

Human Capital Dimensions Influencing Knowledge Hiding in the Public Sector: Evidence from Italy

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Abstract: The aim of the current study is to investigate the influence of human capital dimensions on knowledge hiding behaviour of public sector employees. A simple random sampling technique was used, and data were collected through a survey from 336 individuals working in different companies within the Italian public sector. The results show that, in most cases, the influence of human capital dimensions on knowledge hiding behaviour was significant. Furthermore, these findings contribute to identifying and highlighting how gender also plays a significant role in the way people hide their knowledge. The work is novel in the context of investigating the factors that may influence knowledge hiding behaviour in the public sector and seeks to contribute to the development of knowledge risks strand and, more generally, to the research on knowledge management in public sector organisations. It also encourages managers to consider the potentially harmful effects of this practice.

Keywords: Knowledge hiding, Organisational behaviour, Human capital, Gender, Public sector

1. Introduction

Recognized as a component of the intellectual capital construct together with structural, relational, and social capital (Brennan and Connell, 2000; Edvinsson and Malone, 1997; Scafarto, V., Ricci and Scafarto, F., 2016), human capital (HC) is “anything but physical capital such as properties, equipment and financial capital” (Pasban and Nojehdeh, 2016, p. 250), and refers to the accumulation of knowledge, skills and experiences of individuals, which organisations employ to achieve and maintain a competitive advantage, and which they must use and develop optimally to prevent it from diminishing in value (Islam and Amin, 2022). The link between HC, knowledge, and knowledge management (KM) already appears clear from its definition, and has been extensively explored in various research studies. Dar and Mishra (2021), investigating the role of HC in the internationalization of SMEs, highlighted that knowledge is a key constituent of HC both in its explicit form, where it is easily incorporated into the organisation, and in its tacit form, where it is more difficult to codify. In Palacios-Marques, Gil-Pechuán and Lim (2011), the relationship between HC and KM was studied by relating KM practices to each human capital dimensions (HCDs), and it was found that introducing KM practices positively influences HC improvement. Birasnav and Rangnekar (2010) developed a KM hierarchical structure for HC development through a KM tactical process and problem-solving approach, communication-oriented culture, and innovation-supportive culture. Alnoor (2020), using data from a sample of owners of SMEs in Iraq, demonstrated the mediating role of KM on the relationship between HCDs and firm’s survival. Considering the existing link between HC, knowledge, and KM, as confirmed by the literature, we believe it is appropriate to also consider the relationship between HC, its dimensions, and knowledge-related risks, namely, knowledge risks. Knowledge risks have been defined as “a measure of the probability and severity of adverse effects of any activities engaging or related somehow to knowledge that can affect the functioning of an organisation on any level” (Durst and Zieba, 2019, p.2). Durst and Zieba (2019) classified them into technological, operational, and human knowledge risks based on their origin. Human knowledge risks refer to personal, social, and psychological aspects and occur in the context of interactions between organisational members (Durst and Zieba, 2019). Technological knowledge risks concern the relationship of organisations with technology, which can show technology’s risky side as in the case of cyber-attacks (Durst and Zieba, 2019) or when employees use obsolete technologies, especially when working from home (Borgia et al., 2022). Operational knowledge risks are instead connected to the management of knowledge in the day-to-day operations of organisations, as well as in extraordinary events, as in the case of mergers and acquisitions (Durst and Zieba, 2019). Knowledge hiding (KH)

is a human knowledge risk referring to “intentional attempts to withhold or conceal knowledge from another individual” (Connelly et al. 2012, p. 65), and has been recognized as a risk capable of harming the ability of organisations to be competitive and innovative (Butt and Ahmad, 2021). In public sector organisations, knowledge sharing is very important given the role of such organisations in the community (Abbasi et al., 2021; Torfing, 2019); thus, KHB prevention and mitigation become paramount. The relationship between HCDs and risk has been widely investigated in the literature (Adeleke et al., 2018; Isaac, 1995; Zheng et al., 2018), while research on knowledge risks is still developing (Durst, 2019), also regarding its relation to HCDs, especially in the public sector.

The present paper seeks to fill this gap by considering knowledge hiding behaviour (KHB) of public sector employees and by analyzing the effects of HCDs on such behaviour. The influence of gender on KHB is also analyzed, representing a gap in the knowledge risk literature that was a recommended topic to be investigated in knowledge hiding studies (Anand, A., Offergelt and Anand, P., 2022). A study that relates human capital to knowledge hiding behaviour could contribute to research on knowledge management in organisations, in particular, on the risks associated with knowledge management. Investigating knowledge hiding determinants and whether they may be related to human capital may be crucial for organisations wishing to maintain satisfactory and durable levels of performance.

The paper continues in the following sections with the literature review and hypothesis development (Section 2), with an explanation of the methodology used in the analysis (Section 3), and with the presentation of the results (Section 4). The discussion and conclusions close the paper (Section 5 and Section 6).

2. Literature Review and Hypothesis Development

Traditional HC measures are still subject to limitations due to the scarce amount of consideration given to the main qualitative characteristics of HC, which essentially means that it is the result of a combination of individuals’ features (Mubarik, Chandran and Devadason, 2018). Based on Alnoor’s research (2020), in this work, items considered to measure HCDs were education (EDU), experience (EXP), health (HLT), personal attributes (PA), skills (SKI), and training (TRA). Hypothesis 1 was formulated with regard to the relationship between HC and KHB. Hypothesis 2 was formulated based on the influence of gender on KHB. Both the hypotheses of the present work are based on previous studies, which support their formulation.

2.1 Human Capital Dimensions and Knowledge-Hiding Behaviour

2.1.1 Education and knowledge-hiding behaviour

HCDs were found to be in correlation with KHB in several studies. Considering the level of EDU, it was found that it can have both positive and negative effects on KHB, but also be non-significantly related to KHB. The findings from Zhang et al. (2022) showed that employees with better EDU engaged in KHB more rationally rather than evasively, reducing the harmful effects of KH. Pan and Zhag (2014) verified that graduate students hide knowledge, identifying the complexity of knowledge as the main cause of hiding. Dodokh (2020), analyzing data collected from 270 employees in the telecommunications and information technology sector in Jordan, found that education is positively related to workplace knowledge-hiding behavior, finding that higher-educated employees hide information more than their counterparts. In other studies, such as that of Zhang, Yao, Qunchao, and Tsai (2022), it was found that the educational background of employees has no significant effect on KH.

Based on the above, the following hypothesis was created:

Hypothesis 1 (H1a). *The level of education (EDU) has positive effect on knowledge-hiding behaviour (KHB).*

2.1.2 Experience and knowledge-hiding behaviour

Scholars demonstrated that EXP is positively related to KHB. Serenko and Bontis (2016), according to Peng (2013) and Li et al. (2015), pointed out that employees consider knowledge accumulated from past work experiences as a property, and when they are in their current organisation, the sense of psychological ownership of that knowledge drives them to hide it from their colleagues. Considering the above, the following hypothesis was drawn:

Hypothesis 1 (H1b). *Work experience (EXP1) has positive effect on knowledge-hiding behaviour (KHB).*

Hypothesis 1 (H1c) *Similar industry experience (EXP2) has positive effect on knowledge-hiding behaviour (KHB).*

2.1.3 Health and knowledge-hiding behaviour

HLT as a dimension of HC was negatively correlated with KHB, in particular mental health, having been shown, in several studies, that poor mental health, particularly due to working environment conditions, lead employees to withhold knowledge. Zhao and Jiang (2021) demonstrated that role stress, as a core element of emotional exhaustion, positively relates to KHB, and in another study, employees were found to choose KHB in response to psychological stress provoked by high interpersonal conflicts in the workplace (Losada-Otálora, Peña-García, and Sanchez, . 2020). Furthermore, in Rubbab (2022), it was found that organisational dehumanization, causing psychological distress, induces employees to KHB. Given the foregoing, the hypothesis relating to HLT dimension is posed:

Hypothesis 1 (H1_a). *Health conditions (HLT) have negative effect on knowledge-hiding behaviour (KHB).*

2.1.4 Personal attributes and knowledge-hiding behaviour

Referring to personality characteristics and abilities (Wood 1989), PA have been related to KHB in several researches. Considering personality characteristics, de Geofroy and Evans (2017) found that high emotional intelligence has a negative impact on KHB, which results in mitigation. Abilities were defined as personal attributes capable of influencing work performance, such as creativity or problem sensitivity (Carnevale and Smith 2013), which researchers found negatively correlated to KHB, as in the case of employee creativity (Bogilović et al. 2017; Malik et al. 2019), professional commitment (Butt 2021), and extroversion (Demirkasimoglu 2016; Iqbal et al. 2020). In contrast to these studies, Akhlaghimofrad and Farmanesh (2021) found that a PA such as cynicism has no significant impact on KHB, and rather acts as a mediating variable. Thus, the hypothesis about PA size is stated below:

Hypothesis 1 (H1_e). *Personal attributes (PA) have negative effect on knowledge-hiding behaviour (KHB).*

2.1.5 Skills and knowledge-hiding behaviour

Scholars investigated the effects of SKI on KHB as well. In particular, employees' political skills were found to be helpful in diminishing the occurrence of KHB (Ain et al. 2022; Kaur and Kang 2022; Offergelt and Venz 2023). Hence, the hypothesis about SKI effects on KHB is drawn:

Hypothesis 1 (H1_f). *Skills (SKI), in particular employees' political skills, have negative effect on knowledge-hiding behaviour (KHB).*

2.1.6 Professional training and knowledge-hiding behaviour

With reference to the effects of TRA on KHB, Labafi et al. (2022) studied the factors triggering KHB in IT services of Iran, and found that the learning ability of the knowledge seeker is one of the most influential factors. This implies that organisations need to implement the learning capacity of knowledge seekers through training mechanisms aimed at promoting knowledge sharing. Lanke (2023), on the other hand, using an integrative review technique, found that compassion training, by helping to develop empathy, improves interpersonal relationships consequently reducing KHB. Thus, the hypothesis of this study regarding TRA dimension:

Hypothesis 1 (H1_g). *Professional training (TRA) has negative effect on knowledge-hiding behaviour (KHB).*

2.2 Gender and Knowledge-Hiding Behaviour

Whether and how gender can influence risk perception and behaviour has been widely covered in the literature thus far. Savage (1993) studied the influence of demographics on the perception of very different types of risk, finding that women have more dread related to hazards. In other studies, the perception of risk of tourists during the COVID-19 pandemic was explored, and gender was also considered as an influencing factor (O'Connor and Assaker 2021; Perić, Dramićanin and Conić, 2021; Zhan et al. 2022). In Forsythe and Shi's research (2003), the risk profile of an internet shopper was provided, where the influence of gender was considered among selected demographics. Regarding gender and risk behaviour, considerable scientific studies have been carried out as well. Jackman et al. (2021) investigated differences in suicidality based on gender identity, and Ghahremani et al. (2019) analyzed the relationship between demographics and high-risk behaviour. Furthermore, La Greca et al. (2022) investigated mothers' health-risk behaviour, and other studies analyzed the gender differences in risky driving behaviour (Măirean and Diaconu-Gherasim 2021; Granie et al. 2021).

With specific reference to KHB, Demikasimoglu showed that female academics are more likely to engage in evasive knowledge hiding behaviour (Demirkasimoglu 2016), while Andreeva and Zappa (2023) reported that men were more likely to hide their knowledge from colleagues. The role of gender was also considered in research focused on the relationship between ethical leadership and KH (Koay and Lim, 2021), and between expert power and referent power regarding KH (Issac et al. 2022). In the study by Koay and Lim, gender was included as a control variable because it was thought to influence employees' propensity to share knowledge, while Issac found that men were more likely to retaliate against their abusive supervisors by hiding knowledge from other shop workers. After considering this researches, the following hypothesis was formulated:

Hypothesis 2 (H2). *Gender affects knowledge-hiding behaviour (KHB). Women hide knowledge more than their male counterparts.*

The conceptual framework shown in Figure 1 represents the various hypotheses that are presented in this study. HC (with its subscales) and gender are independent variables, whereas KHB1 is dependent.

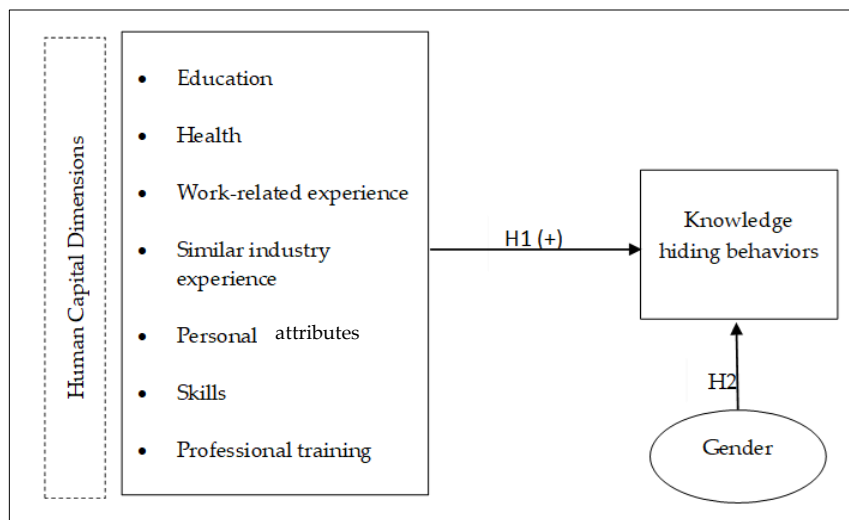


Figure 1: The conceptual framework. Source: authors' conceptualization

3. Research Methodology

3.1 Sampling and Data Collection

To examine the research model presented in Figure 1, and to achieve the study objectives, a quantitative approach was followed, two non-probabilistic sampling methods (i.e., convenience sampling and self-selection sampling) to gather data from the participants through circulating the questionnaire link to faculty members via their emails as well as distributing hard copies of the questionnaires on their work-related sites. As a result, the questionnaire has been distributed via two ways (online questionnaire and on-site).

From June 2022 to September 2022 a total of 336 responses (117 online + 219 self-administered) were collected and regarded as valid for further analysis.

3.2 Questionnaire and Measures

The study utilized two non-probabilistic sampling methods to gather data from the participants. These methods were used to gather information from the individuals through the distribution of the questionnaire link via email, and hard copies of the questionnaire were also made available on the work-related sites of the participants. The study's pre-test was conducted to determine the minimum amount of time that it would take for the participants to complete the questionnaire. It showed that some of the participants may not have taken the survey seriously. To minimize the error variance that might occur due to a low number of participants who took the survey seriously, the cutoff for the analysis was set at 2.2 minutes. The questionnaire's final form featured two main sections. One of these asked about the respondents' demographic features, such as their gender, marital status, educational qualifications, and work position. The other asked about the constructs of KHB and HC. Previous studies also used an applied response scale, where 1 was strongly disagree and 5 was strongly agree. The results of the survey were then sent to the responders in Italian. For HCDs, reference was made to the dimensions

proposed by Alnoor (2020), namely education, experience, health, personal attributes (EDU, EXP1, EXP2, HLT, PA, SKI1, SKI2, and TRA), which were related to the various aspects of an employee’s experience . HCDs were measured using eight items thanks to previous studies (Mubarik, 2016; Mubarik, Chandran and Devadason, 2016; 2018, Alnoor 2020; Han, Lin and Chen, 2008). As in the study by Nguyen, Malik and Budhwar (2022) KHB was measured using a scale developed by Peng (2012), which included a limited number of items derived from Connelly’s scale (2012) (Table 1).

Table 1: Constructs’ items

Latent variables/ items	References
<p>Human Capital Dimensions (HCD)</p> <p>EDU My level of education helps me perform my job duties professionally and productively</p> <p>EXP1 Work related experience allows me to perform my work duties effectively and efficiently.</p> <p>EXP2 Similar industry experience allows me to perform my job duties effectively and efficiently.</p> <p>HLT My health conditions allow me not to be absent from work frequently.</p> <p>PA My personal attributes support me in carrying out my work duties and in managing the relationship with colleagues in the best possible way.</p> <p>SKI1 My skills allow me to carry out technically complex tasks.</p> <p>SKI2 My skills allow me to solve problems related to my work.</p> <p>TRA Professional training, even on-the-job, has provided me with the soft and technical skills necessary to perform my work duties effectively and efficiently.</p>	<p>Mubarik (2016)</p> <p>Mubarik, Chandran and Devadason. (2016, 2018)</p> <p>Alnoor (2020)</p> <p>Han, Lin and Chen, 2008</p>
<p>Knowledge Hiding Behaviour (KHB)</p> <p>KHB1 I don't want to transfer my personal knowledge and experience to others.</p> <p>KHB2 I voluntarily hide useful information or knowledge from others because I believe they can use it to their advantage and to my detriment.</p> <p>KHB3 I find difficult to transform my valuable skills and competences into organisational knowledge.</p>	<p>Nguyen, Malik & Budhwar (2022)</p>

3.3 Statistical Techniques

Descriptive statistical analysis was conducted by first using central tendency and variability indexes for quantitative variables and frequency tables for qualitative variables. We used an independent t-test to compare the mean values of “I don't want to transfer my personal knowledge and experience to others.” (KHB1), “I voluntarily hide useful information or knowledge from others because I believe they can use it to their advantage and to my detriment” (KHB2), and “I find difficult to transform my valuable skills and competences into organisational knowledge” (KHB3) between men and women. Finally, a multiple linear regression was used with KHB1 (I don't want to transfer my personal knowledge and experience to others) as a dependent variable and EDU, EXP1, EXP2, HLT, PA, SKI, TRA and Gender as independent variables. The variable SKI was obtained by calculating the mean value between SKI1 and SKI2, as both variables measured the same factor. KHB1 was chosen as the dependent variable since we consider it an item that underlies the most emblematic KHB. The R² index, F statistic of the final model, and VIF values were used to evaluate the overall goodness of fit of the model. A significance level of 0.05 was chosen for all considered analyses. All analyses were conducted in SPSS Statistics version 28.

4. Study Findings

4.1 Demographic Characteristics

Table 2 shows the demographic characteristics of the participants. The sample was 47.2% male and 52.8% female. Of the respondents, about 75% were more than 50 years old, 67.6% of the participants had a bachelor’s

degree, the vast majority of participants were employees (90.8%), and 77.7% of the sample had work seniority having been at their organisation for more than 15 years. In addition, 67.3% of the sample was married.

Table 2: Demographic characteristics

Variables	Categories	Absolute frequencies (n)	Relative frequencies (%)
Gender	Man	148	44.0
	Woman	188	56.0
Marital status	Married	226	67.3
	Widower	10	3.0
	Divorced, Separated	41	12.1
	Never married	59	7.6
Work Position	Manager	31	9.2
	Employee	305	90.8
Age	22-30	5	1.5
	31-40	24	7.1
	41-50	80	23.8
	>50	227	67.6
	>50	227	67.6
Educational qualification	Diploma	92	27.4
	Degree	227	67.6
	Master's	17	5.0
Work seniority (years)	6-10	20	6.0
	11-15	55	16.3
	>15	261	77.7

4.2 Formulated Hypotheses

The descriptive statistics of the scales presented in Table 3 indicate that the means of the organisational factors were quite high, considering that the Likert scales had values between 1 (strongly disagree) and 5 (strongly agree). The variable with the highest mean value was KHB3 ($\bar{x} = 3.83$, $\sigma = 0.607$), while the lowest value was for KHB1 ($\bar{x} = 1.51$, $\sigma = 0.593$). Assuming that the distribution of a Likert scale can be approximated as a continuous distribution, the normality condition was investigated via the skewness and kurtosis indexes, and all the values presented in Table 2 indicate that these values were within the threshold of ± 3 (Ghasemi & Zahediasl, 2012).

Table 3: Descriptive statistics

Variables	Mean	St. Dev.	Skewness	Kurtosis
EDU	3.74	0.507	-0.331	-0.348
EXP1	3.79	0.612	0.150	-0.507
EXP2	3.44	0.591	-0.522	-0.641
HLT	3.83	0.607	0.1	-0.416
PA	3.79	0.612	0.150	-0.507
SKI1	3.85	0.607	0.085	-0.387
SKI2	3.85	0.603	0.073	-0.353
TRA	2.63	0.483	-0.545	-1.713
KHB1	1.51	0.593	0.698	-0.473
KHB2	1.58	0.588	0.438	-0.689
KHB3	3.83	0.607	0.1	-0.416

An independent samples t-test was performed to verify if there is a statistically significant difference between the means of the variables KHB1, KHB2, and KHB3 in the two subgroups of the gender variable (Table 4). Before the t-test, the Levene test was performed to test the null hypothesis of equal variances in the two subgroups: in the case of Levene’s test being significant, a robust t-test was applied. There was a significant difference in KHB1 between men ($\bar{x} = 1.34, \sigma = 0.544$) and women ($\bar{x} = 1.64, \sigma = 0.6$) ($t_{(327.5)} = -4.695, p = <0.001$). There was not a significant difference in KHB2 between men ($\bar{x} = 1.6, \sigma = 0.556$) and women ($\bar{x} = 1.56, \sigma = 0.613$) ($t(334) = 0.580, p = 0.562$). There was a significant difference, but only a 0.10 level of significance, in KHB3 between men ($\bar{x} = 3.76, \sigma = 0.621$) and women ($\bar{x} = 3.88, \sigma = 0.591$) ($t(308.28) = -1.787, p = 0.075$).

Table 4: Independent samples t-test

Variable		Mean	St. D.	Levene p	Levene F	T-test t	T-test p
KHB1	Man	1.34	0.544	,016	-4,640	-4.695	<0.001
	Woman	1.64	0.600				
KHB2	Man	1.60	0.556	3,325	,069	.580	0.562
	Woman	1.56	0.613				
KHB3	Man	3.76	0.621	4,885	,028	-1.787	0.075
	Woman	3.88	0.591				

For the outcome of KHB1, a multiple linear regression was developed to determine which factors have a statistically significant impact. We obtained a statistically significant final model ($F_{(8,327)}=19,912, p < 0.001$) with a good R^2 value of 0.328. No collinearity problems emerged when observing the VIF values for independent variables. The results of the multiple linear regression are presented in Table 5 The variables EXP1, EXP2, HLT, and SKI were found to have a statistically significant impact on KHB1 (p -value $<0,05$); specifically, EXP1 and HLT have a positive impact, while EXP2 and SKI have a negative impact. Furthermore, being a man compared to being a woman results in a decrease of 0.275 in KHB. Observing the standardized coefficients, it is possible to conclude that, compared to other independent variables, SKI has the strongest impact on KHB1 (Beta= -0,431). Decisions on the assumptions made are summarised in Table 6.

Table 5: Results of multiple linear regression^a

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2,828	,539		5,251	<,001		
EDU	-,063	,058	-,054	-1,091	,276	,851	1,176
EXP1	,093	,046	,096	1,998	,047	,898	1,114
EXP2	-,140	,047	-,140	-2,971	,003	,932	1,073
HLT	,149	,046	,152	3,245	,001	,936	1,068
PA	,042	,049	,043	,851	,396	,801	1,249
SKI	-,430	,048	-,431	-9,029	<,001	,904	1,106
TRA	,037	,059	,030	,626	,532	,888	1,127

Gender	-,275	,063	-,231	-4,342	<,001	,728	1,374
a. Dependent variable: KHB1.							

Table 6: Hypothesis decision

Hypothesis	Result	Effect
(H1_a) EDU -> KHB1	Rejected	-
(H1_b) EXP1 -> KHB1	Not Rejected	As EXP1 increases, KHB1 increases
(H1_c) EXP2 -> KHB1	Not Rejected	As EXP2 increases, KHB1 decreases
(H1_d) HLT -> KHB1	Not Rejected	As HLT increases, KHB1 increases
(H1_e) PA -> KHB1	Rejected	-
(H1_f) SKI -> KHB1	Not Rejected	As SKI increases, KHB1 decreases
(H1_g) TRA -> KHB1	Rejected	-
(H2) Gender-> KHB1	Not Rejected	Men have lower KHB1 scores than women

5. Discussion

Although the literature revealed that some organisational factors such as HCDs can influence employees' risk behaviour (Adeleke et al. 2018; Isaac 1995; Zheng et al. 2018), research examining the impact of these factors on KHB is still scattered and almost always scarce. This paper attempts to bridge this research gap. The model used was developed basing on early studies in this field. Our findings reveal that HC has a significant effect on KHB (H1). Almost all of the results related to Hypothesis one and its sub-hypotheses are in line with previous empirical studies, showing the significant effect of HCDs on KHB.

Regarding H1a, the results showed a non-significant correlation between EDU and KHB, this led to reject the hypothesis, but it is however a result in line with those studies that have not found EDU to have a significant effect on KHB (Zhang et al 2022).

The hypotheses related to EXP on KHB were supported by the results, which showed the positive effects of EXP1 on KHB, as found in previous researches (Li et al., 2015; Peng, 2013; Serenko and Bontis 2016;).

Furthermore, this study hypothesized a negative effect of HLT on KHB (H1d). This assumption was not supported by the results, which revealed a positive effect of employee health conditions on KHB. This result could be due to the fact that this variable is complex and correlated to individual elements of judgment on personal health conditions. According to H1e, PA have negative effect on KHB. This hypothesis was not supported by the results, which instead revealed the non-significance of the correlation, a result however comforted by a part of the literature (Akhlaghimofrad and Farmanesh 2021). SKI has been hypothesized to have negative effects on KHB (H1f). This was confirmed by the results of the present analysis, and is in line with previous research (Ain et al. 2022; Kaur and Kang 2022; Offergelt and Venz 2023). Finally, H1g was rejected as the results showed a non-significant relationship between TRA and KHB.

Our findings related to the second hypothesis (H2) indicate that gender exerts influence over KHB. This result concurs with other previous studies that demonstrated the influence of gender on KHB (Demirkasimoglu 2016; Koay and Lim, 2021; Issac et al. 2022; ; Zutshi et al. 2021).

Both theoretical and practical implications can be drawn from this study. By analysing the relationship between HC and KHB in the public sector and considering the possible influence of gender on KHB (Anand, 2022), this paper adds to the underdeveloped research on knowledge risk (Durst, 2019; Durst and Henschel, 2020). Furthermore, this research could encourage public sector managers and governments to develop those innate or acquired HC traits that are more likely to induce knowledge sharing behaviour and reduce KHB. Thus, the current research is considered necessary for the HR staff of an organisation, especially those in top management, who are trying to understand the phenomenon of knowledge-hiding behaviour and the ways to reduce it. The data collected here show that the study-suggested model clarifies and predicts satisfactory levels of individual behaviour in the workplace, confirming the usefulness of the study's theoretical model.

6. Conclusions

6.1 Theoretical and Managerial Implications

The aim of this work was to investigate the relationship between human capital dimensions and knowledge hiding behaviour in the public sector. Data were gathered from public sector establishments in South Italy through a structured questionnaire. A research model was developed to determine the relationships between variables, and the hypothesized relationships were analyzed by employing a structural model analysis. The findings show that HC affects KHB, although some HCDs were found to have a non-significant effect. Additionally, we found that gender affects the KHB of public employees. Thus, the present research contains numerous theoretical and intellectual contributions that may be of great interest to academics and researchers in this field. This study adds to our understanding of a variety of variables related to organisational behavior and human resources. It provides a deeper understanding of the impact of some pivotal implications, indicating the significance of HCDs and gender on KHB; additionally, this study is one of the few carried out in Italy, and specifically in South Italy, so it is expected that this study will help to bridge the research and knowledge gap in this field. This study is also significant because there are few studies in the literature that indicate the existence of or propose a comprehensive model containing organisational factors affecting knowledge-hiding behaviour.

Furthermore, the study may help influence knowledge-hiding behavior policies. To be more specific, this work is considered one of the few studies conducted to assess how HCDs and gender can influence KHB from the perspective of public sector employees in South Italy.

This study has several management implications and can help define a set of practical recommendations for decisionmakers, policymakers, and organisations to prepare public managers on the organisational factors that contribute to employee knowledge-hiding behaviour in the public sector. Through the results of this study, it was found that there are two organisational factors that lead to employees partaking in KHB in the work environment. These two factors are HCDs and gender. Therefore, organisation managers must develop appropriate policies and implement measures in a timely manner to limit KHB and related practices. This can be accomplished by improving communication and knowledge-sharing practices that facilitate direct interaction channels between employees and senior management, which may allow for direct interaction, reduce knowledge-hiding behaviour, and create a work environment that encourages participation and the expression of opinions.

Practically, managers of organisations and companies must consider all factors that lead to organisational isolation within the organisation. This can result from an organisation's failure to listen. Improvements can be achieved by providing management with the necessary support to motivate employees and encourage them to feel connected to the organisation in which they work, as well as make them feel that the work they provide, whatever it is, has value and meaning. This can also be accomplished by increasing employees' ideas and opinions. Preparing external workshops that improve confidence in establishing relationships and breaking down isolation barriers through training will ultimately help improve teamwork in the work environment and consolidate relationships between employees within the organisation. Establishing organisation policies that are developed and implemented clearly can help to ensure employee rights for both men and women. This also provides employees reassurance on their rights and stability regarding their future in the organisation by providing them with opportunities to achieve their own goals (for example, involving them in development programs that aim to improve performance) so that they feel a sense of accomplishment or achievement, reducing knowledge-hiding behaviour that occur when they do not achieve personal goals.

6.2 Limitations and Future Research Directions

Despite the importance of this research, which may help organisations make modifications in their procedures and processes, this study has some limitations. Firstly, the study participants were from public sector establishments in South Italy, and thus, external validity may be a concern. Hence, future research may include private sector organisations as well, and may conduct a comparative study between these two sectors. Secondly, the results of this study are not longitudinal, and this may cause a problem in establishing causal relationships. Moreover, the current study relies on self-report measures of individuals' behavior, which could cause the possibility of a method bias. Thirdly, the study was restricted to HCDs; therefore, future research may include other organisational factors such as organisational deviation, organisational hypocrisy, and organisational injustice and explore their effects on other variables such as stress in the workplace. The goal of future studies should be to analyze the various factors that influence the performance of employees. These include the psychological empowerment of staff members, the establishment of high-performing teams, and the relationship between managers and employees.

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