factor structure and reliability, in this study. Future research may try to use other identification measures. The measure used in this study (Mael & Ashforth, 1992) was originally an organizational identification measure, which was adapted into workgroup context. An identification measure specifically created for workgroups (e.g. Riordan & Weatherly, 1999) may provide better results.

Another limitation is that due to the cross-sectional design, causal inferences can not be made. A longitudinal design including an intervention may be hard to accomplish, but worth trying. For instance, to be able to see the effects of leadership on knowledge sharing, leadership training – with a focus on transformational leadership style – may be carried out as an intervention. The leadership style of leaders, and knowledge sharing willingness or actual behavior of the employees under the leaders which will take training can be measured prior to training (t1). After the training and a time period that is sufficient for the trainees to adapt

what they learned into behavioral dimension to influence their employees, a second

assessment can be accomplished measuring the same variables (t2). The differences between

t2 and t1 may allow us to make a causal inference. A similar kind of intervention can also be

carried out by giving training on 'creating and maintaining group norms favoring knowledge

sharing' or 'how to remove social barriers that prevents knowledge sharing'.

Furthermore, this study concentrated on knowledge sharing within a *workgroup*.

Future research may consider examining the motivational states underlying knowledge

sharing *between departments*. For example, knowledge sharing between the managers of

different departments may be investigated, while controlling for the cooperation vs.

competition levels between departments, or the personal attraction, social ties vs. hostility

between the managers. Also, it can be researched whether departmental or personal issues

may be more influential on knowledge sharing.

5.3. Theoretical and Methodological Contributions and Implications

First of all, the most important theoretical contribution of the present study is that it

brought out the motivational states through which perceived contextual factors influenced

individuals' willingness to share knowledge. To the best of the author's knowledge, this is the

first study to attempt to explain why and how contextual factors may be related to knowledge

sharing willingness of individuals.

Another contribution of the study was that relationship between intention (willingness)

and actual behavior in knowledge sharing context was empirically tested. The study findings

predicate that knowledge sharing willingness is significantly associated with knowledge

sharing behavior. This standardized estimate of the path between knowledge sharing

willingness and actual knowledge sharing is .52 (p<.001), which is very close to the value of

.47 obtained in the meta-analysis by Armitage & Conner (2001). Although both willingness

and behavior were obtained from the same source, the model was tested controlling for the

social desirability motives. Therefore, it is meaningful to conclude that this study provides

empirical evidence for the link between intention and behavior in the knowledge sharing

context.

Moreover, the study had considerable contributions to measurement. For instance, the

existing literature suggested several risks of knowledge sharing or other voluntary extra-role

behaviors, such as losing the power and privileges that knowledge provides (Gupta &

Govindarajan, 2000), losing first authorship of knowledge (Andrews & Delahaye, 2000), to

be the only one who share knowledge, i.e. feeling as a sucker (Comer, 1995). However, these

risks or unpleasant consequences of knowledge sharing were not brought together as measure.

In this study, a measure for expectancies regarding risks associated with knowledge sharing

was created by the researcher.

Another measure was created for workgroup norms favoring and hindering knowledge

sharing. In the existing literature, only subjective norms (i.e. what significant others think)

about knowledge sharing was present. However, descriptive norms (i.e. developed from

watching what other members of the group do), and injunctive norms (i.e. developed when

members want to get socially approved) were not empirically examined with a measure.

Following the item suggestions made by Ehrhart and Naumann (2004) about subjective,

descriptive and injunctive norms related to OCB, an instrument was created to measure

workgroup norms favoring and hindering knowledge sharing.

A third measure was created by the researchers of the present study, which aimed to

assess the trust perceptions of individuals regarding other workgroup members' competencies

and benevolence in utilizing the shared knowledge. Previous literature did not have such a specific trust measure.

All of the created measures had high internal consistencies, Cronbach alphas were ranging from .80 to .90. Factor analyses results indicated that these measures also had construct validity.

Furthermore, the study had contributions for adapting an existing construct created for organizational context into workgroup context. Workgroup-based self-esteem (WBSE) construct was adopted from Pierce and colleagues' (1989) conceptualization of organization-based self-esteem (OBSE) in order to make a better prediction for a dependent variable regarding workgroup context (i.e. willingness to share knowledge with the workgroup).

Furthermore, the present study adopted the predictions of existing theories and aimed to find empirical support for these predictions. One of the theories taken into account was Group-Value Model by Lind and Tyler (1988). According to the relational focus of the model, it was proposed that procedural justice was related knowledge sharing willingness through WBSE and workgroup identification. However, study findings revealed that procedural justice was related to instrumental rather than relational motivational states. This finding provides empirical support for an earlier explanation of procedural justice, Instrumental Model (Thibaut & Walker, 1975). Although current literature suggests that instrumental explanations are incomplete and relational judgments of procedural justice are more related to performing voluntary cooperation than instrumental judgments (Tyler et al., 1996), the findings of the study indicated that instrumental judgments were better predictors. This should further be elaborated and investigated in future research.

The predictions of an untested theory, which was Intellectual and Emotional Recognition Theory by Kim and Mauborgne (1998), was also taken into account while proposing the relationship between procedural justice and knowledge sharing willingness through the mediation of WBSE. However, this anticipated relationship did not find empirical support in the present study. This might be due to that the proposed mediated relationship (i.e. WBSE mediating the relationship between procedural justice and knowledge sharing willingness) was tested in a comprehensive model, and other variables might have cancelled out the significant relations between the variables procedural justice, WBSE and knowledge sharing willingness. If only the mentioned relationship was tested by regression, the results might support the predictions of the theory.

Finally, Shamir and colleagues' (1993) Self-Concept Based Theory of Transformational Leadership was adopted in proposing the relationship between transformational leadership and knowledge sharing willingness through the mediation of relational states. The mediated relationship between transformational leadership and knowledge sharing willingness through WBSE found empirical support in the present research.

5.4. Practical Implications

The findings of the present study indicated that the two most important contextual factors influencing knowledge sharing within the workgroup are workgroup norms and leadership style. Therefore, leaders or managers of the workgroup are suggested to give importance in building and maintaining norms which favor knowledge sharing. They are recommended to be careful about the social barriers and cognitions that hinder knowledge sharing. The workgroups may take trainings regarding how to increase communication and

cooperation through sharing ideas. Workgroup leaders may be role models in advocating the importance of knowledge sharing as well as actually sharing knowledge or carefully listening and considering the shared knowledge. Thus, their attitudes toward knowledge sharing may be influential in creating and maintaining workgroup norms favoring knowledge sharing.

Also, the organizations are suggested to train and develop their leaders to adjust their leadership styles to be transformational. During employee selection processes, organizations are suggested to select leaders / managers higher in transformational leadership, especially for workgroups / departments which are known to be knowledge-intensive. Also performance appraisal and reward systems for managers may include criteria for transformational leadership, for motivating managers to adapt their leadership styles as transformational.

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APPENDICES

APPENDIX 1. Pilot Study Feedback Questionnaire Form

ANKET PİLOT ÇALIŞMASI GERİBİLDİRİM FORMU

1	2	3	4	5
Hiç katılmıyorum	Katılmıyorum	Kararsızım (biraz katılıyorum, biraz katılmıyorum)	Katılıyorum	Tamamen katılıyorum

1. _____ Bölüm başlarında yer alan açıklamaları anlamakta zorlanmadım.

2. _____ İfadelerin dili açık ve anlaşılırdır.
   (Lütfen varsa düzeltmelerinizi maddeler üzerinde gösteriniz.)

3. _____ Anketi lise ve üstü eğitim seviyesindeki çalışanların rahatlıkla yapabileceğine inanıyorum.

4. _____ Soru sayısı uygundur.

5. _____ Sayfa düzenlemesi uygundur.

6. _____ Yazı formatı ve büyüklüğü uygundur.

7. _____ Anketi doldururken sıkılmadım.

8. _____ Anketi doldururken keyif aldım.

9. _____ Anketin grup içinde bilgi paylaşımı konusunda hemen hemen her şeyi kapsadığını düşünüyorum.

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10. Anketi _____ dakikada tamamladım.

Lütfen önerileriniz detaylı olarak yazınız.

APPENDIX 2. Cover Letter of the Survey

İŞYERİNDE BİLGİ PAYLAŞIMI ARAŞTIRMASI

Sayın katılımcı,

Koç Üniversitesi Psikoloji Bölümü Endüstri ve Örgüt Psikolojisi Yüksek Lisans Programı öğrencisi Tuna Dağlı Öztekin'in tezi kapsamında olan bu anket, çalışanların çalışma grupları içindeki bilgi paylaşımlarını etkileyen faktörleri araştırmak amacıyla oluşturulmuştur.

➔ Anketi cevaplandırırken, hiçbir yere isminizi ve şirketinizin ismini yazmayınız.

➔ Anketten elde edilecek bilgiler, yalnızca bilimsel amaçlarla kullanılacak, kesinlikle hiçbir kişi veya kurumla paylaşılmayacaktır.

➔ Lütfen her soruyu dikkatle okuyunuz ve hiçbir soruyu yanıtsız bırakmamaya özen gösteriniz. Hiçbir sorunun doğru veya yanlış cevabı yoktur. **Sizin içtenlikle vereceğiniz cevaplar bizim için en yararlı olanlardır.**

➔ Anket toplam **6 sayfa**dır. Anketin cevaplanmasında süre sınırlaması yoktur; ancak anketin doldurulması, yaklaşık 20 dakika sürmektedir.

➔ Araştırma ile ilgili sorularınız için bize her zaman ulaşabilirsiniz.

➔ Bu araştırmaya katılımınız gönüllüdür.

➔ Anketi doldurduktan sonra, beraberinde verilen zarfın içine koyup, zarfı kapatınız. Kapattığınız zarfı _____ teslim ediniz.

Çalışmamıza yaptığınız katkı bizim için çok değerlidir. Bu anketi doldurmak için zaman ayırdığınızdan dolayı teşekkür ederiz.

Saygılarımızla,
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ÖNEMLİ!
Bu anketi doldururken, aşağıdaki tanımları göz önünde bulundurarak ifadeleri değerlendirmenizi rica ederiz.

ÇALIŞMA GRUBU : Bir kurumda, aynı yöneticiye veya lidere doğrudan rapor eden, birlikte birbirine bağlı görevleri yerine getiren beyaz yaka çalışanlardan oluşan gruptur (örn. AR-GE Departmanı, Pazarlama Departmanı, proje grupları, ve benzerleri gibi). BU GRUBU DÜŞÜNÜRKEN YÖNETİCİNİZİ veya LİDERİNİZİ DE DAHİL EDİNİZ.

BİLGİ : Eğitiminizden, işle ilgili almış olduğunuz eğitimlerden, uzmanlığınızdan ve geçmiş tecrübelerinizden kazandığınız bilgiler veya kişisel bağlantılarınız sayesinde edindiğiniz kolayca ulaşılabilir olmayan bilgiler.

BİLGİ PAYLAŞIMI : Bilginin çalışma grubunuzdaki diğer çalışma arkadaşlarınızla yüz yüze, resmi veya resmi olmayan toplantılarda, telefon veya e-mail yoluyla ve eğer varsa çalışma grubu veritabanı yoluyla paylaşılması.

APPENDIX 3. Research Survey

Tüm anketteki ifadeleri değerlendirirken,
ölçekteki sizce uygun olan rakamı ifadenin solundaki boşluğa yazınız.

BÖLÜM 1

Bu bölümde, çalışma grubunuz kurumun stratejik hedeflerine ulaşma konusunda kararlar alırken, sizin grubunuza olan katkılarınıza ilişkin sorular sorulmaktadır.

1	2	3	4	5
Çok az ölçüde	Az ölçüde	Orta ölçüde	Fazla ölçüde	Çok fazla ölçüde

Çalışma grubunuzda, kurumun stratejik hedeflerinin hayata geçirilmesi ile ilgili <u>karar alma sürecinde</u>,

_____ 1. ... karar için gerekli doğru bilginin toplanmasına ne ölçüde müsaade ediliyor?

_____ 2. ...ne ölçüde alınan karara itiraz etme fırsatı veriliyor?

_____ 3. ...ne ölçüde karardan etkilenecek olan tüm kişilerin görüşlerini ifade etmelerine izin veriliyor?

_____ 4. ...ne ölçüde kararların tutarlı bir şekilde alınması için standartlar getiriliyor?

_____ 5. ...ne ölçüde karardan etkilenecek olan tüm kişilerin kaygılarına yer veriliyor?

_____ 6. ...ne ölçüde karar ve uygulanması hakkında yararlı geribildirimler verilmesi destekleniyor?

_____ 7. ...ne ölçüde karar hakkında ek bilgi ve açıklama istemeye müsaade ediliyor?

_____ 8. ...görüşlerinizi ve duygularınızı belirtmenize ne ölçüde fırsat tanınıyor?

_____ 9. ...ulaşılan son kararda ne ölçüde etkiniz oluyor?

<u>Karar alma sürecinde</u>, doğrudan bağlı bulunduğunuz (rapor ettiğiniz) yöneticiniz,

_____ 10. ...sizin görüşünüzü ne ölçüde dikkate alır?

_____ 11. ...ne ölçüde kişisel önyargılarını kontrol altında tutabilir ve tarafsızlığını muhafaza edebilir?

_____ 12. ...ne ölçüde karar ve sonuçları hakkında size zamanında geribildirim verir?

_____ 13. ...ne ölçüde size iyi ve düşünceli davranır?

_____ 14. ...ne ölçüde bir çalışan olarak haklarınıza değer verir?

_____ 15. ...ne ölçüde size dürüstçe davranmak için çaba gösterir?

BÖLÜM 2

Doğrudan bağlı olduğunuz yöneticiniz hakkındaki ifadeleri değerlendiriniz.

1	2	3	4	5
Hiçbir zaman	Arada bir	Bazen	Oldukça sık	Her zaman olmasa da, çok sık

Doğrudan bağlı olduğum (rapor ettiğim) yöneticim,

_____ 1. ...önemli varsayımların uygun olup olmadığını sorgulamak için onları tekrar inceler.

_____ 2. ...önem verdiği değer ve ilkeleri açıklar.

_____ 3. ...sorunların çözümünde farklı bakış açıları arar.

_____ 4. ...gelecek hakkında iyimser konuşur.

_____ 5. ...kendisiyle çalışmaktan gurur duymanızı sağlar.

_____ 6. ...başarılması gerekenler hakkında coşkulu konuşur.

_____ 7. ...güçlü bir amaç duygusuna sahip olmanın önemini vurgular.

_____ 8. ...öğretmeye ve yetiştirmeye zaman harcar.

_____ 9. ...grubun iyiliği için kendi çıkarlarını bir kenara bırakır.

_____ 10. ...size sadece grubun bir üyesi olarak değil bir birey olarak davranır.

_____ 11. ...saygınızı kazanacak şekilde hareket eder.

_____ 12. ...kararların ahlaki ve etik sonuçlarını göz önüne alır.

_____ 13. ...güç ve güven duygusu sergiler.

_____ 14. ...çekici bir gelecek vizyonunu açıkça ifade eder.

_____ 15. ...sizi başkasından farklı gereksinimleri, yetenekleri ve beklentileri olan bir birey olarak dikkate alır.

_____ 16. ...sorunlara birçok farklı açıdan bakmanızı sağlar.

_____ 17. ...güçlü yönlerinizi geliştirmeniz için yardım eder.

_____ 18. ...verilen görevlerin nasıl tamamlanması gerektiği konusunda yeni yollar önerir.

_____ 19. ...ortak bir misyon duygusuna sahip olmanın önemini vurgular.

_____ 20. ...amaçların gerçekleştirileceğine dair güvenini ifade eder.

BÖLÜM 3 – DİKKAT 1 ile 6 arasında puanlar veriniz.

1	2	3	4	5	6
Kesinlikle katılmıyorum	Katılmıyorum	Biraz katılmıyorum	Biraz katılıyorum	Katılıyorum	Kesinlikle katılıyorum

_____ 1. Eğitimimden edindiğim bilgileri, çalışma grubumun üyeleri ile paylaşmaya gönüllüyümdür.

_____ 2. Kişisel bağlantılarımı kullanarak önemli bir bilgi edindiğimde, bunu çalışma grubumdaki kişilerle paylaşmaya hazırımdır.

_____ 3. Geçmiş iş tecrübelerimi çalışma grubumdaki kişilerle paylaşma konusunda gönüllüyümdür.

_____ 4. İşimle ilgili uzmanlığımı çalışma grubumdaki kişilerle paylaşmak konusunda istekliyimdir.

_____ 5. İşle ilgili bir eğitim aldığımda, edindiğim bilgileri çalışma grubumdaki kişilerle paylaşmak için istekliyimdir.

BÖLÜM 4 – DİKKAT 1 ile 5 arasında puanlar veriniz.

Çalışma grubunuzla ilgili ifadeleri değerlendiriniz.

1	2	3	4	5
Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım (biraz katılıyorum, biraz katılmıyorum)	Katılıyorum	Kesinlikle katılıyorum

_____ 1. Kişilerin performansına dair verilen geri bildirim, çalışma grubunun tamamının performansına dayanır.

_____ 2. Çalışma grubunun performansı, kişilerin performansının değerlendirilmesinde çok önemli bir rol oynar.

_____ 3. Kişilere verilen ödüller (prim, terfi vb.), ağırlıklı olarak onların çalışma grubuna sağladıkları katkıya göre belirlenir.

_____ 4. Çalışma grubunun üyeleri diğerlerinden bilgi ve materyal almadan kendi görevlerini yerine getiremezler.

_____ 5. Çalışma grubunun üyeleri işlerini yapabilmek için birbirlerinden alacakları bilgi ve materyale ihtiyaç duyarlar.

_____ 6. Çalışma grubunda farklı kişiler tarafından yapılan işler birbirleri ile bağlantılıdır.

_____ 7. Yöneticim, çalışma grubumla bilgi paylaşmamın gerekli olduğunu düşünür.

_____ 8. Çalışma grubumdaki iş arkadaşlarım kendileriyle bilgi paylaşmamın gerekli olduğunu düşünür.

_____ 9. Çalışma grubum içinde bilgi paylaşıl<u>MA</u>ması pek hoş karşılanmaz.

_____ 10. Çalışma grubumun üyeleri birbirleriyle bilgilerini paylaşırlar.

_____ 11. Çalışma grubumun üyeleri grup içinde bilgi paylaşılması gerekliliğini savunur.

_____ 12. Çalışma grubumun üyeleri bilginin paylaşılmasını saflık / enayilik olarak görürler.

_____ 13. Çalışma grubumda bilginin paylaşılması ukalalık olarak değerlendirilir.

_____ 14. Çalışma grubumda, herkesin kendi problemlerine kendi başına çözüm bulması beklenir.

BÖLÜM 5

1	2	3	4	5
Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım (biraz katılıyorum, biraz katılmıyorum)	Katılıyorum	Kesinlikle katılıyorum

Çalışma grubum içinde,

_____ 1. ...önemli bir yerim vardır.

_____ 2. ...önemliyimdir.

_____ 3. ...insanların bana inancı vardır.

_____ 4. ...değerliyimdir.

_____ 5. ...verimliyimdir.

_____ 6. ...ciddiye alınırım.

_____ 7. ...bana güvenilir.

_____ 8. ...bir farklılık yaratabilirim.

_____ 9. ...yararlı biriyimdir.

_____ 10. ...işbirlikçi biriyimdir.

BÖLÜM 6

1	2	3	4	5
Hiçbir zaman, asla	Nadiren, Sınırlı ölçüde	Bazen, orta ölçüde	Çoğu zaman, büyük ölçüde	Hemen hemen her zaman, Çok büyük ölçüde

_____ 1. Kişisel bağlantılarımı kullanarak önemli bir bilgi edindiğimde, bunu çalışma grubumdaki kişilerle paylaşırım.

_____ 2. Eğitimimden edindiğim bilgileri çalışma grubumun üyeleri ile paylaşırım.

_____ 3. Geçmiş iş tecrübelerimi çalışma grubumdaki kişilerle paylaşırım.

_____ 4. İşyerim beni kişisel gelişimim veya teknik alanlarla ilgili konularda eğitimlere gönderir.

_____ 5. İşle ilgili bir eğitim aldığımda, edindiğim bilgileri çalışma grubumdaki kişilerle paylaşırım.

_____ 6. Çalışma gurubumdaki kişilerle bilgimi paylaşma fırsatım oluyor.

_____ 7. İşimle ilgili uzmanlığımı çalışma grubumdaki kişilerle paylaşırım.

BÖLÜM 7 – DİKKAT "DOĞRU" veya "YANLIŞ" olarak cevaplayınız.

Bu bölümde, aşağıdaki ifadeler hakkındaki görüşlerinizi belirtiniz. Eğer ifade, sizin düşüncenize uyuyorsa DOĞRUnun altındaki kutuyu, uymuyorsa YANLIŞın altındaki kutuyu işaretleyiniz.

	DOĞRU	YANLIŞ
1. Sorunu olan birisine yardım etmekte asla tereddüt etmem.	☐	☐
2. Hiçbir zaman isteyerek birisini üzecek bir şey söylemedim.	☐	☐
3. Bir şeylerden kurtulmak için bazen hasta rolü oynadığım oldu.	☐	☐
4. Başkalarını kullandığım anlar olmuştur.	☐	☐
5. Kiminle konuşursam konuşayım, daima iyi bir dinleyiciyimdir.	☐	☐
6. Sevmediğim insanlar da dahil herkese karşı her zaman kibar ve dostaneyimdir.	☐	☐
7. Yanlış yaptığımda bunu her zaman kabul ederim.	☐	☐
8. Bazen, başkalarının başına kötü bir şey geldiğinde bunu hak ettiklerini düşünürüm.	☐	☐
9. Affetmek yerine bazen intikam almaya çalışmışımdır.	☐	☐
10. Bazen dedikodu yapmayı severim.	☐	☐

BÖLÜM 8 – DİKKAT 1 ile 6 arasında puanlar veriniz.

1	2	3	4	5	6
Kesinlikle katılmıyorum	Katılmıyorum	Biraz katılmıyorum	Biraz katılıyorum	Katılıyorum	Kesinlikle katılıyorum

Çalışma grubumda,

_____ 1. ...bilgimi paylaştığım için ödüllendirilirim.

_____ 2. ...bilgimi paylaşmam harcadığım çabaya değmez.

_____ 3. ...bilgimi paylaşmam ilerlemem için emin bir yoldur.

_____ 4. ...bilgimi paylaşıyor olmam çoğu zaman gözden kaçar.

_____ 5. ...maaş artışı veya terfi gibi fırsatlar, çalışanların çalışma grubunun diğer üyeleri ile bilgi paylaşıp paylaşılmamalarından etkilenir.

_____ 6. ...bilgimi paylaşsam da paylaşMAsam da değişen bir şey yoktur, sonuç aynıdır.

_____ 7. ...istediğim şeyleri elde etmem için bilgimi paylaşmak zorundayım.

_____ 8. ...bilgimi paylaşmam, çok çaba gerektiriyor ve çok zaman alıyor.

_____ 9. ...bilgimi paylaşırsam, terfi alma şansımı kaybedeceğimi hissediyorum.

_____ 10. ...bilgimi paylaşırsam, vazgeçilemez biri olamam.

_____ 11. ...bilgimi diğer çalışma arkadaşlarımla paylaşırsam, bilgimin getirdiği güç ve ayrıcalıklarımdan vazgeçmiş olurum.

_____ 12. ...bilgimi diğer çalışma arkadaşlarımla paylaşırsam, benim ismimi kullanmadan bu bilgiyi kendilerininmiş gibi kullanabilirler.

_____ 13. ...benden başka kimse bilgisini paylaşmazsa diye endişelenirim ve kendimi kullanılıyor gibi hissederim.

_____ 14. ...bilgimi paylaşmam diğer çalışanlarla aramdaki bağları kuvvetlendirecektir.

_____ 15. ...bilgimi paylaşmam çalışma grubuna yeni katılan kişilerle daha iyi ilişkiler kurmamı sağlayacaktır.

_____ 16. ...bilgimi paylaşmam diğer çalışanlarla ilişkimin kapsamını genişletecektir.

_____ 17. ...bilgimi paylaşmam diğer çalışanlarla ileride işbirliği yapmamı kolaylaştıracaktır.

_____ 18. ...bilgimi paylaşmam ortak çıkarları olan çalışanlar arasında güçlü ilişkiler kurulmasını sağlayacaktır.

_____ 19. ...verdiğim bilgiler heba edilmez.

_____ 20. ...paylaştığım bilgiler iyi değerlendirilir.

_____ 21. ...paylaştığım bilgiler grubun yararına olacak şekilde kullanılır.

_____ 22. ...bilgi paylaştığımda, bu bilginin doğru değerlendirileceğine inanırım.

BÖLÜM 9 – DİKKAT 1 ile 5 arasında puanlar veriniz.

1	2	3	4	5
Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle katılıyorum

—— 1. Birisi bu çalışma gurubunu övdüğünde, kendime iltifat edilmiş gibi hissederim.

—— 2. Bu çalışma gurubunun başarıları benim başarılarımdır.

—— 3. Başkalarının bu çalışma gurubu hakkında ne düşündüğü ile çok ilgilenirim.

—— 4. Birisi bu çalışma gurubunu eleştirdiğinde, bunu şahsıma yapılmış bir saldırı olarak algılarım.

—— 5. Bu çalışma gurubu hakkında konuşurken genellikle "onlar" yerine "biz" derim.

BÖLÜM 10 - KİŞİSEL BİLGİLER

Cinsiyetiniz: ❑ Erkek ❑ Kadın

➡ Yaşınız: _____

➡ Eğitim düzeyiniz: ❑ Lise ❑ Yüksekokul ❑ Üniversite ❑ Yüksek lisans ❑ Doktora

➡ Çalıştığınız sektör: _____

➡ Çalıştığınız departman : ❑ AR-GE ❑ Pazarlama ❑ Bilgi Teknolojileri
❑ Üretim ❑Diğer (belirtiniz) _____

➡ Pozisyonunuz: ❑ Yönetici ❑Yönetici değil

➡ Çalışma grubunuzda kaç kişi çalışıyor? (Yöneticiniz dahil) _____ kişi

➡ Mevcut işyerinde ne kadar zamandır çalışıyorsunuz?
(Bir yıldan çok ise yıl, az ise ay olarak belirtiniz.) _____ yıl _____ ay

➡ Mevcut çalışma grubunda ne kadar zamandır çalışıyorsunuz?
(Bir yıldan çok ise yıl, az ise ay olarak belirtiniz.) _____ yıl _____ ay

➡ Şu anda bağlı olduğunuz yöneticinizle ne kadar süredir birlikte çalışıyorsunuz?
(Bir yıldan çok ise yıl, az ise ay olarak belirtiniz.) _____ yıl _____ ay

➡ Çalışma grubunuzun üyeleri ile aynı lokasyonda mı çalışmaktasınız? ❑ Evet ❑ Hayır

➡ Çalışma grubunuzda işlerin sağlıklı yürümesi için ne ölçüde bilgi paylaşılmasına ihtiyaç vardır?
❑ Çok küçük ölçüde
❑ Küçük ölçüde
❑ Orta ölçüde
❑ Büyük ölçüde
❑ Çok büyük ölçüde

ARAŞTIRMAMIZA OLAN KATKINIZ İÇİN ÇOK TEŞEKKÜR EDERİZ!

APPENDIX 4. *Summary of Exploratory Factor Analysis Results for Procedural Justice Measure*

Items	Factor Loadings
Çalışma grubunuzda, kurumun stratejik hedeflerinin hayata geçirilmesi ile ilgili <u>karar alma sürecinde</u>,	
8. ...görüşlerinizi ve duygularınızı belirtmenize ne ölçüde fırsat tanınıyor?	**.86**
3. ...ne ölçüde karardan etkilenecek olan tüm kişilerin görüşlerini ifade etmelerine izin veriliyor?	**.83**
7. ...ne ölçüde karar hakkında ek bilgi ve açıklama istemeye müsaade ediliyor?	**.80**
5. ...ne ölçüde karardan etkilenecek olan tüm kişilerin kaygılarına yer veriliyor?	**.80**
2. ...ne ölçüde alınan karara itiraz etme fırsatı veriliyor?	**.80**
9. ...ulaşılan son kararda ne ölçüde etkiniz oluyor?	**.78**
6. ...ne ölçüde karar ve uygulanması hakkında yararlı geribildirimler verilmesi destekleniyor?	**.77**
1. ...karar için gerekli doğru bilginin toplanmasına ne ölçüde müsaade ediliyor?	**.72**
4. ...ne ölçüde kararların tutarlı bir şekilde alınması için standartlar getiriliyor?	**.69**
Percentage of explained variance (%)	**61.25**
Eigenvalue	**5.51**

APPENDIX 5. *Summary of Exploratory Factor Analysis Results for Interactional Justice Measure*

Items	*Factor Loadings*
<u>Karar alma sürecinde</u>, doğrudan bağlı bulunduğunuz (rapor ettiğiniz) yöneticiniz,	
4. ...ne ölçüde size iyi ve düşünceli davranır?	**.89**
5. ...ne ölçüde bir çalışan olarak haklarınıza değer verir?	**.87**
6. ...ne ölçüde size dürüstçe davranmak için çaba gösterir?	**.87**
3. ...ne ölçüde karar ve sonuçları hakkında size zamanında geribildirim verir?	**.80**
1. ...sizin görüşünüzü ne ölçüde dikkate alır?	**.80**
2. ...ne ölçüde kişisel önyargılarını kontrol altında tutabilir ve tarafsızlığını Muhafaza edebilir?	**.79**
Percentage of explained variance (%)	**70.10**
Eigenvalue	**4.21**

APPENDIX 6. *Summary of Exploratory Factor Analysis Results for Transformational Leadership Measure*

Items	Factor Loadings	
	1	2
Doğrudan bağlı olduğum yöneticim,		
11. ...saygımı kazanacak şekilde hareket eder.	**.80**	.34
12. ...kararların ahlaki ve etik sonuçlarını göz önüne alır.	**.77**	.23
15. ....sizi başkasından farklı gereksinimleri, yetenekleri ve beklentileri olan bir birey olarak dikkate alır.	**.77**	.32
9. ...grubun iyiliği için kendi çıkarlarını bir kenara bırakır.	**.77**	.28
18. ....verilen görevlerin nasıl tamamlanması gerektiği konusunda yeni yollar önerir.	**.75**	.35
17. ...güçlü yönlerinizi geliştirmeniz için yardım eder.	**.74**	.40
10. ...size sadece grubun bir üyesi olarak değil bir birey olarak davranır.	**.72**	.25
16. ...sorunlara birçok farklı açıdan bakmamı sağlar.	**.65**	**.46**
13. ...güç ve güven duygusu sergiler.	**.63**	**.51**
5. ...kendisiyle çalışmaktan gurur duymanızı sağlar.	**.63**	**.53**
8. ...öğretmeye ve yetiştirmeye zaman harcar.	**.61**	**.44**
14. ...çekici bir gelecek vizyonunu açıkça ifade eder.	**.60**	**.58**
20. ...amaçların gerçekleştirileceğine dair güvenini ifade eder.	**.55**	**.61**
19. ...ortak bir misyon duygusuna sahip olmanın önemini vurgular.	**.53**	**.62**
3. ...sorunların çözümünde farklı bakış açıları arar.	.38	**.62**
2. ...önem verdiği değer ve ilkeleri açıklar.	.35	**.68**
7. ...güçlü bir amaç duygusuna sahip olmanın sahip olmanın önemini vurgular.	.30	**.76**
4. ...gelecek hakkında iyimser konuşur.	.27	**.66**
6. ...başarılması gerekenler hakkında coşkulu konuşur.	.26	**.80**
1. ...önemli varsayımların uygun olup olmadığını sorgulamak için onları tekrar inceler.	.19	**.60**
Percentage of explained variance (%)	**57.44**	**63.41**
Eigenvalues	**11.49**	**1.19**

APPENDIX 7. *Summary of Exploratory Factor Analysis Results for Positive Workgroup Norms regarding Knowledge Sharing Measure*

Items	*Factor Loadings*
5. Çalışma grubumun üyeleri grup içinde bilgi paylaşılması gerekliliğini savunur.	**.86**
2. Çalışma grubumdaki iş arkadaşlarım kendileriyle bilgi paylaşmamın gerekli olduğunu düşünür.	**.84**
4. Çalışma grubumun üyeleri birbirleriyle bilgilerini paylaşırlar.	**.79**
1. Yöneticim, çalışma grubumla bilgi paylaşmamın gerekli olduğunu düşünür.	**.72**
3. Çalışma grubum içinde bilgi paylaşılMAması pek hoş karşılanmaz.	**.58**
Percentage of explained variance (%)	**58.58**
Eigenvalue	**2.93**

APPENDIX 8. *Summary of Exploratory Factor Analysis Results for Negative Workgroup Norms regarding Knowledge Sharing Measure*

Items	*Factor Loadings*
2. Çalışma grubumda bilginin paylaşılması ukalalık olarak değerlendirilir.	**.91**
1. Çalışma grubumun üyeleri bilginin paylaşılmasını saflık / enayilik olarak görürler.	**.90**
3. Çalışma grubumda, herkesin kendi problemlerine kendi başına çözüm bulması beklenir.	**.84**
Percentage of explained variance (%)	**78.35**
Eigenvalue	**2.35**

APPENDIX 9. *Summary of Exploratory Factor Analysis Results for Feedback and Reward Interdependence Measure*

Items	*Factor Loadings*
2. Çalışma grubunun performansı, kişilerin performansının değerlendirilmesinde çok önemli bir rol oynar.	**.81**
1. Kişilerin performansına dair verilen geri bildirim, çalışma grubunun tamamının performansına dayanır.	**.78**
3. Kişilere verilen ödüller (prim, terfi vb.), ağırlıklı olarak onların çalışma grubuna sağladıkları katkıya göre belirlenir.	**.74**
Percentage of explained variance (%)	**60.25**
Eigenvalue	**1.81**

APPENDIX 10. *Summary of Exploratory Factor Analysis Results for Workgroup Identification Measure*

	Factor Loadings	
Items	1	2
1. Birisi bu çalışma gurubunu övdüğünde, kendime iltifat edilmiş gibi hissederim.	**.86**	-.03
2. Bu çalışma gurubunun başarıları benim başarılarımdır.	**.76**	.21
5. Bu çalışma gurubu hakkında konuşurken genellikle "onlar" yerine "biz" derim.	.33	.38
3. Başkalarının bu çalışma gurubu hakkında ne düşündüğü ile çok ilgilenirim.	.22	**.74**
4. Birisi bu çalışma gurubunu eleştirdiğinde, bunu şahsıma yapılmış bir saldırı olarak algılarım.	-.08	**.82**
Percentage of explained variance (%)	**35.89**	**57.45**
Eigenvalues	**1.79**	**1.08**

APPENDIX 11. *Summary of Exploratory Factor Analysis Results for Workgroup Identification Measure after Being Forced to Single Factor*

Items	*Factor Loadings*
2. Bu çalışma gurubunun başarıları benim başarılarımdır.	**.71**
3. Başkalarının bu çalışma gurubu hakkında ne düşündüğü ile çok ilgilenirim.	**.66**
1. Birisi bu çalışma gurubunu övdüğünde, kendime iltifat edilmiş gibi hissederim.	**.62**
5. Bu çalışma gurubu hakkında konuşurken genellikle "onlar" yerine "biz" derim.	**.50**
4. Birisi bu çalışma gurubunu eleştirdiğinde, bunu şahsıma yapılmış bir saldırı olarak algılarım.	**.50**
Percentage of explained variance (%)	**35.89**
Eigenvalue	**1.79**

APPENDIX 12. *Summary of Exploratory Factor Analysis Results for Workgroup-based Self-esteem Measure*

	Factor Loadings	
Items	1	2
Bu çalışma gurubunda,		
2. …önemliyimdir.	**.86**	.18
4. …değerliyimdir.	**.82**	.18
1. …önemli bir yerim vardır.	**.80**	.21
6. …ciddiye alınırım.	**.75**	.26
3. …insanların bana inancı vardır.	**.60**	.36
5. …verimliyimdir.	**.57**	**.41**
7. …bana güvenilir.	**.53**	**.55**
8. …bir farklılık yaratabilirim.	**.40**	**.56**
9. …yararlı biriyimdir.	.36	**.74**
10. …işbirlikçi biriyimdir.	.02	**.83**
Percentage of explained variance (%)	**51.50**	**61.87**
Eigenvalues	**5.15**	**1.04**

APPENDIX 13. *Summary of Exploratory Factor Analysis Results for Workgroup-based Self-esteem Measure after Three Double-loaded Items are Removed*

Items	Factor Loadings
Bu çalışma grubunda,	
2. …önemliyimdir.	**.84**
1. …önemli bir yerim vardır.	**.81**
4. …değerliyimdir.	**.80**
6. …ciddiye alınırım.	**.80**
7. …bana güvenilir.	**.73**
3. …insanların bana inancı vardır.	**.70**
5. …verimliyimdir.	**.69**
8. …bir farklılık yaratabilirim.	**.63**
Percentage of explained variance (%)	**54.91**
Eigenvalue	**3.84**

APPENDIX 14. *Summary of Exploratory Factor Analysis Results for Positive Outcome Expectancies Measure*

Items	Factor Loadings	
	1	2
Bu çalışma grubunda,		
8. ...bilgimi paylaşmam diğer çalışanlarla ileride işbirliği yapmamı kolaylaştıracaktır.	**.89**	.13
6. ...bilgimi paylaşmam çalışma grubuna yeni katılan kişilerle daha iyi ilişkiler kurmamı sağlayacaktır.	**.87**	.18
7. ...bilgimi paylaşmam diğer çalışanlarla ilişkimin kapsamını genişletecektir.	**.87**	.14
5. ...bilgimi paylaşmam diğer çalışanlarla aramdaki bağları kuvvetlendirecektir.	**.82**	.15
9. ...bilgimi paylaşmam ortak çıkarları olan çalışanlar arasında güçlü ilişkiler kurulmasını sağlayacaktır.	**.76**	.03
1. ...bilgimi paylaştığım için ödüllendirilirim.	.17	**.75**
3. ...maaş artışı veya terfi gibi fırsatlar, çalışanların çalışma grubunun diğer üyeleri ile bilgi paylaşıp paylaşılmamalarından etkilenir.	-.07	**.68**
4. ...istediğim şeyleri elde etmem için bilgimi paylaşmak zorundayım.	.10	**.67**
2. ...bilgimi paylaşmam ilerlemem için emin bir yoldur.	.28	**.73**
Percentage of explained variance (%)	**44.71**	**62.57**
Eigenvalues	**4.02**	**1.61**

APPENDIX 15. *Summary of Exploratory Factor Analysis Results for Negative Outcome Expectancies Measure*

Items	Factor Loadings	
	1	2
Bu çalışma grubunda,		
7. ...bilgimi diğer çalışma arkadaşlarımla paylaşırsam, bilgimin Getirdiği güç ve ayrıcalıklarımdan vazgeçmiş olurum.	**.90**	.08
6. ...bilgimi paylaşırsam, vazgeçilemez biri olamam.	**.86**	.02
5. ...bilgimi paylaşırsam, terfi alma şansımı kaybedeceğimi hissediyorum.	**.74**	.20
9. ...benden başka kimse bilgisini paylaşmazsa diye endişelenirim ve kendimi kullanılıyor gibi hissederim.	**.55**	.39
8. ...bilgimi diğer çalışma arkadaşlarımla paylaşırsam, benim ismimi kullanmadan bu bilgiyi kendilerininmiş gibi kullanabilirler.	**.55**	.44
4. ...bilgimi paylaşmam, çok çaba gerektiriyor ve çok zaman alıyor.	.31	.29
3. ...bilgimi paylaşsam da paylaşMAsam da değişen bir şey yoktur, sonuç aynıdır.	.03	**.82**
2. ...bilgimi paylaşıyor olmam çoğu zaman gözden kaçar.	.14	**.79**
1. ...bilgimi paylaşmam harcadığım çabaya değmez.	25	**.76**
Percentage of explained variance (%)	**41.50**	**57.80**
Eigenvalues	**3.74**	**1.47**

APPENDIX 16. *Summary of EFA Results for Outcome Expectancies Measure*
(Both Positive and Negative Expectancies)

Items	Factor Loadings			
	1	*2*	*3*	*4*
p8. ...bilgimi paylaşmam diğer çalışanlarla ileride işbirliği yapmamı kolaylaştıracaktır.	**.88**	-.08	-.13	.10
p6. ...bilgimi paylaşmam çalışma grubuna yeni katılan kişilerle daha iyi ilişkiler kurmamı sağlayacaktır.	**.87**	-.06	-.09	.17
p7. ...bilgimi paylaşmam diğer çalışanlarla ilişkimin kapsamını genişletecektir.	**.86**	-.00	-.15	.10
p5. ...bilgimi paylaşmam diğer çalışanlarla aramdaki bağları kuvvetlendirecektir.	**.79**	-.12	-.18	.12
p9. ...bilgimi paylaşmam ortak çıkarları olan çalışanlar arasında güçlü ilişkiler kurulmasını sağlayacaktır.	**.75**	-.15	-.04	.05
n7. ...bilgimi diğer çalışma arkadaşlarımla paylaşırsam, bilgimin getirdiği güç ve ayrıcalıklarımdan vazgeçmiş olurum.	-.09	**.90**	.10	-.01
n6. ...bilgimi paylaşırsam, vazgeçilemez biri olamam.	-.08	**.87**	.03	.00
n5. ...bilgimi paylaşırsam, terfi alma şansımı kaybedeceğimi hissediyorum.	-.09	**.74**	.22	-.01
n8. ...bilgimi diğer çalışma arkadaşlarımla paylaşırsam, benim ismimi kullanmadan bu bilgiyi kendilerininmiş gibi kullanabilirler.	-.03	**.50**	.26	-.00
n9. ...benden başka kimse bilgisini paylaşmazsa diye endişelenirim ve kendimi kullanılıyor gibi hissederim.	-.19	**.49**	.41	.17
n2. ...bilgimi paylaşıyor olmam çoğu zaman gözden kaçar.	-.12	.12	**.77**	-.12
n3. ...bilgimi paylaşsam da paylaş<u>MA</u>sam da değişen bir şey yoktur, sonuç aynıdır.	-.15	.05	**.72**	-.28
n1. ...bilgimi paylaşmam harcadığım çabaya değmez.	-.19	.24	**.71**	-.14
p4. ...istediğim şeyleri elde etmem için bilgimi paylaşmak zorundayım.	.15	-.00	.19	**.75**
p1. ...bilgimi paylaştığım için ödüllendirilirim.	.16	-.01	-.26	**.69**
p3. ...maaş artışı veya terfi gibi fırsatlar, çalışanların çalışma grubunun diğer üyeleri ile bilgi paylaşıp paylaşılmamalarından etkilenir.	-.06	.15	-.20	**.63**
p2. ...bilgimi paylaşmam ilerlemem için emin bir yoldur.	.25	-.10	-.22	**.60**
Percentage of explained variance (%)	**30.58**	**46.08**	**57.20**	**63.86**
Eigenvalue	**5.20**	**2.64**	**1.89**	**1.13**

APPENDIX 17. *Summary of Exploratory Factor Analysis Results for Trust in Workgroup Measure*

Items	*Factor Loadings*
Bu çalışma grubunda,	
2. ...paylaştığım bilgiler iyi değerlendirilir.	**.91**
3. ...paylaştığım bilgiler grubun yararına olacak şekilde kullanılır.	**.91**
4. ...bilgi paylaştığımda, bu bilginin doğru değerlendirileceğine inanırım.	**.86**
1. ...verdiğim bilgiler heba edilmez.	**.83**
Percentage of explained variance (%)	**76.94**
Eigenvalue	**3.08**

APPENDIX 18. *Summary of Exploratory Factor Analysis Results for Knowledge Sharing Willingness Measure*

Items	*Factor Loadings*
3. Geçmiş iş tecrübelerimi çalışma grubumdaki kişilerle paylaşma konusunda gönüllüyümdür.	**.87**
1. Eğitimimden edindiğim bilgileri, çalışma grubumun üyeleri ile paylaşmaya gönüllüyümdür.	**.87**
4. İşimle ilgili uzmanlığımı çalışma grubumdaki kişilerle paylaşmak konusunda istekliyimdir.	**.86**
5. İşle ilgili bir eğitim aldığımda, edindiğim bilgileri çalışma grubumdaki kişilerle paylaşmak için istekliyimdir.	**.83**
2. Kişisel bağlantılarımı kullanarak önemli bir bilgi edindiğimde, bunu çalışma grubumdaki kişilerle paylaşmaya hazırımdır.	**.76**
Percentage of explained variance (%)	**70.39**
Eigenvalue	**3.52**

APPENDIX 19. *Summary of Exploratory Factor Analysis Results for Actual Knowledge Sharing Measure*

Items	*Factor Loadings*
3. Geçmiş iş tecrübelerimi çalışma grubumdaki kişilerle paylaşırım.	**.87**
2. Eğitimimden edindiğim bilgileri çalışma grubumun üyeleri ile paylaşırım.	**.85**
4. İşle ilgili bir eğitim aldığımda, edindiğim bilgileri çalışma grubumdaki kişilerle paylaşırım.	**.84**
5. İşimle ilgili uzmanlığımı çalışma grubumdaki kişilerle paylaşırım.	**.80**
1. Kişisel bağlantılarımı kullanarak önemli bir bilgi edindiğimde, bunu çalışma grubumdaki kişilerle paylaşırım.	**.66**
Percentage of explained variance (%)	**64.75**
Eigenvalue	**3.24**