Examining the Relationship Between Communication and Information Sharing and Organisational Ambidexterity: A Study on Nurses in TRC1 Region

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İletişim ve Bilgi Paylaşımı ile Örgütsel Ustalık Arasındaki İlişkinin İncelenmesi: TRC1 Bölgesi Hemşireleri Üzerinde Bir Araştırma

Abstract

This study aimed to determine the relationship between communication and knowledge-sharing levels and organisational ambidexterity levels of nurses working in university hospitals in the TRC1 (Gaziantep, Adıyaman, Kilis) Region of Turkey. Through simple random sampling, 318 nurses working in university hospitals in the TRC1 Region were reached. As a result of the analysis, a positive linear and significant relationship was determined between communication and information sharing and organisational ambidexterity. In addition, it is a remarkable result of this study that the communication, knowledge sharing, and organisational ambidexterity levels of the Y-generation nurses are at the lowest level compared to the other generation nurses.

Keywords : Communication and Information Sharing, Organisational Ambidexterity, Nurse.

JEL Classification Codes : M12, D83, D23.

Öz

Bu çalışmada, Türkiye'nin TRC1 (Gaziantep, Adıyaman, Kilis) bölgesindeki üniversite hastanelerinde çalışan hemşirelerin iletişim ve bilgi paylaşım düzeyleri ile örgütsel ustalık düzeyleri arasındaki ilişkinin belirlenmesi amaçlanmıştır. Basit tesadüfi örnekleme yoluyla TRC1 Bölgesi'ndeki üniversite hastanelerinde çalışan 318 hemşireye ulaşılmıştır. Analiz sonucunda iletişim ve bilgi paylaşımı ile örgütsel ustalık arasında pozitif yönde doğrusal ve anlamlı bir ilişki saptanmıştır. Ayrıca Y kuşağı hemşirelerin iletişim, bilgi paylaşımı ve örgütsel ustalık düzeylerinin diğer kuşak hemşirelere göre en düşük düzeyde olması bu çalışmanın dikkat çekici bir sonucudur.

Anahtar Sözcükler : İletişim ve Bilgi Paylaşımı, Örgütsel Ustalık, Hemşire.

1. Introduction

Globally, the health system is an indispensable chain of methods as long as humanity exists. One of the critical links of this chain is the communication and information sharing that ensures coordination between multidisciplinary professional groups in the provision of health services. Since nurses, who comprise most healthcare professions, are expected to be systematic, qualified, and share in patient care services, communication and information sharing are very important for nurses (Turkelson et al., 2017). Nurses with individual and team-based skills in providing healthcare services work in coordination and communication with different healthcare professional groups. If there is a deficiency or impairment in communication or coordination, medical errors may arise in areas with severe working conditions, such as intensive care and emergency services. For this reason, effective communication prevents unwanted situations that may occur during the working process of nurses before they turn into a disaster for the patient (Turkelson et al., 2017). In addition, according to Ruhomauly et al. (2019), effective communication is also important regarding patient safety, which has an important place in nursing care services. Moreover, according to Pun et al. (2020), the patient handover process is another example of effective communication between nurses in conveying critical information such as patient care, treatment, and recovery. In this process, a setback or delay in sharing the patient's information may cause negative consequences for the patient. Similarly, Ekambaram et al. (2018) reported that communication and information management are vital in enabling organisations to cope with changes effectively, increase their productivity, and pave the way to development and innovation. In this context, it can be said that effective communication and information sharing have an important role in terms of the continuity of nursing services and the complete fulfilment of responsibilities.

The concept of organisational ambidexterity, which is as important as communication and information sharing in management systems, such as increasing the performance of the organisation, using the resources of the organisation systematically, and revealing the talents of the organisation members (Ahammad et al., 2019), making use of the existing capabilities of the organisations and ensuring that they are always open to innovations, providing opportunities for discovery and innovation, offers opportunities (Jeskey et al., 2011) in line with the interests of the organisation and staff. According to Jeskey et al. (2011), the monitoring system used for continuous patient monitoring after surgery mediates nurses' improvement and development efforts as an example of organisational ambidexterity behaviours.

Technological and political developments, manifested today with constant change and transformation, have affected sectors such as the economy, security, education, and health. This change and transformation have also caused some changes in the roles and functions of nurses, the largest health sector workforce. It is seen that especially preventive health services come to the forefront in nurses compared to curative health services, and services for healthy individuals and their families increase instead of providing care to the sick individual. Thus, besides the primary caregiver role of nurses, functions such as

educators, consultants, decision-makers, managers, and coordination have emerged. Therefore, the nursing profession gets rid of the traditional nursing understanding and quickly assumes a contemporary professional identity (Dinç et al., 2007; Korkmaz, 2010). This contemporary professional identity has led to the establishment of the concept of professionalism in nurses, and they have reached a situation where they can perform their functions, such as scientific research, theory development, and participation in professional associations, as well as providing care services. Of course, while providing care services, nurses act with ethical principles as well as exhibit behaviours toward professional values (Göriş et al., 2014; Saraçoğlu, 2010). The International Union of Nurses (ICN), one of the pioneers of the nursing profession, constitutes an important force worldwide to increase the service standards of the members of the profession on behalf of the professionalisation of the nursing profession (Korkmaz, 2010). Therefore, nurses should know professional, ethical values and should be professional member who carries out care and practice in line with their professional standards and acts with the awareness to increase the quality of continuous service. Nurses must acquire a special skill to carry out care and all these professional requirements together. In this direction, it is important to determine the organisational ambidexterity behaviours of nurses to gain not only a specific subject but also different organisational skills within the organisation. Another originality of our research is investigating the factors that can effectively gain other professional competencies of nurses. In addition, due to the important contributions of information sharing, such as increasing individual and organisational performance and job satisfaction, it has been discussed mainly among nurses together with organisational ambidexterity (Gehrke & Hasan, 2020; Sönmez-Çakır & Adıgüzel, 2020).

In addition, when the literature was examined, it was observed that communication and information sharing in the nursing field and organisational ambidexterity research were discussed separately (Altındiş & Veysel, 2011; Wasilewski, 2019). However, no study has been conducted on nurses considering both concepts together. Therefore, this research can be evaluated as original research since it is the first research in the health field. Thus, with its results, this research will contribute to filling the gap in the literature, being a guide for other researchers, and increasing managerial skills in the nursing field.

2. Conceptual Framework

2.1. Communication and Information Sharing

Communication and information sharing are very important in ensuring the safety of patient care aimed at providing health care, providing quality health care service, and meeting the increasing demand for health care. Therefore, healthcare providers must communicate effectively with multidisciplinary teams, patients, and their families (Palanisamy & Verville, 2015; Quan et al., 2013). In health, effective communication was defined as the doctor-nurse game (Stein, 1968), which was first used in 1967. However, difficulties in effective communication among health professionals remain (O'Daniel & Rosenstein, 2008). The lack of effective communication causes a decrease in job

satisfaction, wear and tear in business life, and medical errors for the nurse. In contrast, it causes prolongation of the patient's hospital stay, delay in patient treatment, and psychological wear on the patient. (Palanisamy & Verville, 2015).

Information-sharing behaviour can be determined by certain factors within the organisation (Ipe, 2003). To exhibit these behaviours, the desire to share the information acquired by the nurse within the organisational culture and to have the information obtained by others are important factors affecting information sharing (Pai & Tsai, 2016). Therefore, the organisation should have an organisational culture that will provide mutual interest, trust, and openness to ensure information sharing (Al-Alawi et al., 2007). In addition, it has been reported by Marri et al. (2019) that effective communication and information sharing among the organisation members positively contribute to the nurses in terms of gaining creativity, developing their specialist skills, increasing their motivation, and gaining different perspectives.

In the health centre, care providers share all patient-related information, usually during shift changes. In the study conducted by Coughlan et al. (2007), it was stated that when the shift change interviews were conducted in the patient room, patients also participated in information sharing. In this way, it was noted that communication between different health centre stakeholders increased, and better participation was achieved. Research has demonstrated that an organisational environment that cares about communication and information sharing and provides effective information management is critically important in generating creative and innovative ideas, competitive product success, and, therefore, competitive advantage (Ouakouak & Ouedraogo, 2017; Ferreira, 2014). It was stated by Ferreira (2014) that the development of communication and information technology allows the flow of information in the organisational environment to increase cooperation and interaction. On the other hand, heterogeneity among healthcare professionals can pose difficulties in communication and information sharing. For example, in the study by Kauppila et al. (2011), it was stated that heterogeneity between groups poses difficulties in communication and information sharing because people with different functions always discuss concerns, priorities, and even problems that are different from each other. However, according to Wu et al. (2015), managers stated that even if they face potential inefficiencies in communication and information sharing, they can maintain communication and information sharing by creating a common communication symbol and method.

In light of the information above, it can be said that communication and information sharing are vital driving forces for a successful business outcome in nursing services. Because effective communication and information sharing not only provide successful cooperation among nurses but also has a positive relationship with service success, organisational success, personal satisfaction, and survival (Alshawabkeh, 2020; Yang et al., 2012; Raisch & Birkinshaw, 2008; Kotlarsky & Oshri, 2005).

2.2. Organisational Ambidexterity

Organisational ambidexterity is the willingness of an organisation to simultaneously navigate the market and surrounding environment (Alshawabkeh et al., 2020; Petro, 2017) and reallocate resources and competencies to address new opportunities and threats (O'Reilly & Tushman, 2011). Although, according to Ojha et al. (2018), organisational ambidexterity is shown as a static process, when similar studies (Ojha et al., 2018; Brown & Eisenhardt, 1998; March, 1991) in the literature are examined, it is seen that organisational ambidexterity is a dynamic and sequential process. Anyway, organisational ambidexterity, which is of great importance for the long-term success of organisations operating in an uncertain and dynamic environment (Marri et al., 2019), is expected to be dynamic in terms of adaptation to the environment, not static. Similarly, in the studies conducted by Fahrudi (2018) and Raisch & Birkinshaw (2008), organisations' efficient management of current business demands in the face of dynamic external environments and the development of adaptability skills that enable organisations to survive are supported in terms of the dynamism of organisational ambidexterity. In addition, in the literature (Alshawabkeh et al., 2020; Tamayo-Torres et al., 2017; Güttel & Konlechner, 2007; Gibson & Birkinshaw, 2004), it was stated that the concept of organisational ambidexterity should have an effective organisational functioning related to having dynamic capabilities. According to Alshawabkeh et al. (2020) and Gibson and Birkinshaw (2004), this is ambidextrous organisations can cope with environmental challenges and effectively meet today's demands. Ambidextrous organisations also can be actively familiar with environmental challenges while adapting to their existing processes to tackle market conditions. On the other hand, in some studies (Wasilewski, 2019; Fahrudi, 2018), organisational ambidexterity is expressed as the ability of the organisation to make its existing knowledge effective and compatible with new knowledge.

The continuity of innovations and discoveries is critical for organisations to maintain organisational welfare and organisational success (Baškarada et al., 2016). Duncan (1976) introduced the term organisational ambidexterity to the literature based on the idea that different structures are required for innovation and discovery. In this direction, he argued that organisations should initiate innovation and change their structures to ensure continuity and success. Since organisational ambidexterity is important for the continuity and success of organisations, it is seen that research on this concept has attracted attention, especially in recent years, and has been defined by many researchers (Lis et al., 2018; Wasilewski, 2019). In this context, it can be said that organisational ambidexterity expresses both innovation (Wasilewski, 2019; Ekambaram et al., 2018; Fahrudi, 2018; Lis et al., 2018; Ojha et al., 2018; Baškarada et al., 2016; Jeskey et al., 2011; Duncan, 1976) and exploratory ability of the organisation (Wasilewski, 2019; Fahrudi, 2018; Ojha et al., 2018; Baškarada et al., 2016; Borzillo et al., 2012). Moreover, organisational ambidexterity includes flexibility, autonomy, and experimentation within the organisation, creating a synergistic environment in the organisation by aiming to provide continuous improvement with efficiency and control (Subaciute & Rao, 2019; Baškarada et al., 2016).

When the studies of the premises of organisational ambidexterity (Ojha et al., 2018; Lin et al., 2017; Li, 2013; Kortmann, 2015) are evaluated together, it can be said that among the building blocks of organisational ambidexterity, there are factors such as cooperation of knowledge assets, diversity of senior management and strategic orientations in decision making. When the studies in the literature are examined in terms of the dimensions of organisational ambidexterity, it is seen that organisational ambidexterity has been classified as temporal, structural, and contextual (Wasilewski, 2019; Fahrudi, 2018; O'Reilly & Tushman, 2013; Turner& Lee-Kelley, 2013) for the last 20 years to determine how individuals will evaluate their time between innovation and discovery activities within the organisation. This classification can be summarised as follows:

- Temporal Ambidexterity: It refers to the adaptation of organisations to the new process in a systematic order in the face of change (O'Reilly & Tushman, 2013).
- Structural Ambidexterity: It is the separation of individuals within the organisation according to their field and function (Good & Michel, 2013). In the study by Marri et al. (2019), it was stated that the structural differentiation of an organisation through structural ambidexterity. However, it is advocated and supported to achieve organisational ambidexterity but is criticised for its negative effect on organisations with limited resources. Similarly, it has been stated in some studies (Chang & Hughes, 2012; Kyriakopoulos & Moorman, 2004; Raisch & Birkinshaw, 2008) that achieving organisational ambidexterity may depend on the availability of sufficient resources, especially as the complexity of operations increases.
- Contextual Ambidexterity: It refers to the combined use of both temporal and structural ambidexterity behaviours by the organisation's goals (Duncan, 1976; O'Reilly & Tushman, 2013; Wasilewski, 2019).

Although mostly positive organisational results regarding organisational ambidexterity are given in the literature, Guettel & Konlechner (2007) mentioned that ambidextrous organisations face constant tensions due to strategic contradictions. In addition, the difficulties of achieving organisational ambidexterity are also mentioned in the literature. For example, according to Fahrudi (2018), achieving organisational ambidexterity is very important for large organisations that want to provide better customer service. However, large organisations often find it difficult to discover new learning due to the complexity of structures and bureaucracies. Accordingly, it can be said that nurses may have difficulty in achieving organisational ambidexterity since the institutions where nurses work are generally large and complex organisations.

When "communication and knowledge sharing", "organisational ambidexterity", and "nurse" are written in the Google Scholar database, only the research conducted by Subaciute & Rao (2019) has been reached. When the same concepts were written in Science Direct (2020), Sobiad (2020), and Taylor & Francis (2020) databases, no studies were found. With the exclusion of the "Nurse" concept, 61 studies were found in the Google Scholar (2020) database, and two studies were found in the Science Direct (2020) database.

However, no research has been found in Sobiad's (2020) and Taylor & Francis's (2020) databases. It was observed that both studies (Ojha et al., 2018; Chang & Hughes, 2012) accessed in the SCI database also exist in the Google Scholar database. Therefore, in the conceptualisation of this research and in examining communication and knowledge sharing research and organisational ambidexterity research, 63 studies have formed the universe of literature reviews. However, only relevant studies were used to achieve the purpose of the study. When these studies are examined, no research on nurses related to "communication and information sharing" or "organisational ambidexterity "has been encountered. This situation reveals the originality of this research.

3. Methodology

3.1. Aim of the Research

The primary purpose of this study is to reveal whether there is a relationship between the level of communication and information sharing and the organisational ambidexterity level of nurses working in hospitals affiliated with universities in the TRC1 Region (Gaziantep, Adıyaman, Kilis). The secondary objectives of the research can be listed as follows:

a) Examining whether there is any difference between the communication and information sharing levels in terms of the socio-demographic characteristics of the nurses.
b) Examining whether there is any difference between the perceived organisational ambidexterity levels in terms of the socio-demographic characteristics of the nurses.
c) Sharing the results obtained within the scope of the research with the managers of the university hospitals to contribute to the managers of the relevant institutions.
d) Contributing to the knowledge in the literature and future research with the information obtained.
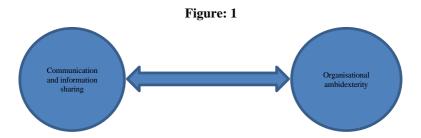
As a result of the research conducted in the literature, it has been observed that similar studies (Katou et al., 2020; Hughes et al., 2020; Yılmaz & Yıldırım, 2018; Cingöz & Akdoğan, 2015; Anthoine et al., 2014; Lubatkin et al., 2006) have been conducted in both national and foreign literature. However, Turkey's Southeast, particularly in TRC1 (Gaziantep, Adıyaman, Kilis), did not reveal a similar survey. Accordingly, it can be said that this study is the first study conducted in the TRC1 region in terms of its subject and study of the universe, and it shows originality in this context. In the discussion part of the study, the findings of this research were compared with those of other studies in the literature, and differences and similarities were emphasised. However, in different regions of Turkey, since it is assumed to have differences in socio-demographic and cultural variables, this study in this context must be considered a limited study.

3.2. Sample of the Research

Nurses working in university hospitals in TRC1 Region (Gaziantep, Adıyaman, Kilis) constitute the main population of this study. However, although Kilis province is located in TRC1 Region, it is not included in the scope of this study since it does not have a university hospital. Considering that there are a total of 1250 nurses, 500 in Adıyaman and 750 in Gaziantep, the sample size determined by Yazıcıoğlu & Erdoğan (2004) was taken as a basis. Accordingly, it was aimed to reach at least 471 volunteer nurses between June and August 2020 when the study was conducted. However, due to the intensity experienced in the health sector due to the COVID-19 Pandemic, the total number of target samples could not be reached. 160 volunteer nurses from Adıyaman and 158 from Gaziantep participated in this study, which can be done online due to the Covid-19 pandemic. Therefore, the sample size of our study consisted of 318 people. 67.5% of the targeted sample and 25.4% of the main mass were reached.

3.3. Research Model and Hypotheses

The model below developed depending on the purpose of the research, can be considered a predictive model for the hypothesis that nurse-perceived communication and information sharing are related to organisational ambidexterity.

Figure: 1

When the literature is examined, it is seen that information sharing has important effects on long-term relationships and organisational and individual performance, job satisfaction, organisational success, and competitive advantage (Gehrke & Hasan, 2020; Sönmez-Çakır & Adıgüzel, 2020; Ji & Zou, 2017; Harsono, 2016; Tong et al., 2013; Im & Rai, 2008). In addition, in the study conducted by Al-Shawabkeh (2018), which is very similar to this research, it was revealed that knowledge sharing has a mediating role in organisational ambidexterity. Similarly, in the study conducted by Aamir et al. (2021), it was determined that the effect of knowledge sharing on sustainable performance was mediated by employee ambidexterity. Therefore, when all studies are evaluated together, it can be predicted that there is a positive relationship between knowledge sharing and organisational ambidexterity.

The main hypotheses and sub-hypotheses developed depending on the above evaluations and previous research (Aamir et al., 2021; Gehrke & Hasan, 2020; Sönmez-

Çakır & Adıgüzel, 2020; Al-Shawabkeh, 2018; Minister et al., 2017; Ji & Zou, 2017; Vrontis et al., 2017; Savolainen, 2017; Tan et al., 2017; Harsono, 2016; Tong et al., 2013; Im & Rai, 2008) on these issues and the purpose of this research are given below:

Main hypotheses:

1. **H_1: There is a significant relationship between nurses' communication and information sharing and organisational ambidexterity levels.**

2. **H_1: There is a significant difference between the communication and information-sharing levels in terms of the socio-demographic characteristics of the nurse.**

   2.1. H_1: There is a significant difference between the communication and information-sharing levels in terms of the generation status of the nurse.
   2.2. H_1: There is a significant difference between the levels of communication and information sharing in terms of the education level of the nurse.

3. **There is a significant difference between the organisational ambidexterity levels in terms of the socio-demographic characteristics of the nurse.**

   3.1. H_1: There is a significant difference between the organisational ambidexterity levels in terms of the generation status of the nurse.
   3.2. H_1: There is a significant difference between the organisational ambidexterity levels in terms of the education level of the nurse.

4. **H_1: There is a significant difference between the communication and information-sharing levels of the nurse in terms of the characteristics of business life.**

   4.1. H_1: There is a significant difference between the communication and information-sharing levels in terms of the seniority of the nurse.
   4.2. H_1: There is a significant difference between the communication and information-sharing levels regarding working style.
   4.3. H_1: There is a significant difference between the communication and information-sharing levels regarding the voluntary choice of the working unit.
   4.4. H1: There is a significant difference between the communication and information-sharing levels regarding the desire to leave the unit.

5. **H_1: There is a significant difference between the organisational ambidexterity levels of the nurse in terms of the characteristics of business life.**

   5.1. H_1: There is a significant difference between organisational ambidexterity levels in terms of the seniority of the nurse.
   5.2. H_1: There is a significant difference between organisational ambidexterity levels regarding working style.

5.3. H_1: There is a significant difference between the levels of organisational ambidexterity in terms of voluntary choice of the working unit.

5.4. H_1: There is a significant difference between organisational ambidexterity levels regarding the desire to leave the unit.

3.4. Data Collecting

The data were collected through a questionnaire. The research questionnaire consists of three parts and 33 questions in total. The questionnaire was sent online via "Google Forms" to the participants' corporate e-mail addresses. The study data set was reached by completing the online questionnaire of the participants. In the first part of the questionnaire form, multiple choice questions were included, consisting of 11 questions, measuring the participants' socio-demographic and business life characteristics. In determining the generation status, one of the nurses' socio-demographic characteristics, the age ranges of the participants were taken as the basis. The classification made by Andrea et al. (2016) was used to define generation status by age range.

3.5. Scales

In the second and third parts of the questionnaire, the communication and information sharing scale (10 expressions) used by Yılmaz & Yıldırım (2018) in the form of a 5-point Likert-type scale ranging from 1 "Strongly Disagree" to 5 "Strongly Agree" (10 expressions) Cronbach's Alpha value is. Lubatkin et al. (2006), the organisational ambidexterity scale (12 expressions) Cronbach's Alpha value is 0.948. The Cronbach's alpha value of the research was determined as 0.887. Therefore, it can be said that the scales used in the research are highly reliable (Gottems et al., 2018; Taber, 2018; Gliem & Gliem, 2003).

3.6. Analysis of Data

The data obtained were analysed using the SPSS 22.0 package program. A standard distribution test was conducted to determine which analyses would be applied to the data set. The standard distribution feature was examined with the "Kolmogorov-Smirnov test", and it was determined that the data did not show normal distribution ($p \leq 0,01$). In this context, Mann Whitney U and Kruskal Wallis H tests, non-parametric analysis methods, were used to test the research hypotheses.

3.7. Ethical Approval

For the study, the ethics committee approval was obtained from the Non-Invasive Clinical Research Ethics Committee of Adıyaman University, dated 21.04.2020, and numbered 2020 / 3-29. In addition, the voluntary principle was fulfilled by obtaining the consent of the participants before the research.

4. Results

Descriptive characteristics regarding gender, education, marital status, generation status, seniority, working unit, working status, working style, and similar socio-demographic and work-life characteristics of the nurses participating in the study are shown in the table below.

Table: 1
Descriptive Characteristics of the Participants

Characteristics		n	%	Characteristics		n	%
Gender	Male	90	28,3	Marital Status	Married	222	69,8
	Female	228	71,7		Single	96	30,2
	Total	318	100,0		Total	318	100,0
Generation Status	X	99	31,1	Working Style	Continuous Daytime Work	121	38,1
	Y	201	63,2		Continuous Night Work	23	7,2
	Z	18	5,7		On Duty	174	54,7
	Total	318	100,0		Total	318	100,0
Education Status	High school	41	12,9	Seniority Status	Less than 5 years	112	35,2
	Associate Degree	44	13,8		Between 5 and 10 years (10 years not included)	120	37,7
	License	217	68,2		Between 10 and 15 years (15 years not included)	41	12,9
	Master and Doctorate	16	5,0		15 years and above	45	14,2
	Total	318	100,0		Total	318	100,0
Working Unit	Policlinic	10	3,1	Working Status	Service (Clinic) Nurse	241	75,8
	Service (Clinic)	237	74,5		Executive Nurse	36	11,3
	Intensive care	46	14,5		Private Branch Nurse	41	12,9
	Operating room	20	6,3		Total	318	100,0
	Administrative Units	5	1,6	Voluntary Preference of the Working Unit	Voluntary Choice	191	60,1
	Total	318	100,0		Not Voluntary Choice	127	39,9
Weekly Working Time	Less than 40 hours	11	3,5		Total	318	100,0
	40 hours	210	66,0	Request to Leave the Working Unit	Request to leave	101	31,8
	More than 40 hours	97	30,5		No request to leave	217	68,2
	Total	318	100,0		Total	318	100,0

When the information given in Table 1 is evaluated together, it is seen that most of the nurses participating in the study are female, married, and from Generation Y. Also, most work 40 hours a week and are on duty. In addition, it can be said that most participants worked as clinical nurses, voluntarily preferred the unit they worked in, and did not want to leave the unit.

4.1. Testing Hypotheses

The main and sub-hypotheses of the study are tested below, respectively. Since the data did not show a normal distribution, Spearman's rho correlation test was used to test the relationship's hypotheses. The Mann Whitney U and Kruskal Wallis H tests were used to testing the hypotheses examining differences. In this study, for evaluating the general average levels of communication and information sharing of nurses and the general average levels of organisational ambidexterity of nurses, the value ranges in the studies conducted by Güllüoğlu (2012), and Yaman & Tekin (2010) were used. Accordingly, the general average level of communication and information sharing of nurses is 3.26, and the general average level of organisational ambidexterity of nurses is 2.94. Since both scores are in the range of 2.61-3.40, it has been concluded that both the communication and information

sharing level of nurses and their organisational ambidexterity level is at the average level; that is, they are not high.

4.1.1. Analysis of the Relationship Between Communication and Information Sharing and Organisational Ambidexterity Levels

The first primary hypothesis of the study, Hypothesis 1.H1, was analysed with Spearman's rho correlation test, and the analysis results are shown in Table 2 below.

Table: 2
Analysis of the Relationship Between Communication and Information Sharing and Organisational Ambidexterity Levels

Spearman's rho Correlation Test		Average Communication and Information Sharing	Average Organisational Ambidexterity
Average Communication and Information Sharing	Correlation Coefficient	1,000	**,210**[**]
	Sig. (2-tailed)	.	,000
	N	318	318
Average Organisational Ambidexterity	Correlation Coefficient	**,210**[**]	1,000
	Sig. (2-tailed)	,000	.
	N	318	318

** Correlation is significant at the 0.01 level (2-tailed).

As a result of the analysis, it was determined that there is a low-level positive linear and significant relationship (Senthilnathan, 2019; Schober et al., 2018; Connelly, 2012) between communication and knowledge sharing and organisational ambidexterity (r = 210 and p =0.00<0.05). Therefore, the first main hypothesis of the research was accepted as 1.H$_1$.

The study's second, third, fourth, and fifth main hypotheses and the sub-hypotheses developed based on these main hypotheses were analysed according to the Mann Whitney U and Kruskal Wallis H tests, respectively, below.

4.1.2. Analysis of Differences Between Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of the Generation Status of the Nurse

Whether there is a significant difference between the communication and information sharing and organisational ambidexterity levels in terms of the generation status of the nurse was revealed as a result of the analysis made with the Kruskal Wallis H test.

According to the results in Table 3, it has been determined that there is a significant difference between the communication and knowledge-sharing levels as well as the organisational ambidexterity levels in terms of the generation status of the nurse (p=0,005 and 0,000<0,05). Accordingly, hypotheses 2.1.H$_1$ and 3.1.H$_1$ were accepted. When the average rank values are examined, it is seen that in terms of communication and information sharing levels, Generation Z nurses have the highest value, and Generation Y nurses have the lowest value.

Table: 3
Analysis of Communication and Information Sharing and Organisational Ambidexterity Level Differences in Terms of the Generation Status of the Nurse

Generation Status		N	Mean Rank	Chi-Square	df	Asymp. Sig.
Average Communication and Information Sharing	X	99	168,38			
	Y	201	149,90	10,423	2	**,005***
	Z	18	217,92			
	Total	318				
Average Organisational Ambidexterity	X	99	201,02			
	Y	201	140,24	29,441	2	**,000***
	Z	18	146,19			
	Total	318				

On the other hand, in terms of organisational ambidexterity, it is seen that Generation X nurses have the highest value and Generation Y nurses have the lowest value. When both results are evaluated together, it is striking that the communication, information sharing, and organisational ambidexterity levels of the Y-generation nurses are the lowest compared to the other generation nurses.

4.1.3. Analysis of Differences Between Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of Nurse's Educational Status

Whether there is a significant difference between the levels of communication and information sharing and organisational ambidexterity in terms of the educational status of the nurse was revealed as a result of the analysis made with the Kruskal Wallis H test.

Table: 4
Analysis of Differences in Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of the Educational Status of the Nurse

Educational Status		N	Mean Rank	Chi-Square	df	Asymp. Sig.
Average Communication and Information Sharing	High school	41	161,18			
	Associate Degree	44	194,72			
	License	217	151,27	8,446	3	**,038***
	Master and Doctorate	16	169,94			
	Total	318				
Average Organisational Ambidexterity	High school	41	163,61			
	Associate Degree	44	148,41			
	License	217	164,59	5,961	3	,114
	Master and Doctorate	16	110,41			
	Total	318				

According to the results in Table 4, it was determined that there is a significant difference between the levels of communication and information sharing in terms of the education status of the nurse (p=0,038<0,05). Accordingly, when the mean rank values are examined, it is seen that the communication and information-sharing levels of the associate degree graduates are the highest compared to the other nurses, while the communication and information-sharing levels of the undergraduate nurses are the lowest compared to the other nurses. On the other hand, it has been revealed that there is no significant difference between the organisational ambidexterity levels in terms of the education level of the nurses

(p=0,114>0,05). Based on these results, the 2.2.H_1 hypothesis was accepted. However, the 3.2.H_1 hypothesis was rejected.

4.1.4. Analysis of Differences Between Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of Nurse's Seniority

The analysis of the Kruskal Wallis H test revealed a significant difference between the levels of communication and information sharing and organisational ambidexterity levels regarding the seniority status of the nurse.

Table: 5
Analysis of Differences in Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of Nurse's Seniority

Seniority Status (Years)		N	Mean Rank	Chi-Square	df	Asymp. Sig.
Average Communication and Information Sharing	Less than 5 years	112	157,97	12,132	3	,007*
	Between 5 and 10 years (10 years not included)	120	148,79			
	Between 10 and 15 years (15 years not included)	41	147,98			
	15 years and above	45	202,37			
	Total	318				
Average Organisational Ambidexterity	Less than 5 years	112	127,89	52,530	3	,000*
	Between 5 and 10 years (10 years not included)	120	164,75			
	Between 10 and 15 years (15 years not included)	41	139,22			
	15 years and above	45	242,66			
	Total	318				

According to the results in Table 5, it has been determined that there is a significant difference between the levels of communication and information sharing and the organisational ambidexterity levels in terms of the nurse's seniority status (p=0,007 and 0,000<0,05). Accordingly, when the mean rank values are examined, it is seen that the communication and information sharing and organisational ambidexterity levels of nurses with 15 years and more seniority are the highest compared to other nurses. Therefore, it can be said that the nurse's seniority level makes a difference in the levels of communication and information sharing and organisational ambidexterity. According to the analysis results, hypotheses 4.1.H_1 and 5.1.H_1 were accepted.

4.1.5. Analysis of Differences Between Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of Working Style

Whether there is a significant difference between the communication and information sharing and organisational ambidexterity levels in terms of the working style of the nurses participating in the study was revealed as a result of the analysis made with the Kruskal Wallis H test.

Table: 6
Analysis of Differences Between Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of Working Style

Working Style		N	Mean Rank	Chi-Square	df	Asymp. Sig.
Average Communication and Information Sharing	Continuous Daytime Work	121	177,76	7,843	2	**,020***
	Continuous Night Work	23	154,11			
	On Duty	174	147,51			
	Total	318				
Average Organisational Ambidexterity	Continuous Daytime Work	121	185,40	16,107	2	**,000***
	Continuous Night Work	23	157,33			
	On Duty	174	141,78			
	Total	318				

According to the results in Table 6, it has been observed that there is a significant difference between the communication and information sharing levels and the organisational ambidexterity levels in terms of the working style of the nurse (p=0,020 and 0,000<0,05). Hence, hypotheses 4.2.H_1 and 5.2.H_1 were accepted. Accordingly, when the mean rank values are examined, it is seen that the communication and information sharing levels and organisational ambidexterity levels of the nurses whose working style is "continuous day" are the highest. However, it has been determined that nurses whose working style is "on duty" have the lowest levels of communication, information sharing, and organisational ambidexterity.

4.1.6. Analysis of Differences in Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of Voluntary Preference of the Working Unit

Whether there is a significant difference between the communication and information sharing and organisational ambidexterity levels in terms of the nurse's preference of the unit he/she works in was revealed as a result of the analysis made with the Mann-Whitney U test.

Table: 7
Analysis of Differences in Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of Voluntary Preference of the Working Unit

Voluntary Preference of the Working Unit		n	Mean Rank	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Average Communication and Information Sharing	Voluntary Choice	191	177,13	8761,000	-4,202	**,000**
	Not Voluntary Choice	127	132,98			
	Total	318				
Average Organisational Ambidexterity	Voluntary Choice	191	179,94	8224,000	-4,867	**,000**
	Not Voluntary Choice	127	128,76			
	Total	318				

According to the results in Table 7, it has been observed that there is a significant difference between the levels of communication and information sharing and organisational ambidexterity levels in terms of voluntarily choosing the unit in which the nurse works (p = 0.000 and 0.000 <0.05). Hence, hypotheses 4.3.H_1 and 5.3.H_1 were accepted. According to the mean rank values, it is seen that nurses who voluntarily choose their unit of work have

high levels of communication and information sharing, as well as organisational ambidexterity.

4.1.7. Analysis of Differences in Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of the Desire to Leave the Unit

Whether there is a significant difference between the levels of communication and information sharing and organisational ambidexterity in terms of the nurse's desire to leave her/his unit was revealed as a result of the analysis made with the Mann-Whitney U test.

According to the results in Table 8, it has been determined that there is a significant difference between the levels of communication and information sharing and organisational ambidexterity levels in terms of the nurse's desire to leave the unit where he/she works (p = 0.000 and 0.001 <0.05). Hence, 4.4. H_1 and 5.4. H_1 hypotheses were accepted. Accordingly, when the mean rank values are examined, it is seen that the communication and information sharing and organisational ambidexterity levels of the nurses who do not want to leave the unit they work in are higher than those who want to leave.

Table: 8
Analysis of Differences in Communication and Information Sharing and Organisational Ambidexterity Levels in Terms of the Desire to Leave the Unit

Request to Leave the Working Unit		N	Mean Rank	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Average Communication and Information Sharing	Request to leave	101	126,12	7587,000	-4,426	**,000**
	No request to leave	217	175,04			
	Total	318				
Average Organisational Ambidexterity	Request to leave	101	134,71	8454,500	-3,284	**,001**
	No request to leave	217	171,04			
	Total	318				

When the above analysis results are evaluated together, it can be said that there are most significant differences in terms of sociodemographic characteristics and work-life characteristics of the nurses participating in the study, according to the second, third, fourth, and fifth main hypotheses of the study and the related sub-hypothesis results. Therefore, the research's second, third, fourth, and fifth main hypotheses were widely accepted.

5. Discussion

This study, in Turkey, in the TRC1 region, was conducted on nurses working in university hospitals. The study aimed to determine the relationship between communication, information sharing, and organisational ambidexterity levels. As a result of the Spearman rho correlation test found a positive, significant, and linear relationship between communication and information sharing and organisational ambidexterity levels. This result supports the studies by Pun et al. (2020) and Zhang et al. (2011). In addition, when this study was examined according to the working style of the participant nurses, significant differences (p <0.020 and 0.000 <0.05) were revealed between the communication and information sharing levels and the organisational ambidexterity levels. Accordingly, it was

found that the communication and information sharing levels and the organisational ambidexterity levels of the nurses who work continuously during the day are much higher than the other nurses. It is thought that this may be due to the high seniority level of daytime working nurses, their administrative duties, and/or their ownership of their work.

In the study conducted by Ferreira et al. (2016), it was emphasised that communication and information sharing between nurses and patients are very important in health care delivery. It was also reported that nurses effectively communicated with patients on issues such as obtaining information, understanding their thoughts, and answering questions. Thus, it was also emphasised that nurses would understand patient differences and focus on patient-specific nursing care. However, when we look at the communication and information-sharing levels of the nurses participating in our study, a medium level of communication and information-sharing was found (3.26<3.41). Accordingly, as stated by Skok & Thir (2010), the reasons for the low level of communication and information sharing among nurses may include job security, insecurity and competition, lack of education about information sharing, the inadequacy of the reward system, and other perceived negative attitudes and behaviours.

Another striking finding of our study is that communication and information sharing differ significantly according to the socio-demographic characteristics of the nurses participating in the study ($p < 0.05$). However, in the study by Parlayan & Dökme (2016) on patient and nurse communication, it was reported that the socio-demographic characteristics of nurses did not affect communication in patient evaluation. Therefore, our study findings do not match the findings of the study conducted by Parlayan & Dökme (2016).

When the communication and information-sharing levels were examined according to socio-demographic characteristics in our study, it was determined that there were significant differences between different generations of nurses. The highest difference was Generation Z's communication and information-sharing level ($p < 0.05$). In addition, it was determined that there were significant differences between the levels of communication and information sharing in terms of the education levels of the nurses, and the highest difference was at the associate's degree level ($p < 0.05$). It is thought that the reason for the high level of communication and information sharing of generation Z may be due to the higher usage dominance of technological tools in communication compared to other generations.

Organisations attach importance to the sharing of information, continuous education, professional development, and communication of their nurses and follow them continuously (Gray & Laidlaw, 2004; Wasko & Faraj, 2005). It has been reported that effective communication in nursing is very important in providing conscientious and high-quality nursing care (Bramhall, 2014). The important steps of effective communication for nurse administrators are to express their ideas sufficiently and understand the individuals they communicate with (Whitman & Davis, 2009). In the research conducted by Hara & Hew (2007) on nurses, it has been reported that the need to verify this information with others who share similar information, the desire better to understand current knowledge and best

practices in the field, the existence of a non-competitive environment, the communication environment and the role of the manager are effective in maintaining information sharing. In this direction, the relationship between communication and information sharing, one of our research objectives, and organisational ambidexterity behaviours, one of the important organisational behaviours in the organisation, was examined. A linear, positive and significant relationship was found between communication, knowledge sharing, and organisational ambidexterity ($p<0,05$). Accordingly, as the nurse's communication and information-sharing level increases, the organisational ambidexterity level will increase, or as the nurse's communication and information-sharing level decrease, the organisational ambidexterity level will also decrease. Significant differences were found between the organisational ambidexterity levels of the nurses participating in the study regarding generation status ($p<0.05$). However, there were no significant differences between the organisational ambidexterity levels of the nurses participating in the study regarding educational status ($p>0,05$). It is thought that the difference between generations may be due to reasons such as revisions in nursing education and technological developments.

When the researches about organisational ambidexterity are examined, organisational ambidexterity is a talent (Alshawabkeh et al., 2020; Tamayo-Torres et al., 2017; Güttel & Konlechner, 2007; Mannor, 2007; Gibson & Birkinshaw, 2004), it increases the competitiveness of organisations and maintains their competitive advantage (Ojha et al., 2018; Bolisani et al., 2014; O'Reilly & Tushman, 2011; Raisch & Birkinshaw, 2008), is used in increasing and maintaining organisational performance (Ojha et al., 2018; Boumgarden et al., 2012; Junni et al., 2013; Patel et al., 2013; Raisch & Birkinshaw, 2008; Andersen & Nielsen, 2007), ensuring organisational success and continuity (Alshawabkeh, 2020; Marri et al., 2019; Wasilewski, 2019; Lis et al., 2018; Ouakouak & Ouedraogo, 2017; Baškarada et al., 2016; Yang et al., 2012; Raisch & Birkinshaw, 2008; Kotlarsky & Oshri, 2005; Duncan, 1976), discovering new knowledge (Wasilewski, 2019; Fahrudi, 2018; Lis et al., 2018; Ojha et al., 2018; Borzillo et al., 2012), and developing new products (Lis et al., 2018; Ojha et al., 2018; Ouakouak & Ouedraogo, 2017; Wei et al., 2014), and it has been seen to emerge as a versatile organisation concept (Lis et al., 2018) with positive effects.

In our study, organisational ambidexterity levels were examined in terms of whether the nurses wanted to leave the unit where they worked, and it was found that the organisational ambidexterity levels of nurses who did not want to leave the unit they worked were found to be significantly higher than other nurses who wanted to leave (Table 8). This result of our study is in parallel with the literature. For example, in the study conducted by Rana & Malik (2017), it was reported that organisational ambidexterity is an important concept in human resources management in the health sector, which is in constant change and development processes and has a high hierarchy. In addition, in a study conducted by Wasilewski (2019) on nursing and other healthcare managers, it was reported that organisational ambidexterity behaviours exhibited within the organisation were a result of the leadership characteristics of the managers and were always open to innovations. Considering the studies conducted by Wasilewski (2019) and Rana & Malik (2017), it can be said that nurses, who make up the majority of healthcare workers, especially in the

hospital organisation, deal with difficult events in the workplace and also nursing leaders can lead nurses to create a collaborative environment of synergy for innovation and thus positive organisational outcomes can occur. In this context, organisational ambidexterity can provide an important focus for leaders who seek positive organisational outcomes through innovative approaches.

6. Conclusion

As a result, in this study, a significant relationship was found between communication and information sharing of nurses, which are the cornerstones of health care services, and organisational ambidexterity behaviour. In this direction, it can be said that communication and information sharing can be increased to increase organisational ambidexterity behaviour among nurses, which ensures the development of organisational performance, service quality, harmony among nurses, and managerial skills. Communication and information sharing between nurses and between nurses and patients improves organisational ambidexterity behaviours and the quality of care, which is the focus of nursing services, enhances solidarity among nurses, and increases patient satisfaction. Therefore, it can also provide to gain highly beneficial behaviours for the organisation.

Accordingly, among nurses;

- It should be ensured that the experience, knowledge, and experience of especially the executive nurses in the field and the senior nurses in the unit with the nurses who are just starting or whom they think are inadequate, should be constantly shared,
- Executive nurses should encourage the sharing of information and creating a culture according to the needs of other health professionals and other nurses with a multidisciplinary approach, starting with themselves,
- Executive nurses should support the creation of an innovative "I can" culture to encourage communication and information sharing among staff in terms of institutionalising learning,
- For a multifaceted orientation of organisational ambidexterity, senior management may suggest providing the necessary support to nurses.

7. Limitations

The scope of this study, only one of which is Turkey's 2nd level sub-region, is the region TRC1. Therefore, this study is limited to Turkey's TRC1 region. In addition, this study was limited to only the health sector as a sector, only nurses as nurses, and only university hospitals as an institution. For this reason, research findings and results may not be generalisable for all times, regions, or even countries where labour and organisational opportunities and threats may differ. Moreover, another limitation is that this study is answer-centred due to the survey used to obtain the data set. However, it was assumed that

the nurses who answered the questions understood the questionnaire questions, in the same way, were sincere and impartial in their answers, and also had a rational and rational attitude.

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