The aim of the present study is to show the links between the domains of knowledge management and human resources management. This study was conducted among employees from multiple organizations (within different organizational frameworks) in the banking sector in Turkey to examine the relationship between perceived training intensity (PTI) and knowledge sharing considering intrinsic motivation and self-efficacy as the moderating variables. Data was collected from 497 employees working in four different types of banking sector organizations (public banks, private banks with Turkish capital, private banks with foreign capital and participation banks). While a positive relationship was found between perceived training intensity and knowledge sharing, it was reported that, intrinsic motivation and self-efficacy had a positive impact on knowledge sharing and moderated this relationship.

Key Words
Perceived Training Intensity, Knowledge Sharing, Intrinsic Motivation, Self-Efficacy

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Introduction

Knowledge has been considered by many researchers as the most strategically significant resource of the firm and the most stable source of competitive advantage (Bixler, 2005; Nonaka and Takeuchi, 2007; Osterloh & Frey 2000; Winter, 1998). Thus, in knowledge-intensive organizations, knowledge management practices are becoming more crucial, especially where processes are very dynamic (Fentem, Dumas & McDonnell, 1998, p.417; Millar, Lockett & Mahon, 2016, p.845). The career, education and promotion opportunities make banking an attractive profession and that is why it is one of the most popular professions that teenagers aspire too. Researches made among university students verify that, banking and finance are the primary choice of the university students, especially the ones studying administrative sciences. As well as its advantages, banking on the other hand is a profession that requires too much sacrifice. "Concerning the challenges that the banks face today which include largescale competition for customer's deposits, loans, increasing customer demands, shuddering profit limits, the need to keep up with the new financial technologies that will ease banking operations, fighting the rising interest rate environment, navigating the regulatory and compliance landscape" (Nikitas, 2018; Olodude & Oladejo, 2013, p.129), a tough competitive environment, irregular working hours and performance pressures are the challenging parts of this profession. Furthermore, there are the challenges that the new forces of the economy of the 21st century create for the employees. These forces are not only changing the nature of jobs, but also mean a new reality for both organisations and for individuals. Whilst in the old system of working, the employees were often categorized as “knowledge workers” if they dealt with knowledge and information, the new movement is the age of the learning workers. In the new economy, a learning worker is deemed more valuable to the organization because of his/her flexibility to respond to the changing knowledge and skill requirements of the workplace environment (Morgan, 2016; U.S. Department of Commerce, U.S. Department of Education, U.S. Department of Labor, National Institute of Literacy, and the Small Business Administration, 1999, p.iii). It is accepted wisdom that modern banking is a business of information, not just a business of money (Lamb, 2001, p.24). The banking industry is one of the most knowledge-intensive industries. The core competitiveness of the banking industry is highly reliant on the ability of management teams to systematically manage knowledge and experience (Cabrita, Cruz-Machado & Matos, 2013, p.2) and the employees to systematically have the training, education, and skills necessary to create high performance workplaces. It has been suggested that extensive training should increase knowledge sharing (Cabrera & Cabrera, 2005; Cabrera, Collins & Salgado, 2006).

This study aims to provide a theoretical basis and empirical evidence on the link between perceived training intensity and knowledge sharing behaviors in such a tough and competitive environment. Although there is a broad consensus among scholars and practitioners that both human capital and knowledge are to be regarded as scarce and idiosyncratic resources and hence today maximizing the potentials of both domains is crucial to organizational effectiveness, there has been a considerable gap in the literature linking human resource management and knowledge management. Therefore this study aims to investigate from both the knowledge management and human resources perspective, the impacts of perceived training intensity (PTI) on knowledge-sharing behavior of Turkish bank employees within different organizational frameworks and make a contribution to the management level by emphasizing the importance of knowledge sharing in organizations, so that an effective knowledge sharing culture is built.

Literature Review

Knowledge Sharing

Senge (1997, p.17) states that “Sharing knowledge is not about giving people something or getting something from them. That is only valid for information sharing. Sharing knowledge occurs when people are genuinely interested in helping one another develop new capacities for action; it is about creating learning processes.” Knowledge sharing can be defined as the process in which individuals mutually exchange both their implicit and explicit
knowledge and in addition to this create new knowledge in order to improve the overall performance of the community they belong to. Knowledge sharing can be achieved either by communication or through mechanisms such as the use of a knowledge archive (Bock, Zmud, Kim & Lee, 2005; Lin, 2007, p.136; van Den Hooff & de Ridder, 2004, p.118; Yaacob, Abdullah, Yaacob, Amin, Bakar, Noor & Abdullah, 2011, p.41). Kuvaas, Bach and Dysvik (2012, p.170) argue that, PTI should lead to an increase in knowledge sharing, due to the acceptance that it is beneficial to meet the demands represented by practices which lead to an increase in knowledge sharing.

**Perceived Training Intensity (PTI)**

Employee training is defined as an endeavor to promote to the employees to learn job-related knowledge, skills, and behaviors or to help them enhance and increase their performance. The aim of the training programs is to develop human resources that meet the needs of the organization, to ensure effective utilization of human resources and to integrate individual goals with the organizational goals. Thus they help to ensure the continuous improvement of both the organizations and individuals (Chimote, 2010, p.28; Mohammed, Bhatti, Jariko & Zehri, 2013, p.128; Sims, 2002). PTI refers to "employees' perception of organizational demands for, expectations toward, and frequency and duration of participation in formal and informal training and development activities". PTI involves perceived demands and expectations of an employee to develop, learn and grow (Kuvaas et al., 2012, p.168-170) but at the same time it demands employee attention and effort in addition to current in role expectations (Paulsson, Ivergard & Hunt, 2005, p.135). With the below stared hypothesis this study will be examining the relationship between perceived training intensity and knowledge sharing.

**H1:** There is a positive relationship between perceived training intensity and knowledge sharing.

**Intrinsic Motivation**

Intrinsic motivation is defined as "a very desirable reason for performing achievement-related activities because learning comes as a by-product of engaging in an enjoyed task and learners feel self-determined." (Spinath & Steinmayr, 2012, p.1135) or "behavior based on intangible rewards that arise from an individual's own personal values and motivations" (Janus, 2016, p.19). The importance of intrinsic motivators in knowledge sharing is recognized in a number of studies (Bock et al., 2005; Cabrera & Cabrera, 2005; Cabrera et al., 2006; Gagne, 2009, Kuvaas et al., 2012; O'Dell & Grayson, 1998; Osterloh & Frey, 2000; Stewart & Duggan, 2006; Welschen, Todorova & Mills, 2012). Employees who are intrinsically motivated to share knowledge find the activity itself interesting, enjoying, and stimulating (Foss, Minbaeva, Pedersen & Reinhold, 2009, p.875). Thus, they share their knowledge with others, without being requested (Gagne, 2009, p.577) regardless of the push that PTI may represent (Kuvaas et al., 2012, p.169). Based on these the researchers would like to propose the following hypothesis

**H2:** Intrinsic motivation moderates the relationship between perceived training intensity and knowledge sharing.

**Self-Efficacy**

Self-efficacy has been variously defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p.391) or "belief in one's power to produce given levels of attainment." (Bandura, 1997, p.382). Self-efficacy can either motivate or inhibit one's intention to share knowledge with the others (Bock & Kim, 2002; Kankanhalli, Tan & Wei, 2005) and "through contribution, knowledge contributors can be satisfied by enhancing their knowledge self-efficacy or confidence in their ability to provide knowledge that is deemed useful and thus valuable by the organization" (Constant, Kiesler & Sproull, 1994; Constant, Sproull & Kiesler, 1996). As stated by Cabrera and Cabrera (2005, p.726) the use of extensive training and development programs may stimulate an increase in the self-efficacy of the employees. "Hence they will feel more confident about their abilities and it is
more probable that they will exchange their knowledge with others”. Here the researchers would like to propose the following hypothesis:

H3: Perceived self-efficacy moderates the relationship between perceived training intensity and knowledge sharing.

Method

Research Model and Hypotheses

In the current study, the researchers investigated the relationship between perceived training intensity (PTI) and knowledge sharing considering intrinsic motivation and self-efficacy as moderating variables. A multi-item questionnaire used by Kuvaas et al. (2012) in their research “Perceived Training Intensity and Knowledge Sharing: Sharing for Intrinsic and Prosocial Reasons” is used with the researchers’ permission. The hypothesized model is shown in Figure 1.

![Figure 1. Hypothesized Model](image)

Participants and Procedure

According to the Banks Association of Turkey, the number of banks operating in the banking system in Turkey is 47. The number of deposit banks are 13 (3 of them are state owned, 9 of them are privately owned deposit banks and 1 of them is a bank under the Deposit Insurance Fund), 21 of them are foreign banks (16 of them are foreign banks founded in Turkey, 5 of them are foreign banks having branches in Turkey) and 13 of them are development and investment banks (3 of them are state-owned, 6 of them are privately-owned and 4 of them are foreign development and investment banks) (The Banks Association of Turkey, 2018). According to the Participation Banks Association of Turkey, the number of participation banks in Turkey is 5 (2 of them are state-owned, 3 of them are privately-owned) (The Participation Banks Association of Turkey, 2018). The participation banks constitute a different category because although the participation banks (also called as “Islamic Banks” or “Interest free banking”) are functionally similar to depository banks, their collecting and lending methods of funds are different.

In the present study, the researchers have classified the banking sector regarding their organizational frameworks in four groups which are public banks, private banks with Turkish capital, private banks with foreign capital and participation banks. Data has been collected through structured questionnaires from employees working in each type of banking sector organizations. The questionnaires were distributed to bank employees by simple random sampling. After eliminating uncompleted questionnaires, a final sample size of 497 has been reached. A mean age of 31.33 years (Sd=6.77) and an average job tenure of 9.1 years (Sd=6.9) were reported as the demographic characteristics of the respondents. Of respondents, 50.3% were female and 49.7% are male. 4.4% of respondents were high school graduates, 8.5% were undergraduates (2 year course), 67.2% had university degrees (4 year course), 18.7% had MBA degrees and 1.2% had Ph.D. degrees. 56% of respondents in the sample indicated that, they have managerial responsibilities.
Measures

**Perceived Training Intensity:** The perceived training intensity scale developed by Kuvaas et al. (2012, p.185-187) has been used in this research. Participants are asked to rate each of the 10 items using a 5-point Likert scale (1=strongly disagree, 5=strongly agree). Sample items include “My organization expects me to participate in training and developmental programs in order for me to be prepared for future work assignments.” and “My organization spends considerable resources on training and developmental programs in order to ensure that its employees keep their work-related knowledge and skills up to date.”

**Knowledge Sharing:** Knowledge sharing was measured by means of an 8-item scale derived from de Vries, van den Hooff and de Ridder (2006). Sample items include “I share information that I have acquired with my colleagues.” and “I ask my colleagues about their skills when I want to learn particular skills.”

**Intrinsic Motivation:** Intrinsic motivation was measured by means of 6 items used by Dysvik and Kuvaas (2008) and Kuvaas et al. (2012). Sample items include “My job is so interesting that it is a motivation in itself.” and “Sometimes I become so inspired by my job that I almost forget everything else around me.”

**Self-Efficacy:** Self-efficacy is measured by the widely used 10-item scale that was developed by Schwarzer and Jerusalem (1995) for use in several cultures. The validity and reliability of the Turkish version of the scale was realized by Yıldırım and İlhan (2010). Sample items include “It is easy for me to stick to my aims and accomplish my goals.” and “I can usually handle whatever comes my way.”

Control Variables

Age, gender, education level, managerial responsibility and job tenure were controlled for the demographic variables because they have been associated with knowledge sharing in various studies (Hasan & Ahmed, 2009; Ojha, 2005; Rabbiosi & Makela, 2009; Riege, 2005; Yap, Tasmin, Saufi, Rusuli & Hashim, 2010).

Results

Means, standard deviations, correlation coefficients, and reliability estimates of all variables are shown in Table 1. To assess the convergent and discriminant validity of all measures, a measurement model of all multi-item measures was subjected to confirmatory factor analysis.

<table>
<thead>
<tr>
<th>Variables</th>
<th>X</th>
<th>Ss</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived training intensity</td>
<td>3.49</td>
<td>0.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Intrinsic motivation</td>
<td>3.05</td>
<td>0.97</td>
<td>.334***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Self-efficacy</td>
<td>4.03</td>
<td>0.61</td>
<td>.269***</td>
<td>.224***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Knowledge Sharing</td>
<td>3.86</td>
<td>0.81</td>
<td>.478***</td>
<td>.261***</td>
<td>.210***</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001 (two-tailed tests); N=497

Note: Values in brackets on the diagonal represent Cronbach’s alpha coefficients

To test the predictions that intrinsic motivation and self-efficacy moderates the relationship between perceived training intensity and knowledge sharing a hierarchical, moderated regression analysis on knowledge sharing was conducted, by entering the predictor variables in the following order:

**Intrinsic motivation:** (i) control variables-gender, education level, managerial responsibility and job tenure (Model 1); (ii) independent variable-perceived training intensity (Model 2) (iii) independent variable-intrinsic motivation (Model 3); and (iv) their two-way interaction term (Model 4). Prior to the analyses, all continuous measures were mean-centered (Aiken & West, 1991; Cohen, Cohen, West & Aiken, 2003).
**Self-efficacy:** (i) control variables—gender, education level, managerial responsibility and job tenure (Model 1); (ii) independent variable—perceived training intensity (Model 2) (iii) independent variable—self-efficacy (Model 5); and (iv) their two-way interaction term (Model 6).

**Intrinsic motivation and self-efficacy:** (i) control variable—job tenure (Model 1); (ii) independent variable—job stress (Model 2); (iii) independent variables—intrinsic motivation, and self-efficacy (Model 7); and (iv) their two-way interaction terms (Model 8).

**Table 2. Summary of Hierarchical Regression Analysis of Variables Predicting Knowledge Sharing**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control variable</td>
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<td></td>
<td></td>
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<tr>
<td>Gender</td>
<td>-0.120**</td>
<td>-0.091*</td>
<td>-0.105**</td>
<td>-0.102**</td>
<td>-0.092**</td>
<td>-0.092**</td>
<td>-0.100*</td>
<td>-0.097*</td>
</tr>
<tr>
<td>Education level</td>
<td>-0.057</td>
<td>-0.012</td>
<td>-0.021</td>
<td>-0.012</td>
<td>-0.017</td>
<td>-0.019</td>
<td>-0.031</td>
<td>-0.031</td>
</tr>
<tr>
<td>Managerial responsibility</td>
<td>0.005</td>
<td>0.031</td>
<td>-0.010</td>
<td>-0.022</td>
<td>-0.024</td>
<td>-0.024</td>
<td>-0.008</td>
<td>-0.011</td>
</tr>
<tr>
<td>Job tenure</td>
<td>0.029</td>
<td>0.054</td>
<td>0.044</td>
<td>0.045</td>
<td>0.046</td>
<td>0.044</td>
<td>0.044</td>
<td>0.045</td>
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<tr>
<td>Main effect variables</td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Perceived training intensity (PTI)</td>
<td>0.472***</td>
<td>0.429***</td>
<td>0.328**</td>
<td>0.414***</td>
<td>0.279**</td>
<td>0.414***</td>
<td>0.311**</td>
<td></td>
</tr>
<tr>
<td>Intrinsic motivation (IM)</td>
<td>0.127**</td>
<td>0.047</td>
<td></td>
<td></td>
<td></td>
<td>0.110**</td>
<td>0.020</td>
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<tr>
<td>Self-efficacy (SE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.009*</td>
<td>-0.006</td>
<td>0.000*</td>
</tr>
<tr>
<td>Interaction variables</td>
<td></td>
<td></td>
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<tr>
<td>PTPIM</td>
<td>0.187**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.160**</td>
</tr>
<tr>
<td>PTPSE</td>
<td></td>
<td>0.213*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.014</td>
<td>0.236</td>
<td>0.245</td>
<td>0.250</td>
<td>0.241</td>
<td>0.245</td>
<td>0.264</td>
<td>0.271</td>
</tr>
<tr>
<td>ΔR²</td>
<td>0.014**</td>
<td>0.222**</td>
<td>0.009**</td>
<td>0.005*</td>
<td>0.005*</td>
<td>0.004*</td>
<td>0.028**</td>
<td>0.007*</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001

The results suggest that there is no statistically significant relationship between knowledge sharing behavior and age, education level, managerial responsibility or job tenure. Only gender weakly negatively correlated with knowledge sharing behavior. The results of the regression are provided in Table 2. As predicted,

(i) The 2-way interaction of perceived training intensity and intrinsic motivation on knowledge sharing was significant (β=0.187, p<0.01). Hypothesis 2 is accepted. To illustrate the nature of the 2-way interaction, the predicted values of the dependent variable at one standard deviation above and one standard deviation below the means for the independent variables are exhibited in Figure 2 (Aiken & West, 1991; Cohen et al., 2003).

(ii) The 2-way interaction of perceived training intensity and self-efficacy on knowledge sharing was significant (β=0.213, p=0.001). Hypothesis 3 is accepted. The nature of the 2-way interaction is illustrated in Figure 3. This study showed that banking sector employees’ perceived training intensity increase their knowledge sharing. Another finding is that both intrinsic motivation and self-efficacy have positive impact on knowledge sharing and they both moderate the relationship between perceived training intensity and knowledge sharing.
Perceived Training Intensity and Knowledge Sharing Among Banking Sector Employees in Turkey: Examining the Moderating Role of Intrinsic Motivation and Self-Efficacy

Discussion

The key questions of knowledge management are “What drives employees to share their knowledge with each other?” and “What can management do to increase knowledge sharing among employees?” Therefore it is important to identify the factors that determine, promote, and hinder organizational knowledge sharing. This paper examined the moderating effect of intrinsic motivation and self-efficacy on the relationship between perceived training intensity and knowledge sharing among the banking sector employees in Istanbul. Whereas a positive relationship was found between perceived training intensity and knowledge sharing, it was reported that, intrinsic motivation and self-efficacy had a positive impact on knowledge sharing and moderated this relationship. Parallel to the suggestions of Davenport, Jarvenpaa and Beers (1996, p.64) that organizations must better manage knowledge and the people who create and possess it because these two constitute the two of their most precious assets, the main objective of this research was to show linkages which exist between the domains of these two most precious assets namely knowledge management and human resources management.

The findings of the present study reveal that the employees perceived demands and expectations for personal growth and achievement through employee training intensity increases their knowledge sharing. Kuvaas et al. (2012, p.170) also hypothesized that, “PTI should lead to higher levels of knowledge sharing, due to the acceptance that, it is beneficial to meet the demands represented by practices which lead to an increase in knowledge sharing”. These findings are consistent with their study which...
found that perceived training intensity is positively related to knowledge sharing. Consistent with the findings of the studies of Bock and Kim (2002), Kankanhalli, Tan and Wei (2005), Bock et al. (2005), Cabrera and Cabrera (2005), Cabrera et al. (2006), Gagne (2009), Kuvaas et al. (2012), O’Dell and Grayson (1998), Osterloh and Frey (2000), Stewart and Duggan (2006), Welschen, Todorova and Mills (2012), the findings of the present study also reveal that both intrinsic motivation and self-efficacy have positive impacts on knowledge sharing. Furthermore, the findings suggest that both intrinsic motivation and self-efficacy moderate the relationship between perceived training intensity and knowledge sharing. Based on the findings of this study, the researchers suggest that, those at the managerial level should find ways to increase the perceived training intensity, the intrinsic motivations and the perception of self-efficacy of the employees, so that they have a tendency to share their knowledge and develop organizational practices and policies which can affect the motivation of employees to share their knowledge rather than withhold it.

**Limitations and Further Research**

One of the limitations of this study is its focus on a single sector. Whilst the generalizability of the findings of the present study may be restricted by the nature of it’s sample, which involved banking sector employees, it is necessary to examine the relationship between perceived training intensity and knowledge sharing behavior in the whole financial sector or other sectors and also include a larger sample, so as to confirm research findings. The validity of the present study’s findings may be limited by the reliance on self-report data. Whilst the perceptual variables of the present study are clearly best represented by self-report data, knowledge sharing can be measured by using self-report or as report from managers or peers. Future research should include data from other sources such as peers or managers, and use a longitudinal research design.
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Yaşam Becerileri Psikoloji Dergisi • Life Skills Journal of Psychology • http://dergipark.gov.tr/ybsd


