A Study of Authentic Leadership and Organisational Learning, and Common Method Bias in

Sport Management Research

Thesis submitted by

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Abstract

In Study 1, the purpose is to explore the impact of authentic leadership on organizational learning, whilst also testing the mediating roles of knowledge sharing and organizational culture. Participants of this study were all senior managers of Guilan sports professional associations & organizations (n=189). To collect data, a questionnaire was applied. One hundred eighty-two questionnaires were completed (response rate = 96.29%). Collected data were analysed by partial least square (PLS) approach to structural equation modelling (SEM). The findings indicate that authentic leadership positively and considerably impacts organizational learning, knowledge sharing and organizational culture. There were also evidences that knowledge sharing, and organizational culture positively and considerably impact organizational learning. Moreover, the mediating roles of knowledge sharing, and organizational culture were also supported. This research encourages managers to boost knowledge sharing and organizational culture and to achieve higher organizational learning levels through applying the characteristics of authentic leadership style. Finally, suggested managerial and theoretical implications are some promising ways which help practitioners to enhance organizational learning in sport organizations.

In Study 2, the purpose is to critically examine the efforts by sport management researchers to mitigate CMB. To achieve the goals of study 2, content analysis method is used. The articles in this study were sourced from Sport Management Review (SMR), Journal of Sport Management (JSM), and European Sport Management Quarterly ESMQ) from 2016 to 2020. The findings of study 2 show that the vast majority of studies which are at risk of CMB have made no attempt to mitigate CMB. Further, sport management researchers applied only a few approaches to CMB mitigation. However, the results propose that Harman's one-factor test and enhanced survey items are most usable statical and procedural approaches applied by sport management scholars. In terms of contribution, this study highlights the rigour of sport management often falls short of the rigour expected and required in other (leading) social science journals. In terms of implications, this study suggests that editors and editorial review boards should reflect on what they consider to be reasonable and appropriate mitigations where a CMB potential exists.

Table of Contents

List of Figures

List of Tables

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Statement of Authorship

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis accepted for the award of any other degree or diploma. No other person's work has been used without due acknowledgment in the main text of the thesis. This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

Ali Hadiannasab

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Introduction

While successful organizations focus on how to enhance and develop their human resources which has a direct effect on organizations' efficiency, one of the biggest problems of Iran's sports organizations is inefficiency (Fereidouni et al., 2015). To increase efficiency of sports organizations, organizational learning is a key factor (Megheirkouni, 2017). On the other hand, in sports organizations of Iran, there are many political managers whose decisions lead to organizational unlearning. Therefore, these organizations require decision makers who facilitate process of organizational learning (Delshab et al., 2019). According to the current literature, authentic leadership which forms the basis of the majority of positive and new leadership styles (Hadiannasab & Afshari, 2019) is considered as one of main determinants of organizational learning (Mousa et al., 2019). Further, a successful organization consists of a group of people with organizational culture and common thoughts and objectives, who share their experience and knowledge, out of their love for further progress, with their managers in a flexible system. Thus, the main goal of the study 1 is to investigate the impact of authentic leadership on organizational learning: mediating role of knowledge sharing and organizational culture.

Reviewing the methodology of studies applied cross-sectional and self-report methodology, show that utilizing these methods have several limitations that researchers need to be aware of them. Among these, Common Method Bias (CMB) is considered a most important concern. For this reason, the current thesis has dedicated study 2 to this matter.

Study 2 has been designed to critically examine the efforts by sport management researchers to mitigate CMB. This study concentrating on the articles which has been published in three famous sport management journals from 2016 to 2020, follows two main purposes: 1. Introducing pre- and post-event research strategies for mitigating the threat of CMB. 2. the proportion of articles with a CMB potential that address/mitigate CMB.

According to study 2, scholars can avoid CMB in the pre- and post-event research design phases. This is achieved by using different sources of information for independent and dependent constructs, for example with multiple respondents, objective data, or providing time intervals, or by considering solutions to design and do research (such as using different methods - interview, article, written questionnaire, and various response formats for data collection; including an assessment of response style, emotion management, or social desirability; using an ideal marker variable; a variable whose its theoretical relationship with variables in the research cannot be predicted).

Study 1

Authentic leadership and organizational learning: Mediating roles of knowledge

sharing and organizational culture

In recent years, there has been increased interest in organizational learning. Organizational learning can both create (Imran et al., 2016) and maintain competitive advantage (Hosseini et al., 2020; Pasamar et al., 2019) and has been linked to enhanced organizational productivity (Bologa & Lupu, 2014). The utility of organizational learning has prompted many efforts to define and recognize the driving forces of organizational learning (Lengnick-Hall & Inocencio-Gray, 2013). Researchers often apply a cognitive approach to describe how organizations can learn through employees, while there are a few empirical studies which have examined how personal factors affect organizational learning (Kim & Park, 2020; Yang et al., 2018). However, one of the biggest problems of Iran's sports organizations is inefficiency (Fereidouni et al., 2015). To increase efficiency of sports organizations, organizational learning is a key factor (Megheirkouni, 2017). On the other hand, in sports organizations of Iran, there are many political managers whose decisions lead to organizational unlearning. Therefore, these organizations require decision makers who facilitate process of organizational learning (Delshab et al., 2019).

This study extends previous research by proposing and testing a model of organizational learning determinants. The three determinants are authentic leadership, knowledge sharing and organizational culture. Authentic leadership which forms the basis for majority of positive and new leadership styles (Hadiannasab & Afshari, 2019) is a framework of leader behaviors that describes and amplifies a positive psychological potentials and positive moral atmosphere (Ribeiro et al., 2019). Whilst the relationship between leadership and organizational learning is well developed, few studies have utilized modern leadership styles (e.g. authentic leadership, servant leadership, shared leadership). Researchers have tended to investigate the effect of authentic leadership on follower's performance (Hadiannasab &

Afshari, 2019). Considering authentic leadership as determinant of organizational learning is a neglected issue (Oh & Han, 2020). That is why Xie (2019) identified need for further research about relationship of new leadership styles and organizational learning.

Knowledge sharing occurs when employees share information with others in the organization (Afsar et al., 2019). Knowledge sharing augurs well for sustaining competitiveness (Yadav et al., 2019) and is vital for improving organizational learning (Sorakraikitikul & Siengthai, 2014). Knowledge is important for value creation and is fostered by leadership (Yadav et al., 2019). Leadership style plays a serious role in enhancement of knowledge sharing behaviors among followers (Masa'deh et al., 2016).

According to Sung and Kim (2019), organizational culture refers to the complicated collection of values, opinions, suppositions, signs, and symptoms which determines the organizations strategy and distinguishes it from the others in the same field. Organizational culture substantially affects behaviors, including the learning process (Sanz-Valle et al., 2011).

Despite its importance, we know little about the determinants of organizational learning (Mousa et al., 2019). It is worth examining the links between authentic leadership, organizational learning, knowledge sharing and organizational culture for a number of reasons. By this study one can learn more about the effects of authentic leadership on organizational learning (Oh & Han, 2020; Xie, 2019), organizational culture (Borgersen et al., 2014) and knowledge sharing (Edú-Valsania, 2016). In addition, the study can enhance our understanding of the mechanisms linking authentic leadership and organizational learning (Oh & Han, 2020), organizational culture and organizational learning (Sanz-Valle et al., 2011), as well as knowledge sharing and organizational learning (Park & Kim, 2018).

This study proceeds as follows. First the article proposes seven hypotheses based on the previous studies of authentic leadership, knowledge sharing organizational culture and organizational learning. Then structural equation modeling (SEM) empirically tests the

hypotheses. After presenting the findings and results, the paper discusses the theoretical and practical implications along with the contributions of the study.

Research Contribution

This research aims to make multiple contributions by addressing the existing knowledge gaps. First, even though different leadership styles considerably affect organizational learning, the role of authentic leadership which forms the basis for majority of positive and new leadership styles (Hadiannasab & Afshari, 2019), has been not addressed carefully (Mousa et al., 2019). Thus, this contributes to the literature by examining the relationship between authentic leadership and organizarional learning. Second, despite the importance of relationship between authentic leadership and knowledge sharing, there is limited literature about this linkage (Edú-Valsania et al., 2016; Zeb et al., 2019). So, by this study one can learn more about the effects of authentic leadership on knowledge sharing. Therefore, the results of this study make an important contribution to fill existing gaps by exploring this linkage. Third, numerous researchers call for further research describing the effect of knowledge sharing on organizational learning (Yang, 2007; Kumaraswamy & Chitale, 2012), but studies investigating the relationship between organizational culture on organizational learning (Swift & Hwang., 2013) remain scarce. Therefore, the study can enhance our understanding of the mechanisms linking authentic leadership and organizational learning. Finally, examining the mediating role of knowlegde sharing and organizational culture in the effect of authentic leadership on organizational learning is another contribution of this research.

Conceptual Framework

Given the existing research gap in the current litrature, the present study examines the impact of authentic leadership on organizational learning, whilstv also examining the

mediating roles of organizational culture and knowledge sharing. The conceptual model of this research is depicted in Figure 1.1 below.

Figure 1.1

Conceptual Model

Research Goal

The goal of the research is to investigate the effect of authentic leadership on organizational learning and the mediating roles of organizational culture and knowledge sharing.

Research Hypotheses

1. Authentic leadership has a positive and significant effect on organizational learning.

2. Authentic leadership has a positive and significant effect on knowledge sharing.

3. Authentic leadership has a positive and significant effect on organizational culture.

4. Knowledge sharing has a positive and significant effect on organizational learning.

5. Organizational culture has a positive and significant effect on organizational learning.

6. Knowledge sharing mediates the effect of authentic leadership on organizational learning.

7. Organizational culture mediates the effect of authentic leadership on organizational learning.

Definition of Variables

Organizational Learning

Organizational learning is a set of organizational actions such as knowledge acquisition, information distribution, and interpretation of information, which consciously or unconsciously affects the positive organizational change (Molodchik & Jardon, 2015). Learning is a dynamic concept that gradually changes from individual learning to organizational learning. The concept of organizational learning emphasizes the factors that facilitate learning in the organization (Brandi & Iannone, 2015). Organizational learning is a continuous, dynamic, and interactive process among individuals, groups, and organizations. This kind of learning has both individual and social dimensions. Individual dimension refers to individual knowledge. Social dimension refers to knowledge that a person transmits and knowledge that is transmitted by all members in the organization (Smith, 2012).

Authentic Leadership

Authentic leaders are those who lead employees via their fundamental values and demonstrate their actual selves, as opposed to leaders who perform histrionic behavior (Walumbwa et al. 2008). Based on a comprehensive definition, the concept of authentic leadership exhibits a format of leaders' conduct which contains four main dimensions. 1. Self-perception 2. Openness to different information 3. Lucidness of connection with employees 4. Fundamental ethical principles (Imam et al., 2020). These leaders are well familiar with their

potencies, qualifications, advantages, and opinions. Authentic leaders try to enhance the capability of subordinates (Sri-Ramalu & Janadari, 2020).

Organizational Culture

Although there are several definitions have been proposed for organization culture, some of them are briefly mentioned as follows. Organizational culture is a unique pattern of routine assumptions, values, and norms that construct the socialization activities, languages, symbols, and operations of an organizations (Pujiono et al., 2020). Organizational culture is also considered as a collection of common beliefs and values that influence on organizational members' behavior and thoughts (Park & Doo, 2020). Organizational culture is the collection of core values, assumptions, interpretations, and attitudes that describe an organization (Nguyen et al., 2019). Organizational culture is a particular set of characteristics that distinguish an organization from other organizations (Aboramadan et al., 2019). In summary, organizational culture is the special perception that people have about an organization (Teräväinen & Junnonen, 2019).

Knowledge Sharing

Knowledge sharing is the process of exchanging knowledge, information, and experience among members of a group or organization (Kmieciak, 2020). It also refers to the process of identification, distribution, and exploitation of existed knowledge that can gradually build up to solve more challenging organizational problems in future (Gerbin & Drnovsek, 2020). Knowledge sharing reflects the potency of organizational members to exchange their information, merits, and proficiency with others (Abdel-Fattah et al., 2020). Knowledge sharing is described as the processes by which individual knowledge could be understood, absorbed, and utilized by others (Hong et al.,2011).

Research Domain

Subject Domain

Because the goal of this study is investigation of the effect of authentic leadership on organizational learning while considering knowledge sharing and organizational culture as mediators. The scope of current research includes organizational behavior and human resources.

Spatial Domain

Data were obtained from all senior managers of Guilan sports professional associations & organizations in Guilan province (Iran).

Structure of Study One

Findings of study one is presented five sections: the first section was dedicated to the research overview; the second section contains literature review; the third section discusses the methodology; the fourth section includes the statistical analysis of the collected data; ultimately, the fifth section presents conclusion, findings, discussions, and suggestions for further readings.

Literature Review

This section is devoted to introducing organizational learning, authentic leadership, organizational culture, and knowledge sharing.

Organisational Learning

Learning occurs at both the individual and organizational level. Individual learning takes place through experience, interview, study, and the development of effective mental patterns in the mind. Organizational learning occurs when an individual learns to interact in a group, share knowledge, and generally work collectively (Abu-Tineh, 2011).

Organizational learning refers to the dynamic procedure which empowers the organization to be adapted with environmental changes. This procedure comprises the production of new knowledge, skills, and behaviours, and is reinforced by sharing between functional and collaborative learning (Hoon Song et al., 2011). The result of these two principles is the creation of a learning culture and a common culture among all employees (Pantouvakis & Bouranta, 2013). Organizational learning is a tool by which organizations differentiate themselves from the environment to improve their performance (Lenart-Gansiniec & Sułkowski, 2020). In fact, learning is the key asset and the most important factor in organizational success (Soltani et al., 2019). Organizational learning is a conscious, purposeful, and continuous process that has an active engagement with world perception experiences (Mantok et al., 2019).

In recent years, there has been increased interest in organizational learning. Organizational learning can both create (Imran et al., 2016) and maintain competitive advantage (Hosseini et al., 2020; Pasamar et al., 2019) and has been linked to enhanced organizational productivity (Bologa & Lupu, 2014). The utility of organizational learning has prompted many efforts to define and recognize the driving forces of organisational learning (Lengnick-Hall & Inocencio-Gray, 2013). Researchers often apply a cognitive approach to describe how organisations can learn through employees, while there are a few empirical studies which have examined how personal factors affect organisational learning (Kim and Park, 2020; Yang et al., 2018). However, one of the biggest problems of Iran's sports organizations is inefficiency (Fereidouni et al., 2015). To increase efficiency of sports organizations, organizational learning is a key factor (Megheirkouni, 2017).

Organizational Learning and Learning organization

Two terms of "organizational learning" and "learning organization" cannot be used interchangeably. Organizational learning is not limited to the total learning capacity of

employees. In other words, organizations do not lose their learn ability when employees leave the organization. "Organizational learning" and "learning organization" are not synonymous. Organizational learning reflects learning of individuals within working groups and in the organization, but learning organization refers to learning of the organization as a whole system. In fact, the learning organization is the result of organizational learning (Örtenblad, 2001). Organizational learning as a concept which is used to describe specific kinds of activities that are occurring in an organization while learning organization is as the result of organizational learning. Moreover, it is necessary to distinguish these two terms from the term "organizational promotion" as well (Rebelo & Gomes, 2008). Organizational learning means the ability of an organization to achieve an understanding through experiencing, observation, and desire for success and failure test (Brandi & Iannone, 2015).

In addition, in an official definition, learning organization is an organization that increases the capacity for its learning, adjustment, and change. In such an organization, learning procedures are analysed under supervision, developed, and managed in relation to the goals of creation and promotion. Vison, strategy, leadership, values, structures, systems, procedures, and operation of such an organization work together to facilitate the individual's learning and promote and accelerate learning in an organization (Örtenblad, 2018). The learning organization is an organization with high level of efficiency and competition owing to the competency for producing new knowledge and learns from the experiences. Therefore, such a structure can be creative and transferable to solve issues fast (Ions & Minton, 2012). According to Jain and Mutula (2008), learning organization is the skill and capability of an organization in creating and transferring knowledge and revising the individual's behaviour for using new knowledge and perspective.

The learning organization is a place in which the individuals are related to each other by using their whole capacities for creating results in their areas of interest. A place in which

the new and broad patterns of thought are raised such that the dreams of everyone could be freely adjusted in that set. A place where people frequently explore how to learn from and with each other (Chiva, 2017).

Organizational learning and Sport Organizations

Nowadays, sports organizations are exposed to a constant change. Communication and interaction of these organizations with various stakeholders such as fans, sponsors, and other national and international sports organizations, create a turbulent environment for these organizations (Yildiz & Eroğlu, 2020). In fact, organizational learning which has become one of the most important topics in sports studies, can protect sport organizations from environmental changes (Megheirkouni, 2017). Thus, sports organizations have to use effective tools to be able to deal with the constantly changing and complex situations and environment around them (Delshab et al., 2019). One of the most important and effective tools, is institutionalization of learning in the organization (Al-Dari et al., 2020). In other words, sports organizations can prepare themselves to face these environmental changes by increasing the level of their learning (Megheirkouni, 2017). Organizational learning leads to an increase in organizational performance by eliminating information and beliefs that may harm the success of the organization (Oh, 2019). Also, as organizations increase their ability to learn, they acquire greater strategic capabilities that enable them to maintain their competitive advantage and improve their performance (Chahal & Bakshi, 2015).

Authentic Leadership

It is very important for authentic leaders to help their followers by applying their authority. The main goal of these leaders is to empower their subordinates, as opposed to traditional leaders whose priority is to maintain their position and gain more power, fame and money. Authentic leaders naturally utilize their fundamental ethical and moral values, beliefs, and emotions because these traits are within their mind set. These leaders are not authentic

22

when they were born, but authentic leaders expand their natural talent to become an authentic leader. These leaders are aware of their strengths and weaknesses. In fact, these leaders are trying to overcome their weaknesses and improve their strengths (George, 2003). The behaviour of authentic leaders is according to their basic principles that they believe in. There is no difference between the words and deeds of authentic leaders, in fact, they do what they believe in. These leaders have a high level of honesty because their behaviour stems from their beliefs, not their desire to be popular and approved by others (Kyei-Poku & Yang, 2020).

Authentic Leader Characteristics

Authentic leadership theory is a popular concept that has been widely used in management (Walumba et al., 2008). It is more complicated than the simple aforementioned definitions of authentic leadership. According to Walumba et al (2008), this concept has four main aspects.

The first trait of authentic leadership concept is self-perception. This trait assists authentic leaders to gain deeper understanding of their own frame of mind by interpreting behaviours and reactions. Leaders who have self-perception are aware of their strengths and weaknesses (Puni & Hilton, 2020).

The second trait of these leaders is openness to different information. Authentic leaders evaluate the different input information from different sources. This trait shows that genuine leaders review all the available information before making a decision. (Chughtai, 2018). Authentic leaders seek the views and opinions of others, even if they challenge the decisions of these leaders and their position. In fact, one of the most important characteristics of these leaders is the processing of various information for making decisions. Openness to different information comprises the assessment of information about himself/herself (favorable or unfavourable) in a non-biased manner (van Droffelaar & Jacobs, 2017). Moreover, authentic

leaders seek different opinions about themselves, even if they do not like them (Puni & Hilton, 2020).

Lucidness of connection with employees is the third aspect of authentic leadership concept. Authentic leaders tend to be their true self and avoid pretending or masking their reality in front of the subordinates. These leaders, as much as they can, divulge working information in a clear relationship with subordinates. It is worth mentioning that authentic leaders are aware that they must not disclose private information of subordinates (Wong & Cummings, 2009). When authentic leaders cannot completely share necessary information, they describe why they cannot share some special information and they try to follow suitable strategy in which information is shared as much as possible. Lucidness of connection with employees indicates leaders' tendency to share their real opinions and sensations, while their dignity is preserved within working environment. Thus, subordinates recognize the fact behind the leaders' advice, which helps to listen and understand these advice calmly in a positive environment (Walumba et al., 2008).

The final dimension of authentic leadership is fundamental ethical principles which echoes authentic leaders' fidelity to their opinions. Ethical principles, standards, and inner values are personal decisions. In fact, this character shows that authentic leaders are ruled by fundamental principles, even if these principles contradict the norms of their work environment (Emuwa & Fields, 2017). Fundamental ethical principles enable leader to follow decisions which are in line with their ethical standards. These leaders do not sacrifice their moral principles if they face environmental pressures (Walumba et al., 2008).

Authentic leadership and sport organisations

Studies on the impact of authentic leadership style in sports organizations show that this leadership style, in sports organizations, leads to positive results such as an enhancement

of employee creativity (Paek et al., 2020), psychological capital (McDowell et al., 2018), commitment (Bandura & Kavussanu, 2018), welfare and performance of athletes (Kim et al., 2020).

According to Paek et al (2020), leaders who have traits such as inspiration, creativity, honesty, and truthfulness, create spiritual motivation in employees. In fact, authentic leaders who apply positive psychological and moral views including self-awareness, institutionalization of ethical views, impartial processing of information and clarification of the working relationship between leaders and employees, improve creativity behaviours of sport employees. Kim et at (2020) believe that authentic leaders have a crucial contribution to strength the positive work attitudes of followers. Moreover, they note that authentic leadership is an ongoing process by which these leaders gain self-awareness and build open, transparent, and trusting relationships, thereby increasing the performance of sport employees and improving their well-being.

Knowledge Sharing

Knowledge is the most essential factor and a key strategic resource for organizations to obtain intangible assets and capabilities (Cao & Xiang, 2012). Researchers (e.g. Nguyen & Malik, 2020; Chedid et al., 2020) argue that knowledge play a key role in organizational growth, and organization's ability to capture sustainable competitive advantage. Knowledge held by employees does not have much use unless it can be shared among employees (Lee et al., 2020). Knowledge is the most essential factor and a key strategic resource for organizations to obtain intangible assets and capabilities. Knowledge plays a key role in organizational growth, and organization's ability to capture competitive advantage. The knowledge-based view of the organization claims that organizations must regard knowledge as an initial factor for value creation and competitive advantage (Arsawan et al., 2020).

Knowledge sharing includes intentional interindividual interplay procedures, such as discourses, swapping opinions, or common issue solving, where knowledge is shared (Matošková et al., 2020). Knowledge sharing (KS) is considered as an important factor to keep competitive advantage. However, certain traits of knowledge, such as the cost of commencement and the inherent fuzziness of the concept, can present insurmountable obstacles. KS usually involves the mutual exchange of individual tacit knowledge, which is not easy to identify or exchange. As a result, tacit knowledge sharing may not occur naturally, thus necessitating a series of incentive mechanisms amid an organizational atmosphere to foster the transmission of knowledge (Cao & Xiang, 2012).

KS defines the sharing of pertinent experiences, information, and value among organizational members. KS is a complex socio-technical system that embraces multiple shapes of knowledge management, storage, representation, and exchange. The performance and traits of KS must be expanded based on expectations inherent in national cultural history of organizational employees. KS is a popular concept among researchers because it is a powerful estimator of employees' productivity (Chiu et al., 2018).

Knowledge sharing and sport organisations

When researchers were analysing the contributing factors of the success of the Beijing (2008) Olympic Games, they found that knowledge management played a key role in organizing these games (IOC, 2008). Knowledge sharing as one of important dimensions of knowledge management (Parayitam et al., 2020) could lead to a better performance of sports organizations. Knowledge sharing is an essential factor for strategic decisions and future orientations of sports organizations (Souteh et al., 2017). However, only a limited number of studies have been conducted on the effect of knowledge sharing in sports organizations (Werner & Dickson, 2018). Some of which will be discussed in the following.

Werner and Dickson (2018) conducted a research about the effects of knowledge sharing on athletics' performance in Germany. They concluded that knowledge sharing can positively influence athletics' performance. Souteh et al (2011) investigated driving forces of knowledge sharing in ministry of youth and sport in Iran. The researchers concluded that long-term knowledge management planning, organizational culture and structure, leadership style and human resources, are most important factors that affect knowledge sharing in sports organizations.

Organizational Culture

Organizational culture reveals the common understanding of organization members towards their organization. Therefore, organizational culture could be considered as a collection of shared concepts and opinions (Teräväinen & Junnonen, 2019). Members of an organization may have different backgrounds and working levels, but their understanding of organizational culture will approximately converge to the same thing. An organization may have a specific culture that is based on a set of common values, opinions, and inferences among the members of the organization and affect the way of thinking of the members (Allison, 2019). Due to diversity and differences of organization members there might be different subcultures within the organization as well. Organizational culture could also be defined as a collection of the fundamental values, opinions and principles that distinguish one organization from another (Krajcsák, 2018).

Recently established organizations had a weaker organizational culture than organizations that have longer history because members of younger organizations did not have the opportunity and experience to build up a particular culture (Kwarteng & Aveh, 2018). One of the most important benefits of studying different organizational cultures is to understand the causes for success or failure of organizations (Akhavan et al., 2014).

Organizational culture has a significant impact on the performance and wellbeing of members (Soomro & Shah, 2019). Therefore, successful organization leaders often identify and direct the culture of that organization through establishing the shared values and encouraging the desired way of thinking and acting within the organization (Maamari & Saheb, 2018).

Organization culture resembles personality of a human being. This culture expresses the ideas, beliefs, norms that are common among the members of an organization. So, when a new person joins an organization, he or she could gradually understand and grasp the organizational culture (Turker & Altuntas, 2015). Organizational culture is one of the most important and fundamental characteristics of an organization that it affects how members of the organization relate to each other. Thus, organizational culture has a significant contribution on employee performance and interactions (Soomro & Shah, 2019).

The effect of organizational culture on the members of the organization is so deep that by examining its various aspects, a general understanding and prediction of the behaviours, feelings, points of view, attitudes and reactions of the organization members could be achieved (Harrison & Bazzy, 2017). Wise leaders would find compatible ways with organization culture to facilitate changes in the organization and define new strategies for their organization (Chang & Lee, 2007).

Organizational culture and sport organisations

According to Cameron and Quinn (2005), researchers must pay attention to driving forces of organizational culture to improve issues related to effectiveness and performance, achieving long-term organizational goals, and understanding the phenomenon related to anthropology in the field of sports organizations. In addition, sports organizations can resolve the role conflict and role ambiguity through a strong organizational culture. On the other hand, organizational culture plays a very important role in the attitude of employees and teamwork

culture (Trice & Beyer, 1993). In the following, some of research done about the effect of organizational culture on sports organizations will be discussed.

Although Tojari et al (2011), examined the mediating role of organizational culture between leadership and organizational effectiveness, their research introduced organizational culture as a key mediator for organizational effectiveness. Wallace and Weese (1995) conducted a research in which they described that leaders play an important role in promoting and maintaining the culture of the organization. Lee et al (2018), show that leaders play an important role in promoting and maintaining the culture of the organization. Also, in their research on the relationship between organizational culture and job satisfaction in the field of sports management, they concluded that organizational culture makes a key contribution to improving job satisfaction.

Hypothesis Development

The Effect of Authentic Leadership on Organizational Learning

Authentic leaders have four characteristics: Self-perception, openness to different information, lucidness of connection with employees and fundamental ethical principles (Ribeiro et al., 2019). Self- perception indicates that these leaders are aware of their qualifications, priorities, and stimulants. Lucidness of connection with employees, is reflected when authentic leaders show their true self, as opposed to other leaders who have histrionic personality disorder (Baron & Parent, 2015). Openness to different information is shown when leaders do not limit themselves to a particular set of information. They are open to hear all opinions even if they seem unrelated, wild, unorthodox, or even opposite to their initial hypothesis. They evaluate all this diverse information prior to making their decisions. Finally, fundamental ethical principles are shown when authentic leaders behave according of their central (core) values and their alleged values (Guerrero et al., 2015). Authentic leaders impact organizational learning through their ability to change behaviours. More specifically, authentic

29

leaders provide an authentic dialogue which enhances individual learning and removes organizational obstacles towards learning (Mazutis & Slawinski, 2008). Authentic leaders encourage followers to learn by experimentation and observation. Authentic leaders encourage subordinates to learn new proficiencies and capabilities. Moreover, authentic leaders enhance tendency of followers towards organizational learning (Delić et al., 2017). Authentic leadership encourages leaders and followers alike to learn and to create a positive learning environment (Ilies et al., 2005). Authentic leaders increase psychological safety among followers and create a safe environment for dialogue, and subsequently organizational learning (Alavi & Gill, 2017). According to Milić et al., (2017) authentic leaders enhance organizational learning by creating an organizational atmosphere in which followers can easily access to information and have several opportunities to learn. Relational transparency of authentic leaders helps them to simplify exchange of knowledge which foster learning in organization. On this basis we propose:

Hypothesis1: Authentic leadership has a significant effect on organizational learning.

The Effect of Authentic Leadership on Knowledge Sharing

To promote an appropriate knowledge sharing climate among employees, leaders make an important contribution (Lei et al., 2019; Kim & Park, 2020). Leaders as a facilitator expand interactions among employees that this behaviour promotes knowledge sharing in the organization. Leadership style affect knowledge sharing through mechanisms which assist employees boost their visions toward knowledge sharing (Mishra & Pandey, 2019). In fact, leaders regulate knowledge sharing procedures through behaving as a role-model for the method in which knowledge is shared, setting impetuses for sharing knowledge, and preparing connection of knowledgeable individuals of the organization (Masa'deh et al., 2016).

One of the basic traits of authentic leaders is sharing knowledge with followers. Authentic leaders can crystallize and reinforce knowledge sharing behaviours amongst their

colleagues (Edú-Valsania et al., 2016). Authentic leaders facilitate positive emotions toward the organization amongst their followers (Ribeiro et al., 2019), and when employees are psychologically connected to the organization, they are more inclined to share knowledge (Jo & Joo, 2011). Knowledge at both the individual level and organizational level can be improved by using of authentic leadership style (Delić et al., 2017).

Authentic leaders foster knowledge sharing behaviours through their four main characteristics (Zeb et al., 2019). First, self- awareness encourages authentic leaders to reinforce the process of knowledge sharing among employees through support of knowledge contributors (Tran, 2019). Second, the relational transparency of authentic leaders leads to sharing knowledge by employees (among them and including leader). When there is a leadership style accompanied by high morality values, employees tend to share their knowledge (Alzghoul et al., 2018). Third, trait of balanced processing of information stimulates authentic leaders to provide sincere feedback to the subordinates and consider their opinions. This revaluating process enhance knowledge sharing behaviours among followers. Fourth, internalized moral perspective causes authentic leaders to facilitate the process of sharing knowledge because not only do leaders who have this trait reduce the threat of losing knowledge for followers, but also this trait plays an important role in enhancing knowledge sharing behaviours of followers (Tran, 2019). On this basis we propose:

Hypothesis 2: Authentic leadership has a significant effect on knowledge sharing.

The Effect of Authentic Leadership on Organizational Culture

The concept of leadership refers to the ability to influence team members to achieve organizational goals (Gabel-Shemueli et al., 2020). Each leader may have his/her own way of interactions and communications to encourage and direct employees. Leadership styles are methods of giving direction, developing plans, and encouraging people about behaviours in

organization. Leadership style reflects the pattern of manners applied by leaders when they want to influence on subordinates' attitude (Pawirosumarto et al., 2017).

Leaders of an organization have a great role on shaping the organizational culture (Chang & Lee, 2007). The basic beliefs, convictions, views, and behaviours of the organization's leaders directly affect the current and future direction of the organization. Therefore, it can be expected that these basic principles and tendencies will be transferred to other parts of the organization by middle managers (Chong et al., 2018). Managers, on the other hand, are the role models of employees in the organization, and are constantly monitored by them. Employees remember the decisions of managers (Warhurst, 2011). In fact, employees pay attention to the outcome of leaders' actions because employees want to demonstrate that they understand the expectations and are willing to meet these expectations (Zhou & Wu, 2018).

Leaders' information, expertise and competences are their assets to develop and control organizational culture. Their manners and selected methods influence organizational culture. Leaders can put in place certain values, visions and missions in the organization (Tran, 2020). Leaders have the authority to establish standards and procedures and they may choose to have a reward and punishment system (Zheng et al., 2019). Leaders influence organizational culture through enhancing shared opinions, identifying and reducing unsuitable habits, improving relationship with subordinates, and providing progress opportunities for new organizational members (Sarros, et al., 2011). In this regard, Traditional leadership styles face major challenges to account for rapid changes surrounding them. So, the need for a new leadership style which empower managers to face these challenges has been increased (Ladkin & Taylor, 2010). In fact, managers could follow new leadership strategies designed based on high moral values to achieve organizational goals (Hadiannasab & Afshari, 2019). Since authentic leaders rely on ethical behaviour in the organization and devote all their efforts to empower employees,

they help to create an organizational culture which upholds ethical principles (Karadag & Oztekin-Bayir, 2018). Authentic leaders are those who can influence the behaviours, ideas, thoughts, ideology and beliefs of employees. These leaders can also refine organizational practices to promote fairness and excellence. Therefore, organizational culture, which is defined as common beliefs and standards among members of the organization, is enhanced by these leaders (Azanza et al., 2013). Attitudes, manners and characteristics of authentic leader s influence on followers' thoughts and ideas which form the main foundation for organizational culture (Farnese et al., 2019). In summary, authentic leadership helps to form an ethical culture and atmosphere in the organization (Verbos et al., 2007). On this basis we propose:

Hypothesis 3: Authentic leadership has a significant effect on organizational culture.

The Effect of Knowledge Sharing on Organizational Learning

Knowledge sharing is the core of organizational learning (Swift & Hwang, 2013). This is mainly because knowledge sharing is the process by which employees share their experience and expertise with other employees in work groups or units (Lo et al., 2021). Organizational learning is the process of finding errors and mistakes and correcting them through achieving shared knowledge (Al-Dari et al., 2020). To foster organizational learning, organizations should enhance level of knowledge sharing (Galeazzo & Furlan 2019; Usman et al., 2019). According to Werner and Dickson (2018), knowledge sharing facilitates organizational learning. Knowledge sharing provides both individuals and organizations with the opportunity to reflect on outcomes and better comprehend their working place. Knowledge sharing between and amongst organizational members has a positive effect on organizational learning (Malik & Kanwal, 2018). In the organization, knowledge sharing builds the foundation of organizational learning. One of the key outputs of knowledge sharing is organizational learning (Kumaraswamy & Chitale, 2012). Knowledge sharing behaviours leverage learning in organizations (Kim & Park, 2020; Sorakraikitikul & Siengthai, 2014). Knowledge sharing

behaviours and organizational learning complement each other. Learning is the result of processing valuable knowledge. Moreover, knowledge sharing establishes a basis for improving learning in the organization by creating opportunities to learn among individuals. knowledge sharing empowers organizational members to sustain their learning processes (Park & Kim, 2018). Knowledge sharing facilitates organizational learning processes to occur more effectively (Nugroho, 2018). On this basis we propose:

Hypothesis 4: Knowledge sharing has a significant effect on organizational learning.

The Effect of Organizational Culture on Organizational Learning

Organizational culture has a substantial effect on various dimensions of the organization, such as learning orientation (Karakasnaki et al., 2019). Organizational culture is a key facilitator of organizational learning. An organizational culture in which individuals are stimulated to take risks, be responsible and directed towards self- growth, can enhance organizational learning procedures (Molodchik & Jardon, 2015). Organizational culture influences the behaviour of employees and acts to accelerate or decelerate learning actions, in terms of the values to be stimulated (Oh & Han, 2020). According to Sanz-Valle et al (2011), organizational culture is a vital factor for facilitating organizational learning processes because culture in an organization has a positive effect on behaviours of organizational members. There are four ways by which organizational culture influence organizational learning. First, culture in the organization forms employees' assumptions toward importance of knowledge. Second, it transforms individual knowledge into organizational knowledge. Third, organizational culture supports process which boost knowledge creation. Finally, culture makes a special atmosphere for social interaction. On this basis we propose:

Hypothesis 5: Organizational culture has a significant effect on organizational learning.

Mediating Roles of Knowledge Sharing in the Relationship Between Authentic Leadership and Organizational Learning

Knowledge sharing enhances organizational learning. To create a learning atmosphere, knowledge sharing is considered as an important tool and leadership as the process of impacting the works of a subordinate or a team, promotes knowledge sharing which leads to organizational learning improvement (Franco & Almeida, 2011). Authentic leadership expands subordinates' psychological and practical capabilities and improves organizational learning by encouraging staff to share knowledge among employees, which can stimulate both employees' cognitive and behavioural actions (Mousa et al., 2019). On this basis we propose:

Hypothesis 6: Knowledge sharing mediates the relationship between authentic leadership and organizational learning.

Mediating Roles of Organizational Culture in the Relationship Between Authentic Leadership and Organizational Learning

Social exchange theory (Blau, 1964) supports the argument that learning is improved by a condition and culture when leadership actively provide an atmosphere where outcomes are assessed and rewarded (Graham & Nafukho, 2007). Leadership is considered as a vital element to influence organizational learning by shaping organizational culture (Khalifa & Ayoubi, 2015). Leaders foster learning in the organization through supporting a culture which enhance organizational learning (Atwood et al., 2010). Leadership is considered as a creator of organizational culture which reflects values and special belief of the leader (Gholamzadeh et al., 2014). So, culture and aforementioned factors provide effective organizational conditions which influence organizational learning (Nugroho, 2018). On this basis we propose:

Hypothesis 7: Organizational culture mediates the relationship between authentic leadership and organizational learning.

<center>**Methods**</center>

This section explains the methodology, research design, participants, sampling, data collection, survey items, sample size, validity, reliability, and analytical techniques.

Methodology

Methodology of this research is positivism. This paradigm which emphasizes utilizing quantitative methodology in research, forms the philosophical basis of all quantitative research through using the logic of deductive reasoning. Based on this approach, everything that can be understood in the environment can be analysed with cause-effect relationships, and if a phenomenon cannot be objectively measured, the existence of that phenomenon should be seriously doubted. The positivism considers "reality" as objective, observable, measurable and predictable. In this approach which is based on statistical methods, hypotheses are presented as propositions or conditional expressions and tested for validation (Hjørland, 2005).

Research Design

Research methods in behavioral sciences can be categorized, according to two criteria including research objective and method of data collection. Scientific research is classified, in terms of a research objective, into three types of basic research, practical or applied research, and developmental research (Sekaran, 1992). The objective of practical research is to develop practical knowledge in a particular field. This research is a practical one as its objective is to examine the relationships among authentic leadership, organizational learning, organizational culture, knowledge sharing.

According to the method of data collection, research fall into two categories including non-experimental and experimental research. Non-experimental research comprises a set of methods aimed at describing the conditions and phenomena which are being studied (Ghauri et al, 1995). Accordingly, this research is a non-experimental one. Moreover, descriptive research is subdivided into five types of survey research, correlational research, action research,

<center>36</center>

case study research, and causal comparative research (Gay & Diehl, 1992). This is a non-experimental research because it investigates the qualities and properties of individuals in the population; also, it studies the status quo of the population in terms of several qualities or variables.

Participants

In this research, the participants of this study were all senior managers of sports professional associations and organizations in the Guilan province in Iran. For this reason, 189 questionnaires were distributed. Eventually 186 questionnaires were returned and since 4 of them lacked the necessary information, 182 completed questionnaires (response rate = 96.29%) were analyzed. The distribution of participants from each county are shown in Table 1.1.

Table 1.1

Number of Senior Managers

Organization/Department	Number of managers
Guilan Administration of Youth and Sports	68
Rasht Youth and Sports Department	27
Āstāneh-ye-Ashrafīyeh Youth and Sports Department	12
Lahijan Youth and Sports Department	9
Langarud Youth and Sports Department	8
Rudsar Youth and Sports Department	10
Rudbar Youth and Sports Department	11
Fuman Youth and Sports Department	5
Shaft Youth and Sports Department	7
Anzali Youth and Sports Department	16
Talesh Youth and Sports Department	9

Sampling

A sample comprises of several persons whose characteristics are like the characteristics of the population. They are the specimen of the population, which are homogeneously

consistent with the members of the population. Consequently, sampling is among the main steps of any scientific research, which enables the researcher to produce satisfactory results using fewer facilities (Gay & Diehl, 1992). The researcher must observe the framework of the methodology, nature of data, method of data collection, and the structure of the population, and then form a sample which typifies the quality and quantity of the population (Sekaran, 1992).

In this research, the participants of this study were all senior managers of sports professional associations and organizations in the Guilan province in Iran. For this reason, 189 questionnaires were distributed. Eventually 186 questionnaires were returned and since 4 of them lacked the necessary information, 182 completed questionnaires (response rate = 96.29%) were analyzed.

Data Collection

Any research conclusion requires precise, accurate information, so the decision on the tool or method of collecting credible information to prove or disprove a hypothesis carries considerable weight in a research for. There are various tools to measure the variables. The decision on the method of data collection is contingent upon the available facilities in an organization, the requisite level of accuracy, the researcher's judgment, the required length of time for the research, research costs, and the available relevant sources of information (Sakaran, 1992).

Survey Items

This research utilizes a 5-point Likert scale (1=strongly disagree; 2=disagree; 3= undecided; 4 = agree; 5=strongly agree). The questionnaire is divided into two sections. The first section covers general information about respondents; the second section contains twenty-two (22) questions evaluating the research variables. Six questions used by Swift & Hwang (2013), are framed to evaluate organizational learning as dependent construct and one of the four main research variables. Eight questions (two questions for each dimension of this

variable) applied by Walumbwa et al (2008), are also dedicated to evaluating authentic leadership as the independent research variable. Four items suggested by Cao & Xiang, (2012), were applied to measure knowledge sharing as one of the mediating constructs. Finally, four questions proposed by Denison (2000), were used to test organizational culture as another mediating variable. Refer to the following table (1.2).

Table 1.2

Survey items

Variable	Questions
Organizational Learning	1. We promote risk-taking and experimentation in our working methods.
	2. We do have set working practices, but we can change these in pursuit of greater efficiency if need be.
	3. We actively encourage employees and customers to let us know if we are going wrong in the way we do things and to let us know how we can improve.
	4. There is two-way communication between employees of all levels about what this company is doing and where it is going.
	5. Ideas from all employees are listened to and acted on to change company policy even if they challenge senior manager views.
	6. This is an open organization and as much information as possible is made available to employees.
Authentic Leadership	7. Seeks feedback to improve interactions with others.
	8. Accurately describes how others view his or her capabilities.
	9. Says exactly what he or she means.
	10. Is willing to admit mistakes when they are made.
	11. Demonstrates beliefs that are consistent with actions.
	12. Makes decisions based on his/her core beliefs.
	13. Solicits views that challenge his or her deeply held positions.
	14. Listens carefully to different points of view before coming to conclusions.
Knowledge Sharing	15. I usually share my work experience with colleagues and collaborators.
	16. When I receive new information, I would share with my collaborators.
	17. I usually express my view and suggestions when attending team discussions freely.
	18. I usually share my work documents and material when collaborators are in need.
Organizational Culture	19. The majority of my organization's employees are extensively involved with their work.
	20. If an employee ignores the fundamental values of the organization, he/she will be in trouble.
	21. Everyone in the organization has a deep understanding of the needs of their clients.
	22. In our organization, there is a clear strategy for the future.

Validity Checks

Validity signifies the soundness of measurement method and is generally defined as the level of accuracy in a measurement method. In other words, validity identifies whether the instrument measures the characteristic it is supposed to measure or not (Fornell & Larcker, 1981). There are a variety of validities including face validity, content validity, predictive validity, construct validity, etc. (Hulland, 1999). A panel of three experts used "back-translation" techniques to translate the items into Farsi. After achieving consensus, the first draft of the translated items was back-translated by two individuals with competence in both English and Farsi languages. The back-translations were near-identical to the original items, requiring only minor editing to obtain a final Farsi scale. The content validity of the present questionnaire was confirmed by academics with relevant content expertise. Content validity determines whether the scale sufficiently evaluates the variables which it is thought to evaluate and can be verified via specialists (Memon et al., 2017).

Common Method Bias (CMB) is potentially problematic when scholars use cross-sectional and self-report methodology (Jordan & Troth, 2020). To mitigate CMB, both pre- and post-hoc strategies were applied. In fact, we applied two procedural remedies and one statistical remedy to control CMB effects. In terms of pre- hoc strategy, first, we enhanced survey items through getting feedback from experts so that respondents can understand them easily, and then, we distributed items throughout the survey (Counterbalancing the arrangement of endogenous and exogenous constructs). These processes were applied as pre-hoc strategies to reduce CMB effects (Jordan & Troth, 2020). To check the presence of CMB, we applied Herman's Single Factor Test as a statistical remedy (Tehseen et al., 2017). The findings show that CMB is not a problem.

Reliability Checks

The reliability of an instrument signifies the precision, credibility, consistency, and reproducibility if the measurement results (Hair et al., 2019). It shows that to what extent a test or measurement can produce the same results if it is repeated. This research uses internal consistency reliability since it is entirely appropriate for field studies inasmuch as the method needs only a single indicator and it is the most popular method of measuring reliability. Internal consistency reliability can be measured by means of Cronbach's alpha. The first step is to calculate the variance of scores for each subset of questions as well as the total variance. Then, the value of alpha is calculated by means of the following formula.

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

N = the number of items.

$\bar{c}$ = average covariance between item-pairs.

$\bar{v}$ = average variance.

According to Cronbach, (1951), the coefficient alpha varies from 0.00 (showing the utters lack of reliability) to 1.00 (demonstrating the highest reliability). In general, values from 0.6 to 0.8 are satisfactory. (0.7 is generally acceptable in most cases.). SPSS software was used to calculate the Cronbach Alpha of the current questionnaire. Cronbach's alpha of the whole questionnaire is 0.926 which is higher than the cut-off point of 0.7.

Analytical Techniques

Data analysis is conducted by utilizing either a descriptive or an inferential approach. Descriptive statistics describes the acquired information, including the demographic features of the sample and the statistical analyses like frequency index and statistical charts. On the other hand, inferential statistics is applied to analyze the hypotheses and prove or disprove

relationships between the variables. In this research, partial least square approach to structural equation modeling is used to test the research hypotheses and analyze the structural relationships between variables. Also, SPSS and Smart: PLS software are used to analyze the data.

Results

In this section, collected data will be analyzed in terms of descriptive indicators and inferential statistics by the means of SPSS 24 and Smart: PLS version 3.2.3. The first section describes the collected data by means of descriptive statistical indicators. Eventually, in second section, relationship among constructs is tested by partial least square approach to SEM.

Respondents and Demographical Characteristics

The participants of this study were all senior managers of sports professional associations & organizations in the Guilan province in Iran. For this reason, 189 questionnaires were distributed. Eventually 186 questionnaires were answered and since 4 of them lacked the necessary information, 182 completed questionnaires (response rate = 96.29%) were analyzed.

In order to better understand the sample used in the current study, before dealing with inferential statistics and testing hypotheses, we examined the demographic characteristics of the research sample. Among the 182 people who made up the study sample, 71 (39.01%) were women and 111 (60.99%) were men. On the other hand, 54 people were (29.67%) in the age group under 30 years, 67 people were (36.81%) in the age group 31 to 40 years, 28 people were (15.38%) in the age group 41 to 50 years, and 33 people were (18.14%) in the age group over 50 years. In terms of work experience, 24 people had 1 to 5 years (13.19%), 48 people 6 to 10 years (26.37%), 69 people 11 to 15 years (37.91%) and 41 people over 15 years (22.53%) of work experience.

Table 1.3

Demographics Characteristics of Participants

Demographic		Frequency	Percent (%)
Gender	Male	111	60.99
	Female	71	39.01
Work experience	1-5years	24	13.19
	6-10 years	48	26.37
	11-15 years	69	37.91
	More than 15 years	41	22.53
Age	18-30years	54	29.67
	31-40 years	67	36.81
	41-50 years	28	15.38
	More than 50 years	33	18.14

Figure 1.2

Distribution of Respondents in terms of Gender

Figure 1.3

Distribution of Respondents by Work Experience

Work Experience

	1-5 years	6-10 years	11-15 years	More than 15 years
Work experience	24	48	69	41

Figure 1.4

Distribution of Respondents in terms of Age

Age

	18-30 years	31-40 years	41-50 years	More than 50 years
Age	54	67	28	33

Descriptive Statistics

The questionnaire consists of 22 questions. The responses are based on 5-point Likert scale. To encode the responses in the questionnaire, this research applies the 5-point Likert Scale, including 'Strongly disagree' 'Disagree', 'Undecided', 'Agree', and 'Strongly agree'.

One hundred and eighty-two participants completed the 22-item survey. Next, all data were entered into SPSS. After that, descriptive statistics of all research questions was calculated. The descriptive statistics of the questions has been shown as below:

Table 1.4

Descriptive Statistics of the Questionnaire

Variable	Item	Frequency	Min	Max	Mean	Standard Deviation
	1	182	1.00	5.00	3.14	0.96
Organizational Learning	2	182	1.00	5.00	2.81	1.11
	3	182	1.00	5.00	2.44	0.92
	4	182	1.00	5.00	2.51	1.03
	5	182	1.00	5.00	2.53	0.93
	6	182	1.00	5.00	2.71	0.97
Authentic Leadership	7	182	1.00	5.00	2.79	1.02
	8	182	1.00	5.00	2.86	0.95
	9	182	1.00	5.00	2.68	0.97
	10	182	1.00	5.00	2.47	0.91
	11	182	1.00	5.00	2.28	0.92
	12	182	1.00	5.00	2.94	0.92
	13	182	1.00	5.00	3.02	0.95
	14	182	1.00	5.00	3.08	0.88
Knowledge sharing	15	182	1.00	5.00	2.62	0.90
	16	182	1.00	5.00	2.59	1.07
	17	182	1.00	5.00	2.45	1.07
	18	182	1.00	5.00	3.16	0.90
Organizational culture	19	182	1.00	5.00	2.59	0.99
	20	182	1.00	5.00	2.87	1.10
	21	182	1.00	5.00	2.31	1.29
	22	182	1.00	5.00	2.39	1.30

Inferential Data Analysis

After descriptive analysis, inferential analysis is done. In fact, the research hypotheses are tested out by the inferential data analysis.

Structural Equation Modelling (SEM) is one of the widespread types of statistical methods. This method helps researchers to examine the relationships between several variables in a model. The power of this technique has made it widely popular in various subjects such as marketing, human resource management, strategic management, and information systems (Hair et al., 2013). There are two reasons for naming this method as SEM: 1. The relationships between the variables in this method are analyzed using a series of structured equations. 2. These structured equations are plotted in the form of graphics that allow the researcher to visualize research theories based on the data (Bryne, 2010). In SEM, there are two generations of data analysis methods: The first generation is covariance-based and the second one is variance-based. The main limitation of first generation is that it requires a large sample size. LISREL, AMOS, EQS, and MPLUS are the four most widely used software that utilize this generation. The second generation of SEM, known as Partial Least Squares (PLS), is based on variance. The PLS-based software needs fewer conditions than the other software utilizing the first-generation method (Hair et al., 2017).

Partial least square to structural equation modelling was used to test hypotheses. There are couple of reasons why we applied this method. First, PLS-SEM is suitable for small sample sizes. Second, it is not sensitive to data normality. Third, this method is appropriate for both primary models and exploratory research (Hair et al., 2019). Structural equation modeling with a partial least squares approach consists of two main steps: 1) measurement model, and 2) structural model (Hair et al., 2017).

Measurement Model

Measurement model examines how latent variables are explained by the corresponding explicit variables (items) (Ringle et al., 2012). To evaluate the measurement models, the three criteria have been utilized: 1. Item reliability (factor loading coefficients, Cronbach's alpha, and composite reliability). 2. Convergent validity (average variance extracted) and 3. Discriminant validity (Fornell-Larker method) (Hulland, 1999).

The outcomes showed that the item reliability is verified because the amounts of factor loadings, composite reliability, and Cronbach's alpha are greater than the determined cut-off points. The minimum acceptable value for factor loading is 0.5 (Chin, 1998). Cronbach's alpha values and composite reliability must also be greater than 0.7 (Cronbach 1951). Refer to following table (1.5):

Table 1.5

Factor loading, Cronbach's alpha, and Composite Reliability Indexes

Construct	Item	Factor Loading	Cronbach's alpha	Composite Reliability
Organizational Learning	1	0.753	0.853	0.887
	2	0.755		
	3	0.706		
	4	0.752		
	5	0.735		
	6	0.817		
	7	0.613		
	8	0.760		
Authentic Leadership	9	0.657	0.862	0.892
	10	0.807		
	11	0.771		
	12	0.737		
	13	0.650		
	14	0.699		
Knowledge Sharing	15	0.855	0.848	0.898
	16	0.895		
	17	0.832		
	18	0.732		
Organizational Culture	19	0.722	0.700	0.811
	20	0.757		
	21	0.692		
	22	0.707		

To test convergent validity, Average Variance Extracted (AVE) method is used. In the case of (AVE), a minimum value of 0.5 indicates acceptable convergent validity (Fornell & Larcker 1981). Table (1.6) reflects that our model has suitable convergent validity.

Table 1.6

AVE Index

Construct	Authentic Leadership	Knowledge Sharing	Organizational Culture	Organizational Learning
AVE	0.511	0.690	0.518	0.568

In the current research, Fornell-Larker matrix is used to measure discriminant validity. The acceptable discriminant validity of a model indicates that one construct in the model has more interaction with its items than other constructs (Ringle et al., 2012). According to Fornell and Larker (1989), discriminant validity is checked by a matrix in which the square root of the AVE values for each construct are non-diagonal elements of matrix and the below cells contain the values of the correlation coefficients. In other words, non-diagonal elements must be greater than numbers in the same column and row. Table (1.7) reflects that our model has suitable discriminant validity.

Table 1.7

Discriminant Validity Matrix

Construct	Mean	SD	Authentic Leadership	Knowledge Sharing	Organizational Culture	Organizational Learning
Authentic Leadership	2.767	0.945	**0.715**			
Knowledge Sharing	2.709	0.989	0.602	**0.831**		
Organizational Culture	2.545	1.177	0.604	0.639	**0.720**	
Organizational Learning	3.697	0.991	0.610	0.737	0.677	**0.753**

Structural Model

After examining the fit of measurement model, it is time to check the fit of structural model. Unlike the measurement model, the structural model does not deal with questions (explicit variables) and only latent variables with their relationships are examined. In the current study, the fit of the structural model is investigated through the criteria of T-values, R^2, and Q^2. The obtained results are described in detail below.

The first criterion for examining the fit of a structural model is T-values. Figure 1.6 shows that the t-value coefficients are higher than the value of 1.96, indicating the fit of the structural model. Moreover, one of the indicators for confirming the significance of relationships in the structural model is the significance of path coefficients. The significance of path coefficients is a complement to the magnitude and direction of the sign of path coefficients. If the value obtained is above the minimum statistic at the desired confidence level, that relationship or hypothesis is confirmed. The level of confidence in the present study is 95% and the minimum statistic is 1.96. The results show that all significance coefficients are greater than the value of 1.96, which indicates the significance of the paths.

The second criterion for examining the fit of a structural model in a research is the coefficients of determination R^2 for the endogenous latent variables of the model. R^2 criterion indicates the effect of an exogenous variable(s) on an endogenous variable(s) (Hair et al., 2019). Chin (1998) introduces three values of 0.19, 0.33 and 0.67 as the criterion values for weak, medium, and strong values of R^2. Although naturally a strong or relatively strong value of the coefficient of determination is more desirable and indicates a better fit of the structural model, but if the latent endogenous variable is affected by a small number (one or two) of the exogenous variable, moderate values of the coefficient of determination are also acceptable (Henseler et al., 2009).

As can be seen from the values presented in the table below, the values of R^2 related to the endogenous variables (knowledge sharing, organizational culture, and organizational learning) of the model are higher than the average value of this criterion, which is 0.33. This indicates a suitable fit for the structural model of the research.

Table 1.8

R^2 Index

Construct	Authentic Leadership	Knowledge Sharing	Organizational Culture	Organizational Learning
R^2	NA	0.363	0.364	0.629

Another criterion is Q^2, which determines the predictive power of the model. The value of Q^2 must be calculated for all endogenous constructs of the model. If the value of Q^2 in the case of an endogenous construct is zero or less than zero, it indicates that the relationship between the other construct of the model and that endogenous construct is not well specified and therefore the model needs to be modified (Hair et al., 2019). Hensler et al. (2009) have set three values of 0.02, 0.15 and 0.35 regarding the intensity of model predictive power for endogenous constructs. According to them, if the value of Q^2 for an endogenous construct is in the range of close to 0.02, it indicates that the model has poor predictive power over the items of that construct, and as this value increases, the predictive power increases (Hair et al., 2019). Based on the results presented in Table (1.9), the value of Q^2 for all endogenous variables of the research is greater than 0.02, which indicates an appropriate fit of the structural model of the research.

Table 1.9

Q^2 Index

Construct	Authentic Leadership	Knowledge Sharing	Organizational Culture	Organizational Learning
Q^2	NA	0.238	0.176	0.073

The criterion of goodness of fit (GoF) is related to the general fit of the model. This means that by this criterion, scholars can check the overall fit of the model (Tenenhaus et al., 2005). Wetzels et al. (2009) introduced three values of 0.01, 0.25 and 0.36 as weak, medium, and strong values for GoF. The result of 0.509 for the GoF criterion indicates a very strong overall fit of the research model.

$$GOF = \sqrt{Communalities \times \overline{R^2}} = \sqrt{0.572 \times 0.452} = 0.509$$

Hypothesis Testing

When the measurement and structural models are confirmed, it is time to evaluate hypotheses, PLS technique to structural equation modeling was utilized to examine the hypotheses for the conceptual model of research, check significance of relationships among research variables, and investigate the relevance of the observed data with the conceptual model of the research. In fact, based on the algorithm of data analysis in PLS technique, researchers can test the research hypotheses after examining measurement models, structural model, and general fit. This section consists of two parts: 1) Investigation of Z-score related to each variable; 2) Investigation of standardized coefficients of factor loading related to the paths of each of the hypothesis. Z-score determines statistical significance of relationships as well as approval or disapproval of research hypotheses. On the other hand, standardized coefficients of factor loading determines the intensity of the effect of variables on each other The results of the hypothesis testing are reflected in the following figures.

Figure 1.5

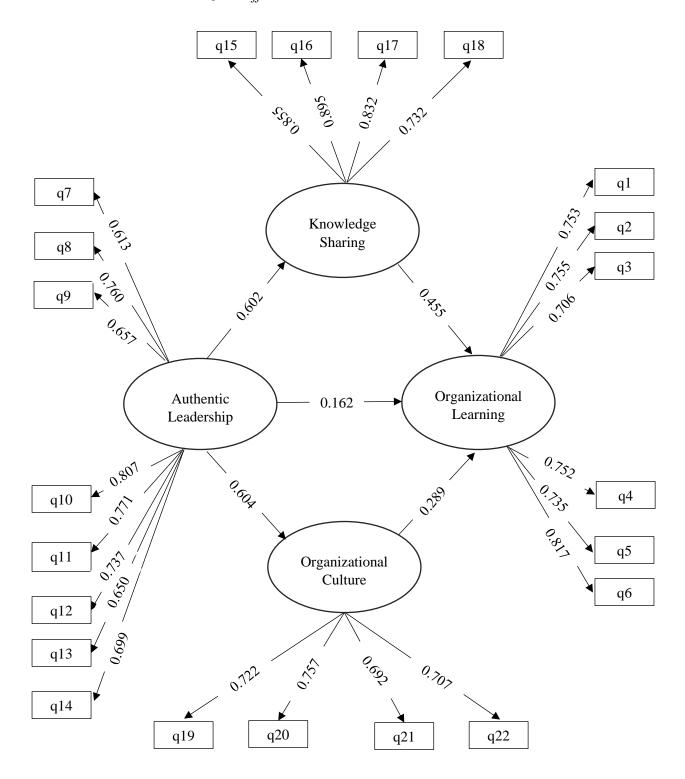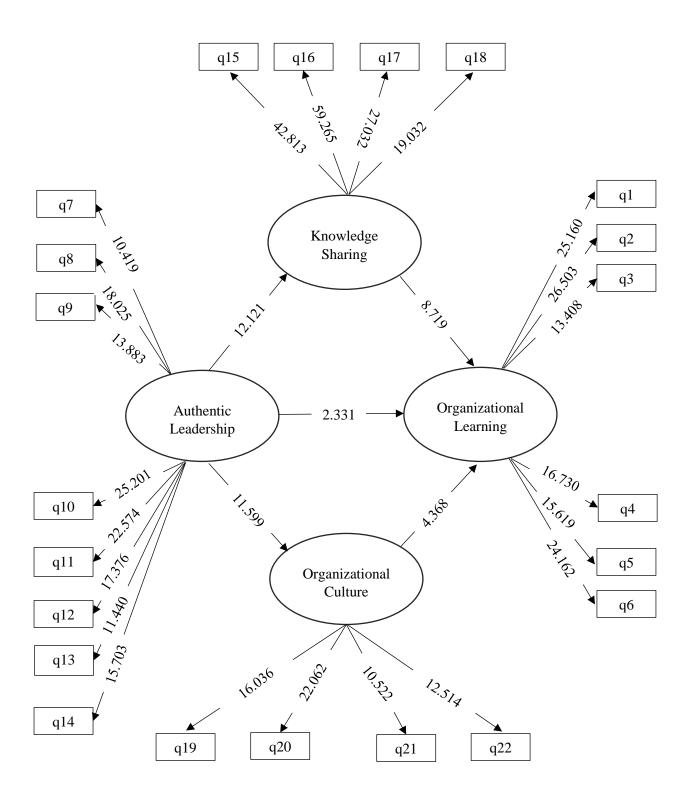*Structural Model in Standardized coefficients Mode*

Figure 1.6

Structural Model in T-Value Mode

Hypothesis Support

This research examines the effect of authentic leadership on organizational learning with regards to the mediating roles of knowledge sharing and organizational culture. There are seven hypotheses. To do this, seven hypotheses were proposed. To test hypotheses, the correlations among independent variables, mediator variables, and dependent variables were examined. As it was proved in the previous section, the correlation between variables was examined by Partial Least Square approach to Structural Equation Model. The analysis is done by Smart: PLS version 3.2.3.

The results verify hypothesis 1, that authentic leadership positively influences organizational learning (β= 0.162, T= 2.331, p<0.01). As the same way, hypothesis 2 is verified (authentic leadership positively affects knowledge sharing (β= 0.602, T= 12.121, p<0.01)) and Hypothesis 3 (authentic leadership positively impacts organizational culture (β= 0.604, T= 11.599, p<0.01). In addition, Hypothesis 4 and Hypothesis 5 are confirmed. More specifically, knowledge sharing has substantial effect on organizational learning (β= 0.455, T= 8.719, p<0.01) and organizational culture significantly contributes to organizational learning (β= 0.289, T= 4.368, p<0.01).

Table 1.10

Results of Hypotheses

Hypotheses	Impact factor	T	Result
H1. Authentic leadership has a significant effect on organizational learning.	0.162	2.331	Supported
H2. Authentic leadership has a significant effect on knowledge sharing.	0.602	12.121	Supported
H3. Authentic leadership has a significant effect on organizational culture.	0.604	11.599	Supported
H4. Knowledge sharing has a significant effect on organizational learning.	0.455	8.719	Supported
H5. Organizational culture has a significant effect on organizational learning.	0.289	4.368	Supported
H6. Knowledge sharing mediates the effect of authentic leadership organizational learning.			Supported
H7. Organizational culture mediates the effect of authentic leadership organizational learning.			Supported

To test mediating role of knowledge sharing (Hypothesis 6) and organizational culture (hypothesis 7), we applied two different approaches, respectively, 1. Bootstrapping (Henseler et al., 2009). 2. Baron and Kenny's (1986) techniques.

The results of bootstrapping methods from 5000 subsamples confirm hypothesis 6 and 7. The outputs verify hypothesis 6 because path a (authentic leadership and knowledge sharing), and path b (knowledge sharing and organizational learning), were significant. Hypothesis 7 was confirmed owing to the fact that path e (authentic leadership and organizational culture) and path b (organizational culture and organizational learning) were significant.

Baron and Kenny's (1986) four step approach examined the mediating role of knowledge sharing and organizational culture (Hypothesis 6 and 7). First, authentic leadership affects positively and significantly organizational learning in the absence of mediators, path c, total effect (β= 0.615, T= 13.212, p<0.01). Also, the second and third conditions are confirmed given that Hypotheses 2, 3, 4 and 5 were verified. Fourth, the effect of authentic leadership on organizational learning was decreased (β= 0.162, T= 2.331, p<0.01) after using knowledge sharing and organizational culture as mediators, without any drop in the significance level (path c').

A variable is a partial mediator when a portion of effect of independent variable on dependent variable will be transferred through it, while some other portion of the change in dependent variable is due to direct relationship with the independent variable. In other words, the relationship between the independent and dependent variable in the presence of a variable which has a partial mediating role, is still significant. On the other hand, a variable is a full mediator when full effect of independent variable on dependent variable will be transferred through it, and direct relationship between independent variable and dependent variable is

insignificant (Woody, 2011). The results show that both knowledge sharing and organizational culture have partial mediating role on the relationship between authentic leadership and organizational learning.

Figure 1.7

The Model before Adding Mediators

| Authentic Leadership | — c = 0.615 and 13.212 → | Organizational Learning |

Figure 1.8

The Model after Adding Mediators

Knowledge Sharing

a = 0.602 and 12.121

b = 0.455 and 8.719

Authentic Leadership — c' = 0.162 and 2.331 → Organizational Learning

e = 0.604 and 11.599

f = 0.289 and 4.368

Organizational Culture

Summary

In this section, after an initial data analysis (anomaly detection and detection of missing data), drawing histogram graphs, mentioning descriptive statistics of items, the validity of the measurement models was tested one by one. After the adoption of models, measurement models were verified. Afterward, descriptive indicators, path coefficients, and the correlation

between variables were evaluated. The structural model and relationships among variables are assessed. The results confirmed the model's goodness of fit. The hypotheses were tested out by PLS technique to structural equations modeling. All hypotheses were confirmed.

Discussion and Conclusion

A research purpose is to produce results through which definite objectives are achieved. Furthermore, the attained results can establish the foundations for future research. At the end of any research, the researcher, after doing the data analysis and the hypothesis testing, provides the findings and some suggestions. As shown in previous sections, the formulation of hypotheses was based on the conceptual model of the research. In fact, research findings must derive from careful analysis so that they can deliver improvements in the given fields. Accordingly, this research has already adopted proper analytical methods of hypothesis testing to produce accurate, clear-cut findings. The following is the interpretations and suggestions based on the findings from data analysis.

Research Summary

This research examined the effect of authentic leadership on the organizational learning with respect to the mediating roles of knowledge sharing and organizational culture. At the beginning of the research, the general principles (the research gap, objectives, hypotheses, variables, and the conceptual model) were specified. Then, the theoretical bases for research principles and the involving variables were developed in order to better strengthen the theoretical foundations of the whole research. The information needed for the formulation of the hypotheses was collected from library sources, the conceptual model of the research, and the comments from the experts. The data extracted from the questionnaires were used for data analysis and hypothesis testing (employing structural equation approach and Smart: PLS). The data, collected by means of the questionnaires completed by 182 senior managers of Guilan sports professional associations & organizations, were analyzed in two parts of descriptive and

inferential statistics. Finally, this section presents the research findings and both theoretical and practical suggestions for future research. This research developed seven major hypotheses which had been formulated based on the conceptual model. At the level of descriptive analysis, the demographic data (the age, gender, and experience of the participants) and descriptive statistics of all research questions (frequency, frequency percentage, mean, and standard deviation) were analyzed. At the level of inferential analysis, the data were analyzed by means of statistical hypothesis testing to prove or disprove the research hypotheses.

Discussion of Key Findings

The following section present interprets the results produced through the testing the hypotheses.

Hypothesis 1. Authentic leadership has a significant effect on organizational learning. The findings indicates that the effect of authentic leadership on organizational learning is significant with a significance value of 2.331 and a confidence level of 95%. The path coefficient of 0.162 signifies that authentic leadership makes a 16.2 percent impact on the organizational learning of Guilan sports professional associations and organizations. This finding shows that implementation of the principles of authentic leadership lead to enhancement of organizational learning in Guilan sports professional associations & organizations. In fact, the current findings agree with the findings of studies by Mousa et al. (2019), Okmen et al., (2018), and Mazutis & Slawinski (2008).

Hypothesis 2. Authentic leadership has a significant effect on knowledge sharing. Examining the second hypothesis confirms the effect of authentic leadership on knowledge sharing with a significance value of 12.121 and a confidence level of 95%. Also, the path coefficient of 0.602 reflects that authentic leadership creates a 60.2 percent impact on knowledge sharing in Guilan sports professional associations & organizations. This result attests to this fact that implementation of the concepts and principles of authentic leadership,

facilitates the procedures of knowledge sharing in Guilan sports professional associations & organizations. These findings match up the findings of the studies by Zeb et al. (2019), Li et al., (2017), and Edú-Valsania et al. (2016).

Hypothesis 3. Authentic leadership has a significant effect on organizational culture. Measuring the third hypothesis confirms the effect of authentic leadership on organizational culture with a significance value of 11.599 and a confidence level of 95%. Also, the path coefficient of 0.604 shows that authentic leadership creates a 60.4 per cent impact on organizational culture of Guilan sports professional associations & organizations. The outcome verifies that exerting the concepts and rules of authentic leadership in sports professional associations & organizations shapes an appropriate organizational culture by which organizations will show a growth in organizational learning. This result is in the line with the findings of the studies by Azanza et al. (2013), and Shirey et al. (2009).

Hypothesis 4: Knowledge sharing has a significant effect on organizational learning. Exploring the fourth hypothesis illustrates that the effect of knowledge sharing on organizational learning is significant with a significance value of 8.719 and a confidence level of 95%. The path coefficient of 0.455 signifies that knowledge sharing creates a 45.5 percent influence on the organizational learning of Guilan sports professional associations & organizations. This finding shows that exerting the concepts and principles which promotes knowledge sharing in Guilan sports professional associations & organizations provides a suitable basis by which organizational learning will be developed. In fact, the current findings agree with the findings of studies by Park & Kim. (2018), and Yang (2007).

Hypothesis 5. Organizational culture has a significant effect on organizational learning. Testing the fifth hypothesis demonstrates the effect of organizational culture on organizational learning with a significance value of 4.368 and a confidence level of 95%. The path coefficient of 0.289 shows organizational culture exerts a 28.9 percent impact on the organizational

learning. This outcome evinces the effect of organizational culture in Guilan sports professional associations & organizations on organizational learning. The current result is in the line with the findings of the studies done by Oh & Han (2018), and Joseph (2009).

Hypothesis 6: Knowledge sharing mediates the effect of authentic leadership on organizational learning. Bootstrapping (Henseler et al., 2009), and Baron and Kenny's (1986) techniques were applied to test Hypothesis 6. The results confirm the mediating role of knowledge sharing in the relationship between authentic leadership and organizational learning. This is due to the fact that there are significant relationships between both of the followings: 1. Path a (relationship between authentic leadership, and knowledge sharing) and 2. Path b (relationship between knowledge sharing and organizational learning). The results reflect that the initial direct effect of authentic leadership on organizational learning is reduced when knowledge sharing as a mediator is added to this relationship. This finding shows that knowledge sharing is a partial mediator. Therefore, it is the way that increases the effect of authentic leadership on organizational learning in Guilan sports professional associations & organizations is enhancement of knowledge sharing. The findings pertaining to the sixth hypothesis correspond with the findings produced in studies by Kim & Park (2020), and Park & Kim (2018).

Hypothesis 7: Organizational culture mediates the effect of authentic leadership on organizational learning. A similar study has been conducted for organizational culture as a mediating variable between authentic leadership and organizational learning. The results display a partial mediating effect of organizational culture between authentic leadership and organizational learning. This is because of significant relationship between the followings: 1. Path e (relationship between authentic leadership and organizational culture) and 2. Path f (relationship between organizational culture and organizational learning). Both organizational culture and knowledge sharing have partial mediating role to achieve organizational learning

through authentic leadership style. In other words, the direction relationship between authentic leadership (independent variable) and organizational learning (dependent variable) is still significant after adding these two mediators. This finding suggests that organizational culture is an effective and useful way for Guilan sports professional associations & organizations to enhance organizational learning when authentic leadership has been already applied to increase organizational learning. The result of seventh hypothesis is in line with the findings produced in studies by Hosseini et al (2020).

Research Implications

The research implications are based on the current findings and categorized into two parts: practical and theoretical.

Theoretical implications. Knowledge sharing has been studied as a mediating variable to figure out whether or not it is a mediator between authentic leadership and organizational learning. This finding suggests that knowledge sharing is an effective and useful way for organizations to enhance organizational learning, particularly when authentic leadership has been already applied to increase organizational learning. In fact, this research provide a a new insight for the current literature by showing the mediating role of knowledge sharing between authentic leadership and organizational learning. Moreover, this could assist to describe the relevance with the literature on organizational learning wherein some researchers consider leadership as exercise of influence (Liao et al., 2017).

Organizational culture has a partial mediating role, similar to knowledge sharing mediating role to achieve organizational learning through authentic leadership style. The result demonstrates that organizations can apply authentic leadership to achieve organizational learning by means of expansion of both organizational culture and knowledge sharing. This outcome has not been previously noticed in the literature. To best of our where knowledge no similar research elaborated the relationship among organizational learning, authentic

leadership, and organizational culture. Second, the findings complement the previous studies by Mousa et al., (2019), Okmen (2018), Baron (2016) and Mazutis (2008). These scholars measure an organization ability to perform organizational processes, and how authentic leadership affects the enhancement of learning behaviors. Our study reflects more clearly the connection between these elements and the way to attain competitive advantages through organizational culture, as a desirable superior step to increase organizational learning.

This outcome not only amplifies the role of both knowledge sharing and organizational culture as mediator constructs, but also prepares a sign of the interrelationship between knowledge sharing and organizational culture (Nugroho, 2018; Tseng, 2017), and the impact that both mixed effects have in driving authentic leadership to gain organizational learning.

In addition, the findings also shine more light in the present literature about these connections, displaying that driving authentic leadership through knowledge sharing and organizational culture could help organizations to derive a benefit of organizational learning.

Finally, this study provides empirical support for the relationships between authentic leadership, organizational learning, knowledge sharing and organizational culture. It develops the literature on organizational learning by addressing the present shortcomings in this field (Camisón & Villar-López, 2011). Further, the present study is a response to lack of proper theoretical and empirical research about organizational learning and its connection with other elements, as proposed by various authors (van den Brink, 2020) who have emphasized the demand for this kind of study. This approach provides a big picture and a manifest to connect widely spread paths of literature about organizational learning, authentic leadership, knowledge sharing and organizational culture (Camisón & Villar- López, 2011).

Practical implications. From a managerial point of view, this research adds several values. First, organizational learning gives organizations the ability to be unique in their business and sustain competitive advantages. According to Farzaneh et al., (2020),

Organizational learning provides a valuable asset for an organization. Promoting organizational learning by managers could be one of the keys to gain further success in the competitive market. Accordingly, it is imperative that practitioners figure out the functions which could enhance organizational learning. Thereby, practitioners must amplify their knowledge of organizational learning and enhance their skills in learning practices, recognizing, and comprising learning objectives in the organization's strategy, and introducing them within the entire organization.

The results indicate that one of the main managerial tasks must be an effective utilization of authentic leadership style towards increase of knowledge sharing behaviors because several learning opportunities could exist by the enhancement of sharing activities and procedures (e.g., sharing work processes and transfer information with colleagues and learning from managers). For this reason, practitioners must allow employees to acquire knowledge at an individual level and share it at an organizational level more freely. Additionally, the level of organizational learning can be improved by managers who provide a supportive work environment that encourages knowledge sharing behaviors.

Managers could also benefit from applying authentic leadership style to shape the culture that improves organizational learning because authentic leaders' characters promote both positive employees' mental abilities and moral climate in the organization (Walumbwa et al., 2008) that foster organizational learning. Therefore, Managers need to support the culture that enhances organizational learning and then select appropriate solutions to correct some of the organizational beliefs that hinder organizational learning. It is worth mentioning that the results of this study also specify those leaders' behaviors that can deter learning.

Thus, authors suggested managers to appraise their authenticity to recognize procedures which reinforce knowledge sharing and organizational culture, as well as building up positive relations with suppliers, consumers, and rivals to improve organizational learning. Succinctly,

managers must pay attention to organizational learning particularly. So, managers need to expand processes which amplify knowledge sharing and organizational culture which leads to a higher level of organizational learning. Shaping a proper organizational culture and reinforcing knowledge sharing behaviors are appropriate strategies that help managers to promote organizational learning.

Managers of sports organizations who usually want to adapt their organization to the dynamic environment (Delshab et al., 2017) must focus on increasing the learning of their organization because organizational learning is a dynamic process that enables the organization to quickly adapt with environmental changes (Ortega-Egea, et al., 2020). It could be concluded that the managers of the organization can play an effective role in developing and strengthening organizational learning by using the characteristics of authentic leadership style. Therefore, managers of sports organizations are advised to provide better conditions in the organization to improve organizational learning through strengthening the characteristics of genuine leadership style including self-awareness, relationship transparency, balanced information processing and internalized ethical perspective. Also, since knowledge sharing, and organizational culture have mediating role in the connection between authentic leadership and organizational learning. Therefore, it is suggested that managers of sports organizations strengthen organizational learning by strengthening the factors that facilitate knowledge sharing and improve organizational culture to maximize the chance of their business survival in turbulent environment of modern market.

Limitations and Suggestions for Future Research

Various limitations can be imagined when explicating this research. The present study examined sports professional associations and organizations in the Iranian province of Guilan. Results may not necessarily be generalized. Further study in other Iranian industries and internationally, would be required to examine whether the results are relevant in other contexts.

Moreover, this research evaluated the connections between authentic leadership and organizational learning with a focus on the mediating role of knowledge sharing and organizational culture. The mediating effect of other constructs such as social capital and psychological capital on the connection between authentic leadership and organizational learning should be considered in future study. Eventually, although, various ways such as warranting obscurity of the respondents and enhancing measurement questions, were utilized to control the common method bias in this study, usage of a qualitative research is also proposed to not only control the common method bias by presenting a different measurement framework (Jordan & Troth, 2020) but also to achieve better understanding into the highlighting process linking authentic leadership to organizational learning.

Study 2

Common Method Bias in Sport Management Research

Common Method Bias (CMB) is an all-too-common problem in survey research. Conversations or debates about the need to address and or mitigate CMB within a discipline reflect concerns about the validity and reliability of findings. Many academic disciplines have reflected on the CMB. These disciplines include behavioural science (Podsakoff et al., 2003), health (Wingate, 2018; Min et al., 2016), management (Jakobsen & Jensen, 2015), marketing (Baumgartner & Weijters, 2012; MacKenzie & Podsakoff et al, 2012; Viswanathan & Kayande, 2012), organizational science (Conway & Lance, 2010), road traffic research (Barraclough, 2017), tourism (Huang et al., 2019). As a discipline that claims maturity (James, 2018), it is wholly appropriate that sport management scholars "continue "our academy's continued self-reflection of knowledge and theory development". (Funk, 2019 p. 3). In this study we encourage the sport management academy to reflect on its acceptance and tolerance for studies that fail to mitigate CMB.

CMB is regarded by many as a serious concern that needs to be addressed, especially when a single source is used to collect data for both endogenous and exogenous variables (Gorrell et al., 2011). Common method bias reflects the deviations of the observed relations from the "real" connections that arises from the similarity of the methods used to obtain data (Garger et al., 2019). This bias can be seen in estimating the reliability and validity of latent constructs as well as estimating the empirical relationships between constructs (inflation or flat) (Siemsen et al., 2009).

Peer-reviewed journals routinely expect, and perhaps even require researchers to address and or mitigate the issue of CMB within their studies. The penalty for not doing so, is often a desk rejection. Both well established - Journal of Operations Management (Guide & Ketokevi, 2014) and Nonprofit Management & Leadership (Hager, 2019) – as well as emergent journals such as the Journal of Theoretical and Applied Electronic Commerce Research

(Rodríguez-Ardura & Meseguer-Artola, 2020) have all published notes from editors emphasising the need for researchers to address explicitly CMB. Researchers are often encouraged to include a separate section for checking CMB in their paper. In this section, scholars would outline awareness of the potential impact of common method bias and identifying how CMB may influence their results. The procedural and statistical remedies to reduce common method bias would be discussed and eventually the proper strategy would be selected (Garger et al., 2019). See Lyu et al (2020) for a recent example. Though not specifically mentioning CMB, other journals have a desk rejection policy for the type of studies that are vulnerable to CMB. For example, the European Journal of Work and Organizational Psychology assert that "papers relying exclusively on cross-sectional self-report studies, including those that aggregate data to another level (e.g., aggregate ratings of team members rating their leader), will be desk rejected."

Fundamentally, researchers can address CMB using procedural or statistical remedies. remedies. In the procedural approach, data related to independent and dependent variables should be collected from different sources. Statistical remedies seek to identify whether CMB exists, whether CMB impacts the findings and then delete the influence of CMB (Tehseen et al, 2017). As for which approach is best, the comments of (Guide & Ketokevi, 2014, p. vii) seem pertinent:

> Addressing common method bias must really start at the research design phase: most effective remedy is to be *ex ante* smart about the issues. Many *ex post* analyses can only diagnose whether or not there is a problem — if there is a problem, there is usually not much the researcher can do at that point.

The purpose of this study is to critically examine CMB within sport management research. We seek to identify 1) the proportion of articles with a CMB potential that address/mitigate CMB; 2) the approaches used by sport management researchers to mitigate

CMB. Data for this study are articles published in the three leading sport management journals - Sport Management Review; Journal of Sport Management, and European Sport Management Quarterly – between 2015 and 2020.

This study has multiple contributions. The study highlights relative unimportance of mitigating CMB within sport management scholarship. This is important as the sport management academic community wishes to be perceived as credible and legitimate, and sport management scholars seek to publish their research in mainstream management, marketing and consumer behaviour journals. Second, the study articulates the variety of procedural and statistical mitigations available to sport management scholars.

The remainder of this study is structured as follows. The next section provides a detailed description of CMB and the established CMB mitigations. These mitigations are dived into procedural and statistical mitigations. We then describe the methods. After presenting the findings and results, the study discusses the implications of the study for sport management scholarship.

Background Literature

This section is divided into three main parts. In the first part, the concept of CMB and its effect on behavioural science research are expressed, the second part is dedicated to the procedural remedies. Finally, statistical remedies are mentioned.

CMB Overview

In the last few decades, scholars have raised concerns about creating bias when the scholar apply a common method to gather information of variables which the connections among them are being investigated. Using a common method to explore various variables causes a significant threat because several perceived covariations among variables, are derived from utilization of the common method (Podsakoff et al., 2012).

Eliminating or reducing errors and bias play an important role in improving the quality of data collection process, followed by the quality of analysis and decision made by deciders (Viswanathan & Kayande, 2012). In general, there is a difference between error and bias (Eberlin & Tatum, 2005). In survey research, error refers to any difference between the mean values collected by the questionnaire and the actual mean values of the target population (Borelli, 2008), while bias is related to the nature of the study process. Thus, a researcher may subconsciously collect poor quality data and make decisions based on it, putting the outcome of his or her research at risk (Caputo, 2013). As a result, it is important to understand the types of biases and ways to avoid them (Kumar & Goyal, 2016). A research is biased when the data are collected in such a way that their values are systematically different from the actual values (Mushinada & Veluri, 2019). Bias is one of the key words in studies and research and measuring and evaluating attitudes (Randall et al., 1993). Bias means not being neutral towards a phenomenon or event or belief or value or…. Wrong choice of the statistical population can lead to the formation of bias in the results (Acciarini et al., 2020).

Method bias is one of the big challenges in social science studies. Method bias means the effect of the method on examination of the validity and reliability of the measurement tool and the common covariance between the two constructs, which is the result of measuring different constructs with one method (Min et al., 2017).

One of the factors that may damage the structural validity of the model in behavioural (Podsakoff et al., 2003) and cross-sectional research (Akter et al., 2011) is CMB. It reflects the level of the common false covariance between the endogenous and exogenous constructs, which has been examined at a point in time. To illustrate, in a cross-sectional survey, applying a special tool such as a questionnaire (Podsakoff et al., 2003). In fact, the subject which is under study may not be appropriately separated from the hand-made measurement (Jordan & Troth, 2019). CMB causes a systematic measurement error that affects the estimation of the

relationship between theoretical structures (Baumgartner & Weijters, 2012). CMB occurs when only one data collection method is used (MacKenzie & Podsakoff et al, 2012) or data collection is done only in one time (Conway & Lance, 2010).

Despite the level of influence, some researchers studied the ways that CMB may challenge the research findings. Jordan and Troth (2020) suggested the following impact of CMB on research findings: 1) It may affect reliability and validity of the scale due to the fact that it may cause wrong arbitrations concerning the efficiency of the scale; and 2) CMB may lead to a wrong approximation of the interrelation among various variables because not only it endangers the accuracy of the hypothesis evaluation, but it also creates a wrong appraisal concerning the value of variance belonging to the index by the independent construct; that leads to less discriminant validity of the measurement.

To mitigate CMB, researchers must apply methods such as data collection by more than one method, data collection over a period, separation of the collected data of independent variables from dependent variables and confirmatory factor analysis through LISREL software (Podsakoff et al., 2003). To control CMB, there are several procedural and statical remedies.

CMB - Procedural Remedies

According to Tehseen et al. (2017), scholars can avoid CMB through applying pre-hoc strategies. In the following section, the strategies to mitigate CMB are described briefly:

Enhancing Survey Items. Designing complex items is an easy way to confuse participants. For example, the usage of words such as rarely and sometimes can be interpreted differently. These conditions push respondents to provide their answers in an uncertain situation, and as a result, he/she will move away from the normal answering conditions. For this reason, designing short and clear questions is the best way to overcome this problem (Jordan & Troth, 2020). In other words, to decrease CMB, survey items should be comprehensible so that respondents can understand them more easily (Podsakoff et al., 2003).

A key strategy which assists researcher to reduce CMB as well as understanding of the items' ambiguity is to get feedback from the panel of experts. This enables the researcher to better recognise the questions' ambiguity and to take subsequent steps to monitor and control them (Garger et al., 2019).

Increasing the number of questions related to a construct is another way to reduce the ambiguity associated with that variable and thus mitigate CMB (Tehseen et al., 2017).

Different Data Sources. Collecting data from one single source is considered the main reason of CMB (Podsakoff et al., 2003). Thus, gathering information from two different sources enables researchers to mitigate CMB effects. In this remedy, the researcher collects the data related to exogenous construct from one source and the data of endogenous construct from another one (Jordan & Troth, 2020). Scholars can apply questionnaire to gather information of exogenous construct and utilize secondary data for endogenous construct (Podsakoff et al., 2003). In sum, this remedy assists researchers to mitigate CMB effects through decreasing the orientation of respondents to provide socially conditioned responses (Jordan & Troth, 2020).

Counterbalancing the Arrangement of Endogenous and Exogenous Constructs. Counterbalancing the arrangement refers to determining the order of the questions and specifying the position of the sensitive and important questions. To avoid CMB, researchers must distribute items throughout the survey. Scholars should not allow questions related to each variable to be accumulated in just one specific part of the questionnaire (Tehseen et al., 2017). The underlying problem is that participants may modify their answers based on the responses given in the past (MacKenzie & Podsakoff, 2012). However, disrupting an otherwise logical sequence of items can create its own set of negative consequences (Podsakoff et al., 2003).

Different Scale Endpoints. When using different scale endpoints, researchers use different anchors to measure independent and dependent variables. In fact, applying same

anchors for all items may force respondents to provide answers which tends systematically toward a special part of the questionnaire (Schwarz et al., 2008). For example, a 5-point Likert scale may be applied to measure the independent variable and a 7-point range may be applied to test the dependent variable. Moreover, one of the variables anchors may vary from "very low" to "very high" and another one may be measured by extremely agree to extremely disagree (Jordan & Troth, 2020).

Temporal Separation. Temporal separation, which is a popular procedural remedy, refers to collecting information in different time periods. For example, it is when a researcher decides to gather information of the endogenous and exogenous construct at specific intervals. However, this remedy has a weakness in which procedural difficulties (e.g., process of data collection may take a long time, respondents may be frustrated by this lengthy process, researchers are unable to determine the appropriate time frame for data collection) can nullify this remedy. The bottom line is that these time intervals should not be so short as to invalidate this remedy or long enough to enable an intervening variable to impact the study (Jordan & Troth, 2020).

The procedural remedies for CMB are summarised in Table 2.1 below.

Table 2.1

Summary of Procedural Remedies for CMB

Remedy	References
Enhancing survey items	MacKenzie & Podsakoff, 2012
Counterbalancing the arrangement of evaluation of the endogenous and exogenous constructs	Jakobsen & Jensen, 2015
Different scale endpoints (i.e., 5- and 7-point scales)	Tehssen et al., 2017
Different data sources	Jordan & Troth, 2020
Temporal separation	Podsakoff et al., 2003

Statistical Remedies

Post-event approaches must be used to validate and, if necessary, reduce common method bias using variety of statistical procedures. It is difficult for respondents to guess the

purpose of the research when scholars apply more complex models such as entering nonlinear interactive effects, and as a result, this process reduces common method bias (MacKenzie & Podsakoff, 2012). Harman single-factor test lacks the necessary sensitivity and is therefore insufficient to prove that common method bias is not a concern in the study. Instead, scholar should utilize more specialized tests such as CFA marker approach, and unmeasured latent marker variable approach. Therefore, scholars should apply a combination of multiple pre-event research design and post-event statistical analysis solutions (Rodríguez-Ardura & Meseguer-Artola, 2020).

Harman's Single-Factor Test. Harman single-factor test is one of the most widely used techniques for controlling the bias of the common method (Tehseen et al., 2017). According to this method, all observed variables in the research are entered into exploratory factor analysis and the answer of un-rotated factor analysis is determined by the number of factors required to calculate the number of variances of all variables (Podsakoff et al., 2003). The basic premise of this technique is that when it can be said that there is a significant amount of variance or bias in the common method that only one factor can be obtained from factor analysis or one factor among the several factors extracted explains a very large amount (more than 50%) of the total variance of the variables (Podsakoff & Organ, 1986). The biggest advantage of using this technique is that it detects the presence of a common method bias. Otherwise, it cannot test or delete the influence of CMB (Podsakoff et al., 2003).

CFA Marker Approach. In this method, a theoretically unconnected marker variable is applied, in order to design common method bias, while there are relations to indexes and connections to other constructs (Williams et al., 2010). Applying this method enables researchers to easily detect, test, and remove CMB effects (Jakobsen & Jensen, 2015).

Correlation Matrix. According to Tehseen et al (2017), if correlation between two latent constructs is greater than the cut-off point of 0.9, CMB is a problem. Application of

correlation matrix procedure is like Harman's single-factor test, only empowers scholars to detect the presence of CMB effects (Podsakoff et al., 2003).

Marker Approach. This approach has two phases: first, scholars add another variable called marker which is unconnected to at least one variable in the research. In this situation, index of common method bias is the correlation among marker variable and other unconnected variables. Second, scholars delete the influences of CMB though deleting the least possible correlation among marker variable and uncorrelated variables (Rodríguez-Ardura1 & Meseguer-Artola, 2020). According to Lindell & Whitney (2001), this technique can detect, test, and delete CMB effects.

Measured Latent Variable Approach. Despite in this approach, marker construct has identical format, but its items is different from others (Tehseen et al., 2017). In fact, scholars involve some probable reasons which causes CMB such as contributors' desire to reply based on socially desirable. By doing this, scholars can measure the probable biases and give the influences fixed value while considering the relationship among constructs (Rodríguez-Ardura1 & Meseguer-Artola, 2020). It has three capabilities of detecting, testing, and deleting CMB effects (Weijters et al., 2008).

Unmeasured Latent Marker Variable Approach. In this approach, scholars involve a first-order variable called method factor which do not possess items. Instead, it applies items of other variables which likely influenced by CMB. After applying all items on variables, scholars test meaningfulness of items, in two modes of presence and absence method factor. The current approach enables scholars to test the influence of CMB at evaluation mode apart from specifying a particular reason of CMB (Rodríguez-Ardura1 & Meseguer-Artola, 2020). According to Richardson et al (2009), unmeasured latent factor is a powerful approach that enables researcher to detect, test, and delete CMB effects.

The statistical remedies for CMB are summarised below in Table 2.2

Table 2.2

Summary of Statistical Remedies for CMB

	Discovering CMB	Testing CMB	Removing CMB	Reference(s)
CFA marker approach	✓	✓	✓	Jakobsen & Jensen, 2015
Correlation matrix	✓			Podsakoff et al., 2003
Harman's single-factor test	✓			Podsakoff et al., 2003
Measured latent marker variable approach	✓	✓	✓	Weijters et al., 2008
Marker approach (Correlation based)	✓	✓	✓	Lindell & Whitney, 2001
Unmeasured latent marker variable approach	✓	✓	✓	Richardson et al., 2009

Is CMB a Problem?

The contribution of CMB on research findings is contested (MacKenzie & Podsakoff, 2012). While some researchers maintain that failure to control CMB can prejudice research findings (Jordan & Troth, 2020), others hold the opposite view - CMB does create a significant risk for research findings (Doty & Glick, 1998; Spector, 2006).

Some researchers believe that CMB effects are not big enough to invalidate the findings. Doty and Glick (1998) conducted a research on the impact of CMB on research results. They have highlighted the risk of CMB, but they eventually have figured that the impact is not significant to invalidate the research findings. Spector (2006) has discussed that the level of CMB effect on research findings have been exaggerated by some researchers. In other words, even though CMB has an influence, but it might not be big enough to invalidate the research results.

Discipline-Specific Prevalence of CMB Mitigations

A number of scholars have provided discipline-specific commentaries on CMB. Jakobsen and Jensen (2015) conducted a research to find potential issues that could occur because of CMB in public management studies. They designed an empirical study to reflect potential risks caused by CMB. Wintage et al (2018) examined the effect of CMB on physical and environmental activities. They applied a survey and quantitative method. The results show that CMB influences physical and socio-ecological activities. In addition to study of the CMB importance, researchers have also presented procedural and statistical remedies to reduce influence of CMB on results. In a commentary directed at organisational researchers, Conway & Lance (2010) offered reviewers, examiners, and editors some advices about CMB. According to the authors, apriori CMB mitigations are superior to statistical remedies. MacKenzie & Podsakoff (2012) conducted a research about importance of CMB in marketing. Thereafter, they provide appropriate procedural methods to avoid and reduce CMB effects. Baumgartner & Weijters (2012) conducted a review of retail research which was inspired by the study of MacKenzie & Podsakoff (2012). They proposed some activities which can help researchers to avoid CMB before data collection phase. Viswanathan & Kayande (2012) studied the influence of CMB in marketing field. The researchers specified some factors which lead to CMB and suggested some procedural remedies by which potential risk of CMB could be reduced. Huang et al (2019) did a research about identifying possible influences of CMB in tourism industry. The findings emphasize that researchers should be aware of possible risk of result sensitivity to CMB.

Methods

The purpose of the research is to critically examine the efforts by sport management researchers to mitigate CMB. In this section, the methods used in the study are described. The section begins with an over of content analysis, before providing descriptions of the findings.

Content Analysis

Content analysis is a method used to examine the content of texts. Due to the characteristics of the content analysis method, this method is the best research method for reviewing texts and documents. This method converts the content of texts into quantitative data, through which the researcher can easily analyse the data (Kunz, 2019). In this method, the data are collected, classified, and analysed. The data may be words, sentences, clauses, or complete texts in written or oral works. According to Poole & Folger (1981), in the content analysis method, as in other research methods, the researcher recognizes the problem, defines it, possibly formulates a hypothesis, then gathers organises and analyses information. In other words, in this method, the process of scientific research is regularly observed.

Data Collection

The articles in this study were sourced from Sport Management Review (SMR), Journal of Sport Management (JSM), and European Sport Management Quarterly ESMQ). The reason for selecting these three journals is straightforward. These journals are widely regarded as the three leading sport management journals. If CMB "best practices" were evident within the sport management discipline, then they should be evident in these journals.

SMR is published by Elsevier on behalf of the Sport Management Association of Australia and New Zealand. SMR has a SCImago Journal Rank (SJR) indicator of 1.39. The SCImago Journal Rank (SJR) indicator is a measure of the scientific influence of scholarly journals that accounts for both the number of citations received by a journal and the importance or prestige of the journals where the citations come from. A journal's SJR is a numeric value indicating the average number of weighted citations received during a selected year per document published in that journal during the previous three years. Higher SJR values are meant to indicate greater journal prestige.

JSM is owned and published by Human Kinetics Publishers. JSM is the official journal of the North American Society for Sport Management. The journal's SJR for 2019 was 1.34.

ESMQ the official journal of the European Association for Sport Management and is published by Routlege. ESMQ's SJR for 2019 was 0.797. In addition, ESMQ was rated as 3 – an indicator of 'original and well executed research' in the 2018 Association of Business Schools' Academic Journal Guide. ESMQ was the highest rated sport management journal in the ranking.

All three journals were rated an "A" in the 2019 Australian Business Deans Council rankings. All other sport management journals were rated a "B" or lower.

All articles assigned a volume/issue number between 2016 to 2020 were examined for CMB potential. To make this criteria clear, articles published in 2020 that had not yet been assigned to a particular volume/issue were not included. All articles were reviewed to determine if their methods made created the potential for CMB. This was achieved by identifying articles which used a survey as a collection tool (Jordan & Troth, 2019; Jakobsen & Jensen, 2015; Podsakoff et al., 2003); collected data through participants' self-assessment (Cooper et al., 2020); or when the data was collected at a specific time point and from one specific source (Podsakoff et al., 2003; MacKenzie & Podsakoff, 2012; Fuller et al., 2016). These studies were classified into four following categories: 1) Articles at risk of CMB; 2) Articles that addressed/acknowledged explicitly CMB; 3) Articles that mitigated CMB; and 4) Techniques used to mitigate CMB.

Results

This section begins with an assessment of CMB mitigation frequency for each of the three journals, before a combined (i.e., all three journals) analysis is presented. Then, the frequency of procedural and statistical remedies is examined.

Analysis of Journals

Sport Management Review. In SMR, there were 71 articles with a potential for CMB. Within these 71 articles, only seven (or 10%) of the articles attempted to mitigate CMB.

Figure 2.1

CMB Mitigation in SMR

Journal of Sport Management. In JSM, there were 88 articles with a potential for CMB. Within these articles, only 16 (or 21.6%) of the articles attempted to mitigate CMB.

Figure 2.2

CMB Mitigation in JSM

CMB Mitigation *No CMB Mitigation*

European Sport Management Quarterly. In ESMQ, there were 69 articles with a potential for CMB. Only 12 (or 17.3%) of these articles attempted to mitigate CMB.
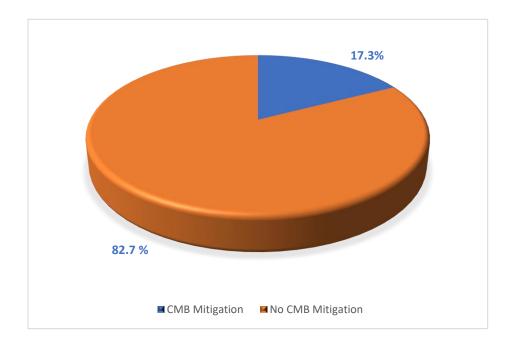
Figure 2.3

CMB Mitigation in ESMQ

CMB Mitigation *No CMB Mitigation*

Combined Analysis. Across all three journals, there were 228 articles with a potential for CMB. Only 35 (or 15.35%) attempted to mitigate CMB.

Figure 2.4

CMB Mitigation in All Three Journals

As can be seen in Table 2.4, the vast majority of studies which are at risk of CMB have made no attempt to mitigate CMB.

Common Method Bias Remedies

For each journal, Table 2.3 below identifies each article that has mitigated CMB. The table also specifies which remedy (or remedies) was utilised.

Table 2.3

Summary of Common Method Bias Remedies by Sport Management Journal and Article

Journal	Author(s)	Common Method Bias Remedy	
		Procedural	Statistical
	Kim et al., 2017	Enhanced survey items Temporal separation	
SMR	Swanson & Kent, 2017		Harman's one-factor test CFA marker technique
	Blank et al., 2018	Enhanced survey items	Correlation matrix procedure CFA marker technique
	Kim & Byon, 2018	Temporal separation	

	Song et al., 2018		Harman's one-factor test Unmeasured latent method
	Keane et al., 2020		Harman's one-factor test CFA marker technique
ESMQ	Tuan, 2020	Temporal separation	CFA marker technique
	Maier et al., 2016	Temporal separation;	Harman's one-factor test
	Berendt & Uhrich, 2016	Different scale endpoints	Harman's one-factor test CFA marker technique Measured latent method
	Angell et al., 2016	Counterbalancing the arrangement of constructs	Harman's one-factor test
	Wemmer et al., 2016		Harman's one-factor test CFA marker technique
	Kim & Byon, 2018	Temporal separation; Different scales endpoints	
	Bamford et al., 2018	Counterbalancing the arrangement of constructs;	Harman's one-factor test CFA marker technique
	Koenig-Lewis et al., 2018	Different scale endpoints; Enhanced survey Counterbalancing the arrangement of constructs	Harman's one-factor test Unmeasured latent method
	Koenigstorfer & Preuss, 2018	Enhanced survey items	
	Kim et al., 2018	Counterbalancing the arrangement of constructs; Different scale endpoints	Harman's one-factor test CFA marker technique
	Väätäinen & Dickenson, 2019		Unmeasured latent method
	Lee et al., 2020	Enhanced survey items	Harman's one-factor test Unmeasured latent method
	Dickenson & Souchon, 2020		Harman's one-factor test Unmeasured latent method
JSM	Wegner et al., 2016 Visentin et al., 2016	Enhanced survey items; Temporal separation; Counterbalancing the arrangement of constructs	
	Wakefield, 2016		CFA marker technique
	Ko et al., 2017		Unmeasured latent method
	Burton et al., 2017		CFA marker technique
	Kunkel & Funk, 2017	Different scale endpoints; Temporal separation	
	Inoue et al., 2017	Temporal separation	Correlation matrix procedure
	Baker et al., 2018		Correlation matrix procedure
	Constandt et al., 2018	Enhanced survey items	Correlation matrix procedure
	McDowell et al., 2018		Harman's one-factor test
	Kim & James, 2019 Heere et al., 2019 Kim et al., 2020	Enhanced survey items; Temporal separation; Enhanced survey items.	
	Kunkel et al., 2020	Temporal separation; Enhanced survey items; Counterbalancing the arrangement of constructs	

83

Doherty & Cuskelly, 2020	Enhanced survey items	
Du et al., 2020		CFA marker technique
		Harman's one-factor test
		Correlation matrix procedure

Frequency of Common Method Bias Remedies

In the next analysis, we identify the most frequently used statistical and procedural remedies.

Table 2.4

Frequency of Common Method Bias Remedies

Remedy	Specific remedy	Frequency
Statistical	Harman's one-factor test	14
	CFA marker technique	11
	Unmeasured latent method	6
	Correlation matrix procedure	5
	Measured latent method	1
Procedural	Enhanced survey items	11
	Temporal separation	10
	Counterbalancing the arrangement of constructs	6
	Different scale endpoints	5

It is important to note that eight sport management articles claimed to have mitigated CMB by providing their participants with anonymity. In one study, the authors wrote that, "respondents were informed that there were no right or wrong answers, that responses were anonymous, and that they should answer questions as honestly as possible". In the second study, the authors wrote "confidentiality was guaranteed, and honesty was encouraged to the respondents, by ensuring them that there were no right or wrong answers". The claims by these authors are reasonable insofar as participant anonymity recognized a CMB mitigation strategy (Podsakoff et al., 2003). And it is accepted that nearly all sport management research provides their participants with anonymity. So here it is conceded that probably all sport management studies mitigate CMB by providing participant anonymity. However, I take our cue from (Min

et al., 2016) who did not specify participant anonymity as a procedural remedy for CMB. Thus, these studies were excluded from my analysis.

Table 2.4 above is dedicated to calculating the number of times a CMB remedy was applied. In this table CMB remedies have been divided into two different sections: statistical and procedural. According to the findings, Harman's one-factor test is most popular statical remedy. After that, CFA marker technique took second place with 11 occurrences. In this regard, the third, fourth and fifth places were allocated to unmeasured latent method, correlation matrix procedure and measured latent method with 6, 5 and 1 occurrences, respectively.

Among the pre hoc strategies used by researchers, enhanced survey items ranks first with 11 repetitions, followed by temporal separation, and counterbalancing the arrangement of constructs, respectively by 10, and 6 occurrences. Different scale endpoints was at the bottom of the table with only five mentions.

Longitudinal Trends

In this part of the analysis, we explore longitudinal trends in frequency of CMB mitigation in the three leading sport management journals. The proportion of CMB-mitigated studies is calculated by dividing the number of articles with a potential for CMB by the number of articles that addressed CMB. The proportion of CMB-mitigated studies for all five years in all three journals is summarised in Table 2.5 below. Table 2.5 indicates little change in the proportion of CMB-mitigated studies.

Table 2.5

Proportion of CMB-mitigated studies

	2016	**2017**	**2018**	**2019**	**2020**
Proportion of studies with CMB-mitigation (%)	17	19	24	7	14

Discussion

The purpose of this research was to critically examine the efforts by sport management researchers to mitigate CMB. The study examined articles published in the three leading sport management journals - Sport Management Review, Journal of Sport Management and European Sport Management Quarterly – published between 2016 and 2020. The key finding is that sport management researchers are unlikely to acknowledge, let alone mitigate CMB. It is worth noting that there is a difference between articles which have acknowledged to CMB and those which have tried to mitigate it. For example, Kenyon & Bodet, (2018), have acknowledged that CMB is a potential threat which may challenge research findings, but they did not try to mitigate CMB in their research.

These results share both similarities and differences with other comparable studies. The results of our research reflect that most sport management scholars like hospitality researchers (Min et al., 2016) tend to apply both procedural and statistical remedies. These results are in line with recommendations to scholars in the behavioural sciences (Podsakoff et al., 2003), public management (Jakobsen & Jensen, 2015), and tourism (Huang et al., 2019), disciplines.

According to the findings of the current research, Harman's one-factor test is most usable statical approach applied by sport management scholars. This result is similar to the findings of Fuller et al (2016) and Min et al (2016) who show Harman's one-factor test are the most popular mitigations used by business and hospitality scholars. Harman's one-factor test is usually proposed as first statical technique for researchers who are doing research in behavioural (Podsakoff et al., 2003), organizational (Jordan & Troth, 2020), and public management (Jakobsen & Jensen, 2015) field.

Our findings show CFA marker technique was the second most popular post hoc strategy among sport management researchers, while this strategy ranked third among business

86

researchers (Fuller et al., 2016) and but was not used by hospitality scholars (Min et al., 2016). CFA marker approach is highly recommended discipline to researchers in other fields such as organizational studies (Jordan & Troth, 2020), and public management (Jakobsen & Jensen, 2015).

While our findings show that process of paying attention to CMB in sport management studies is descending, according to Min et al., (2016), there is an increasing probability hospitality researcher will mitigate CMB. Unlike most previous studies of CMB focused on extending the literature of CMB (Jordan & Troth, 2020; Huang et al., 2019; MacKenzie & Podsakoff, 2012; Podsakoff et al., 2003), the current research concentrates on scholars' attention to the issue of CMB. Findings of this research, support concerns that a lack of attention to CMB has a negative effect on the validity of research findings (Schwarz et al., 2017; Viswanathan & Kayande, 2012). Our results also are similar to the studies of CMB which introduce both procedural and statistical remedies (Jordan & Troth, 2020; Tehseen et al., 2017; Podsakoff et al., 2003).

Amongst the SMR, ESMQ and JSM studies that did mitigate for CMB, temporal separation and enhanced survey items were the most frequently used procedural remedy. This result is in line with finding of Min et al (2016), where temporal separation of independent and dependent data collection was the most frequent procedural method among hospitality researchers.

In terms of contribution, this study highlights the rigour of sport management often falls short of the rigour expected and required in other (leading) social science journals. On this basis we offer a reluctant conclusion that research within the sport management discipline may not be as mature or rigorous as researchers within it like to think.

In terms of implications, this study suggests that editors and editorial review boards should reflect on what they consider to be reasonable and appropriate mitigations where a CMB

potential exists. For the individual researcher, the implication of this study is that CMB mitigations may not be necessary to ensure publication the leading sport management journals, but that CMB mitigations are never likely to be poorly received. If sport management researchers wish their discipline to, their studies with a CMB potential must implement appropriate procedural and or statistical remedies.

Limitations and Future Research

The key limitation of this study is that it has focused on articles published in three journals between 2016 and 2020. Future research may seek to provide a more expansive number of journals across a longer time frame. Researchers are also encouraged to provide an empirical assessment of how CMB mitigations impact the findings of a study. Such a study may prove useful in demonstrating the utility of procedural and statistical remedies for CMB. At the moment, it seems than many sport management researchers, reviewers, and editors understate its role in providing reliable research findings.

Epilogue

In this thesis two complementary studies have been conducted. The first study examines the impact of authentic leadership on organizational learning with regard to the mediating roles of knowledge sharing and organizational culture. The second study is about common method bias (CMB) that could cause systematic errors. In study 2, the efforts by sport management researchers to mitigate CMB and to categorize procedural and statistical remedies has been critically examined.

The purpose of the study 1 was to investigate the effect of authentic leadership on organizational learning with regard to the mediating role of knowledge sharing and organizational learning. For this reason, in the first stage, research contribution, conceptual model, hypotheses, definitions of variables and research scope were presented. Then, by reviewing the theoretical foundations around the research variables, 6 hypotheses were

proposed based on the conceptual model of research. These hypotheses were then evaluated by the data obtained from distributed questionnaires among senior managers of Guilan sports professional associations & organizations. Partial Least Square (PLS) approach to Structural Equation Modelling (SEM) were used as data analysis tools. The findings reflect that authentic leadership positively affects organizational learning, knowledge sharing and organizational culture. Also, knowledge sharing, and organizational culture positively influence on organizational learning. The mediating roles of knowledge sharing, and organizational culture were verified regarding the significance of aforementioned linkages.

Due to the fact that the study 1 has applied cross-sectional and self-report methodology, CMB is a serious threat which could invalidate the research findings (Jordan & Troth, 2020). Therefore, researchers have used pre- and post-hoc strategies to reduce this risk. Enhanced survey items and counterbalancing the arrangement of endogenous and exogenous constructs were the procedural remedies used to mitigate CMB. On the other hand, correlation matrix was the statistical remedy applied to test the presence of CMB. Since the correlation between the variables is not higher than the cut-off point of 0.9, CMB is not a problem (Podsakoff et al., 2003).

The purpose of study 2 was to gain better understanding of CMB and the level of its influence on the outcome of research. Some research methodologies have been reported to so sensitive to CMB that creates the risk of invalid research findings (Jordan & Troth, 2020). Study 2 revealed that for future works, one could apply more efficient pre-hoc and post-hoc strategies. For example, temporal separation and different scale endpoints are strong procedural remedies as well as CFA marker technique which is a statistical remedy. CFA marker technique allows researchers to measure the level of CMB effect and then mitigate this effect in case it is significant (Tehseen et al., 2017).

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