

ORIGINAL ARTICLE

Harmonious work passion and work-related internet information seeking among nurses: The mediating role of intrinsic motivation

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Abstract

Aim: The aim of this study is to investigate the relationship between nurses' harmonious work passion and work-related internet information seeking. In doing so, we examine intrinsic motivation as an underlying mechanism of this relationship.

Background: Nurses seek and utilize information to respond effectively to their tasks and to develop their skills and competencies. Internet consists one of the easiest and richest sources of information. Both nurses and organizations need to identify potential antecedents of work-related internet information seeking.

Methods: Data were collected from 239 nurses and nurse assistants in a Greek University hospital and were analysed using bootstrap analysis with PROCESS macro.

Results: Harmonious work passion was positively related to intrinsic motivation and intrinsic motivation related positively to work-related internet information seeking. The mediating role of intrinsic motivation was also supported.

Conclusions: Nurses with harmonious work passion seek more regularly work-related information on the internet because they experience high levels of intrinsic motivation.

Implications for Nursing Management: Health care organizations and managers need to recruit passionate nurses and cultivate a workplace culture that will trigger higher levels of harmonious work passion. Recruitment tools and methods such as interviews, situational judgement tests or role playing could be very beneficial towards uncovering potential candidates with an elevated passion for their work.

KEYWORDS

intrinsic motivation, mediation, nurses, work passion, work-related internet information seeking

1 | INTRODUCTION

The internet is a predominant source of information for most professional groups, including health care professionals (Kritsotakis

et al., 2021; Kostagiolas et al., 2012, 2018), as they need to update their knowledge, manage change and develop their professional skills (Kostagiolas et al., 2015). Nursing is an information-intensive profession with rapid research advances on evidence-based principles and

practices for patient safety and care (Skela-Savič & Lobe, 2021). Everyday work of nurses is complicated and intense and includes high uncertainties (Arcadi et al., 2021; Modaresnezhad et al., 2021). The availability of online information and the extensive online information sharing among nursing professionals has become a decisive factor in empowering evidence-based practices in nursing (Sortedahl et al., 2018), adopting online learning programs and collaboration technologies (Button et al., 2014) and developing computer-based nursing information (Ammenwerth et al., 2011).

Drawing on the critical role of information seeking for nurses, in this study we focus on work-related internet information seeking (Alving et al., 2018; Clarke et al., 2013). Specifically, we attempt to examine its relationship with a relatively novel construct in organizational behaviour, namely, work passion. Furthermore, we aim to offer a better understanding of the relationship between work passion and work-related internet information seeking, by examining intrinsic motivation as an underlying mechanism that explains the above relationship.

The present study contributes to the existing literature mainly in two ways. First, this is one of the first studies to address the relationship between work passion and information seeking (and more specifically work-related internet information seeking). Although prior literature has examined various outcomes of work passion, little empirical research has highlighted information-related work behaviours as possible outcomes of work passion. Second, we also add to the work passion literature that addresses the underlying mechanisms that account for its effect by highlighting the role of intrinsic motivation.

2 | THEORY AND HYPOTHESES DEVELOPMENT

2.1 | Work passion and intrinsic motivation

Organizational behaviour explains human behaviour within organizational settings (Tasselli et al., 2018). In this framework, organizational behaviour parameters also describe how nurses interact with each other and/or act within their professional environment to create effective and efficient work outcomes at an individual and/or organizational level (Borkowski, 2015). In the realm of nursing, the role of information seeking behaviour has not been fully explained and studied. Case and Given (2016, pp. 104) suggested that '*information behavior is not always motivated by the need to solve a problem or make a decision ...*'. Information seeking might indeed be driven by some form of other work-driven qualities related to a person's attitudes, feelings and behaviours. In the work-related context, qualities of this nature might include among others 'work passion' and 'intrinsic motivation'.

Existing literature mainly includes critiques and discussions either voiced in other disciplines, for example, extensive discussions for intrinsic motivation and work passion from organizational behaviour and human resource management studies (e.g., Perrewé et al., 2014;

Zigarmi et al., 2018) or includes information seeking theorists, which discuss the relevant human motivators (e.g., Case & Given, 2016). However, the current literature stops short when, for instance, associations of work passion and intrinsic motivation to information-seeking behaviour need to be explored. On the other hand, Wilson (2006) and Savolainen (2017) suggested that this vein of research might be quite fertile for further understanding the role of information seeking behaviour within the work contexts. Similar suggestions were made in health care (Kostagiolas et al., 2014), and also, Wu (2019) tried to associate job performance with information literacy competencies and skills. It is well established that intrinsic motivation is a factor that increases job performance as well (Hao et al., 2018; Liu et al., 2011).

Vallerand and Houlfort (2003) characterized work passion as a strong inclination towards an activity that people find personally meaningful, invest time and energy and enjoy (or even love), and they value in the context of work. Mageau et al. (2009) pinpointed that the dimension of value is particularly important in the context of passion: value is what distinguishes passionate activities from other stimulating and interesting, but non-important ones.

Work passion can be further distinguished into harmonious passion, which concerns the autonomous internalization of work activity, and obsessive passion, which relates to a controlled internalization of the work activity in one's identity (Vallerand & Houlfort, 2003). Given that harmonious passion—compared to obsessive—has been related to positive outcomes, we adopt the former type of passion. Harmonious passion incorporates the 'social identity' of people towards an activity and their internal motivation for it.

Broadly speaking, intrinsic work motivation is considered as the internal reasons that make people initiate and sustain work-related behaviours and also outline the intensity and duration of these behaviours (Pinder, 2008). Intrinsic motivation relates to the inherent satisfaction and enjoyment that employees experience when they perform their work activities (Deci & Ryan, 1985, 2000). Employees with high levels of intrinsic motivation are interested by their work itself and therefore are motivated by the intrinsic facets of their work (Bakker, 2008).

Based on the above, we suggest that passionate nurses will have incorporated their work activity into their personal identity (Vallerand et al., 2003) and will be intrinsically motivated. Therefore, we form the following hypothesis:

Hypothesis 1 Harmonious work passion is positively related to intrinsic motivation.

2.2 | Intrinsic motivation and work-related internet information seeking

The theory of reasoned action, employed in the 'Technology Acceptance Model' (Ajzen & Fishbein, 1980), asserts that perceived usefulness and ease of use determine whether individuals will perform an activity. Based on this theory, nurses who perceive the internet as a useful tool for their work practices information resource and they

know how to efficiently and effectively utilize online information resources are prone to seek information over the internet (Alving et al., 2018; Clarke et al., 2013; Gilmour et al., 2016). Research suggests that perceived enjoyment and perceived image are additional antecedents in determining a behavioural intention (such as work-related internet employment by nurses) in addition to perceived usefulness and ease of use (An et al., 2007; Lahti et al., 2014). Furthermore, researchers found that employees' intentions to use the internet to find information were mainly influenced by their perceptions of how useful the computers were in helping them to improve their job performance (Fourie, 2009; Ward et al., 2008). Intrinsic motivation triggers individuals' fundamental receptivity to information and intensifies information seeking (Dubnjakovic, 2018). On this basis, individuals that are intrinsically motivated are fascinated by the work itself and this is likely to enhance work-related information seeking behaviours. Therefore, the following hypothesis is formed:

Hypothesis 2 Intrinsic motivation is positively related to work-related internet information seeking.

2.3 | The mediating role of intrinsic motivation

Pierce and Gardner (2004) pointed out that employees who think they are beneficial and important to the organization are more easily involved in innovative actions and take initiatives to pursue their professional goals in the best possible way. Shi (2012) showed that passion at work fosters innovative work behaviour while Deci et al. (1994) found that when individuals are passionate about their job, they cultivate skills such as information seeking skills, which may lead to their development. Nurses' information seeking skills and work passion constitute a dynamic linkage that leads individuals to devote themselves to work improvements and work-related knowledge enhancement (Baum & Locke, 2004). Nurses with harmonious work passion are intrinsically motivated to make excessive efforts for their work and positively use their knowledge and experience, and, as a result, they experience feelings of fulfilment (Baum & Locke, 2004; Vallerand et al., 2003). Nurses with harmonious work passion also express high levels of dedication in achieving the desired work goals (Baum & Locke, 2004). Moreover, they tend to do all the necessary actions to achieve their job-related goals (Button et al., 1996) and direct large amounts of cognitive and mental energy towards these goals (Mannheim et al., 2004).

As mentioned above, nurses seem to understand the importance and need for information to improve their job performance (McKnight, 2006). Work passion is positively related to job performance above and beyond job satisfaction, organizational commitment and intrinsic motivation (Hao et al., 2018; Liu et al., 2011; Wheatley, 2017). Based on the above arguments, we suggest that harmonious work passion is positively related to work-related internet information seeking.

Thus far, we have hypothesized that harmonious work passion is related to intrinsic motivation (Hypothesis 1) and also that intrinsic

motivation is associated with work-related internet information seeking (Hypothesis 2). Taken together, we suggest that intrinsic motivation is a mediator between harmonious work passion and information seeking about work on the internet.

Hypothesis 3 Intrinsic motivation mediates the relationship between harmonious work passion and work-related internet information seeking.

3 | METHODS

3.1 | Participants and procedure

Data for this cross-sectional analysis were collected during February 2018 from a convenience sample of nurses and assistant nurses working in an acute care University Hospital in central Greece. After communication with and approval from the Department Heads, one researcher distributed the questionnaires in paper format. Before data collection, all participants were reassured about the anonymity and confidentiality of their responses and the fact that they could withdraw from the study and stop completing the questionnaire at any time without any consequences. Nurses were instructed to respond to the questionnaire during their break and typical completion time was about 10 min.

Of the 270 questionnaires that were initially distributed, complete data for this analysis were provided by 239 participants, yielding a response rate of 88.5%. The sociodemographic and work-related characteristics of the respondents are presented in Table 1. Of them, 79.1% were female, 84.5% had a bachelor or nurse assistant degree and 42.3% belonged to the 36–45 age group.

3.2 | Ethical considerations

The research protocol was reviewed and approved by the relevant scientific board of the University Hospital (15/5/26-02-2018). The hospital executives also approved the distribution of the questionnaires in the departments. Nurses' consent to participate was deemed positive by returning the questionnaire.

3.3 | Measures

All measures except for the work-related internet information seeking utilized a 5-point Likert scale in which 1 = 'strongly disagree' and 5 = 'strongly agree'.

3.3.1 | Harmonious work passion

Harmonious work passion was measured using the four out of seven items that displayed factor loadings higher than 0.5 in the seminal

TABLE 1 Sociodemographic and work-related characteristics of the participants

	n	%
Total	239	100
Gender		
Male	50	20.9
Female	189	79.1
Age (years)		
≤25	28	11.7
26–35	23	9.6
36–45	102	42.7
46–55	81	33.9
≥56	5	2.1
Educational level		
Bachelor or nurse assistant degree	202	84.5
Master	32	13.4
PhD	5	2.1
Years working in the same department		
≤5	51	21.3
6–10	29	12.1
11–15	59	24.7
16–20	52	21.8
≥21	48	20.1
Years of working experience		
≤5	37	15.5
6–10	28	11.7
11–15	52	21.8
16–20	65	27.2
≥21	57	23.8

work of Vallerand et al. (2003). Example items are ‘*This activity allows me to live a variety of experiences*’ and ‘*This activity reflects the qualities I like about myself*’. Cronbach’s alpha was .84 in this sample, above the proposed cutoff value of .70 (Taber, 2018).

3.3.2 | Intrinsic motivation

Intrinsic motivation was measured using the five items of the intrinsic work motivation subscale of the ‘*WORK-reLated Flow inventory (WOLF)*’ developed by Bakker (2008). The subscale has been previously used in the Greek context showing adequate psychometric properties (Gkorezis & Kastritsi, 2017). Cronbach’s alpha for this scale was .82. A sample item is ‘*I would still do this work, even if I received less pay*’.

3.3.3 | Work-related internet information seeking

Nurses reported in a 5-point Likert scale in which 1 = ‘*never*’ and 5 = ‘*very often*’ how often did they seek information on the internet

on eight separate categories that are related to multiple clinical situations: Approved Drugs, Experimental Drugs, Hospital-acquired/nosocomial infections, Autoimmune diseases, Medical syndromes, Cancer, Acute/Chronic Diseases, and Pain Management (one question for each clinical category). The question was developed by the authors and Cronbach’s alpha for this scale was .93.

3.3.4 | Control variables

We controlled for several demographic variables, including gender (0 = male, 1 = female), age (1 = ≤25 years, 2 = 26–35, 3 = 36–45, 4 = 46–55, 5 = ≥56), educational level (1 = bachelor or nurse assistant degree, 2 = master, 3 = PhD) and organizational and job tenure (years of working experience and years working in the same department, respectively; 1 = ≤5 years, 2 = 6–10 years, 3 = 11–15, 4 = 16–20, 5 = ≥21). Given that all control variables except for gender showed significant correlations with our outcomes, they were included in the subsequent analyses (Becker, 2005).

3.4 | Statistical analyses

The present hypotheses were tested using bootstrap analysis with PROCESS macro (Preacher & Hayes, 2004). PROCESS comprises a computational tool—a ‘macro’ that can be downloaded from <http://www.processmacro.org>—is available for SPSS (for SAS and R as well) and ‘simplifies the implementation of mediation, moderation, and conditional process analysis with observed (i.e., “manifest”) variables’ (Hayes et al., 2017, p. 77). The specific process analysis for mediation utilized a 5000-bootstrap sample with 95% confidence intervals. Its usefulness lies in that the normality of the distribution of the sample is not assumed. We also conducted confirmatory factor analysis (AMOS 20) to provide validity for our present constructs.

4 | RESULTS

Based on the confirmatory factor analysis, the proposed model has a good fit to the data ($\chi^2 [146] = 407.66$, $p < .01$, CFI = 0.91, IFI = 0.91, RMSEA = 0.09). Therefore, we found support for the distinctiveness of our constructs. Furthermore, all standardized coefficients were significant and thus showed convergent validity.

4.1 | Test of hypotheses

Table 2 shows means, standard deviations and correlations among the study variables. As shown, the correlations among the three constructs are significant. Table 3 reports the regression coefficients for the present hypotheses (Figure 1). Results supported our first hypothesis that harmonious work passion is positively related to intrinsic motivation ($B = .46$, $p < .01$). Likewise, the present findings found

TABLE 2 Descriptive statistics, reliabilities and correlations

	Mean	SD	1	2	3	4	5	6	7
1. Gender	0.79	0.41							
2. Age	3.05	0.99	-.10						
3. Educational level	1.95	1.42	.10	.02					
4. Organizational tenure	3.32	1.37	.03	.69**	.01				
5. Job tenure	3.15	1.41	-.03	.70**	-.01	.86**			
6. Work passion	3.71	0.85	-.05	-.03	.05	-.13*	-.05		
7. Intrinsic motivation	2.50	0.90	-.06	-.15*	.14*	-.16*	-.13*	.44**	
8. Work-related internet information seeking	2.85	1.05	-.04	-.11	.18*	-.09	-.02	.21**	.32**

* $p \leq .05$.** $p \leq .01$.**TABLE 3** Regression analysis

Variables	B	SE	t	p	R ²
Intrinsic motivation regressed on work passion	.46	.06	3.91	.01	.22
Information seeking regressed on intrinsic motivation, controlling for work passion	.30	.08	3.72	.00	.15
Information seeking regressed on work passion, controlling for intrinsic motivation	.09	.09	1.10	.22	.15
	M	SE	L95% CI	U95% CI	
Bootstrap results for indirect effect	.13	.04	.05	.23	

Note. Unstandardized regression coefficients reported. Bootstrap sample size 5000.

Abbreviations: CI, confidence interval; L, lower limit; U, upper limit.

**FIGURE 1** Hypothesized model

support for our second hypothesis, which stated that intrinsic motivation relates positively to work-related internet information seeking ($B = .30, p < .01$). Last, we proposed that intrinsic motivation mediates the relationship between harmonious work passion and work-related internet information seeking. Results of the bootstrap analysis supported the mediating role of intrinsic motivation since the confidence intervals did not include 0 (0.05, 0.23).

5 | DISCUSSION

Information seeking among nurses has received considerable attention in the last decades. In the present study, we examined the relationship between harmonious work passion and work-related information seeking through the mediating role of intrinsic motivation. Results supported our hypotheses by demonstrating that harmonious work passion relates positively to intrinsic motivation, which in turn is

associated with work-related internet information seeking. In doing so, the present study provides novel insights into the linkage between organizational behaviour and information behaviour in the health care sector. Until now, little is known about the effect of health care employees' attitudes and behaviours on their information behavioural outcomes. Therefore, highlighting the relationship of harmonious work passion and intrinsic motivation with work-related internet information seeking, we contribute significantly to the existing literature.

Work passion has recently attracted increasing research attention among scholars. In this vein, prior empirical studies have examined various outcomes of work passion such as organizational identification (Astakhova & Porter, 2015), job satisfaction and performance (Burke et al., 2015), wellbeing (Curran et al., 2015), organizational citizenship behaviour (Astakhova & Porter, 2015) and creativity (Liu et al., 2011). However, we know little about the relationship between work passion and information-related outcomes. In parallel, previous research has examined a few explanatory mechanisms through which

work passion relates to employee outcomes. For instance, scholars have pointed out the mediating role of organizational identification (Astakhova & Porter, 2015), need satisfaction (Forest et al., 2011; Houliort et al., 2015), satisfaction at work or conflict (Vallerand et al., 2010) and emotional contagion (Li et al., 2017). Thus, we shed new light on the existing mediators and highlight intrinsic motivation as an underlying mechanism that explains the effect of harmonious work passion.

5.1 | Limitations

As in any study, there are some limitations that need to be acknowledged. First, we used a cross-sectional design, and we need to be cautious regarding the causality as reverse relationships may also occur. This means that intrinsic motivation may lead to work passion, although based on the theoretical developments, the proposed direction is the most probable. Common method bias is also plausible and may increase the magnitude of the present relationships. The scale that we developed to measure information seeking behaviours in the context of nursing needs to be further researched to prove its robust psychometric properties. Last, we collected data from one university hospital in Greece, and this may raise some concerns about the generalizability of our findings in other countries and settings.

5.2 | Implications for future research

Based on the above limitations, future studies could employ a longitudinal design not only to provide more robust insights on causality but attenuate the possibility of common method bias as well. The present findings could be replicated to other countries, hospitals and health care organizations. Future studies could also examine additional factors and mediating pathways for the relationship between work passion and work-related internet information seeking. For example, Fourie (2009) has pointed out the critical role of emotions (e.g., boredom) in the context of information behaviour. Relatedly, several other factors could affect both work passion and intrinsic motivation such as working hours, job satisfaction or satisfaction with payment. Therefore, including them in the present hypotheses could provide useful insights.

6 | CONCLUSIONS

Nurses seek and utilize information to respond effectively to their tasks and to develop their skills and competencies. In doing so, internet consists one of the easiest and richest sources of information and both nurses and organizations need to identify potential antecedents of work-related internet information seeking. In this study, we provided evidence that nurses with harmonious work passion seek frequently information on the internet regarding work-related issues because they experience high levels of intrinsic motivation.

7 | IMPLICATIONS FOR NURSING MANAGEMENT

These findings provide important practical implications for nurse and health care managers and organizations. As shown, harmonious work passion increases nurses' intrinsic motivation and, ultimately, their information seeking on the internet regarding work-related issues. Nurses' intrinsic motivation is likely to result in a number of favourable outcomes such as organizational commitment (Galletta et al., 2011) and organizational citizenship behaviour (Pohl et al., 2012). Therefore, it is important for health care organizations and managers to recruit passionate nurses or cultivate a workplace that will trigger higher levels of work passion. Regarding the former, recruitment tools and methods such as interviews, situational judgement tests or role playing could be very beneficial towards uncovering potential candidates with an elevated passion for their work. Given that prior research has shown that individuals who perceive their work as a calling demonstrate greater levels of work passion (Vatou & Gkorezis, 2018), managers would benefit from attracting and recruiting those candidates who perceive nursing as a calling.

Likewise, health care organizations could try to foster a cooperative psychological climate among nurses within the organization because this will likely lead to increased work passion (Ho et al., 2018). If top management and supervisors succeed in instilling a work spirit, that will enable nurses to work with each other and emphasize personal effort towards team interests instead of individual ones, this will form a cooperative and team working environment which will promote greater levels of work passion among nurses.

CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

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This study received no funding.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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