ABSTRACT

The paper develops a theoretical model that focuses on the integrated effect of organizational factors on knowledge sharing, taking the moderating effect of training and development. The proposed hypotheses were tested with structural equations modeling using self-reports of 200 personnel working in Bangladesh-based MNCs. The organizational factors such as respect for people, job stability, aggressiveness, transformational leadership, transactional leadership, and decentralization have a direct influence on knowledge sharing. The substantial effect of training and development was not evident in moderating the relationship between organizational factors and knowledge sharing. However, this study reveals that training and development moderates only the relationship between team orientation and knowledge sharing. The findings broaden the understanding of the impact of organizational culture, leadership, training and development, and knowledge sharing. This study helps managers to formulate strategies and provide new knowledge to researchers to look further into this field.

KEYWORDS

Bangladesh, Job Stability, Knowledge Sharing, Leadership, MNCs, Organizational Culture, Service Sector, Training and Development

1. INTRODUCTION

Today’s competitive environment upholds knowledge as a vital resource for an organization. Accordingly, knowledge management has become one of the major research areas for more than the past two decades. In particular, knowledge sharing has received much attention as it ensures the flow of knowledge among and between individuals, groups and organizations (Bock and Kim, 2002; Zhang and Jasimuddin, 2008; Hasnain et al., 2016). Moreover, it improves organizational learning capacity and creates new knowledge, which in turn enhances the competitive advantage of an organization. The existing literature (e.g., Cummings, 2004; Lin, 2007; Jones and Price, 2004; Jasimuddin et al., 2019; Nakshabandi and Jasimuddin, 2018) showed that knowledge sharing has an impact on production costs, completion time of new product development, team performance, firm innovation capabilities, sales growth and revenue from new products and services and so on. However, despite
its positive implications, knowledge sharing in an organization is not an easy task (Welschen et al.,
2012). Employees are generally reluctant to share their knowledge.

Scholars have identified organizational and individual factors that may affect knowledge sharing,
for example, organizational culture, norms and values (Argote and Ingram, 2000; McKinnon et
al., 2003); organizational structure (Nonaka and Takeuchi, 1996); rewards, organizational justice,
personality and trust (Lin, 2007; Gagné, 2009; Matzler et al., 2011; Schwaer et al., 2012; Jasimuddin,
2008); management support (Connelly and Kelloway, 2003); senior manager’s attitude (Lin and
Lee, 2004); human resource management practices (Cabrera et al., 2006), demographic variables
(Constant et al., 1994) and attitudes toward knowledge sharing (Bock and Kim, 2002). However,
most specifically, organizational culture and organizational leadership are treated as critical success
factors for knowledge sharing. Kazi (2005) stated that a knowledge-supporting culture is one of the
most important conditions to ensure efficient knowledge flow among organizational members. Several
theoretical and empirical contributions have established that leadership also plays a significant role
in knowledge management processes, such as sharing, creation and capture (Bryant, 2003; Srivastava
et al., 2006; Lakshman, 2007).

Therefore, this study intends to identify the relevant dimensions of each organizational factor,
incorporate them into one theoretical framework and investigate their integrated effect on knowledge
sharing in the context of service-focused MNCs based in Bangladesh. Moreover, the literature suggests
that training & development could be used as a tool in the knowledge sharing process (Cardoso et al.,
2012). It is argued that training makes employees feel confident about their skills and knowledge, and
makes them comfortable to share their knowledge with colleagues (Cabrera et al., 2006). Therefore,
the moderating effect of training & development on the relationships between organizational factors
and knowledge sharing is also examined to obtain a broader understanding. This study focuses on the
service sector in Bangladesh, where service companies contribute nearly fifty percent to the overall
Gross Domestic Product (GDP) (Ministry of Finance, 2017). Furthermore, adopting various policies
for economic liberalization, reforms and privatizations has made Bangladesh an attractive place
for many MNCs (Abdullah et al., 2011). Since MNCs are entering Bangladesh rapidly, they must
utilize their knowledge resources efficiently to remain competitive in an emerging market. Though
knowledge management studies are available on MNCs, there is a gap in the literature about MNCs’
knowledge sharing in a developing country like Bangladesh (Islam et al. 2015; Aulakh et al., 2016).
The empirical evidence of this study would help service sector managers from MNCs to create a
knowledge-sharing environment to sustain in this emerging economy.

The paper is structured as follows. In the first section, the concepts of organizational factors
(culture and leadership), training & development, and knowledge sharing are defined, and hypotheses
are proposed on the theoretical relationships between these constructs. In the second section, the
methodology is described with data collection, sample, and measurement. Then the results are
presented and discussed in the next two subsequent sections, followed by its theoretical and managerial
contributions. The paper concludes by highlighting its limitations and suggestions for further research.

2. LITERATURE REVIEW

This section reviews the relevant literature to test a research model for this study. Based on the extant
literature, this study examines the relationship between organizational factors (culture and leadership)
and knowledge sharing and also investigates the moderating effect of training & development on
the relationship between organizational factors and knowledge sharing. This study developed nine
hypotheses regarding these concepts, which are discussed below.

2.1 Knowledge Sharing

Knowledge sharing among employees in an organization is widely regarded as a key component in
business (Jasimuddin et al., 2012). Knowledge sharing can be defined as “the act of placing knowledge
possessed by an individual at the disposition of others within the organization” (Camelo-Ordaz et al., 2011). In other words, it is an act of transmitting knowledge among employees so that they can take purposeful actions and involve in innovation (Islam et al., 2015; Jasimuddin, 2006). Lin (2007) defines knowledge sharing as individuals’ exchanging knowledge, experiences, and skills within organizations. In the literature, knowledge sharing is often confused with knowledge transfer. According to Tangaraja et al. (2016), knowledge transferring is a broader concept as compared to knowledge sharing and knowledge sharing itself is one of the processes involved in knowledge transfer.

It is evident from the previous literature that knowledge sharing is linked with numerous positive outcomes such as organizational innovation capability (Jasimuddin and Nakshabandi, 2019; Yeşil and Dereli, 2013; Jasimuddin et al., 2015), improved productivity (Noaman and Fouad, 2014; Zhang and Jasimuddin, 2015), core capability (Gold et al., 2001; Zhang and Jasimuddin, 2008), organizational effectiveness (Yang, 2007; Jasimuddin and Zhang, 2011) and competitive advantage (Grant, 1996; Jasimuddin et al., 2005; Islam et al., 2017; Jasimuddin, 2014). According to Styhre (2002), the organizational value of individual knowledge increases when it is shared. Because of its vast significance, organizations are constantly trying to enhance knowledge sharing among employees so that they can rip the benefits from knowledge resources. Therefore, organizational managers are trying to find factors that play a positive role in enhancing knowledge sharing. Several organizational factors are assumed to have a great influence on knowledge sharing. Organizational culture and leadership as the influencing factors on knowledge sharing are discussed in turn.

2.2 Organizational Culture

Organizational culture represents the value system of an organization and will develop employees’ behavior norms. It is generally seen as a set of key values, assumptions, understandings, and norms that are shared by organizational employees and taught to new members as right (Daft, 2005). Organizational culture guides the behavior of its member and shapes decision-making (Haberberg and Rieple, 2008; Jasimuddin & Zhang, 2014; Saci et al., 2021).

Scholars have assessed organizational cultures through many dimensions. According to Wallach (1983), an organization’s culture can be a combination of three categories – bureaucratic, innovative or supportive. On the other hand, O’Reilly et al. (1991) analyzed several cultural values into seven dimensions - respect for people, team orientation, innovation, job stability, aggressiveness, attention to detail, and outcome orientation. Several studies (e.g., McKinnon et al., 2003; Chang and Lin, 2015; Islam et al., 2015) revealed various dimensions of organizational culture that influence knowledge sharing.

A study by McKinnon et al. (2003) showed that innovation, respect for people, job stability, team orientation and aggressiveness had associations with knowledge sharing, conducting a study in a collectivist society. Since this study is also conducted in a similar cultural context, it is assumed that the dimensions developed originally by O’Reilly et al. (1991) would be appropriate for this study as well. Therefore, the following hypotheses were formulated:

H1a: Respect for people positively influences knowledge sharing.
H1b: Team orientation positively influences knowledge sharing.
H1c: Innovation positively influences knowledge sharing.
H1d: Job stability positively influences knowledge sharing.
H1e: Aggressiveness positively influences knowledge sharing.

2.3 Organizational Leadership

Leadership is the process of influencing others to understand and agree about the shared objectives and the process of facilitating to accomplish that objective (Yukl, 2010). A study by Cavaliere et al. (2015) showed that leadership style has a significant influence on knowledge sharing. Several other
scholars (i.e., Bryant, 2003; Srivastava et al., 2006; Lakshman, 2007) emphasize that leadership plays a significant role in knowledge processes, such as sharing, creation, and capture. Recent studies on leadership styles over the last several years mostly focus on transformational-transactional styles (Bass et al., 2003). Theories of transformational leadership emphasize emotions, values, and creativity in employees. The transformational leadership style develops a collective sense and makes employees overcome their personal interests. Transformational leaders encourage employees through emotional appeal and by creating a compelling vision (Jackson et al., 2013). At the same time, they are sensitive and pay attention to the needs of individual employees. Transformational leadership encourages employees to feel empowered, which improves employees’ engagement (Aguinis and Kraiger, 2009). Various studies have linked transformational leadership with knowledge sharing in the past. The study of Xue et al. (2011) revealed that empowering leaders enhance knowledge sharing among their employees. Similarly, Han et al. (2016) also revealed that transformational leadership has an influence on knowledge sharing.

On the other hand, transactional leadership is the transaction or exchange that takes place among leaders, colleagues, and followers. To fulfill each other’s requirements, transactional leaders exchange things of value with followers (Ivey and Kline, 2010). Followers accomplish the leader’s requirement for rewards or praise or just to avoid punishment for nonperformance or falling short of goal achievement (Bass et al., 2003). It is to be noted that transactional leaders neglect employees’ personal development (Northouse, 2007). Instead, this type of leader is more concerned with achieving goals for the organization. Therefore, this leadership style could demotivate employees to share knowledge. However, several studies have argued that the expectation of rewards could influence knowledge sharing in the organization. In their research, Hussain et al. (2017) and Masa’deh et al. (2016) have found a positive influence of transactional leadership on knowledge sharing. Thus this study hypothesizes:

H2a: Transformational leadership positively influences knowledge sharing.
H2b: Transactional leadership positively influences knowledge sharing.

2.4 Training & Development

Training refers to a continuous development tool that increases employees’ knowledge and skills required to accomplish a task and improve job performance (Wong, 2005; Gloet, 2006). Noe et al. (2008) described training as a planned effort to assist organizational employees in learning job-related competencies that are vital for an individual’s job performance. On the other hand, development involves formal education, increasing job experiences, personality and abilities that prepare employees for future job performance (Noe et al., 2008). Training is important in the context of knowledge sharing as employees learn the value of knowledge and the way to exchange information and ideas through formal training sessions or informal interactions between two or more individuals (Ipe, 2003).

Research about culture and training & development shows that training & development substantially impacts organizational culture. Training & development have been one of the most cost-effective ways to change a corporate culture (Zenger, 1996). It changes culture by changing the norms, values and certain structures within the organization in an easy manner (Schraeder et al., 2005). Kissack and Callahan (2010) mentioned that organizational culture and training & development programs are inextricably linked, where both of them shape, influence, and redefine each other. A substantial body of research also indicates a positive impact of training on leadership across a wide variety of settings, industries and outcomes. Studies that focused on transformational leadership training demonstrated that such training could increase not only employees’ perception of leaders’ transformational leadership but also their attitudes and behaviors (Fitzgerald and Schutte, 2010; Brown and May, 2012). However, most of the studies focus on the effect of training & development
on transformational leadership. This study assumes that training & development may also create a positive impact on transactional leadership. Therefore the following hypotheses are posited:

H3a: Training & development moderates the relationship between respect for people and knowledge sharing
H3b: Training & development moderates the relationship between team orientation and knowledge sharing
H3c: Training & development moderates the relationship between innovation and knowledge sharing
H3d: Training & development moderates the relationship between job stability and knowledge sharing
H3e: Training & development moderates the relationship between aggressiveness and knowledge sharing
H3f: Training & development moderates the relationship between transformational leadership and knowledge sharing
H3g: Training & development moderates the relationship between transactional leadership and knowledge sharing

Based on the literature review, a modest attempt is made to design a model by considering seven independent variables (i.e., respect for people, team orientation, innovation, job stability, aggressiveness, transformational leadership and transactional leadership), one moderating variable (i.e., training & development) and a dependent variable (i.e., knowledge sharing). Figure 1 presents the proposed model showing the directions of influence. Overall, the study offers an empirical test for nine hypotheses developed based on the reasoning discussed in the above accounts.
3. METHOD

3.1 Procedures

Structural equation modeling (SEM) using the partial least squares (PLS) path modeling method is used in this study to test the relationships between the constructs (e.g., organizational culture, leadership, training & development, and knowledge sharing). This approach, using SmartPLS 3 software, is employed to test the research model and hypotheses. SEM is capable of handling simultaneity, where the conceptual network of relationships provides meaning to embedded measures and determines the predictive power of the model. Most specifically, this study employs PLS-SEM approach to the path coefficients, i.e., direct and indirect effects between latent variables, and determine the predictive power of the model (Almuraqab et al., 2021; Jasimuddin et al., 2015). PLS-SEM is more suitable for examining the structural relationship with complex variables than the covariance-based SEM approach or traditional regression (Hair et al., 2017). Moreover, the PLS approach is able to accommodate small-sized samples (Hair et al., 2017).

3.2 Data Collection & Sampling

The data were collected mainly from the service-focused MNCs based in Bangladesh. Total 417 questionnaires were distributed and 217 were returned. Finally, 200 valid responses were usable, with an effective response rate of 47.9%. This study sought to choose respondents who have enough knowledge about the organizational culture, leadership, training & development, and knowledge sharing in his/her organization. The questionnaires with a cover letter explaining the objective of this research were distributed. A self-addressed postage-paid envelope was included in the package.

3.3. Operationalization of Constructs

Previous studies were reviewed to identify scales that were used and validated. Knowledge sharing and training & development constructs were operationalized and measured based on the study of Van den Hooff and Huysman (2009) and Fong et al. (2011). Items for transformational and transactional leadership were borrowed from Lo et al. (2010). Respect for people, team orientation, job stability and aggressiveness were measured using items developed by O'Reilly et al. (1991). All the variables were treated as first-order reflective constructs and consistent with the studies mentioned above.

3.4 Sample Characteristics

As shown in Table 1, the majority of the organizations in the sample represent financial service organizations (55.0%), while there are only 73 (36.5%) telecommunication service providers with 17 (8.5%) other service firms. Of the total 200 respondents, 123 (61.5%) are male, and 77 (38.5%) are female. Employees are mainly educated at the master's (88.0%) and the remaining are bachelor's level (12.0%). The participation of employees holding different positions is quite similar for mid-level (46.0%) and lower level (48.0%); however, employees at the top level constitute only 6%. Employee tenure in the three main categories shows 44.0% (less than 5 years), 33.0% (5-10 years), and 23.0% (more than 10 years). Sample characteristics also show that nearly all the organizations (82.0%) have 400 employees and above.
3.4 Data Preparation and Common Method Variance

Initial screening was followed to identify usable questionnaires and a total of 200 questionnaires were found complete. Five respondents were identified as outliers by calculating the distance of each observation from the mean center using Mahalanobis $D^2$ measure (Kline, 2016). Outliers were not removed due to the negligible impact on the model revealed through trial analysis (Hair et al., 2017). Common method bias issue has been addressed through procedural and statistical remedies (Williams et al., 2010). Procedural remedies involved identifying factors that may contribute to response error and taking corrective action. Construct validity, factor structure, nomological relationships were checked (Messick 1989), items of different constructs were examined for possible overlap (Brannick et al., 2010). Harman’s one factor test did not pose any common method bias issues as all the items as a single factor did not explain the majority of the variance (Lederer et al., 2000). Moreover, skewness and kurtosis did not show any major issues as they were all within the acceptable range ($\pm 1$) (Kline 2016).

Table 1. Sample Characteristics

<table>
<thead>
<tr>
<th>Frequency (s) Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Position</td>
</tr>
<tr>
<td>Top level</td>
</tr>
<tr>
<td>Mid level</td>
</tr>
<tr>
<td>Lower level</td>
</tr>
<tr>
<td>Tenure</td>
</tr>
<tr>
<td>Less than 5 years</td>
</tr>
<tr>
<td>5-10 years</td>
</tr>
<tr>
<td>More than 10 years</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Masters</td>
</tr>
<tr>
<td>Bachelors</td>
</tr>
<tr>
<td>Organization type</td>
</tr>
<tr>
<td>Financial service</td>
</tr>
<tr>
<td>Telecommunication and IT</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td>Number of employees</td>
</tr>
<tr>
<td>Less than 400</td>
</tr>
<tr>
<td>400 and above</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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**Note:** Table 1 provides a summary of the sample characteristics, including gender, position, tenure, education, organization type, and number of employees. Each category is represented with the frequency and percentage, ensuring a clear understanding of the data distribution and sample composition.
3.5 Measurement Equivalence
To ensure reliable group comparison, MICOM (Measurement invariance of the composite model) procedure was followed to establish configural, and compositional variance. Equal mean value variance was not established because establishing configural and compositional invariance fulfills a partial requirement for comparing path coefficients of the structural model between two groups (Hair et al., 2017). Hence, measurement invariance results were obtained following two instead of a three-step MICOM procedure (Henseler et al., 2016).

4. RESULTS

4.1 Measurement Model
All reflectively measured constructs in the measurement model show convergent validity. Cronbach’s alpha reliability estimates were used to measure the internal consistency of these multivariate scales (Nunnally, 1978; Abdou and Jasimuddin, 2020). Table 2 shows outer loadings > 0.80 and Average variance extracted (AVE) values above the threshold of >0.50. However, outer loadings for all the items regarding the innovation construct were less than 0.70. Hence, this variable was excluded from the analysis. Internal consistent reliability is also reflected through composite reliability (> 0.85) and Cronbach’s α (>0.85).

4.2 Structural Model
Before assessing the structural model, a multicollinearity check was performed. Each set of predictor constructs was evaluated separately for each subpart of the structural model using SPSS software (version 24) and no multicollinearity issues were identified - VIF < 5.00 and tolerance levels > 0.20. The hypothesized relationship between constructs, size of the path coefficients and significance levels were assessed using the PLS-SEM algorithm by employing a bootstrapping option on 5000 resamples (Hair et al., 2017).

Table 2. Construct validity and reliability

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Outer loading</th>
<th>AVE</th>
<th>Composite reliability (CR)</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Sharing</td>
<td>KNS_1</td>
<td>0.894</td>
<td>0.794</td>
<td>0.921</td>
<td>0.870</td>
</tr>
<tr>
<td></td>
<td>KNS_2</td>
<td>0.925</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KNS_3</td>
<td>0.853</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respect for people</td>
<td>RESP_1</td>
<td>0.862</td>
<td>0.730</td>
<td>0.890</td>
<td>0.816</td>
</tr>
</tbody>
</table>

Table 2 continued on next page
Table 2 continued

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Outer loading</th>
<th>AVE</th>
<th>Composite reliability (CR)</th>
<th>Cronbach's alpha</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>RESP_2</td>
<td>0.838</td>
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<td></td>
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<tr>
<td></td>
<td>RESP_3</td>
<td>0.864</td>
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<td></td>
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<tr>
<td>Team Orientation</td>
<td>TEAM_1</td>
<td>0.882</td>
<td>0.773</td>
<td>0.911</td>
<td>0.854</td>
</tr>
<tr>
<td></td>
<td>TEAM_2</td>
<td>0.868</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>TEAM_3</td>
<td>0.888</td>
<td></td>
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<tr>
<td>Job stability</td>
<td>STAB_1</td>
<td>0.911</td>
<td>0.845</td>
<td>0.942</td>
<td>0.908</td>
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<td></td>
<td>STAB_2</td>
<td>0.929</td>
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<td></td>
<td>STAB_3</td>
<td>0.917</td>
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<tr>
<td>Aggressiveness</td>
<td>AGGR_1</td>
<td>0.881</td>
<td>0.849</td>
<td>0.944</td>
<td>0.911</td>
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<tr>
<td></td>
<td>AGGR_2</td>
<td>0.948</td>
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<td></td>
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<tr>
<td></td>
<td>AGGR_3</td>
<td>0.934</td>
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<tr>
<td>Transformational Leadership</td>
<td>TFL_1</td>
<td>0.847</td>
<td>0.711</td>
<td>0.945</td>
<td>0.933</td>
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<td></td>
<td>TFL_2</td>
<td>0.816</td>
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<tr>
<td></td>
<td>TFL_3</td>
<td>0.851</td>
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<td></td>
<td>TFL_4</td>
<td>0.842</td>
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<td></td>
<td>TFL_5</td>
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<td></td>
<td>TFL_6</td>
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<td></td>
<td>TFL_7</td>
<td>0.874</td>
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<tr>
<td>Transactional Leadership</td>
<td>TSL_1</td>
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<td>.784</td>
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<td>0.862</td>
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<tr>
<td></td>
<td>TSL_2</td>
<td>0.915</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>TSL_3</td>
<td>0.880</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Discriminant validity - Fornell-Larcker criterion

<table>
<thead>
<tr>
<th>Constructs</th>
<th>AGGR</th>
<th>KNS</th>
<th>RESP</th>
<th>STAB</th>
<th>TEAM</th>
<th>TSL</th>
<th>TFL</th>
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</thead>
<tbody>
<tr>
<td>AGGR</td>
<td>0.921</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>KNS</td>
<td>-0.155</td>
<td>0.891</td>
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<tr>
<td>RESP</td>
<td>-0.066</td>
<td>0.552</td>
<td>0.854</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAB</td>
<td>-0.051</td>
<td>0.567</td>
<td>0.434</td>
<td>0.919</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEAM</td>
<td>-0.050</td>
<td>0.554</td>
<td>0.487</td>
<td>0.508</td>
<td>0.879</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSL</td>
<td>-0.019</td>
<td>0.582</td>
<td>0.390</td>
<td>0.420</td>
<td>0.491</td>
<td>0.886</td>
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<tr>
<td>TFL</td>
<td>-0.007</td>
<td>0.310</td>
<td>0.295</td>
<td>0.116</td>
<td>0.293</td>
<td>0.149</td>
<td>0.843</td>
</tr>
</tbody>
</table>

Note: The off-diagonal values are correlations between constructs and diagonals are square root AVEs.
It is evidenced that employee’s sense of respect for other people working in the organization helps to enhance knowledge sharing (path coefficient = 0.211, confidence interval = 0.292, 0.156, t-statistic = 3.034), therefore hypothesis H1a is accepted. It is also evidenced significant influence of job stability on knowledge sharing (path coefficient = 0.252, confidence interval = 0.316, 0.179, t-statistic = 3.625), therefore, hypothesis H1d is accepted. However, aggressiveness (path coefficient = -0.118, confidence interval = -0.191, -0.072, t-statistic = -2.302) does not favorably enhance knowledge sharing as it shows negative path coefficient, therefore, hypothesis H1e is rejected. Team orientation (path coefficient = 0.125, confidence interval = 0.203, 0.054, t-statistic = 1.379) also showed insignificant influence on knowledge sharing, thus, hypothesis H1b is also rejected. Both transformational (path coefficient = 0.135, confidence interval = 0.235, 0.092, t-statistic = 2.544) and transactional leadership style (path coefficient = 0.307, confidence interval = 0.392, 0.201, t-statistic = 4.433) also have significant positive impact on knowledge sharing, therefore, hypotheses H2a and H2b are accepted. Path coefficients in the research model is shown in Figure 2.

Table 5 shows endogenous variables in the conceptual framework accounted for 57% ($R^2 = 0.572$) variance in the ‘knowledge sharing’, indicating a large predictive power of the model.

Table 5. Results of $R^2$ and $Q^2$

<table>
<thead>
<tr>
<th>Endogenous latent constructs</th>
<th>$R^2$</th>
<th>$Q^2$</th>
<th>Effect size$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Sharing</td>
<td>0.572</td>
<td>0.405</td>
<td>Large</td>
</tr>
</tbody>
</table>

$^a$ Value effect size  
0.02= Small; 0.15= Medium; 0.35= Large

Table 6 shows all $f^2$ effect size values ($\Delta R^2$) when corresponding exogenous variables were omitted from the model and none of them are $< .02$ indicating small to medium effect – guidelines are provided. All exogenous constructs in the model have predictive relevance for the endogenous construct of this study reflected through $Q^2$ values – knowledge sharing ($Q^2 = 0.405$) (Table 5). The value is larger than zero and the effect is considered large, as shown through the table. In addition, Effect size $q^2$ values demonstrate that each exogenous variable produces a small effect on the corresponding $Q^2$ values of the endogenous variable under consideration.
4.3 Moderating Role of Training & Development

Following the MICOM (measurement invariance of composite models) procedure, configural and compositional invariances were ensured before conducting PLS-MGA (Partial least squares based multi-group analysis) (Henseler et al., 2016). To achieve configural invariance, guidelines were followed as set forth by Henseler et al. (2016). MICOM results are shown in Table 7, supporting compositional invariance. Correlation ($c$) of composite scores of two groups is evaluated and $c$ values are shown in Table 6.

Table 6. Results – Path coefficients, $f^2$ and $q^2$ effect size

<table>
<thead>
<tr>
<th>Endogenous Latent Constructs</th>
<th>Knowledge Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respect for people</strong></td>
<td>Path coefficient</td>
</tr>
<tr>
<td>0.211</td>
<td>0.094</td>
</tr>
<tr>
<td><strong>Team orientation</strong></td>
<td>0.125</td>
</tr>
<tr>
<td><strong>Job stability</strong></td>
<td>0.252</td>
</tr>
<tr>
<td><strong>Aggressiveness</strong></td>
<td>-0.118</td>
</tr>
<tr>
<td><strong>Transformational Leadership</strong></td>
<td>0.135</td>
</tr>
<tr>
<td><strong>Transactional Leadership</strong></td>
<td>0.307</td>
</tr>
</tbody>
</table>

Value effect size

- 0.02 = Small; 0.15 = Medium; 0.35 = Large
are all larger than five-percent quantile of the empirical distribution. The null hypothesis that $c = 1$ is not rejected because all $p$ values are $> 0.05$, indicating that $c$ values are not significantly different from 1, thereby confirming compositional invariance (Hair et al., 2017; Henseler et al., 2016).

Table 7. MICOM results of compositional invariance

<table>
<thead>
<tr>
<th>Composite</th>
<th>$c$ value=1</th>
<th>5%&lt;sup&gt;a&lt;/sup&gt; quantile</th>
<th>95% confidence interval</th>
<th>Permutation $p$-Value</th>
<th>Compositional invariance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge sharing</td>
<td>0.999</td>
<td>0.988</td>
<td>0.988; 1.000</td>
<td>0.925</td>
<td>Yes</td>
</tr>
<tr>
<td>Respect for people</td>
<td>0.998</td>
<td>0.971</td>
<td>0.971; 1.000</td>
<td>0.394</td>
<td>Yes</td>
</tr>
<tr>
<td>Team orientation</td>
<td>0.999</td>
<td>0.981</td>
<td>0.981; 1.000</td>
<td>0.874</td>
<td>Yes</td>
</tr>
<tr>
<td>Job stability</td>
<td>0.979</td>
<td>0.969</td>
<td>0.969; 1.000</td>
<td>0.722</td>
<td>Yes</td>
</tr>
<tr>
<td>Aggressiveness</td>
<td>0.983&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.976</td>
<td>0.976; 1.000</td>
<td>0.289&lt;sup&gt;p&lt;/sup&gt;</td>
<td>Yes</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>0.987</td>
<td>0.977</td>
<td>0.977; 1.000</td>
<td>0.258</td>
<td>Yes</td>
</tr>
<tr>
<td>Transactional Leadership</td>
<td>0.991</td>
<td>0.986</td>
<td>0.975; 1.000</td>
<td>0.185</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<sup>a</sup>C is larger than five-percent quantile; <sup>b</sup>p-value > .95 = compositional invariance; <sup>c</sup> Five-percent quantile of the empirical distribution

The need for training & development was measured using a categorical scale. Respondents had to answer about their perceived need for training & development activities and choose between two options – high or low. Multigroup analysis involved nonparametric PLS-MGA technique creating two groups as high and low. To investigate a specific relationship in the PLS path model, bootstrap estimates of one group were compared with all other bootstrap estimates of the same parameter in the other group (Hair et al., 2017). The results of Partial least squares based multi-group analysis are shown in Table 8, depicting differences in path coefficients between structural paths across high and low training & development based work environment. The influence of training & development was found to be quite active in the relationship between team orientation (H3b, $p = 0.035$) and knowledge sharing, indicating significant moderating relationships. However, hypothesized moderating role under respect for people (H3a, $p = 0.971$), job stability H3d ($p = 0.159$), aggressiveness H3e ($p = 0.705$) and transformational leadership H3f ($p = 0.414$) and transactional leadership (H3g, $p = 0.951$) are not supported because these do not correspond with the decision rule of rejecting the null hypothesis when the significance level is $<0.05$ or $>0.95$ (Hair et al., 2017).

Table 8. PLS MGA results for structural relationships - moderated by training & development

<table>
<thead>
<tr>
<th>Path</th>
<th>Path coefficient (training high)</th>
<th>Path coefficient (training low)</th>
<th>Path coefficient difference</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3a: Respect for people ® Knowledge sharing</td>
<td>0.331</td>
<td>0.049</td>
<td>0.282</td>
<td>0.971</td>
</tr>
<tr>
<td>H3b: Team orientation ® Knowledge sharing</td>
<td>0.203</td>
<td>0.005</td>
<td>0.208</td>
<td>0.035</td>
</tr>
<tr>
<td>H3d: Job stability ® Knowledge sharing</td>
<td>0.354</td>
<td>0.199</td>
<td>0.156</td>
<td>0.159</td>
</tr>
<tr>
<td>H3e: Aggressiveness ® Knowledge sharing</td>
<td>-0.135</td>
<td>-0.079</td>
<td>-0.056</td>
<td>0.705</td>
</tr>
<tr>
<td>H3f: Transformational leadership ® Knowledge sharing</td>
<td>0.150</td>
<td>0.131</td>
<td>0.019</td>
<td>0.414</td>
</tr>
<tr>
<td>H3g: Transactional Leadership ® Knowledge sharing</td>
<td>0.425</td>
<td>0.208</td>
<td>0.217</td>
<td>0.951</td>
</tr>
</tbody>
</table>

<sup>*</sup>Significant if $p$ value $<.05$ or $>.95$
DISCUSSION

This study has tested a conceptual framework in which organizational culture and leadership are treated as the key factors influencing knowledge sharing and tested the moderating effect of training & development in the relationship between organizational factors and knowledge sharing. The findings of this study validate the proposed model. To the best of our knowledge, this is the first research for service organizations based in Bangladesh and is in line with the other studies conducted elsewhere.

This study revealed that two dimensions of organizational culture, i.e., respect for people and job stability, were found to have a significant positive relationship with knowledge sharing. However, team orientation had no statistically significant effect on knowledge sharing. Parallel to this, aggressiveness had a significant negative impact on knowledge sharing. This outcome is partially consistent with the study of McKinnon et al. (2003). This finding suggests that mutual respect among employees and job stability in an organization encourages the employee to share knowledge in the service organizations. Contrarily, aggressiveness in terms of competition impacts negatively. The respectful environment in the organization increases comfort and confidence in the working environment, and employees are encouraged to share knowledge to earn a respectable position among colleagues. High competition in the job market may trigger the importance of job stability culture to be a motivator for knowledge sharing. The sense of job security provides mental comfort, which is later translated into deeper mental involvement in the organization.

Transformational leadership was found to influence knowledge sharing significantly. Resonating with the previous research (e.g., Xue et al., 2011; Han et al., 2016), this study reiterates that leadership can play a significant role in impacting employees’ knowledge sharing. The empowering and inspiring aspect of transformational leadership supports the notion that transformational leadership could be one of the crucial influencing factors for knowledge sharing. On the other hand, transactional leadership was also found to significantly influence knowledge sharing, which is in tandem with the studies of Hussain et al. (2017) and Masa’deh et al. (2016). This finding restates that transformational and transactional leadership styles are not two opposite extremes. Rather both can be useful, depending on the situation at hand. Overall, it suggests that if a leader has a positive mindset and considers employees’ betterment, then it encourages employees to share knowledge. In addition, this result also suggests that setting up exchange relations also encourages sharing knowledge along with the motivating approach of transformational leadership in this context.

Furthermore, this study revealed that training & development moderates only the relationship between team orientation and knowledge sharing. The moderating effect on other relationships was not statistically significant. Literature suggests that training & development can initiate changes in the organization and enable employees to learn and adapt organizational culture, improve leadership skills and enables smooth exchange between leader and follower. The study of Salehzadeh et al. (2021) supported the idea that, as a part of the human resource management process, training & development can enhance teamwork which positively impacts knowledge sharing. Besides, Lee et al. (2020) also argued that the development of human capital through training could create trust and reciprocity among employees, which is essential for teamwork, in turn, for knowledge sharing. Several scholars (e.g., Wu et al., 2019; Du et al., 2011) also suggest that interpersonal trust and the norm of reciprocity are important contextual factors. However, the substantial effect of training & development was not evident in moderating the relationship between organizational culture and leadership regarding knowledge sharing. Nonetheless, the significant effect on the relationship between team orientation and knowledge sharing suggests that training & development can improve the team environment conducive to knowledge sharing in the organization.

5.1 Implications for Theory and Practice

It is important to understand the role of organizational factors and leadership styles on knowledge sharing, and their consequences are crucial for both theory and practice. This paper investigates how
organizational factors and leadership styles affect knowledge sharing through the moderating role of training & development. The findings of this study validate the proposed model and contribute to theory and practice.

There are three main theoretical contributions emerged from this study. This study examines the relationship between organizational factors, leadership styles and knowledge sharing in the context of the service sector by introducing a conceptual framework that contributes to the knowledge sharing theory. Second, this study also contributes to the leadership theory by emphasizing the role of transformational and transactional leaders in knowledge sharing. It is found that although transformational and transactional leadership are two styles opposite extreme, a leader’s positive mindset and intention towards employees’ betterment enhances knowledge sharing. Third, past research has ignored, to our knowledge, to examine the moderating role of training & development on these relationships. This study fills this gap with a proposed holistic conceptual model with the PLS-SEM approach.

The results of this study provide some managerial implications. The study revealed that respect for people, job stability, transformational leadership, and transactional leadership have a direct positive influence on knowledge sharing. Therefore, managers working at MNCs in Bangladesh should focus on creating a culture that promotes mutual respect among employees and provides stable job conditions. Organizational leaders should be flexible on their leadership styles based on the job requirement from the leadership aspect. Furthermore, this study has found that training & development moderates the relationship between team orientation and knowledge sharing. For MNC managers, this finding reiterates the importance of training & development to utilize the knowledge resources in the organization. Training & development may create the necessary foundation of trust and reciprocity essential for team building and knowledge sharing environment. These findings regarding the relationships between organizational culture, leadership and knowledge sharing would provide some new contributions to the existing body of literature. This paper makes contextual contributions because it was conducted in Bangladesh, which has not been the site of many previous studies. Thus, this study has tested and validated a Western instrument in the Asian context. The psychometric properties and dimensionalities of the instruments differ in this research setting. As noted earlier, this study solely concentrates on service organizations in Bangladesh. This sector has not been studied extensively in the knowledge sharing literature. Therefore, this study’s focus on service organizations would provide new insights to researchers from a developing country perspective. For practitioner, this study highlighted some key organizational factors that can be nurtured to create a knowledge sharing environment in an organization.

6. CONCLUSION

In an era where the service industry is seeing a rapid increase in a country’s economy, only appropriate knowledge can allow the firms to be competitive in the market. Therefore, knowledge sharing could be one of the biggest challenges to managing knowledge base assets properly. This study explains the influence of organizational culture and leadership on knowledge sharing, as well as the moderating effect of training & development in service organizations based in Bangladesh. The outcome of this study provides useful information about how organizations can work to ensure knowledge sharing within their workplace. As a major contribution to the literature, this study has evidenced that respect for people, job stability, transformational leadership and transactional leadership have an influence on knowledge sharing, particularly in the service sector of an emerging economy like Bangladesh. This study also found a moderating effect of training & development on the relationship between team orientation and knowledge sharing.

However, this study has some limitations that future research could resolve. The data were collected from a sample of organizations within one country (i.e., Bangladesh); therefore, findings could vary in different countries because of the influence of national cultural factors. Cross-cultural
validation could reveal more about the impact of culture and leadership on knowledge sharing. Moreover, a larger sample size would bring more explanatory power, which will allow more sophisticated analysis and, thereby, increase generalizability. Moreover, the data were collected at one point in time, which inhibits the testing of causality between the variables. Further research should use a longitudinal time-lag design. Further study can triangulate in-depth qualitative case studies and quantitative research so as to provide robust results.

As noted earlier, one of the findings shows that training & development moderates only the relationship between team orientation and knowledge sharing. The hypothesized moderating effects on the relationships between other organizational factors (i.e., respect for people, job stability, aggressiveness, transformational leadership, and transactional leadership) and knowledge sharing were not supported. This is a fruitful area for future research to explore the actual reasons for not having a moderating role by training & development. Overall, for practicing managers, this study presents some important organizational factors that can be nurtured to create a knowledge-sharing environment in the organization.

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