

A Comparison between Generation X and Generation Y in Terms of Individual Innovativeness Behavior: The Case of Turkish Health Professionals

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Received: February 19, 2015

Accepted: March 4, 2015

Online Published: March 10, 2015

doi:10.5430/ijba.v6n2p106

URL: <http://dx.doi.org/10.5430/ijba.v6n2p106>

Abstract

Today the criterion of innovation has become a paradigm for all institutions to maintain their success. Innovation is essential for service industry as well as production industry. It is the individual that is in the center of innovation, which can be defined as the difference between a good idea and a good product. The innovative work behavior of individuals is an area that needs to be scrutinized in terms of innovativeness. Because innovation directly effects the quality of life, it has a significant role in the health sector.

In this perspective, this study aims to identify the innovativeness level of individuals working in health industry where innovation is of significance; to identify the differences of innovativeness levels between generations; and to identify the relationship between individuals' perception of whether the institution they work have learning orientation and their level of innovativeness.

The data in this study, which specifically addresses health institutions with their increasing role in the information society, were gathered from the three private hospitals in Black Sea Region in Turkey. 274 health professionals working in those three private hospitals and accepting to take part in the study formed the sample group of the study.

The results of the study show that there is a difference of innovative behavior scores between the participants coming from Generation X and Y. This difference indicates that Generation X is more innovative. Moreover, majority of the participants from Generation X are physicians. In this respect, it can be noted that in terms of innovative behavior the difference between physicians and other health professionals (professional difference) is more significant than the difference between generations.

Keywords: generation X and Y, individual innovativeness, organizational learning, health industry, Turkey

1. Introduction

Health sector is in sectors that are dense in technology and information. As innovations and developments in health sector directly effects human life and quality of life, innovation plays a vital role in health sector, different from other sectors (TÜSİAD, 2011). The portfolio of innovation in health sector consists mostly of product/service and process innovations. While product/service innovation offers a new treatment service, process innovation focuses on the internal processes in hospitals and covers the improvement of clinical examination techniques (Schultz, Zippel-Schultz, & Salomo, 2012).

Health professionals have an important role in the efficient application of innovation. In this role, individuals' innovativeness characteristics is one of the most important factors that create the difference. As an individual characteristic, innovativeness can be related to taking risks, being open new experiences or age (Goldsmith & Foxall, 2003). Indeed, it would not be completely wrong to note that age factor is relatively more important, taking into consideration its impact on other factors.

Individuals belonging to different generations of age have different experiences, different views, different habits and different work style. Although there are five different groups of generation in the literature, workforce can be regarded to be formed by individuals from Baby Boomers, Generation X and Generation Y, considering the fact that majority of the members of the traditionalist generation (those born before 1943) and generation Z (those born after 2000) are not in the working life. As for the generational structure of the workforce in Turkey, those from the generation of baby boomers form 10% of the workforce, Generation X forms about 44%, and Generation Y, which is the last generation employed, forms about 46% of the workforce (TÜİK, 2014). Thus, the total rate of generations X and Y in total workforce is 90%.

There are many studies in the literature investigating the impact of generational differences on workplaces. Differences between generation in terms of values about profession (Meriac, Woehr, & Banister, 2010; Cugin, 2012; Schullery, 2013); organizational commitment (Benson & Brown, 2011; Dixon, Mercado, & Knowles, 2013), career paths (Lyons, Schweitzer, & Ng, 2015), job satisfaction (Benson & Brown, 2011; Young, Sturts, Ross, & Kim, 2013), motivation factors (Montana & Petit, 2008) intention to leave (Benson & Brown, 2011) have been intensively studied. However, to our knowledge, no study has investigated the possible differences between generations in terms of innovative behaviors.

In this study, individual innovativeness characteristics of Generation Y, the largest group in the business world, were scrutinized in comparison with Generation X. Within this line, comparative analyses were made between Generation X and Generation Y by determining the profiles of those generations' innovative behaviors.

2. Background

2.1 Generational Diversity

The concept of generation is studied by social scientists from various perspectives. While the concept of generation can be described as a group of individuals that are related to each other or have mutual characteristics, it can also be handled as a stage of life or a historical period (Kertzer, 1983). However, generation is generally regarded as the differences between the age groups of certain time periods (Pilcher, 1994). Generation is a concept which refers to a group of individuals that have similar birth years and experiences, and whose thoughts, attitudes, values, beliefs and behaviors are effected by various factors, and who effects those factors in turn (Kupperschmidt, 2000; Johnson & Johnson, 2010). These factors are a result of political, economic or cultural structure of the period they live (Guillot-Soulez & Soulez, 2014). Generations are majorly influenced by the historical events individuals encounter until they become adults. As a result of the power and impact of these shared events, each generation constructs unique structure of belief, attitude and behavior (Giancola, 2006) and a unique identity that shapes the feelings that they have for the authority and organizations (Gürsoy, Maier, & Chi, 2008).

Although there is consensus on the names of the first two of these generations, it is seen that there are various names for Generation Y. A similar dispute exists in the classification of the age groups that define the generations (Smola & Sutton, 2002). In this study, age groups were determined based on Gürsoy et al.'s (2008) classification.

Baby boomers: It consists of individuals born in 1943-1960 and those born during the World War II or during the population growth after the war. Individuals from this generation are 7.5% of Turkey's population (TÜİK, 2013).

Generation X (Gen X): These are the member of the generation who were born in 1961-1980 and are about 26% of Turkey's population. Generation X is the first generation to grow up with personal computers in the age of information; however, they were intensively affected by the social and economic disorder, and thus they are less optimistic than the previous generation but they believe in themselves (Sayers, 2007).

Generation Y (Gen Y): This is the generation of individuals who were born in 1981-2000 and it is about 33% of Turkey's population. It is also called Millennials, Generation Me, Echo Boomers and Nexters (Twenge, 2010; Parry & Urwin, 2011). The members of this generation are the children of the previous generation who increased the quality of their lives thanks to the industrial evolution in the 70s, and have a good standard of life in a good environment (Puybaraud, Russell, MsEwan, & Leussink, 2010).

Table 1 shows the professional characteristics of Generations X and Y, who are about 90% of the workforce in Turkey.

Table 1. Generations X and Y in terms of their professional characteristics

	Professional Characteristics	References
Generation X (1961-1980)	They work to live.	Gürsoy, Maier, & Chi, 2008
	They are easy-going, independent, and creative; they may object to the system; they are suspicious and impatient.	Zemke, Raines, & Filipczak, 2013
	They believe in themselves; they do not like being watched. They would rather show loyalty to their occupation and those they work with than organization. Although they take their occupation seriously, they do not rely on a single organization for their career.	Shragay & Tziner, 2011; Jorgensen, 2003
	They try to have a balance between work and life. They have a hunger for learning; they can do many things at the same time.	Kupperschmidt, 1998; Bova & Kroth, 2001
	They are reluctant to have a leadership role.	Jorgensen, 2003
Generation Y (1981-2000)	They interrogate. They would like to know all about what the organization demands from them, what career opportunities they have and what the rewards are.	Martin, 2005
	They like to take responsibility and prove themselves. They expect respect rather than money. They have strong feeling for success.	Martin, 2005; Morton, 2002; Lowe, Levitt, & Wilson, 2008; Gürsoy, Maier, & Chi, 2008; Eisner, 2005
	They care about the meaning of the occupation. They can do jobs from various fields at the same time.	Eisner, 2005; Bennett, Pitt, & Price, 2012.
	They do not hesitate to leave the job when they are not happy with. Moreover, they would like to work in organizations that are innovative, creative, energetic and environmentally friendly.	Lowe, Levitt, & Wilson, 2008; Deloitte, 2014
	They care about family and they would like to have a balance between work and life. However, they are willing to work hard to make progress in the early stages of their career.	Gürsoy, Maier, & Chi, 2008; Maxwell, Ogden, & Broadbridge, 2010.

2.2 Individual Innovativeness

Although many variables influence how individuals react to innovation, individual innovativeness, which can be regarded as the most important one, has been a part of innovation distribution studies for a long time (Agarwal & Prasad, 1998). The concept of innovativeness can be defined as differences among individuals that characterize how individuals react to new things. As an individual characteristic, individual innovativeness can be related to taking risks, being open new experiences or age (Goldsmith & Foxall, 2003). Individual innovativeness is a factor that determines whether one individual accepts innovation before others (Agarwal & Prasad, 1998). In this line, innovativeness can be defined as one individual's or other organizations' level of accepting a new idea relatively earlier than other members of the society (Rogers, 1983; Daft & Marcic, 2011). Individuals react differently to a new idea, application or product due to their characteristics of individual innovativeness. Rogers (1983) categorizes individuals or other unit of adoption into five groups according to their level of innovativeness as follows: (1) innovators, (2) early adopters, (3) early majority, (4) late majority, and (5) laggards (Rogers, 1983).

According to Scott and Bruce (1994), innovation is a multi-level process which requires certain behaviors and actions in each of its levels. They described innovation as sectional activities where individuals can get involved in any level rather than an activity consisting of different and successive levels (Scott & Bruce, 1994). From this perspective, innovative behavior can be approached as the activity of searching new ideas and solutions, development and application. The generation that one belongs, influences performing innovative behavior in line with age. According to Rogers (1963), innovators are younger than those who adopt innovation afterwards (Rogers, 1963). Then, factors such as technology, which are specific to generations, are seen. In a study focusing particularly on Generation Y, which is more involved in technology, it was found that other generations considered Generation Y different from themselves in terms of their creativity and innovation ability. They ranked Generation Y high for their ability to create and innovate (Moon, 2014).

A research company did a research on Generation Y in 2014 and found out that this generation consisted of individuals willing to innovate and preferring to work in the organizations encouraging innovative activities (Deloitte, 2014). In this context, the first hypothesis of the study is:

Hypothesis 1: There is a significant difference between Generation X and Generation Y in terms of individual innovativeness.

Individual innovativeness is influenced by both individual characteristics and the characteristics of the social system the individual belongs to (Rogers, 1983). This study focuses on organizational learning orientation, one of those characteristics.

2.3 Organizational Learning Orientation

An important concept put forward in the 90s was Peter Senge's "learning organizations." This concept, then, enlightened various companies that accomplished evolutionary changes in the business world. Senge (1990) defined learning organization as an organization that continuously acquire information, unify and form this information with their activities by improving it, and thus aim to gain competitive advantage by achieving continuous improvement. Senge specifically focused on the importance of the concept of learning organizations by underlining organizations' non-learning problem, criticized the attitudes and activities of human resources in organizations and pointed out the significance of an organization where team learning was used effectively. Obviously, the premise of team learning is the human resource that forms the team and their desire to learn. However, organizational learning is an accumulation of individual learning processes and a key element placed in the structure, process and culture of the organization (Sağsan, 2009). At this point, the concept of learning orientation comes out in the literature. Learning orientation is defined as individual's interest and devotion to improve themselves (Gong, Huang, & Farh, 2009). With the concept of learning orientation, it is focused on the individual dimension of the concepts of learning organizations or organizational learning. Sinkula et al (1997) investigated learning orientation on three dimensions, which are commitment to learning, shared vision/purpose and open-mindedness.

The relevant literature (Hurley & Hult, 1998; Baker & Sinkula, 1999, 2002; Calantone, Cavusgil, & Zhao, 2002; Lee & Tsai, 2005; Keskin, 2006; Lin, Peng, & Kao, 2008; Jiménez-Jiménez & Sanz-Valle, 2011) shows that there is a high correlation between learning orientation and organizational innovativeness. The common finding of those studies is that the outcome of innovation is significantly linked to the organization's effectiveness during the process of learning. Moreover, many studies have found that organization with an efficient learning process (learning-oriented) are more successful in innovating (Baker & Sinkula, 2002). Individual or behavioral innovativeness, two overlapping concepts, is considered as a sub-dimension of organizational innovativeness (Dulger, Alpay, Yilmaz, & Bodur, 2014). Accordingly, it would not be incorrect to assume that there is a relationship between organizational learning and individual innovativeness.

Hypothesis 2: There is a significant relationship between health professionals' perception of organizational learning and their level of innovativeness.

3. The Study

3.1 Aim and Design

This study aims to determine the innovativeness level of individuals working in health sector where innovation is highly important; to determine whether innovativeness level differs from one generation to another; and to investigate the relationship between individuals' level of innovativeness and their perception of whether the organization they work in have learning orientation. This is a quantitative study. The data were analyzed through factor, t-test and correlation analysis in line with the aims of the study.

3.2 Sample/Participants, Data Collection and Limitations

According to the data from 2013, there are 735.159 health professionals employed in 1.517 health institutions. 139.933 of those health professionals are employed in 550 private institutions (Ministry of Health, 2013). The data were gathered from health professionals employed in the private health institutions in the Black Sea Region. The questionnaires constructed in line with the aims of the study were handed out personally and collected after a while. The three private hospitals have 850 employers in total. 500 of those employers were included in the study; however, only 283 questionnaires were sent back due to reasons such as employers' shifts and their being on leave. 9 of those questionnaires were excluded from the study as some parts of them were incomplete. Thus, 274 questionnaires were included in the study. Questionnaire rate of return is 69.5%, which is adequate for the study to be carried out (Altunışık, Coşkun, Bayraktaröğlü, & Yıldırım, 2005).

The limitation of the study is that it was carried out with health professionals employed in three hospitals in the Black Sea Region because of cost and time constraints.

3.3 Survey Instrument and Data Analysis

In the study, "Individual Innovativeness Scale" was used, which was developed by Hurt, Joseph and Cook (1977) to determine health professionals' level of innovativeness and the innovation groups they belong to, and which was adopted into Turkish by Kılıçer and Odabaşı (2010). The scale is known to be one of the four best scales for

measuring innovativeness, which are Jackson Personality Inventory, Kirton Adaption-Innovation Inventory, NEO Personality Inventory and Innovativeness Scale (Goldsmith & Foxall, 2003).

The five-point Likert scale consists of 20 items about individuals' characteristics. 12 of the scale items are positive (1, 2, 3, 5, 8, 9, 11, 12, 14, 16, 18 and 19), and 8 of them are negative (4, 6, 7, 10, 13, 15, 17 and 20) statements. Innovativeness score is calculated by subtracting the total score gathered from the negative statements from the score gathered from the positive statements, and adding 42 points to that. The lowest score one can get in the scale is 14, and the highest 94. Thus, those who get above 80 are "Innovators"; those who get between 69 and 80 are "Early Adopters"; those who get between 57 and 68 are "Early Majority"; those who get between 46 and 56 are "Late Majority"; and those who get below 46 are "Laggards" (Kılıçer & Odabaşı, 2010).

As for organizational learning orientation, the "learning orientation scale" was used, developed by (Sinkula, Baker, & Noordewier, 1997). The scale has three sub-sections and 11 items. It was adapted to Turkish language for the study. Then, individual innovativeness scale and learning orientation scale were merged and one single questionnaire was created.

The analysis of the data was performed using SPSS 22.0 and the level of significance was accepted as 0.005 in the interpretation of the results. The construct validity was investigated via exploratory factor analysis.

3.4 Validity and Reliability

A high degree of internal consistency was observed for the Individual Innovativeness Scale (Cronbach's Alpha value of 0.792). According to the factor analyses carried out, the KMO and Bartlett value was found as 0.842 (Sig. 0.000). As seen in Table 2 and Figure 1, as a result of the factor analysis and Varimax orthogonal rotation, all of the 20 items of Individual Innovativeness Scale analyzed are gathered under 5 factors whose eigenvalue is higher than 1.0. The explained variance of those 5 factors is 57.531%. In the light of the literature and properties of the items, these factors have been respectively named as follows; opinion-leadership, openness to experience, resistance to change, cautiousness and risk-taking.

Table 2. Individual innovativeness scale factor analysis results

Factors	Factor Loadings
Factor 1. Opinion Leadership	
Item 8: I feel that I am an influential member of my peer group.	,776
Item 9: I consider myself to be creative and original in my thinking and behavior.	,724
Item 11: I am an inventive kind of person.	,668
Item 12: I enjoy taking part in the leadership responsibilities of the groups I belong to.	,677
Item 14: I find it stimulating to be original in my thinking and behavior	,576
Item 18: I am receptive to new ideas.	,559
Factor 2. Openness to experience	
Item 1: My peers often ask me for advice or information	,635
Item 2: I enjoy trying out new ideas.	,828
Item 3: I seek out new ways to do things.	,800
Item 5: I frequently improvise methods for solving a problem when an answer is not apparent.	,532
Factor 3. Resistance to change	
Item 4: I am generally cautious about accepting new ideas.	,740
Item 6: I am suspicious of new inventions and new ways of thinking.	,742
Item 7: I rarely trust new ideas until I can see whether the vast majority of people around me accept them.	,518
Item 10: I am aware that I am usually one of the last people in my group to accept something new.	,583
Item 13: I am reluctant about adopting new ways of doing things until I see them working for people around me	,571
Item 20: I often find myself skeptical of new ideas.	,538
Factor 4: Cautiousness	
Item 15: I tend to feel that the old way of living and doing things is the best way	,812
Item 17: I must see other people using new innovations before I will consider them	,633
Factor 5: Risk-taking	
Item 16: I am challenged by ambiguities and unsolved problems	,798
Item 19: I am challenged by unanswered questions.	,590

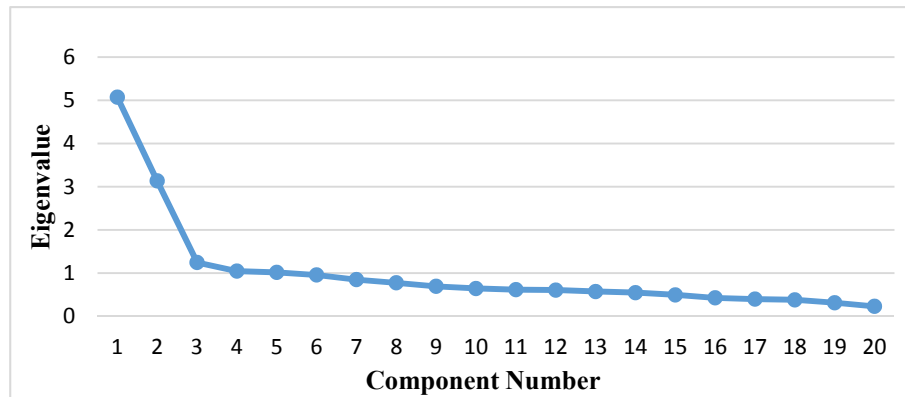


Figure 1. Scree plot of items

Learning Orientation Scale was analyzed for reliability, and the 11th item of the scale, “We rarely collectively question our own biases about the way we interpret customer information”, was removed from the scale because of its low reliability alpha.

Analysis was performed with the rest of the items and the Cronbach Alpha value was found to be 0.879. The exploratory factor analysis for learning orientation scale resulted in KMO and Bartlett value of 0.888 (Sig. 0.000). The dimensions of the scale showed a different distribution from the original scale: via varimax rotation technique, one single factor was determined consisting of 10 questions whose eigenvalues are 1 and above. The explanatory value of this one factor for total variance was determined to be 48.282%.

Table 3. Learning orientation factor analysis results

Items	Factor Loadings
Item 1: There is a commonality of purpose in my organization	0,810
Item 2: There is total agreement on our organizational vision across all levels, functions, and divisions	0,775
Item 3: All employees are committed to the goals of this organization	0,762
Item 4: Learning in my organization is seen as a key commodity necessary to guarantee organizational survival	0,759
Item 5: The sense around here is that employee learning is an investment, not an expense	0,739
Item 6: Employees view themselves as partners in charting the direction of the organization	0,730
Item 7: Personnel in this enterprise realize that the very way they perceive the health marketplace must be continually questioned	0,605
Item 8: Managers basically agree that our organization’s ability to learn is the key to our competitive advantage	0,603
Item 9: We are not afraid to reflect critically on the shared assumptions we have made about customers	0,555
Item 10: The basic values of this organization include learning as the key to improvement	0,543

3.5 Results

3.5.1 Sample Overview

Table 4 shows descriptive statistics about participants. According to Table 4, majority of the participants (73.7%) are females. This is due to the employment structure of the health sector. In terms of occupations, it is seen that physicians are mainly from Generation X and nurses are mainly from Generation Y. Also 38% of participants are nurses, 27.4% are health/laboratory technicians, 24.4% other health professionals and 10.2% are physicians. While 82.8% of the participants are from Generation Y, 17.2% of them are from Generation X. 96% of the participants have worked in their present hospitals less than six years. 11.7% of the participants have worked in their present

hospitals for 13 years or more. It is observed that the duration of employment in the hospitals is short. This could be due to the fact that workforce turnover rate in private health institutions is high and that the hospitals joined the study have a history of about ten years.

Table 4. Demographic characteristics of participants

Variable	Category	Gen X (%)	Gen Y (%)	Total (%)
Gender	Male	25 (53,2)	177 (78)	202 (73,7)
	Female	22 (46,8)	50 (22)	72 (26,3)
	Total	47 (100)	227 (100)	274 (100)
Profession	Physician	21 (44,7)	7 (3,1)	28 (10,2)
	Nurse	10 (21,3)	94 (41,4)	104 (38)
	Technician	4 (8,5)	71 (31,3)	75 (27,4)
	Other health pro.	12 (25,5)	55 (24,2)	67 (24,4)
	Total	47 (100)	227 (100)	274 (100)
Years of experience in the present hospital	1-3	26 (55,3)	153 (67,4)	179 (65,3)
	4-6	17 (36,2)	67 (29,5)	84 (30,7)
	7-9	4 (8,5)	7 (3,1)	11 (4)
	Total	47 (100)	227 (100)	274 (100)
Total years of work experience	1-3	5 (10,6)	117 (51,5)	122 (44,5)
	4-6	5 (10,6)	58 (25,5)	63 (23)
	7-9	4 (8,6)	36 (15,9)	40 (14,6)
	10-12	5 (10,6)	12 (5,3)	17 (6,2)
	13 and 13+	28 (59,6)	4 (1,8)	32 (11,7)
	Total	47 (100)	227 (100)	274 (100)

Table 5. Distribution of health professionals according to individual innovativeness categories

Categories of innovativeness	Frequency (f)	Percentage (%)
Innovators	16	5,8
Early Adopters	72	26,3
Early Majority	148	54,0
Late Majority	32	11,7
Laggards	6	2,2
Total	274	100

Participants were divided into categories after their individual innovativeness scores were calculated. According to this categorization, 54% of the participants are “Early Majority” while only 2.2% of them are “Laggards”.

Table 6. Innovativeness scores for professions

Professions	Individual Innovativeness Score
Physician	71,00
Nurse	64,45
Technician	63,46
Other health professionals	65,34

The analysis of individual innovativeness scores for participants' occupations shows that physicians are the most innovative group, which places them into “Early Adopters” group. Other employees are in “Early Majority” group and their scores are close to each other.

3.5.2 Comparison by Age-Generation

According to Table 7, there is a significant difference between individual innovativeness scores when health professionals are grouped into Generation X and Generation Y. It is seen from the mean score of individual innovativeness that members of Generation X are more innovative than those of Generation Y. It is thought that this outcome is due to the fact that majority of the physicians that are more innovative are members of Generation X.

Table 7. T-test results for individual innovativeness scores of Generation X and Generation Y

Groups	Average Individual Innovativeness Score	Standard deviation	Levene's Test		t	Sig. (two tailed)
			F	Sig		
Generation Y	64,10	8,797	0,11	0,915	-4,030	0,000
Generation X	69,74	8,443				

Table 8. T-test results for sub-factors' score of individual innovativeness scale for Generation X and Generation Y

Groups	Mean	Standard deviation		Levene's Test		t	Sig. (2-tailed)	
				F	Sig			
Factor Score 1: Opinion Leadership	Y	-0,053 2	1,027	Equal variances assumed	3,578	0,06	-1,944	0,053
	X	0,256 8	0,819					
Factor Score 2: Openness to experience	Y	-0,034 4	1,041	Equal variances assumed	4,876	0,028	-1,251	0,212
	X	0,165 9	0,754					
Factor Score 3: Resistance to change	Y	-0,072 6	0,991	Equal variances assumed	0,061	0,805	-2,672	0,008
	X	0,350 9	0,977					
Factor Score 4: Cautiousness	Y	0,003 4	0,980	Equal variances assumed	0,612	0,435	0,123	0,902
	X	-0,016 4	1,099					
Factor Score 5: Risk-taking	Y	-0,066 1	1,021	Equal variances assumed	2,257	0,134	-2,426	0,016
	X	0,319 3	0,825					

The analysis of the answers given by Generation X and Generation Y to sub-factors of Individual Innovativeness Scale shows that there is a significant difference in the confidence interval of 95% in the factors of "resistance to change" and "risk taking." There is no significant difference between generations in the sub-factors of "opinion-leadership", openness to experience "and "cautiousness".

Table 9. Relationship between individual innovativeness score and organizational learning

		Perception of Organizational Learning Orientation
Individual innovativeness Score	Pearson Correlation	0,187**
	Sig. (2-tailed)	0,002
**P<0,01		

As seen in Table 9, there is a low-level but significant and positive relationship between individual innovativeness score and organizational learning.

Table 10. Relationship among the sub-factors of individual innovativeness scale

Factors		Opinion Leadership	Openness to experience	Resistance to change	Cautiousness	Risk-taking
Opinion Leadership	Pearson Correlation	1	0,646**	0,067	0,001	0,431**
	Sig. (2-tailed)		0,000	0,271	0,987	0,000
Openness to experience	Pearson Correlation		1	-0,021	-0,063	0,327**
	Sig. (2-tailed)			0,729	0,300	0,000
Resistance to change	Pearson Correlation			1	0,474**	-0,027
	Sig. (2-tailed)				0,000	0,653
Cautiousness	Pearson Correlation				1	-0,049
	Sig. (2-tailed)					0,420
Risk-taking	Pearson Correlation					1
	Sig. (2-tailed)					
**P<0,01						

Table 10 demonstrates that there is a medium-level positive relationship among “opinion-leadership”, “openness to experience” and “risk-taking” sub-factors of Individual Innovativeness Scale. Meanwhile, the factors of “resistance to change” and “cautiousness” also have medium-level, significant and positive relationship between each other.

4. Discussion

According to Drucker (1993), innovation is remarkably important for gaining and maintaining competitive advantage in contemporary economies (Drucker, 1993). This is true for not only production industry but also service industry. In the developed economies, 7% of Gross National Product (GNP) is products and services coming from health sector, and the employment created within this sector is 10%. It is estimated that the rate of total health expenses to GNP will increase to 16% by 2020. Health sector, growing rapidly, is one of the greatest sources and users of innovative technologies (TÜSİAD, 2011). In this sense, individuals’ innovativeness becomes an important factor. Individuals with high score of innovativeness play role in both creation and effective use of innovation. One of the most credited classifications regarding innovation level belongs to Roger (1983), which consists of five innovation levels: Early Adopters, Early Majority, Late Majority and Laggards. More than half of the participants in this study (54%) are in Early Majority group. Those in this group have adopted new ideas slightly earlier than an average member of the social system they belong to. They prefer to consult to others before they adopt any ideas (Rogers, 1983).

Generation individuals belong to is thought to be one of the factors influencing their innovativeness level. That is why, this study investigated whether there was a significant relationship between innovativeness levels between generations. Initially it was assumed that members of Generation Y would be more innovative since they were younger and more inclined towards technology; however, the analysis of the data showed that there is a significant difference of innovativeness levels between the two generations and that members of Generation X are more

innovative. Though it looks controversial, this outcome is thought to have resulted from the fact that almost all of the members of Generation X who participated in the study are physicians because they are one of the highest-educated professional groups within their society and institutions. Accordingly, it can be noted from the point of health sector that professional groups are more effective in innovative professional behavior, rather than generational dimension. On the other hand, this study also indicates that the existing innovative professional behavior of individuals who have reached a certain level of maturity in professional life can be higher than those individuals that are new in the profession and have less experience. In terms of generation theories, Generation Y, assumed to be more innovative, may demonstrate less innovative characteristic considering factors such as working conditions, professional life and experience. These results highlight that issues regarding organizational behavior should not be discussed merely from a generational perspective, rather they should be approached from a multi-dimensional perspective.

Another issue investigated in the study was whether there was a relationship between individuals' perception of their institutions' learning orientation and their innovativeness level. It was initially assumed that individuals' belief that their institutions had learning orientation would be an encouraging factor for innovation and would increase innovativeness. The study shows that there is a significant and positive relationship between those two variables. The results are consistent with similar studies (Lee & Tsai, 2005; Keskin, 2006; Jiménez-Jiménez & Sanz-Valle, 2011). This can be considered to have resulted from the close relationship between innovativeness, individual and organizational learning. Indeed innovativeness is a product of an effective individual and organizational learning process.

This study was conducted in health institutions, which are bound to provide individuals with more innovative and more quality services. The results show that younger generations may not always be more innovative. The results of this study need to be compared with future studies. Future studies carried out in various sectors and more institutions will show these two generations' understanding of innovation.

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