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Julien C. Nougarou
St. Cloud state University, jcnougarou@stcloudstate.edu

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The effect of Workplace Friendship, Team-Member Exchange and Leader-Member Exchange on Organizational Citizenship Behavior

by

Julien C. Nougarou

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Jody Illies, Chairperson
John Kulas
Barry Kirchoff

Abstract

This study sought to explore the effect of interpersonal factors such as workplace friendship, team-member exchange (TMX), and leader-member exchange (LMX) on organizational citizenship behavior (OCB). Results from a sample of 325 participants recruited through Amazon's Mechanical Turk showed that—contrary to expectations—LMX and TMX were associated more strongly to OCB towards the organization than to OCB toward individuals. Results also supported the predictive effect of workplace friendship on TMX, and also the predictive effect of LMX on workplace friendship. Finally, the findings indicated that TMX fully mediated the relation between workplace friendship and OCB, while workplace friendship only partially mediated the relation between LMX and TMX. Theoretical implications and limitations of the results, as well as directions for future research are discussed.

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Chapter 1: Introduction

Organizational citizenship behavior has become a major construct in the fields of psychology and management. It has gained popularity in organizational behavior literature, especially over the two last decades. While OCB depicts the quality of individual behaviors towards other individuals and towards the organization, this construct is particularly interesting because of the resulting positive outcomes, such as increased productivity and satisfaction and reduced turnover. Because of its nature, OCB—especially towards individuals—can be achieved through high quality work relationships between coworkers but also between employees and their supervisors. Therefore, team-member exchange and leader-member exchange are often found to lead to higher OCB in research focused on those relations. TMX has also been found to be predicted by workplace friendship—including both workplace friendship opportunity and workplace friendship prevalence (actual friendship)—among employees in addition to being a predictor of OCB. That is, a potential mediating effect of TMX on the relation between workplace friendship and OCB might exist. On the other hand, LMX has been found to create workplace friendship between employees, which can also result in OCB. That being said, another interesting path to explore is the mediating path of workplace friendship between LMX and TMX, as well as the mediating effect of TMX between LMX and OCB. The proposed study will add empirical evidence to the positive relationships among LMX, TMX, and OCB. It will also explore if workplace friendship can influence employees' and leaders' work relationships. The proposed model is illustrated in Figure 1.
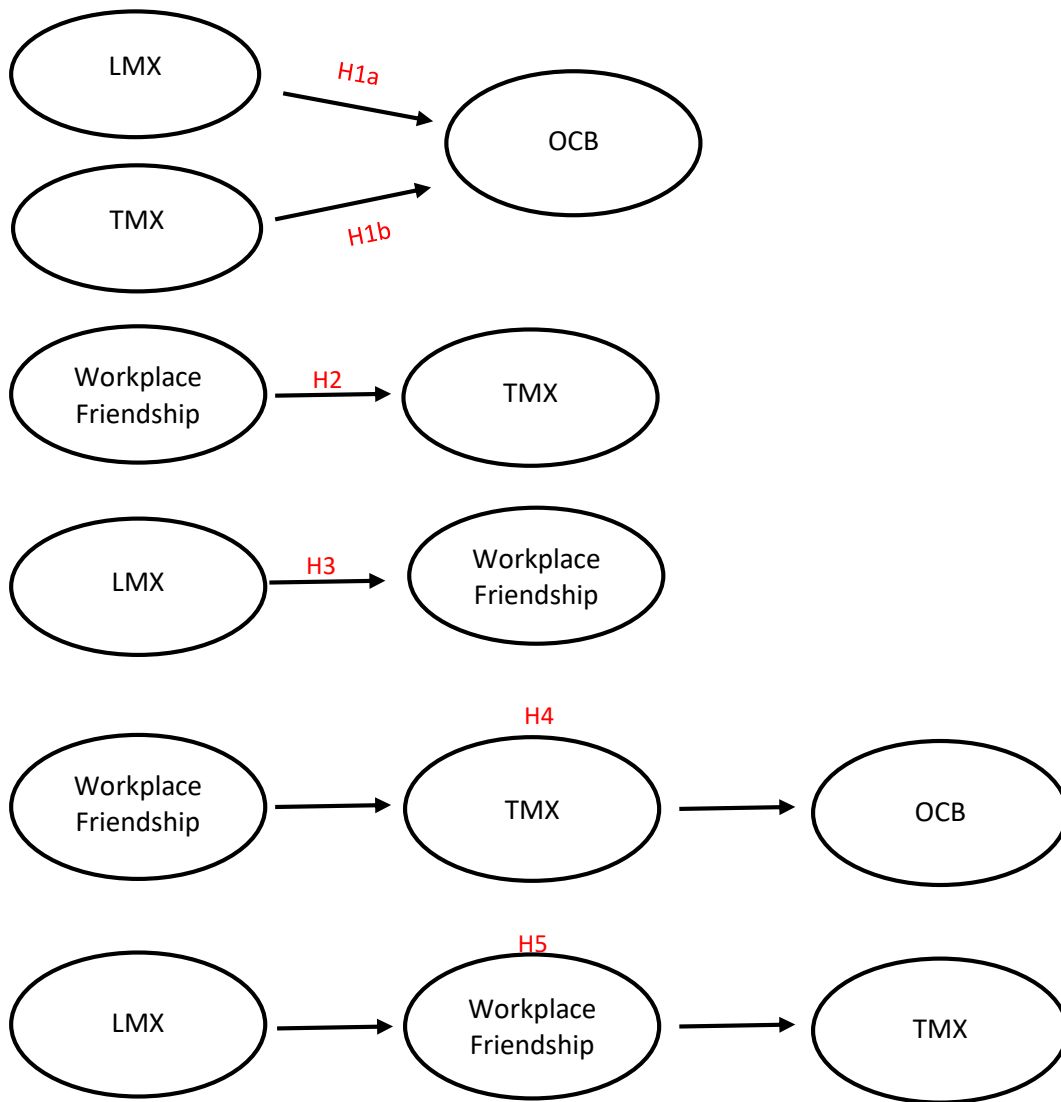
Figure 1. Proposed hypotheses.

Organizational Citizenship Behavior

Organizational citizenship behavior is a construct that affects many aspects of an organization, including employees' performance and turnover (Chelagat, Protus Kiprop, & Kemboi, 2015; Podsakoff, Whiting, Podsakoff, & Blume, 2009). OCB is defined "as individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988, p. 4). In other words, OCB occurs when individuals help others on the job without the promise of rewards, which in turn increases the organization's performance. OCB has often been compared to "contextual performance," which is similarly defined as encompassing behaviors and activities that are not part of the job requirements but that contribute to the social and psychological aspects of the organization (Borman & Motowidlo, 1993). While OCB and contextual performance have often been used interchangeably, they are not quite the same construct. Contextual performance does not stipulate that the behavior has to be discretionary and non-rewarded whereas OCB is generally non-incentivized (Bambale, Shamsudin, & Subramaniam, 2012).

In order to understand OCB, one has to know its underlying dimensions and what they represent. Five dimensions have been created to define the different aspects of OCB: Conscientiousness, Sportsmanship, Civic Virtue, Helping Behavior, and Courtesy (Bateman & Organ, 1983; Organ, 1988; Organ, 1997).

- **Conscientiousness**: Conscientiousness is an indicator of dedication to the job, going above and beyond for the well-being and success of the organization. Examples would be

an employee working long hours or overtime or performing duties that he/she is not assigned.

- **Sportsmanship:** Sportsmanship is a behavior that could be compared to self-control. For example, an employee showing strong Sportsmanship will not show negative behaviors when something does not go as expected or during situations that are difficult, irritating, or frustrating.

- **Civic Virtue:** Civic Virtue relates to the involvement of an employee in the organization's life. For example, an employee with high Civic Virtue would go to non-mandatory meetings or social events organized by the company. That same employee would also talk positively about the company and give opinion when issues arise.

- **Helping Behavior**: Helping Behavior is the combination of three previously used OCB dimensions: Altruism, cheerleading, and peacekeeping (Organ, 1990). All in all, it defines employees who are willing to assist other individuals while not expecting a reward in return.

- **Courtesy**: Courtesy involves preventing problems within the organization by means of communication and consideration. Examples would be encouraging other workers when they feel down or preventing employees from encountering unpleasant situations.

The above five categories have then been grouped into two broader dimensions that represent two distinct aspects of OCB. The first dimension focuses on behaviors that are directed toward the organization and is called OCB-O while the second dimension focuses on behaviors that are directed toward the individual and is called OCB-I (Williams & Anderson, 1991). Courtesy and

Helping Behavior combine to represent OCB-I while Civic Virtue, Conscientiousness, and Sportsmanship combine to represent OCB-O (Williams & Anderson, 1991).

OCB as represented by the two dimensions and five categories discussed above has been found to result in many positive outcomes for an organization. Maybe of greatest importance, OCB has been shown to increase performance among employees (Chelagat et al., 2015; Podsakoff, Ahearne, & MacKenzie, 1997; Podsakoff & MacKenzie, 1997; Podsakoff et al., 2009; Yaghoubi, Salarzehi, & Moloudi, 2013). Although some employees may exhibit OCBs for reasons other than to help their coworkers or the organization—such as for impression management—as Podsakoff et al. (2009) mention, it appears that this fact does not outweigh the generally positive effects these behaviors have on individual and organizational performance. Also, while studies generally show that all five OCB dimensions predict performance, the meta-analysis by Podsakoff et al. showed that Altruism, a component of the Helping Behavior dimension, seems to be the highest predictor of performance in many cases. Chelagat et al. (2015) explained that through Altruism, employees share their expertise and knowledge with other employees and support coworkers with problems at work.

Not surprisingly, much of the research connecting OCB with job performance has utilized subjective performance measures, such as supervisory ratings (MacKenzie, Podsakoff, & Fetter, 1993; Podsakoff et al., 1997; Podsakoff et al., 2009). In a meta-analysis gathering 206 independent samples, Podsakoff et al. (2009) found that OCB was positively related to performance appraisals. More precisely, the researchers showed that employees with higher OCB tend to have higher performance ratings from their managers. The same meta-analysis also demonstrated that employees with high OCB were more likely to receive work rewards such as

bonuses or promotions, than employees with low OCB. While both OCB-I and OCB-O were predictive of job performance, OCB-O was a stronger predictor, likely because OCB directed toward the organization tends to be more observable by supervisors and also affects the overall organization rather than a single individual (Podsakoff et al., 2009).

If OCB-O is more strongly related to supervisory ratings of performance, is stands to reason that OCB-I would be more strongly related to peer ratings of performance. This inference is supported by social exchange theory, originally defined by Homas (1961) as "the exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons" (p. 16). Blau (1967) further explained that the interaction of giving and receiving material or intangible resources during a social exchange is at least partially predicated on the expectation of return. In other words, if an employee is helpful and kind toward another employee, the latter will be influenced by that interaction in his/her performance rating of that employee. Ozer (2011) conducted a study aimed at demonstrating this social exchange effect by exploring the mediation of coworker relations on OCB-I and job performance. He successfully found that coworker relation mediated the relationship between OCB-I and job performance. This was not the case for OCB-O. However, Ozer did show that while it was not mediated my coworker relationships, OCB-O directly predicted job performance.

An interesting point to mention is that by its nature, OCB are behaviors that are not "directly or explicitly recognized by the formal reward system" (Organ, 1988, p. 4). Therefore, employees with higher OCB should not necessarily receive more official rewards or higher performance appraisals. However, this positive relationship can be explained by the fact that most organizational rewards and performance appraisals are intended to, in part, reflect the

benefits the organization receives from employee behaviors. Podsakoff et al. (2009) actually

found that OCB had a stronger relation with reward recommendations than with actual rewards,

thus showing that OCB does not always lead to rewards. In addition, Alkahtani (2015) has

looked into the relationship between each of the five dimensions of OCB and their impacts on

rewards such as promotions, salary increments, and performance evaluation grades. He found

that Civic Virtue, or the extent to which an employee takes active interest in the life of the

organization, will lead to better performance grades. This finding can be explained because

behaviors such as attending non-required meetings, taking initiative to develop improvements,

and welcoming change in the organization contribute to organization effectiveness, which is then

noticed by the supervisor doing the appraisal. On the other hand, rewards such as salary

increments and promotions were found to be significantly predicted by the four other dimensions

of OCB; more precisely, an employee will be more likely to receive a reward if he/she displays

all four of these dimensions of OCB, Altruism (Helping Behavior), Courtesy, Conscientiousness,

and Civic Virtue (Alkahtani, 2015). Again, this is not a direct effect of OCB as rewards occur

because of the benefits an employee's OCB produces for the company in the long term.

In addition to performance, OCB has also been known to be strongly related to

satisfaction and turnover. Bateman and Organ (1983) found that OCB was strongly related to

overall job satisfaction, with higher correlations found for the supervisory support and promotion

facets of satisfaction. While the researchers could not assess the direction of the relationship,

they found consistency in the relationship by collecting OCB and satisfaction scores on a sample

of employees at two separate times (five to seven weeks apart). Another study conducted by

Foote and Li-Ping Tang (2008) involving employees who were part of self-directed teams at

three different geographic locations, explored the relation between OCB and satisfaction as well as a possible moderating effect of team commitment. In addition to finding a positive relationship between OCB and satisfaction, they also successfully demonstrated the moderating effect of commitment, showing that employees with strong OCB who also have high commitment would experience high satisfaction. However, for employees with low commitment, job satisfaction was not significantly related to OCB.

In regard to turnover, the meta-analysis from Podsakoff et al. (2009) demonstrated that overall OCB reduces employee turnover intentions, employee actual turnover, and absenteeism. They also found that the subgroups of OCB-O and OCB-I were significant for only reducing turnover intention (Podsakoff et al., 2009). In addition, to avoid any fake relationship between OCB and those withdrawal behaviors (due to the existing correlation between satisfaction and the latter), they tested the relationship of both OCB and satisfaction with turnover and turnover intention. They found that taken together, both predictors were still significantly and negatively related to turnover intention and actual turnover. Following the previous study, Tziner, Sharoni, Fein, and Shultz (2011) explored the possibly of moderators between OCB and turnover intentions. Among the results, they found that two organizational culture variables— supportiveness and teamwork—were significant moderators. Specifically, better support from supervisors and better relationships with coworkers, along with high OCB resulted in lower turnover intentions.

Among the dimensions of OCB, Sportsmanship tends to be the best predictor of intention to leave the organization (Paillé, 2012). Because employees with high levels of Sportsmanship accept inconveniences such as high workload or occasional extra work, it makes sense that these

same employees will be less likely to leave the organization for another one with less hardship. In addition, Paillé (2012) found that perceived job alternatives—which is a predictor of turnover intention—explained employees' OCB toward the organization better than OCB toward the individual, in terms of intention to stay. Essentially, employees with few job alternatives will continue their OCB to protect their position in their current organization, whereas employees with many alternatives will be less willing to tolerate high job demands and also less likely to protect the interests of the employer.

Given the economic and social benefits a company can gain from having higher performance and satisfaction while reducing their turnover, understanding what predicts OCB is important. That is, the present study will explore the role of relationships among employees, as well as the relationships between employees and their supervisors in predicting OCB.

Team-Member Exchange and Leader-Member Exchange

Relations between members of an organization have been shown to affect organizational citizenship behavior. In their study, Hsieh and Chiao (2011) demonstrated that LMX and TMX were positively related to OCB. Also, they indicated that because LMX and TMX were also related to each other, an employee having both high LMX and high TMX will be even more likely to perform OCB.

Leader-Member Exchange (LMX). According to Liden and Maslyn (1998), LMX theory addresses that a supervisor will have a different approach depending on the subordinate. Basically, subordinates that have good relationships and high-quality exchanges with their supervisors will receive more attention and often higher performance evaluations from those supervisors. Those employees also show higher personal satisfaction and satisfaction with their

supervisors, are more committed to the organization, and have lower turnover rates (Liden & Masly, 1998). Because LMX is a dyadic relationship, the quality of that relationship depends on both leaders' and employees' characteristics. For instance, Harris, Harris, and Eplion (2007) found that higher quality LMX will not only result from a subordinate's work ethic, initial - performance, and likeability, but also from high internal locus of control, need for power, and self-esteem. Overall, an employee that is motivated, confident, and takes initiative, will have a better relation with his/her supervisor (higher LMX). On the other end, subordinates will be more likely to have higher LMX quality with supervisors who show high self-efficacy and optimism (Murphy & Ensher, 1999). Basically, leaders have to demonstrate that they are capable of succeeding and accomplishing tasks required by their job and are able to motivate their employees at work.

LMX has often been found to be positively related to OCB as multiple meta-analyses have suggested (Ilies, Nahrgang, & Morgeson, 2007; Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Rockstuhl, Dulebohn, Ang, & Shore, 2012). In their meta-analysis, Rockstuhl et al. (2012) supported the relation between LMX and OCB, but they also pointed out that the correlation was stronger in individualistic countries (western countries) than in collectivistic countries (Asia). Another study conducted on Malaysian government employees showed, after controlling for demographic variables, that the quality of LMX had a positive impact on the subordinates exhibiting citizenship behavior and having high levels of job satisfaction (Ibrahim, Ghani, & Salleh, 2013). Ilies et al. (2007) also found that LMX was positively related to both OCB directed towards the organization and individuals, with the latter having a slightly higher correlation. This result was also supported by Yang, Ding, and Wen Lo (2015) as they found that

employee perception of the interpersonal relationship between leader and members significantly affected OCB-O as well as OCB-I, but the relationship with OCB-I was stronger.

Hypothesis 1a. LMX will be positively related to OCB-O and OCB-I, with a stronger relationship with the latter.

Team-Member Exchange (TMX). Contrary to the dyadic relationship involved in LMX (the relationship between a supervisor and each of his/her employees separately), TMX is defined as the exchange relationship—in terms of sharing ideas, feedback, efforts, resources, expertise, and recognition—between an employee and his/her peers as a group (Seers, 1989; Seers, Petty, & Cashman, 1995). In their study, Seers et al. (1995) found that higher quality TMX was associated with higher satisfaction with coworkers, higher job satisfaction and higher group cohesiveness. They found that this relation was especially true in autonomous teams (as compared to traditional work groups), as it is almost a requirement for the team to function efficiently. For a group to have a high cohesiveness, the average TMX quality within the group must be high (Farmer, Van Dyne, & Kamdar, 2015). Indeed, if an employee has high TMX relationship quality and is part of a group with high average TMX relationship quality, then this employee will experience a higher sense of belongingness (meeting social identity needs). On the other hand, if a member has high TMX relationships quality compared to other peers in the group, this inconsistency will increase that member's sense of positive uniqueness (meeting personal identity needs), which will reduce its sense of belongingness.

Because OCB and TMX were both found to be related to satisfaction, it can be inferred that TMX could lead to higher OCB. Farmer et al. (2015) confirmed that relationship, but also found that when high TMX relationship quality allowed individuals to feel as though they were a

valued part of the group but still unique, they engaged in higher levels of Helping Behaviors.

Similarly, Kamdar and Van Dyne (2007) found that TMX resulted in higher Helping Behaviors

from employees toward coworkers and supervisors; in other words, TMX was positively related

to OCB towards individuals. Love and Forret (2008) also explored the relation between TMX

and OCB while looking at the subgroups of the latter. As predicted, they found that TMX was

indeed related to the aggregate OCB and was also related (in decreasing magnitude) to Altruism

(Helping Behavior), Courtesy, Civic Virtue, and Conscientiousness. Only Sportsmanship was not

significantly related to TMX. As one would expect, the two OCB-I subgroups of Helping

Behavior and Courtesy were the most related to TMX. Dar and Yunus (2015) reported that trust

in co-workers—which is a strong characteristic of TMX along with respect (Scott & Bruce,

1994)—was a strong predictor of coworker-directed organizational citizenship behavior (i.e.,

OCB-I) as well as a moderate predictor of organization-directed organizational citizenship

behavior (OCB-O).

   Hypothesis 1b. TMX will be positively related to OCB-O and OCB-I, with a stronger

relationship with the latter.

Workplace Friendship

   Unlike TMX, workplace friendship is described as voluntary relationships that exist

primarily for enjoyment and satisfaction rather than for the fulfilment of a particular function or

role (Sapadin, 1988). Studies around workplace friendship generally include two dimensions:

friendship prevalence (actual friendship at the workplace), and friendship opportunity (Nielsen,

Jex, & Adams, 2000; Tse & Dasborough, 2008). The reason for adding friendship opportunities

is to take into account the possibility that employees may have opportunities to make friends at

work but do not take advantage of these opportunities. Workplace friendship has the potential to be related to both TMX and LMX (Morrison, 2004; Tse & Dasborough, 2008; Tse, Dasborough, & Ashkanasy, 2008). In regard to TMX, Morrison (2004) found empirical evidence that in addition to increasing satisfaction and commitment and reducing intention to leave the organization, friendship opportunities and prevalence also increased group cohesion. Group cohesion being similar to TMX, this finding suggests that the latter would also be affected. Researchers have also found that relationship-oriented exchanges between employees intended for friendship development were related to the development of a strong TMX (Tse & Dasborough, 2008). Using a keyword method, Tse and Dasborough (2008) found that to describe the relationship-oriented aspect of TMX, employees most often used "helping," "caring," "concerning," and "supporting each other," which showed that high quality TMX was achieved through informal relationships rather than task completion. Similarly, Tse et al. (2008) argued that workplace friendship creates high-quality TMX relationships because coworkers can trust and value each other and share interests, which results in them viewing the emotional and instrumental support they receive as valuable means of growth and dependence.

Hypothesis 2. Workplace friendship among coworkers will be positively related to TMX

LMX can be quite different than TMX because of the risk of perceived favoritism and because of hierarchy separating supervisors and their subordinates. Indeed, no researchers have explored the effect of workplace friendship between a supervisor and their employees on LMX quality. Graen & Uhl-Bien (1995) explained that difference by the fact that the first interaction between employees and supervisors has to be formal, but with time, they begin to share greater information and resources, both on the personal and work level. Those researchers further

specified that this is a working relationship, meaning that the relationship between leaders and subordinates is based on trust, respect, and mutual obligation. However, that does not mean that LMX cannot lead to workplace friendship among coworkers. Indeed, as mentioned by Song (2006), one aspect of the LMX theory is for supervisors to emphasize the importance of workplace friendship to increase the positive work attitudes and performance of employees. Mueller and Lee (2002) demonstrated that LMX could promote strong relationships between employees because it promotes greater cooperative and receptive information sharing, greater openness and frequency in communication, and better understanding of stimuli that determine communication satisfaction. Based on this, it is possible to expect a higher likelihood of workplace friendship development among employees when they experience high quality LMX with their supervisor; the latter encouraging friendship between them. Tse et al. (2008) explored such a theory and found that LMX had a significant positive relationship with workplace friendship between employees; specifically, high-quality LMX relationships with their supervisor can be seen by subordinates as a social currency to nourish their perceptions of workplace friendships with other coworkers, which in turn facilitate high-quality TMX development in teams.

Hypothesis 3. LMX will be positively related to workplace friendship between coworkers.

Because previous studies have found that workplace friendship among coworkers positively affected TMX and TMX was positively related to OCB, this study will also explore the potential mediating effect of TMX on workplace friendship and OCB.

Hypothesis 4. The relationship between workplace friendship and OCB will be mediated by TMX.

In regard to LMX, researchers mentioned above have shown that LMX was responsible for facilitating workplace friendship among employees. Because it was also stated that workplace friendship was related to higher TMX quality, it could be deduced that employees having high LMX relationships will have higher friendship quality with their coworkers, which in turn will increase their TMX relationships.

Hypothesis 5. The relationship between LMX and TMX will be mediated by workplace friendship.

Chapter 2: Method

Participants

Participants were recruited using Amazon's Mechanical Turk (MTurk) according to the following eligibility criteria: (a) They had to be at least 18 years old; (b) They had at least a 90% HIT approval rate (i.e., 90% of each worker's past assessments were approved by the requesters of each of those assessments); and (c) They had to have at least a coworker and a supervisor at work. Originally, 518 participants responded to the survey; but after filtering out those who did not meet the required criteria (see preliminary analysis in the result section), a total of 325 participants remained for this study. Of the total sample, 144 participants came from the USA (44.3%), 119 from India (36.6%), and the remaining participants (19.1%) were from different countries in the world (see Figure 2). The disparity between genders was not large, 138 participants were females (42.5%) and 187 were males (57.5%). Most of the participants were working in the following industries: IT ($N=$ 64), education ($N=$ 32), retail ($N=$ 23), and manufacturing ($N=$ 21); the rest of the participants came from various industries including journalism, meteorology, oil, and many others. The average age was 35.13 years ($SD=$10.39) and the average tenure was 5.98 years ($SD=$ 5.74). The sample had the following ethnic proportions: Asian or Pacific Islander (40.9%), White (39.7%), Hispanic or Latino (8.3%), Black or African American (4.9%), Native American (3.7%), and other (2.5%).
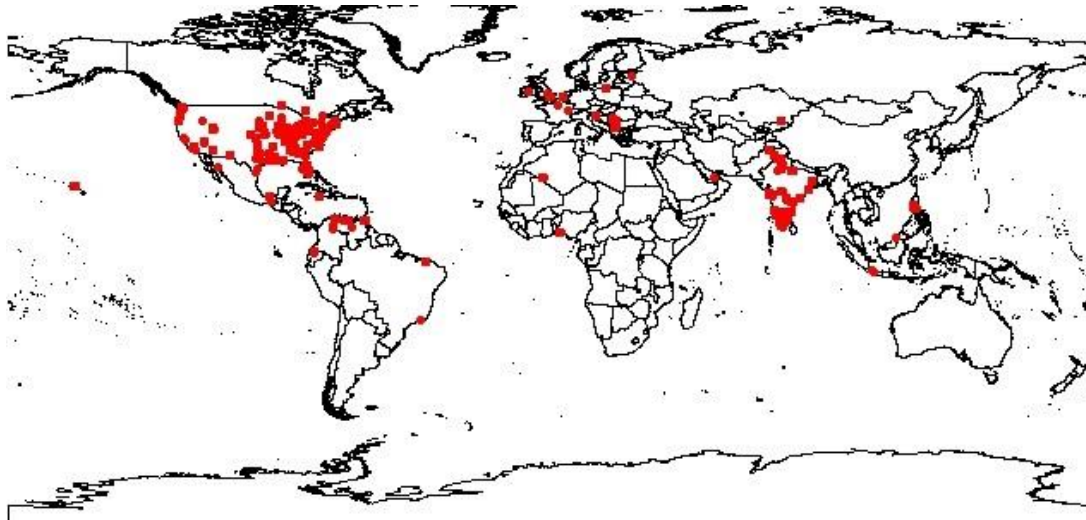
Figure 2. Location of participants on a world map (N=325).

Procedure

Survey instrument. To deliver the survey to participants, the survey was first created

using Qualtrics, which is an online survey platform. The survey started with an introduction

including a "thank you" statement, the topic of the study, a confidentiality statement to tell

participants about the anonymity of their responses, and an estimated time of completion. The

survey had 90 questions and participants took on average 10.4 minutes to complete it. They were

paid $0.21 USD for completing the survey. All the measures needed for this study were

combined into one survey, and three bogus items were implemented at different places within the

survey to ensure participants were not careless (discussed below).

Data collection. In order to gather data, MTurk was used. MTurk is a crowd-sourcing

platform for projects such as research, data-mining, or other high-volume, low-reward tasks.

Buhrmester, Kwang, and Gosling (2011) explored MTurk's suitability for academic research and

they found the platform to be adequate as it had scale reliabilities comparable to normal data

collection methods and also provided a demographically diverse participant pool. Participants

from Mturk were then directed to the Qualtrics survey in order to complete it, and responses

were saved automatically in the Qualtric's database.

Common method bias. The term common method bias refers to variance that is

attributable to the measurement method rather than to the constructs the measures represent.

Because this study uses all self-report methods, there was a risk that common method bias could

present problems. Therefore, some precautions were taken before and after administering the

surveys.

Procedural intervention. In a study exploring sources of common method biases, how

they affect research results, and what procedural and statistical techniques can be used to control

it, Podsakoff, Mackenzie, Lee, and Podsakoff (2003) presented a few suggestions that were

relevant to the present study. They proposed what they called procedural interventions, which

can be taken during the creating of the survey:

1. *Using different scale formats for the different constructs.* Using different formats

    diminished participants' likelihood to use previous responses to answer subsequent

    questions (when those can sound similar), thus decreasing chances of the consistency

    motif (tendency for respondents to try to maintain consistency in their responses to

    questions) and item demand characteristic (when items may convey hidden cues as to

    how to respond to them). For instance, if a participant is asked to rate two statements

    about his/her relationship quality with coworkers using an agreement scale, the response

    to the first statement is likely to influence the response on the other. However, if one of

    the statements asks for agreement, and the other similar statement asks for a frequency,

the participant is less likely to think about the previous response when giving his/her new

answer.

2. *Protecting participants' anonymity and reducing evaluation apprehension.* This was

    probably one of the most important interventions because of the nature of the questions.

    Because participants were asked to rate their peers and supervisors, it is imperative to

    make sure participants were convinced that they would stay anonymous. In addition, it

    was also important to assure them that there were no right or wrong answers and to

    convince them that they should answer questions as honestly as possible. The result was

    that respondents were less likely to edit their responses to be more socially desirable

    (tendency for respondents to attribute socially desirable traits, attitudes, and/or behaviors

    to someone they know and like than to someone they dislike), to be more lenient, to

    acquiescent (tendency for respondents to agree or disagree with questionnaire items

    independent of their content), or to respond according to how they thought the researcher

    wanted them to respond.

   Statistical intervention. In addition, another way to address common method bias was

through a statistical intervention. The first idea was to include variables that often affect the

results of analyses. As mentioned by Podsakoff et al. (2003), the two variables frequently found

to produce common method bias in self-reported surveys are social desirability (i.e., answering

questions in a manner that will be viewed favorably by others), and positive/negative affectivity

(i.e., experience of positive or negative emotions). In order to avoid common method bias, those

two variables were entered as control variables in each statistical analyses in order to partial out

their effects on the different analyzed relationships. The other way to statistically find common

method bias was to use a non-related latent variable—also called marker variable—in order to

show discriminant validity with the other variables of interest (Williams, Hartman, & Cavazotte,

2010). In the present study, a measure of computer anxiety was used for this purpose. In other

words, computer anxiety was not expected to be correlated with any of the other variables.

Measures

      Demographics. In order to explore group differences and to use as control variables,

some demographic information was collected. Those demographics were age, gender, job tenure,

and ethnicity.

      OCB. OCB-I and OCB-O were measured using a 16-item scale developed by Lee and

Allen (2002) (see Appendix A). Although Williams and Anderson's (1991) scale has been the

most common measure of these factors, Lee and Allen (2002) criticized that measure, indicating

that it includes items that are more related to workplace deviance behavior than to OCB. Lee and

Allen (2002) found internal consistency estimates to be $\alpha = .83$ for OCB-I and $\alpha = .88$ for OCB-

O for their measure; in addition, a factor analysis confirmed that the predicted two-factor model

was better than a one-factor model, supporting the distinction between OCB-I and OCB-O. Lee

and Allen's OCB scale uses a 7-point response frequency scale ranging from 1 (*never*) to 7

(*always*). The subscale OCB-I is comprised of eight items such as "Help others who have been

absent" and "Willingly give your time to help others who have work-related problems." The

subscale OCB-O contains the remaining eight items, including "Keep up with developments in

the organization" and "Defend the organization when other employees criticize it." The present

study found the internal consistency of OCB to be $\alpha = .91$, while the alpha for OCB-I and OCB-

O were $\alpha = .87$ and $\alpha = .90$, respectively.

LMX. Because the study also measures TMX from an individual employee's perspective, LMX should also be measured from this perspective. The focus of the study is on the employees and how they perceive their LMX relations with their supervisor. That is, we did not use a measure that assesses a supervisor's view on their LMX relationship with employees. Therefore, the LMX-SLX scale created by Graen, Hui, and Taylor (2006) was administered as it is one of the most commonly used LMX instruments assessing subordinate perceptions of the LMX relationship with their direct supervisor (see Appendix B). The measure's internal consistency was originally explored using a test-retest approach at two different times using the same participants in a team project: the initial internal consistency was $\alpha = .85$ and increased to $\alpha = .97$ after six weeks (Graen et al., 2006). The scale uses a 5-point response scale (1 = *Strongly Disagree*; 5= *Strongly Agree)* to rate 10 statements such as "My direct supervisor is satisfied with my work" and "My direct supervisor will repay a favor." The internal consistency of $\alpha = .91$ found in the present study was therefore consistent with the previous findings.

TMX. Using Seers (1989) TMX scale, employees rated TMX using a 5-point response scale (1 = *Definitely false*; 5= Definitely *True)* (see Appendix C). They indicated the extent to which they felt that 10 statements reflect their TMX-related experiences. Example statements include "I often make suggestions about better work methods to other team members" and "My team members often recognize my potential." Seers (1989) found the scale had an internal consistency of $\alpha = .83$. The present study supported that value with TMX having an alpha of $\alpha = .88$.

Workplace Friendship. In order to measure friendship at work, the 12-item workplace friendship scale was employed (Nielsen, Jex, & Adams, 2000) (see Appendix D). The scale

assessed the two aspects of workplace friendships - friendship prevalence and friendship

opportunities, and used a 5-point Likert scale (1= *Strongly Disagree*; 5= *Strongly Agree*). The

friendship opportunity scale was found to have an internal consistency of $\alpha = .84$ and includes

six items such as "I have the opportunity to get to know my coworkers" and "I have the

opportunity to develop close friendships at my workplace." The friendship prevalence scale was

found to have an internal consistency of $\alpha = .89$ and includes six items such as "I socialize with

coworkers outside the workplace" and "I can confide in people at work." In this study,

workplace friendship had an internal consistency of $\alpha = .89$, friendship opportunity had an alpha

of $\alpha = .82$, and friendship prevalence had an alpha of $\alpha = .85$.

Positive/Negative Affectivity. Positive/Negative affectivity was measured using the I-

PANAS-FS developed by Thompson (2007), which measures positive and negative trait affect in

individuals (see Appendix E). He found that the internal consistency of the two subscales

"positive affectivity" and "negative affectivity" were $\alpha = .78$ and $\alpha = .76$, respectively.

Respondents indicated on a 5-point scale (1= *Never;* 5= *Always*) how often they feel certain of

emotions (e.g., afraid, inspired, attentive). The present study combined the two subscales into a

positive affectivity scale (by reverse coding negative affectivity) and found an alpha of $\alpha = .77$.

Social Desirability. In order to measure social desirability, a short form of the Marlowe-

Crowne Social Desirability Scale (MCSD) was used (Crowne & Marlowe, 1960) (see Appendix

F)**.** Ballard (1992) analyzed different studies that explored short forms of the MCSD scale, and

found a 13-item version with an internal consistency of $\alpha = .76$. The items were rated using a

True-False scale; examples of those items include "There have been occasions when I took

advantage of someone" and "I'm always willing to admit it when I make a mistake"). In this study, social desirability had an acceptable internal consistency of $\alpha = .73$.

Computer Anxiety. As explained before, computer anxiety was used to run discriminant validity against the other variables. The scale was created by Heinssen Jr, Glass, and Knight (1987), and contained 19 items rated using a 5-points Likert scale (1= *Strongly Disagree*; 5= *Strongly Agree*). This study only used 8 of those items, and found an acceptable internal consistency of $\alpha = .76$.

Carelessness. To avoid carelessness from participants, a method suggested by Meade and Craig (2011) that consists in adding bogus items to the survey was used. That is, three questions with obvious answers were embedded in the survey: "I sleep less than one hour per night," "I have never brushed my teeth," and "I have been to every country in the world." Respondents were asked to rate those items using a 5-points Likert scale (1=*Strongly Disagree*, 5= *Strongly Agree*).

Chapter 3: Results

Preliminary Analysis

A total of 518 participants consented to the study. Out of those participants, 448 completed at least 95% of the survey. Because participants had to answer each question to access to the next, having less than 95% of the survey completed meant that the last measure was not completed. That is, those participants were removed (*N= 70).* The next step was to use two questions to identify participants with coworkers and supervisors. Participants who did not have coworkers, supervisors, or both were removed (see Table 1), decreasing the sample size from 448 to 392 participants.

Table 1. *Frequency of Participants with Supervisors and Coworkers*

	Yes	No	Percentage of "unqualified" Participants
Do you have supervisor(s)?	410	38	8.5
Do you work directly with coworker(s)?	420	28	6.3

Note: Participants who did not have coworkers or supervisors (or both) were removed (N=56).
The new sample size was 392 participants.

Then, a carelessness measure was used to identify careless participants (see Table 2). A careful participant was expected to answer "strongly disagree" or "disagree" on each question; but in order to avoid deleting participants who may have responded wrong to only one item of the measure, the three items were aggregated into a mean for carelessness. Participants with a mean of 3 and above were removed from the sample (*N=67);* which led to a final sample size of 325 participants.

Table 2. *Careless Items and Response Rates*

		Str. D 1	D 2	NA Nor D 3	A 4	Str. A 5	Number of Careless Participants (%)
1	I sleep less than one hour per night	272	33	32	37	18	87 (22.2)
2	I have never brushed my teeth	311	15	19	27	20	66 (16.8)
3	I have been to every country in the world	263	28	32	43	26	101 (25.8)

Note: Those three items were aggregated into a mean. Participants with a mean of 3 and above (N=67) were considered careless and were subsequently removed from the sample. The new sample size was 325 participants.
D=*Disagree,* A= *Agree,* Str.A= *Strongly Agree,* Str.D= *Strongly Disagree,* NA/Nor D= *Neither Agree Nor Disagree*

For each measure, participants' responses were combined into a mean composite score that represented the respective measure. Basically, each participant had one score for OCB, one for TMX, and so on. Means, standard deviations, correlations and internal consistencies of all the composite measures were then computed as illustrated in Table 3. Unexpectedly, computer anxiety was found to be significantly related to all of the variables; indicating potential common method bias (discussed further below). In addition, because the tenure of participants ranged from 1 month to 42 years, and most of those participants were working in their company for less than 6 years, tenure was highly skewed. For that reason, the scale for tenure was transformed into a logarithmic scale, which allowed the data to be more normally distributed.

Another problem encountered was that ethnicity had large differences in sample size between each group (see "Participants" section). Therefore, it was removed from the control variables used in all analyses. To make sure this would not affect the results, the analyses were run (a) with the original ethnicity groups, (b) with ethnicity combined into three groups (133

Asians/Pacific Islanders, 129 whites, 63 others), and (c) without ethnicity. In all three manipulations, the results remained the same.

Finally, because the two largest populations of the study were clearly India and the United States, the mean score differences in the variables of interest (i.e., OCB I, OCBO, TMX, LMX, and Friendship prevalence and opportunity) were explored separately for each culture. As seen in Table 4, there was a significant difference in scores between Indian and American participants for friendship opportunity ($t(245) = -2.526$, $p = .012$) where Americans had a higher score, for LMX ($t(250) = -2.675$, $p = .008$) where Americans had a higher score, and for OCB-O ($t(260) = 2.720$, $p = .007$) where Indians had a higher scor

Table 3. *Correlation Table with Mean, Standard deviation, and Reliability of Each Variables (N=325)*

	Mean	StdD	Gender	Age	Tenure	OCB	OCBI	OCBO	LMX	TMX	Friend	FO	FP	Posaff	SD	Compax	Care
Gender	1.58	.50	--														
Age[a]	35.13	10.39	-0.031	--													
Tenure	5.98	5.74	0.111*	0.416***	--												
OCB	4.27	.92	-0.138*	0.122*	0.073	(.91)											
OCBI	4.27	.99	-0.148**	0.043	0.026	0.878***	(.87)										
OCBO	4.26	1.09	-0.100	0.169**	0.100	0.900***	0.582***	(.90)									
LMX	3.92	.84	-0.278***	0.212***	-0.042	0.387***	0.301***	0.384***	(.91)								
TMX	3.95	.68	-0.194***	0.108	-0.013	0.574***	0.481***	0.538***	0.548***	(.88)							
Friend	3.85	.73	-0.194***	0.112*	-0.018	0.484***	0.397***	0.461***	0.514***	0.728***	(.89)						
FO	4.05	.72	-0.240***	0.178**	-0.040	0.450***	0.412***	0.391***	0.552***	0.709***	0.871***	(.82)					
FP	3.64	.90	-0.122*	0.038	0.002	0.421***	0.312***	0.431***	0.388***	0.608***	0.919***	0.606***	(.85)				
Posaff	3.66	.47	-0.101	0.179**	0.057	0.346***	0.209***	0.398***	0.349***	0.411***	0.440***	0.379***	0.408***	(.77)			
SD	1.54	.23	-0.038	0.057	0.118*	0.114*	0.058	0.141*	0.041	0.179**	0.126*	0.035	0.175**	0.343***	(.72)		
Compax	1.83	.67	0.142*	-0.209***	-0.072	-0.283***	-0.267***	-0.238***	-0.292***	-0.362***	-0.291***	-0.357***	-0.185***	-0.330***	-0.136*	(.76)	
Care	1.31	.52	0.155**	-0.309***	-0.027	-0.082	-0.095	-0.052	-0.279***	-0.185***	-0.158**	-0.258***	-0.049	-0.143**	0.016	0.516***	(.31)

Note: OCB: Organizational Citizenship Behavior; OCBI: OCB towards individuals; OCBO: OCB towards the organization; LMX: Leader-Member Exchange; TMX: Team-Member Exchange; Friend: Friendship; FO: Friendship Opportunities; FP: Friendship Prevalence; Posaff: Positive Affectivity; SD: Social Desirability; Compax: Computer Anxiety; Care: Carelessness. Pearson correlation was used. Grey numbers are non-significant correlations. The numbers on the diagonal in parenthesis represent Cronbach alphas' reliabilities.

[a]Coded 1= *Female, 2= Male*

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

Table 4. *t-test for Equality of Means Between India (N= 119) and USA (N=144)*

	India		USA		
	M	SD	M	SD	*t*-test
FP	3.76	0.78	3.58	1.04	*ns*
FO	3.93	0.76	4.16	0.71	-2.526*
TMX	3.94	0.70	3.98	0.73	*ns*
LMX	3.83	0.85	4.10	0.83	-2.675**
OCB-I	4.24	0.97	4.36	1.09	*ns*
OCB-O	4.47	0.93	4.11	1.21	2.720**

Note: OCBI: OCB towards individuals; OCBO: OCB towards the organization;
LMX: Leader-Member Exchange; TMX: Team-Member Exchange;
FO: Friendship Opportunities; FP: Friendship Prevalence
*p<.05. **p<.01.

Hypothesis 1a

To test hypothesis 1a stating that LMX will be positively related to OCB-O and OCB-I,

with a stronger relationship with the latter, a hierarchical regression analysis was used in order to

control for potential confounding variables. Age, tenure, and gender, were entered in the first

model to control for demographic variables. Social desirability and positive affectivity were

entered in the second model to account for their effect in the analysis. Finally, LMX was entered

in the third model to test the hypothesis. This procedure was done twice for the two dependent

variables OCB-I and OCB-O (see Tables 5 and 6, respectively). LMX was a significant predictor

of OCB-I above and beyond the control variables ($\Delta R^2 = .046$, $F(1,318) = 16.405$, $p < .001$).

Similarly, LMX was also a significant predictor of OCB-O above and beyond the control

variables ($\Delta R^2 = .065$, $F(1,318)= 25.937$, $p < .001$). Because the two regression analyses had

variables with different variances, the same analyses were replicated after standardizing all the

variables. LMX was found to be a higher predictor of OCB-O ($\beta= .28$, $p<.001$) than it was for

OCB-I (β= .25, p<.001). That is, hypothesis 1a was partially supported as LMX was a significant

predictor of both OCB-I and OCB-O, but had a (barely) stronger relation with OCB-O.

Table 5. *Results of Hierarchical Regression Analysis of LMX Predicting OCBI (H1a)*

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
(Intercept)	4.32 ***	0.2		2.99 ***	0.5		2.39 ***	0.51	
Gender	-0.30 **	0.11	-0.15	-0.26 *	0.11	-0.13	-0.15	0.11	-0.07
Age	0.00	0.01	0.02	-0.00	0.01	-0.01	-0.01	0.01	-0.06
Tenure	0.03	0.06	0.03	0.03	0.06	0.04	0.06	0.06	0.06
SD				-0.09	0.25	-0.02	-0.00	0.25	0
Posaff				0.42 ***	0.12	0.2	0.25 *	0.13	0.12
LMX							0.30 ***	0.07	0.25
R^2		0.024			0.061			0.112	
F		2.653*			4.161**			6.675***	
ΔR^2					0.037			0.051	
F Δ					6.292**			18.130***	

Note: OCBO: OCB towards the organization; LMX: Leader-Member Exchange; Posaff: Positive Affectivity;
SD: Social Desirability.
*p<.05. **p<.01. ***p<.001

Table 6. *Results of Hierarchical Regression Analysis of LMX Predicting OCBO (H1a)*

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
(Intercept)	3.79 ***	0.22		0.82	0.52		0.08	0.52	
Gender	-0.22	0.12	-0.10	-0.14	0.11	-0.07	-0.00	0.11	0.00
Age	0.02 *	0.01	0.14	0.01	0.01	0.08	0.00	0.01	0.02
Tenure	0.05	0.06	0.05	0.06	0.06	0.05	0.09	0.06	0.08
SD				-0.00	0.26	0.00	0.10	0.25	0.02
Posaff				0.87 ***	0.13	0.37	0.65 ***	0.13	0.28
LMX							0.37 ***	0.07	0.28
R^2		0.040			0.174			0.236	
F		4.404**			13.423***			16.383***	
ΔR^2					0.134			0.062	
F Δ					25.925***			25.937***	

Note: OCBO: OCB towards the organization; LMX: Leader-Member Exchange; Posaff: Positive Affectivity;
SD: Social Desirability.
*p<.05. **p<.01. ***p<.001

Hypothesis 1b

In order to examine hypothesis H1b stating that TMX will be positively related to OCB-O and OCB-I, with a stronger relationship with the latter, a hierarchical regression analysis was used in order to control for potential confounding variables. The control variables were entered the same way as for hypothesis 1a. This procedure was also done twice for the two dependent variables OCB-I and OCB-O (see Tables 7 and 8, respectively). TMX was a significant predictor of OCB-I above and beyond the control variables (ΔR^2 = .245, F(1,318)= 73.940, p < .001). Similarly, TMX was also a significant predictor of OCB-O above and beyond the control variables (ΔR^2 = .165, F(1,318)= 79.053, p < .001). Following the same process as for the previous hypothesis, the variables were standardized, and the two regressions were run again to compare the two predictive powers. TMX was a higher predictor of OCB-O (β= .46, p<.001) than it was for OCB-I (β= .28, p<.001). That is, hypothesis 1b was partially supported as TMX was a significant predictor of both OCB-I and OCB-O, but had a stronger relation with OCB-O.

Table 7. *Results of Hierarchical Regression Analysis of TMX Predicting OCBI (H1b)*

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
(Intercept)	4.32 ***	0.20		2.99 ***	0.50		1.77 ***	0.48	
Gender	-0.30 **	0.11	-0.15	-0.26 *	0.11	-0.13	-0.13	0.10	-0.06
Age	0.00	0.01	0.02	-0.00	0.01	-0.01	-0.00	0.01	-0.04
Tenure	0.03	0.06	0.03	0.03	0.06	0.04	0.06	0.05	0.06
SD				-0.09	0.25	-0.02	-0.18	0.23	-0.04
Posaff				0.42 ***	0.12	0.20	0.06	0.12	0.03
TMX							0.68 ***	0.08	0.47
R^2		0.024			0.061			0.238	
F		2.653*			4.161**			16.583***	
ΔR^2					0.037			0.177	
F Δ					6.292**			73.940***	

Note: OCBI: OCB towards individuals; TMX: Team-Member Exchange; Posaff: Positive Affectivity;
SD: Social Desirability.
*p<.05. **p<.01. ***p<.001

Table 8. *Results of Hierarchical Regression Analysis of TMX Predicting OCB0 (H1b)*

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
(Intercept)	3.79 ***	0.22		0.82	0.52		-0.48	0.49	
Gender	-0.22	0.12	-0.10	-0.14	0.11	-0.07	0.00	0.10	0.00
Age	0.02 *	0.01	0.14	0.01	0.01	0.08	0.01	0.01	0.05
Tenure	0.05	0.06	0.05	0.06	0.06	0.05	0.08	0.05	0.07
SD				-0.00	0.26	0.00	-0.11	0.23	-0.02
Posaff				0.87 ***	0.13	0.37	0.48 ***	0.12	0.21
TMX							0.72 ***	0.08	0.45
R^2		0.040			0.174			0.338	
F		4.404**			13.423***			27.098***	
ΔR^2					0.134			0.164	
F Δ					25.925***			79.053***	

Note: OCBO: OCB towards the organization; TMX: Team-Member Exchange; Posaff: Positive Affectivity; SD: Social Desirability.
*$p<.05$. **$p<.01$. ***$p<.001$

Hypothesis 2

Hypothesis 2 stated that workplace friendship among coworkers will be positively related to TMX. Looking at the correlations from Table 3, workplace friendship is significantly correlated to TMX ($r= .728$, $p<.001$). However, a hierarchical regression analysis is needed to control for confounding variables. The same control variables as the previous hypotheses were used and were entered in the same order. As seen in Table 9, workplace friendship was a significant predictor of TMX above and beyond the control variables ($\Delta R^2 = .349$, F(1,318)= 245.09, $p < .001$) ; so were its two sub-dimensions ($\Delta R^2 = .369$, $F(2,317)= 138.83$, $p < .001$). Friendship opportunity ($\beta= .49$, $p<.001$) was a stronger predictor of TMX than friendship prevalence ($\beta= .18$, $p<.001$). Hypothesis 2 was supported.

Table 9. *Results of Hierarchical Regression Analysis of Friendship Predicting TMX (H2)*

	Model 1			Model 2			Model 3a			Model 3b		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
(Intercept)	3.86 ***	0.14		1.80 ***	0.32		0.81**	0.25		0.49	0.25	
Gender	-0.25 ***	0.08	-0.19	-0.20 **	0.07	-0.15	-0.07	0.05	-0.05	-0.04	0.05	-0.03
Age	0.01 *	0.00	0.12	0.00	0.00	0.05	0.00	0.00	0.02	-0.00	0.00	-0.02
Tenure	-0.03	0.04	-0.04	-0.03	0.04	-0.05	-0.01	0.03	-0.02	0.00	0.03	0.00
SD				0.14	0.16	0.05	0.19	0.12	0.06	0.27 *	0.12	0.09
Posaff				0.54 ***	0.08	0.37	0.13	0.06	0.09	0.12	0.06	0.08
Friend							0.63***	0.04	0.67			
FO										0.50 ***	0.05	0.53
FP										0.18 ***	0.04	0.24
R^2		0.049			0.197			0.546			0.572	
F		5.560***			15.633***			63.844***			60.480***	
ΔR^2					0.148			0.349			0.375	
F Δ					29.272***			245.090***			138.830***	

Note: Friend: Friendship; FO: Friendship Opportunities; FP: Friendship Prevalence; TMX: Team-Member Exchange; Posaff: Positive Affectivity; SD: Social Desirability.
*$p<.05$. **$p<.01$. ***$p<.001$

Hypothesis 3

Hypothesis 3 stated that LMX will be positively related to workplace friendship between coworkers. Looking at the Table 3, LMX is significantly related to workplace friendship ($r=$ .514, $p<.001$). But as for hypothesis 2, a hierarchical regression analysis is needed to control for confounding variables. Looking at Table 10, LMX is a significant predictor of workplace friendship above and beyond the control variables ($\Delta R^2 = .130$, $F(1,118)= 60.754$, $p < .001$). Hypothesis 3 is supported. It is also interesting to note that positive affectivity was a stronger predictor of workplace friendship ($\beta= .46$, $p<.001$) than was LMX ($\beta= .35$, $p<.001$).

Table 10. *Results of Hierarchical Regression Analysis of LMX Predicting Workplace Friendship (H3)*

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
(Intercept)	3.74 ***	0.15		1.58 ***	0.34		0.89 **	0.32	
Gender	-0.27 ***	0.08	-0.18	-0.21 **	0.07	-0.15	-0.08	0.07	-0.05
Age	0.01 *	0.00	0.13	0.00	0.00	0.05	-0.00	0.00	-0.03
Tenure	-0.04	0.04	-0.05	-0.03	0.04	-0.04	-0.00	0.04	0.00
SD				-0.08	0.17	-0.02	0.02	0.16	0.01
Posaff				0.66 ***	0.08	0.43	0.46 ***	0.08	0.30
LMX							0.35 ***	0.04	0.40
R^2		0.051			0.220			0.345	
F		5.740***			17.974***			27.910***	
ΔR^2					0.169			0.125	
F Δ					34.526***			60.754***	

Note: LMX: Leader-Member Exchange; Posaff: Positive Affectivity; SD: Social Desirability.
*p<.05. **p<.01. ***p<.001

Hypothesis 4

In order to test hypothesis 4 stating that the relationship between workplace friendship and OCB will be mediated by TMX, two methods were used. First, the Baron and Kenny (1986) method was used to test for mediation, and second, the bootstrapping method from Preacher and Hayes (2004) was used to further test for significance of the indirect effect. The first test consisted of regressing the dependent variable (OCB) on the predictor (workplace friendship), while controlling for the same variables as previous hypotheses. The relation between those two was significant (β= .513, t(318)= 7.424, p<.001). The second step was to regress the mediator (TMX) on the predictor (workplace friendship). The relationship was also significant (β= .625, t(318)= 15.655, p<.001). The third and last step is to regress the dependent variable (OCB) on both the mediator (TMX) and the predictor (workplace friendship). This step demonstrated that a full mediation existed as workplace friendship lost its significance (β= .130, t(317)= 1.514, p>.05) when entered with TMX (β= .612, t(317)= 6.731, p<.001. To increase the confidence of

the mediation results, the indirect effect of friendship on OCB was tested using a bootstrap estimation approach with 1000 samples. The results indicated that the indirect effect was significant (β= .381, 95% *CI*= .2616, .5008, *p*<.01), meaning TMX was supported as a mediator between friendship and OCB. Hypothesis 4 was consequently supported.

Hypothesis 5

The last hypothesis proposed that the relationship between LMX and TMX will be mediated by workplace friendship. To test that hypothesis, the same mediation tests from Hypothesis 4 were used, while still controlling for age, gender, and tenure. The first step showed that LXM (predictor) was significantly related to TMX (dependent variable) (β= .374, *t*(318)= 9.164, *p*<.001). The second step indicated that LMX (predictor) was significantly related to workplace friendship (the mediator) (β= .346, *t*(318)= 7.794, *p*<.001). Finally, when regressing TMX on both workplace friendship and LMX, workplace friendship was significant (β= .538, *t*(317)= 12.839, *p*<.001), but LMX was still significant (β= .188, *t*(317)= 5.194, *p*<.001), which meant that there was no full mediation. However, because the beta estimate of LMX on TMX decreased when entering workplace friendship, it is possible that a partial mediation existed. As for the significance of the mediation tested using the bootstrapping method with 1000 samples, the indirect effect was significant (β= .185, 95% *CI*= .133, .237, *p*<.05). Therefore, hypothesis 5 is supported, though there may be both a direct and indirect effect of LMX on TMX.

Chapter 4: Discussion

Interpretations and Implications

The purpose of this study was to investigate how different kinds of employee social behaviors (i.e., workplace friendship, LMX, and TXM) interact with each other, but also how those behaviors—both directly and indirectly—affect a company's organizational citizenship behavior. This study attempted to add evidence around the importance of relationship quality among employees and between employees and supervisors. The findings were promising as all the hypotheses were supported to some extent. Figure 3 below illustrates all the findings of this study through an overall model grouping all the hypotheses results.
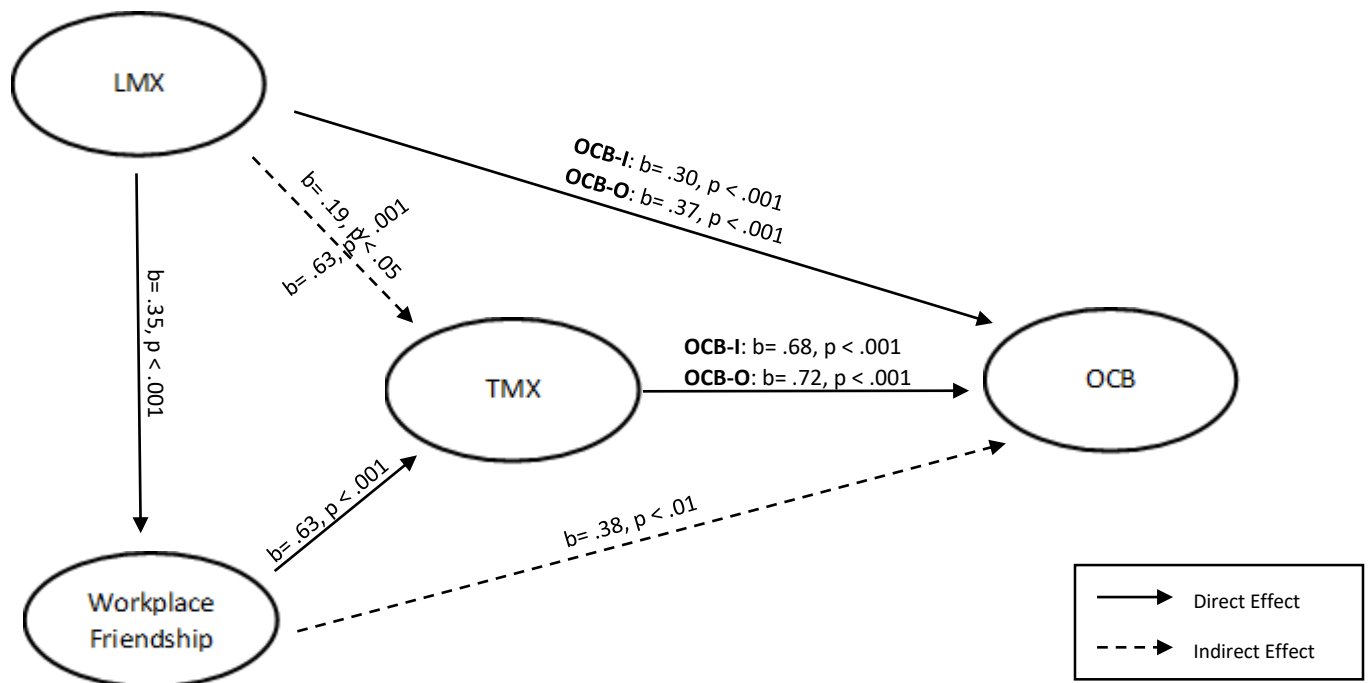

Figure 3. Summary model.

The first part of hypothesis 1 confirmed that LMX predicted OCB, but unlike the findings from Ilies et al. (2007) and Yang et al. (2015), LMX had a slightly stronger effect on OCB-O

than on OCB-I. One explanation for that difference might be that employees from this sample were higher on personal traits such as conscientiousness or satisfaction from organizational rewards (e.g. promotion or pay) than they were on interpersonal traits such as agreeableness or satisfaction with coworkers; which would make them more likely to put the organization before their coworkers. Another explanation can be that the organization is represented by the leaders, and in the case of a social exchange between a leader and an employee, the employee's attention will be more focused toward the leader (that is, the organization) than towards other employees. The results suggest that supervisors' relation with their employees will have a greater impact in organizations in which conscientiousness, civic virtue and sportsmanship (i.e. OCB-O) are important for organizational effectiveness. By having a good relationship with employees, those could become more responsible toward the needs of the organization. Because OCB-I was also found to be significantly predicted by LMX, this supervisor-employee relation is also important in organizations where helping behaviors and courtesy are also central for organizational effectiveness. Employees having a good relationship with their supervisors would be more willing to get involved in extra efforts to help their peers.

Hypothesis 1B indicated that TMX predicted both OCB-I and OCB-O, with a stronger effect on OCB-O. Again, this differed from previous findings (e.g., Love & Forret, 2008; Dar & Yunus, 2015) that revealed a stronger relationship with OCB-I. As explained earlier, this difference can be explained through intrapersonal traits being higher than interpersonal traits. Another possibility is that organizations might give more opportunities for employees to be involved in OCB-O than OCB-I. Indeed, a lot of organizations use incentives such as rewards (e.g. promotion, bonus, etc.) to get their employees involved, which can create competition instead of cohesion between employees; thus discouraging employees to get engaged in OCB-I

behaviors. The present results indicate that through positive interaction with their peers, employees will be more willing to go the extra mile for their organization. As mentioned earlier, there was a difference in OCB-O scores between Indians and Americans, with the latter having lower scores. It is possible that collectivistic countries, such as India, are more loyal to their organization, thus are more willing to get involved in OCB-O. This could suggest that cultural differences in the population might also be the reason why in both hypothesis 1a and 1b, LMX and TMX were found to be stronger of OCB-O than OCB-I, contrary to what was expected based on previous researches' findings.

Next, it was found that workplace friendship was significantly related TMX, which is consistent with Morrison (2004). In addition, this study found that friendship opportunity was more related to TMX than was friendship prevalence. This finding support the theoretical argument that friendship prevalence measures actual friendship in an organization whereas friendship opportunity measures the possibility of making friends (thus, it includes both employees who made friends and those who did not but had the opportunity to do so). In other words, there might be employees who have good TMX relationship with their team but have not made any friends despite the opportunity to do so. The fact that workplace friendship was found to predict TMX indicates that employees who create bonds with their peers are more likely to have high quality exchanges with their peers.

In the third hypothesis, LMX was found to predict workplace friendship, which support the findings from Mueller and Lee (2002) and Tse et al. (2008). LMX can be considered as a facilitator of relationships between employees. Indeed, a supervisor that is supportive and dedicated to his/her employees will be more likely to facilitate the formation of friendship between employees, as those employees would feel more comfortable doing so. On the other

hand, an employee who has a poor relationship with a supervisor might attribute that negative

feeling to the organization's climate, which would also discourage that employee from forming

relations with his/her peers. Tse et al. (2008) also mentioned affective climate as a moderator of

this relation, saying that "in a team where there was a strong positive affective climate,

individuals experiencing high-quality LMX relationships were more likely to develop friendship

at work" (p. 14). This could suggest why positive affectivity was also found to be a strong

predictor of workplace friendship. An employee with high positive affect is more likely to form

friendship at work than an employee with negative affect.

Because of the relation between workplace friendship and TMX, and between TMX and

OCB, it was theorized that TXM would mediate the relationship between workplace friendship

and OCB. The results supported that hypothesis, suggesting that employees who create

friendship at work will be more likely to engage in high quality exchanges with their peers,

which in turn will make them engage in extra-role behaviors towards other employees and

towards the organization. This can be explained as employees who have the opportunity to

develop friendship will be more likely to experience positive relationships with other employees,

which would make the organization appear supportive, and which in turn would motivate

employees to "give back" to the organization.

The last hypothesis involved workplace friendship as a mediator of the relation between

LMX and TMX. While Tse et al. (2008) found that relation to be fully mediated by workplace

friendship, the result of this study only showed a partial mediation. This indicates that while

workplace friendship affects the relationship between LMX and TMX, there is also a direct

effect of LMX on TMX. This means that LMX quality between a supervisor and an employee

can impact the development of TMX by facilitating the creation of workplace friendship between

that employee and one or more coworkers. However, the partial mediation indicates that high

LMX relationship quality between supervisors and employees can lead to better TMX

relationship quality between employees, without developing workplace friendship.

Limitations

This study had several key limitations. First, the correlation table showed a very high

relation between TMX and workplace friendship, which could be an indicator that both measures

are tapping the same construct (i.e., the quality of relationships among employees). Having a

high correlation between those two variables creates collinearity when analyzed together. Taking

hypothesis 4 as an example, if the independent variable (workplace friendship) explains most of

the variation caused by the mediator variable (TMX), then there will not be any unique variation

that would explain the dependent variable (OCB). This explains why workplace friendship lost

its significance when entered with TMX to predict OCB in the third step of this hypothesis; if

TMX explains the variation in OCB, then workplace friendship will not have much left to

explain because most of the variance it explains in OCB is already explained by TMX.

A second limitation might involve the difference in culture. For instance, it is known that

western countries are more individualistic while eastern countries are more collectivistic.

Because the study explored relationships between people, the cultural difference between

participants might actually affect the results. As reported, people from India and the USA had

different scores in OCB-O, friendship opportunity, and LMX. The results of that study found that

LMX predicted workplace friendship and LMX predicted OCB-O when considering all

participants; but the difference in scores suggests the possibility that those predictions might be

different when considering Indian participants and American participants separately.

Third, computer anxiety was used as a latent variable for discriminant validity to check for common method bias. Computer anxiety was supposed to be uncorrelated with other variables, but it was significantly negatively correlated with all the variables. While this may suggest that there is a common method bias, it may also be explained due to the fact that the survey was taken using a computer by employees who desired to get paid through taking computer-based surveys. For example, people with high computer anxiety might be less likely to do this kind of activity on a computer. Another possibility is that computer anxiety is really negatively correlated with all the variables because it is linked to general anxiety. Somebody who is suffering from anxiety might not only be anxious to use a computer, but might be anxious in any situation. That is, having computer anxiety representing general anxiety, it makes sense to find it negatively correlated with all the "positive" variables; anxiety is not going to drive somebody to engage in TMX or LMX relations, nor will it encourage somebody to get involved in organizational citizenship behaviors.

Fourth, the main issue with Baron and Kenny (1986) and Preacher and Hayes (2004) mediation tests is directionality. Without manipulation, it is not possible to know which variable causes the others. For example, when hypothesized that LMX would lead to workplace friendship, which would then affect TMX relation, it could be possible that the TMX relationship happened first, which then created friendship in the workplace before employees actually started to have a good LMX with their supervisors. The mediation effect could also be the result of another third variable, independent from the proposed mediators.

Future Directions

This study provided support for previous findings while also exposing different results from what was hypothesized. That is, some recommendations should be taken into account for

future studies. Because this study was done across different cultures, it would be interesting to replicate those analyses separately for each culture in order to see if the results can be generalized. Another important limitation was around the strong relation between friendship and TMX. A review of both scales should be done, along with manipulations to better differentiate those two constructs.

A recommendation to avoid common method bias would be to obtain certain measures from another source; in this case, obtaining LMX ratings from supervisors while getting TMX ratings from employees could add credibility to the findings. Also, future research should consider using a latent variable different than computer anxiety when looking for common method bias, as it is unclear if the negative correlations found in this study are true relations or if they are the result of common method bias.

Finally, to overcome the directionality limitation in the mediation analyses, future research should focus on adopting experimental and longitudinal designs to bring more support for the causal direction of the two mediations. A longitudinal design would involve taking data at different times in order to show that, for instance, the independent variable (e.g., workplace friendship) precedes the mediator (e.g., TMX), which precedes the dependent variable (e.g., OCB). By doing so, it would provide evidence of a directional relationship between the variables.

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Appendix A

Organizational Citizenship Behavior Scale Items (Lee & Allen, 2002)

indicate on a 7-point scale (1 = never, 7 = always) how often do you perform each

of these behaviors.

1 – Never

2 – Rarely, in less than 10% of the chances when I could have

3 – Occasionally, in about 30% of the chances when I could have

4 – Sometimes, in about 50% of the chances when I could have

5 – Frequently, in about 70% of the chances when I could have

6 – Usually, in about 90% of the chances I could have.

7 – Always

OCB-I Items

1. Help others who have been absent.

2. Willingly give your time to help others who have work-related problems.

3. Adjust your work schedule to accommodate other employees' requests for time off.

4. Go out of the way to make newer employees feel welcome in the work group.

5. Show genuine concern and courtesy toward coworkers, even under the most trying business or

personal situations.

6. Give up time to help others who have work or non-work problems.

7. Assist others with their duties.

8. Share personal property with others to help their work.

OCB-O Items

1. Attend functions that are not required but that help the organizational image.

2. Keep up with developments in the organization.

3. Defend the organization when other employees criticize it.

4. Show pride when representing the organization in public.

5. Offer ideas to improve the functioning of the organization.

6. Express loyalty toward the organization.

7. Take action to protect the organization from potential problems.

8. Demonstrate concern about the image of the organization.

Appendix B

Leader-Member Exchange scale items (Graen et al., 2006)

For each of the ten sentences, indicate on a 5-point scale (1= strongly disagree, 5= strongly

agree) the extent to which you agree with those statements.

1 – Strongly disagree

2 – Somewhat Disagree

3 – Neither agree or disagree

4 – Somewhat Agree

5 – Strongly agree

1. My direct supervisor is satisfied with my work.

2. My direct supervisor will repay a favor.

3. My direct supervisor would help me with my job problems.

4. My direct supervisor will return my help.

5. My direct supervisor has confidence in my ideas.

6. My direct supervisor and I have a mutually helpful relationship.

7. My direct supervisor has trust that I would carry my workload.

8. My direct supervisor is one of my leaders.

9. My direct supervisor has respect for my capabilities.

10. I have an excellent working relationship with my direct supervisor.

Appendix C

Team-Member Exchange Scale Items (Seers, 1989)

Please indicate on a 5-point scale (1= Untrue, 5= True) how those statements reflect who you are:

1 – Definitely false

2 – Probably false

3 – Neither true nor false

4 – Probably true

5 – Definitely true

1. I often make suggestions about better work methods to other team members.

2. Other members of my team usually let me know when I do something that make their job easier.

3. I often let other team members know when they have done something that makes my job easier

4. My team members often recognize my potential.

5. My team members understand my problems and needs.

6. I am flexible about switching job responsibilities to make things easier for other team members.

7. In busy situations, other team members often ask me to help out.

8. In busy situations, I often volunteer my efforts to help others on my team.

9. I am willing to help finish work that has been assigned to others.

10. Other team members are willing to help finish work that was assigned to me.

Appendix D

Workplace Friendship Scale (Nielsen et al., 2000)

For each of these sentences, indicate on a 5-point scale (1= strongly disagree, 5= strongly agree)

the extent to which you agree with those statements.

1 – Strongly disagree

2 – Somewhat Disagree

3 – Neither agree or disagree

4 – Somewhat agree

5 – Strongly agree

Friendship opportunity

1. I have the opportunity to get to know my co workers

2. I am able to work with my coworkers to collectively solve problems

3. In my organization I have the opportunity to talk informally and visit with others

4. Communication among employees is encouraged by my organization

5. I have the opportunity to develop close friendships at my workplace

6. Informal talk is tolerated by my organization as long as the work is completed

Friendship Prevalence

7. I have formed strong friendships at work

8. I socialize with coworkers outside the workplace

9. I can confide in people at work

10. I feel I can trust many coworkers a great deal

11. Being able to see my coworkers is one reason I look forward to my job

12. I do not feel that anyone I work with is a true friend (R)

Appendix E

The International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) (Thompson,

2007)

Thinking about yourself and how you normally feel, indicate on a 5-point scale (1= Never, 5=

Always) to what extent do you generally feel:

1- Never

2- Rarely

3- Sometimes

4- Frequently

5- Always

Negative trait affect

Upset

Hostile

Ashamed

Nervous

Afraid

Positive trait affect

Inspired

Alert

Determined

Attentive

Active

Appendix F

Short Form of the Marlowe-Crowne Social Desirability Scale (Ballard, 1992)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you.

1. I sometimes feel resentful when I don't get my own way. (R)

2. On a few occasions, I have given up doing something because I thought too little of my ability. (R)

3. There have been times when I felt like rebelling against people in authority even though I knew they were right. (R)

4. No matter who I'm talking to, I'm always a good listener.

5. I can remember "playing sick" to get out of something. (R)

6. There have been occasions when I took advantage of someone. (R)

7. I'm always willing to admit it when I make a mistake.

8. I sometimes try to get even, rather than forgive and forget. (R)

9. I am always courteous, even to people who are disagreeable.

10. I have never been irked when people expressed ideas very different from my own.

11. There have been times when I was quite jealous of the good fortune of others. (R)

12. I am sometimes irritated by people who ask favors of me. (R)

13. I have never deliberately said something that hurt someone's feelings.

Appendix G

Computer Anxiety Scale (Heinssen Jr et al., 1987)

Use the following scale to respond to the following items. All responses will be kept strictly confidential and will be combined with all others filling out the scale, so please take time to consider how you feel about each item and answer honestly.

1 – Strongly disagree

2 – Disagree

3 – Neither agree or disagree

4 – Agree

5 – Strongly agree

1. I hesitate to use a computer for fear of making mistakes that I cannot correct.

2. The challenge of learning about computers is exciting.

3. I feel apprehensive about using computers.

4. I am confident that I can learn computer skills.

5. I look forward to using a computer on my job.

6. I have avoided computers because they are unfamiliar and somewhat intimidating.

7. I feel insecure about my ability to interpret a computer printout.

8. It scares me to think that I could cause the computer to destroy a large amount of information by hitting the wrong key.

Appendix H

Carelessness

Please rate each items on the extent to which you agree with the sentence using the following scale:

1 – Strongly disagree

2 – Disagree

3 – Neither agree or disagree

4 – Agree

5 – Strongly agree

1. I sleep less than one hour per night

2. I have never brushed my teeth

3. I have been to every country in the world