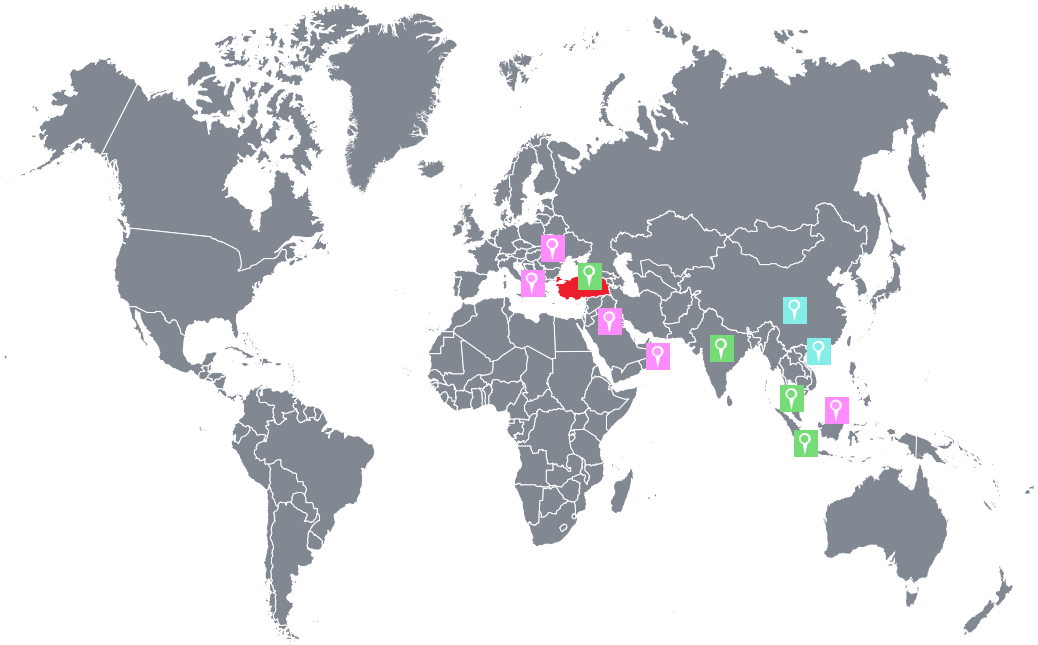
NEW APPROACHES IN HEALTH SCIENCES



Edited By
Dr. Huseyin ERIS
Feray BUCAK

İKSAD
Publishing House

New Approaches in Health Sciences

Editors

Dr. Huseyin ERIS

Feray BUCAK

Managing Editor

Dr. Huseyin ERIS

(The Licence Number of Publicator: 2014/31220)
TURKEY TR: +90 342 606 06 75
USA: +1 631 685 0 853
E posta: kongreiksad@gmail.com
www.iksad.net
www.iksad.org
www.iksadkongre.org

It is responsibility of the author to abide by the publishing ethics rules.
Iksad Publications - 2018©
ISBN: 978-605-7923-21-9
Cover Design: İbrahim Kaya
November / 2018
Size = 148x210 mm

CONTENTS:

PREFACE

The innovativeness movements that have arisen around the world in recent years have led to a new process together with the development of technology. Having affected all the sectors, this process has a deep effect all the fields of the health sciences and further studies have also been encouraged in the health sciences in this sense. As a result of the new studies conducted in the health sciences, new information has been obtained and it has been thought that a number of practices, considered to be accurate in the past, are actually harmful and applying more recent and healthier methods are more appropriate for improving the human health.

This book presents the information on the results of the recent studies conducted on the health sciences by the researchers. The issues of organisational democracy in the health institutions, the evaluation of medical errors according to the national safety reporting system, innovation, health innovation and management, strategical cooperation in the health institutions, customer relations and marketing in health, the importance of optician education and employment opportunities in hospitals in Turkey and anaemia in pregnancy are included in the book.

We are of the opinion that this book would be a good reference for the years ahead since it ensures the currency of present information in health sciences and reviews recent information and practices.

Dr. Hüseyin ERİŞ
Feray BUCAK

CHAPTER 1:

ORGANISATIONAL DEMOCRACY

Dr. Muhammet ÇANKAYA(1)

(1)Faculty of Health Sciences, Hitit University, Corum, TURKEY,
muhammetcankaya@hitit.edu.tr

1. Introduction

Organisations are both sociological and psychological structures since they have relations with a wide environment such as government, state, suppliers, financiers, partners, competitors and national/international society and have a structure containing human factor. While the relations of the organisation with its environment bring a sociological character, the psychological quality emerges rather as a result of focusing on the organisation-employee relationship.

One of the issues addressed in the organisation-employee relationship is the concept of "organisational democracy" explaining the democratic practices in the organisation. It would be appropriate to assert that this concept first appeared in Paris towards the late 19th century. After a while, this practice in organisations have started to be used in many countries for reasons such as the proliferation of socio-cultural developments and the improvement of communication possibilities with technology. Detailed information about the concept will be mentioned in the following sections.

In the general view of a century ago, employees were considered as a machine for organisations and the fact that they were social beings were being ignored. With the changes in

organisational structures and the implementation of organisational democracy in organisations, employees had some rights within the organisation over time. The organisation-employee relationship has changed together with organisational democracy. It can be said that with organisational democracy, employees have gained some rights such as participating in organisational decisions, criticising the organisation policies, accessing information in the organisation in a timely manner, demanding a fair duty distribution, demanding to be equally treated about promotion, and accounting for administrative activities.

Hospitals are differentiated from many organisations since they are the institutions where occupational group having many different expertise renders service together and continuously. Organisation-employee fit is very important in order for the hospitals to carry on their activities effectively in organisational sense. From this point of view, organisational democracy practices we think that they have a positive effect on organisation-employee fit have a special importance for hospitals.

2. Democracy

The concept of democracy etymologically comes from ancient Greek and is formed by the combination of the words "*demos*" (public) and "*kratos*" (sovereignty) meaning the sovereignty of the people (Powley et al., 2004: 68). The word "public" in this concept which emerged in the Greek Civilisation in B.C. does not express actually the whole. What is expressed here with the word of "public" is indeed the concept of "citizen". Citizen is describing the free men over thirty years old in the Greek civilisation at that time. Women, slaves, and foreigners are not described as "citizens". In addition, citizenship was seen as a birthright. As is seen, the starting point of democracy is the phenomenon of the rule of those in a particular gender or status namely minorities, not the majority (Vurucu, 2009: 391-392). Kongar (2002: 13-14) describes democracy as the participative management where the minorities can be majority. The Dictionary of Turkish Language Association defines the concept of democracy as the "*regime based on popular sovereignty*".

Winston Churchill, who began his career as an officer in England and later became famous as one of the country's

important politicians, said a remarkable and unforgettable words summarising the situation about democracy in his speech in House of Commons in 1947. This word was expressed as “Democracy is the worst form of government, except for all the others” (https://dusunbil.com). In fact, with this word, it was tried to express that the democracy is not a perfect system but it is better than the others among the systems that have been tried until then. Yes, the developed societies ruled with democracy today and the organisations in those societies may be ruled by different systems in the future. Time will of course show that.

This cultural change in societies ruled with democratic practices and adding the concept of democracy in their socio-cultural life has spread to the other life elements, as well. One of these disseminations is the working areas where a great majority of daily life is spent. The realisation of democracy in the structure and functioning of organisations in the working life is called as “organisational democracy” (Kesen, 2015: 537).

3. Organisational Democracy

The change showing itself in whole of our daily lives continues in a way that affects each other continuously. It would be appropriate to say that a change experienced in the economic field takes place with the changes in political, cultural and ideological areas (Duman, 2008: 113). The organisational structure and working procedures of the organisations which are one of the main areas of interest of management science also take their share from this change.

The widespread use of technology and the internet has brought social-cultural changes and the values accepted by the modern era have become rejectable in the post-modern period. In sense of management science; it can be asserted that today's organisational structure and working procedures have undergone great changes even compared to the 1990s. Towards the end of the 20th century, new issues have begun to be discussed in organisation-employee relations. One of these issues is the introduction of democratic practices in organisations and the concept of “organisational democracy” that arose within this context.

The organisational democracy is expressed as the participation of the organisation members in the management

and decision-making processes in the organisation. It is stated that the organisational commitment, loyalty, and job peace will develop in the employees if a workplace has organisational democracy (Geckil, 2017: 747).

Sadykova and Tutar (2014: 13) described the organisation democracy as the share of all organisational decisions, applications and their results by the management with the employees. According to them, organisational democracy is very important to achieve job satisfaction, employee performance, organisational productivity, and effectiveness. In case of healthy operation of organisation democracy in the organisations, a number of advantages such as developing constructive opposition and preventing destructive opposition in the organisation can be achieved.

Organisational democracy is a corporate governance method where all stakeholders have a voice in the organisation not only the managers and shareholders (Clegg and Bailey, 2007: 1039).

Ataç and Köse (2017: 118-120) define organisational democracy as the participation of employees in the management and decision-making processes of the organisation and state that it is not right to limit this concept

and employees should have a number of democratic rights and freedoms in the organisation. They exemplify these democratic rights and freedoms as respect for minority rights, fair judgment in the reward and punishment systems, freedom of employees to do political activities, sharing transparently information in the organisation, self-management of the employees, and providing opportunity in the organisation to conduct an open or vertical opposition.

In order to achieve its goals, organisations should increase primarily the job satisfaction of their employees. When the job satisfaction of employees increases, employee performance will increase and the organisation will be able to reach its goals more easily. Kesen (2015: 552) states that organisational democracy plays an important role in increasing the employee performance. According to him, employees who are allowed to participate in the decisions about the organisation and criticise the works related to the organisation can express themselves more easily and make more efforts to overcome the organisational deficiencies when they see that their criticism is taken into consideration.

When an equal, fair and transparent work environment, where employees having an important role in internal processes of organisations are given the right to speak and their involvement in decisions is established, is created; the perception that their efforts are not wasted appears, they can behave like an entrepreneur and work outcomes where they can produce extra added-value will be provided (Öge and Çiftçi, 2017: 460).

4. Historical Development of Organisational Democracy

Although it is not called as the concept of organisational democracy, this concept or practice found a place in the organisation with different names and methods in earlier times. The initiation of democratisation steps of organisations was based on the Paris Commune in 1871. In those years, French working-class who were not happy about the worsening life conditions after France-Prussian war rebelled and a temporary central government was established. This government handed over all its powers to the commune after a while. The commune became the first workers' government in history and the idea of social self-government was made dominant in this commune. Although this government only survived for 71 days, it was accepted important because it is the starting point of the

workers' movements that will occur later. (Mısır, 2003: 114-115).

After the “Russian Revolution” in 1917 in Russia, the factories were organised according to the principle of self-management of workers. In the United States, some regulations were made in the 1930s that could be associated with organisational democracy about the spreading of workers’ control areas to all workplaces and active involvement of the employees in the supervision activities (Erkal Coşan, 2012: 61).

Some practices which evoke organisational democracy have been put forward with the acceleration of scientific studies based on organisation-employee relations especially after the Second World War. The first one of these practices is the “Management by Objectives” technique which was introduced by Peter Drucker in 1954. In this technique, the objectives of the organisation are determined together with the senior management and employees. The fact that the workers can determine the objectives with the senior management can be explained by the participation which is one of the main elements of organisational democracy (Erkal Coşan, 2012: 73-75). In the following years, a similar practice was mentioned in

the X and Y Theory, the known theory of McGregor, where the types of managers are defined. The Y-type manager actually tries to provide an organisational environment carrying the traces of organisational democracy (Davies, 1967: 270-271). The traces of organisational democracy are also seen in the Total Quality Management which constitutes the basic production philosophy of Japan. Total Quality Management has a close relation with organisational democracy with its principles such as focusing on customers and stakeholders, participation of all employees in the organisation to the decisions and long-term training of employees. In this management technique, the satisfaction of the employees and the customers in the organisational system is brought into the forefront. In this system based on customer orientation, the term "customer" refers actually to "external customer" meaning those who received goods or services from the organisation and also the "internal customer", that is, those working in that organisation. The success of organisations in philosophy of Total Quality Management depends on the knowledge, skills, creativity, and motivation of the business partners. The organisations that adopt this management philosophy should provide some opportunities to develop their

employees and improve their skills, share clearly the information with their employees, highlight the merit and encourage employees to take risks (Saat Ersoy and Ersoy, 2011: 26-28). Employee empowerment, which has similar characteristics with organisational democracy and is involved in current management approaches is defined as the process of increasing the decision-making capacity of the personnel by supporting their development process and allowing them to be aware of their own abilities and qualifications (Çiftçi, 2017: 192). Employee empowerment involves also factors like participation in decisions, taking responsibility, providing an opportunity of accessing to information, providing education and development opportunities and the presence of open communication environment in the organisation which are involved in the organisational democracy (Çankaya, 2018: 13-19). Therefore, it can be asserted that employee empowerment is closely associated with organisational democracy.

5. Elements of Organisational Democracy

The concept of organisational democracy includes a number of elements. Each of these elements allows the implementation of organisational democracy in the organisations.

5.1- Participation & Criticism:

The concept of participation is expressed as the involvement of all the employees in the organisation in the examination of the problems that arise in the organisation, development of the strategies needed for the solution of these problems and the implementation of the solution methods (Eren et al., 2014: 94).

The participative management practices are an indispensable principle for organisational democracy. The organisations intending to go into democratic practices in their structure and processes should change the organisation decision models from being the structures formed by one or more people and allow those, who are affected from the related decisions, to be involved in the decision-making processes directly or indirectly. In this case, those who participate in the decision-making processes will be able to express their opinions easily and have an active role in the decision-making process by voting according to their opinions (Geçkil and Tikici, 2015: 45). Along with the increasing participation of employees in the decision process, their attitudes towards work, understanding of success, motivation and the meaning of the work for them are positively affected (Koçel, 2014: 474;

Çankaya, 2018: 14). Again, it is expressed that when employees are allowed to participate in decisions in the organisations, the productivity and creativity of the organisation can increase and thus it would be possible for the organisation to be in competition (Foley and Polanyi, 2006: 174).

Criticism can be defined as the evaluation of the organisational policies and procedures, work and operations by the employees at all levels in the organisation and easily expression of these evaluations by them. However, it is an important matter here that the critic respect for the personal rights and social status of the individual or individuals who is/are criticised. The values and activities of the organisation should be open to criticism and discussion by employees and external observers (Geçkil and Tikici, 2015: 46-47).

5.2-Transparency:

The concept of transparency which is also expressed by the concepts such as openness and publicity expresses a democratic, clean and honest management understanding such as employees' being aware of the operations and transactions carried out by the management, accessing the necessary information and documents, controlling what is done or calling

somebody to account for the mistakes (Akpınar, 2011: 240). Complete and timely access of information about the organisation by the employees who spend a significant part of their daily life at work is an important issue for organisational democracy.

5.3-Justice:

The concept of justice which is also used in the concepts such as rightness and trueness is used to describe the fairness or equity of the managers about the organisations at organisational level (Colquitt et al., 2001: 425).

The organisational justice covers the perceptions of the employees about the correctness of organisational practices and decisions and the effects of these perceptions on employees. Partial behaviours of the managers in the promotion or duty distribution of the employees, inequalities in the performance evaluation system in the organisation, inability to establish an open and honest communication with employees, and failure to rewarding the employees adequately may damage the employees' perception of organisational justice (İçerli, 2010: 68-70).

5.4-Equality:

The equity theory constitutes the basis of equality which means that two or more things are equivalent. Adams, the theorist of the Equity Theory, expressed as a result of his investigations and experiments in General Electric company that the employees give great importance to the fair distribution of the results they obtained as a result of their efforts. The equity theory suggests that employees check the rate between the gains such as the opportunities provided to the employees for the wages, promotion and development they obtained with the contributions such as effort, time and cognitive resources they provide to the organisation before making a decision whether they are treated fairly or not and then compared this rate with the contribution-gain rate of the other employees in the organisation. The inequality perception of employee is high, the employee will feel him/herself under pressure and then will make an effort to reduce this pressure. In these comparisons, getting equal or higher salaries compared to the others would not be problem but a perception of injustice emerges if the employee receives a low wage, the employee feels dissatisfaction and this situation causes a number of negative results in the employee such as reducing his/her own

inputs, distorting the results and leaving the work environment (Akbolat et al., 2015: 8).

Equality is an issue that can lead to a comparison on many matters such as primarily wage and social rights, resource allocation, employees' level of closeness to managers and even the size of the working environment. The equity theory has begun in line with the studies on organisational justice and focused on reactions of individuals against what they have achieved in their work lives. The basic approach of the theory is to determine how the pressure caused by the inequality perceptions in the organisations on the employees can reflect on the work productivity. It is stated that if the employees have high equality perception, their organisational commitment and job satisfaction levels will increase and the participation to the decisions will also be high (Sözen et al., 2009: 397-398).

5.5- Accountability:

The concept of accountability is expressed as "*Providing explanation or giving answer to a person or group other than him/herself about the actions and works that were conducted by any person or group* (Koç, 2017: 236). This concept has also the meaning of answering, reporting, and making

explanations about the responsibilities, taking responsibilities, and being open to social evaluation and judgement. The concept of accountability should not be considered in a limited sense such as the explanation of the financial tables of the organisations only at the end of the year. In accountability, there are also practices such as explaining the objectives, intentions and reasons to the addressees by the authorities before starting to the organisational activities. Thus, with the effect of auto-control, the authorities will move away from the discourses and activities that will show them inadequate and tend to present a transparent and open management style in terms of preventing obscuring or distortion of the corporate realities by groups with high awareness level about the functioning of the system (Demirkıran et al., 2011: 3-4).

Sinclair (1995:221-222) states that accountability has important effects on public perception of the organisation and therefore it will be more accurate to not only stay in financial accountability level but also move to the "managerial accountability" level.

6. Main Reasons for Transition to Organisational Democracy

It is possible to list a number of factors which are shown as the reason for the application of organisational democracy in the organisations as follows (Erkal Coşan and Altın Gülova, 2014: 239-241):

6.1-Developments in Technology and Internet:

With the spreading of internet in the 1990s and especially the widespread use of social media in the 2000s, employees want to express the decisions in the organisation or present their opinions about the organisational applications. This is considered as important in the preparation of the organisational democracy environment.

6.2-Generation Changes:

The birth dates of people mean far more than the numbers. These dates also represent a culture, a life style, namely a generation. People, who are born at the same time interval and affected by the social, economic, cultural, political events and dominant values of that time, and the communities formed by these people are expressed as “generation” (Altuntuğ, 2012: 204). In the social sciences, these generations are subjected to a classification. Accordingly; those born

between 1940-1960 are named as boom generation, those born between 1961-1980 are named as X generation, those born between 1981-2000 are named Y generation, and those born after 2001 are named as Millennium or Z generation. The desire of the employees in Y generation in today's business life to express themselves and criticise the organisational practices is important in the development of organisational democracy because they are less susceptible to the cases like traditionality and austerity compared to the X generation. A few years later, the Z generation will start to take part in business life in the organisations and the peculiar characteristics of this generation will also necessitate some changes in organisational structure and functioning.

6.3-Political Transitions:

There has been an increase in the number of countries preferring democracy as the political regime in the world countries towards the end of the 20th century and then the democracy has started to show itself in the other areas of life. The spreading of democracy in the political regime and social life has started to show itself in the organisational structures. From this point of view, it can be asserted that political

transitions are important in the formation of organisational democracy.

6.4-Increasing Competition and Changing Working Procedures:

The spreading of technology and the Internet has also brought globalisation, and now a competitor of a company can be another company located ten thousand miles away. Now, competition in the market has increased incomparably to the old ones, and ”being different from competitors” has become a key for doing business, that is, staying in the market. Of course, this difference can have a wide variety of meanings, for example, when a factory uses more advanced technology in its production facilities than the others or when it is considered for the service sector, providing a service that is more pleasing and satisfying for the customers will make that enterprise different from its competitors. This will enable that enterprise to be preferred and do business in the market. To give an example in the context of hospitals' corporate governance practices or marketing activities; think about a hospital having no corporate website or a sloppy website. The number of people who can reach you will be very limited. Those who reach you will turn towards other institutions’ website since they would not have a

clear information about your institution from your incomplete website. In today's competition conditions, having a corporate web page is not enough for potential customers to choose your company. The staff in the hospital and the services provided in the hospital should be publicised well. A well-designed website can actually give you not only new customers but also new and high quality suppliers. Organisations can sometimes make some changes in their working procedures in order to satisfy their employees. When these changes are addressed in a physical sense, they can improve the conditions of the work environment or develop a way of work such as flexible working hours for the staff. Besides, some social changes can be made in the working procedure, training the employees in areas in which they are interest or feel the need and executing these trainings in different ways, sometimes at work and sometimes out of work can satisfy employees. In this sense, changes in working procedures for providing satisfaction and improvement of internal customers with the practices required to be done to stay in the market with the increasing competition are evaluated as important for the transition to organisational democracy.

6.5-Social Responsibility:

Organisations do not pursue their activities only for the purposes like making a profit and maintaining their assets. It would be appropriate to say that they have new objectives such as providing social benefit to the society representing the external side of organisations and preparing a comfortable working environment to their employees. It is important to create a perception, which can be described as “good” or “reliable”, by the society in order to step forward in increasing competition. Another point is the fact that employees are also “free advertising faces” of that organisation. If an organisation has been able to prepare the necessary work environment to enable its employees to work peacefully and comfortably, these employees will advertise their institutions free of charge anyway in the environments where they have their social lives.

In order to implement organisational democracy in organisations, some fundamental changes must be made in structure and processes of the organisation. Trainings should be given first to employees about the participation methods and the managers should also be trained about allowing employees to participate. A working environment where there is no punishment fear or threat for the mistakes that may occur

during work should be prepared. In order for the organisation to reach its goals, employees should be able to take responsibility for their works and participate in decisions honestly (Geçkil, 2013: 22).

7. Advantages and Disadvantages of Organisational Democracy

In the companies applying the understanding of democratic management in their organisations, this brings some advantages. These advantages are stated in the literature as follows:

- Democratic management practices in the organisations can be considered as a key to achieve a higher level of organisational effectiveness. Besides, it is regarded as a necessity for reaching further innovation and performance. It nourishes value creation in the long term. It harmonises economic, social, environmental and individual goals (Forcadell, 2005: 255).
- The participation of employees in the decision of the organisation can provide important organisational and individual benefits such as increased job satisfaction, organisational commitment and motivation (Bakan et al., 2017: 1033).

- In the organisations, which believe in and implement the philosophy of democratic management, the creativity of the employees will increase and new ideas will emerge as a result of the participation of the employees to the management and having a voice in the decisions to be taken by the management. Thus, the employee's sense of ownership of the organisation will be ensured by developing the sense of belonging towards the organisation. This will contribute to the increase in the share of the organisation in the market (Şen and Bolat: 2015: 150).
- In the studies by Uvalic (1996) and Cervellati et al., (2006), it was stated that more democratic companies showed better economic performances (cited by Kesen, 2015: 537).
- Democratic practices in the organisations provide employees with the opportunity to make their voices heard and to improve their knowledge and skills. It also contributes to decrease the non-functional behaviours of employees and to increase organisational commitment, productivity, and performance (Geçkil, 2017: 748).

Different academics have also mentioned that there may be some disadvantages that may be caused by the implementation of organisational democracy in the organisations. According to this;

- Lower-level employees with low decision-making skills may not be able to see the big picture, they may not have the training and experience to fulfil the requirements of this power, and therefore they can sign some decisions that are not appropriate for the organisation.
- Decreases may be seen in the productivity of the organisation due to the fact that democratic processes are a whole of time-consuming practices.
- The application of the principles and rules of democracy may require some changes, which may prevent organisational functioning.
- Middle- and senior-level managers may not want to share their power with lower-level employees, and lower-level employees may show an unwilling attitude towards democratic practices on the grounds that that they increase the responsibility.
- Democracy may not be a valid form of management in every case, sometimes in the organisation there may be

situations in which it is necessary to make rapid decisions and the democratic environment may not meet these expectations.

- Implementation of democracy in the organisation may not be morally correct. Because if democratic practices reduce organisational performance, the shareholders, suppliers, financiers, society and even employees of the organisation may be adversely affected from this situation (Harrison and Freeman, 2004: 50-52; Kesen, 2015: 538; Öge and Çiftçi, 2017: 454).

8. An Evaluation for Health Institutions

Looking for excellence in systems established by humans is nothing more than imagination. The existence of a perfectly functioning system produced by the human mind and hand cannot be mentioned. EveniIf not now, today's glorious systems may experience some disruptions after a while but they can continue to exist with a number of repairs. In fact, this is an existing situation in the structure of open systems. Because open systems must adapt their own structure according to the change signals from the environment due to its characters otherwise the system will start to become corrupted and become out of order after a while. Hospitals are also open

systems that obtain information, materials and energy from their environment and provide a number of outputs to their environment. In addition, hospitals are the institutions which provide uninterrupted service and in which many occupational groups need to work together. Differences in occupational groups of employees as well as the correlation between the hospital service outcomes and the increase or decrease in the quality of life of the patients and their survival status are just a few of the fundamental features that differentiate hospitals from other organisations. The relations of an organisation, having a such effect on the lives of the customer group (patients) it provides service, with its employees are also very important. It is not possible to expect employees, who have lost their motivation and have no organisational commitment, to be satisfied with their work. Since the organisational democracy is the whole of practices providing opportunity to the employees to participate in the organisational decisions, criticise the practices in the organisation, access information about the organisation in a timely and complete manner, be treated fairly in the promotion and assignments, work with equal wage policies and receive explanation and ask for accountability from the managers not only financial but also managerial

point of view, it is a fact that it is important for the organisation-employee relationship in health institutions.

Achieving the democracy paradigm at the organisational level is seen as an important key of organisational effectiveness. Organisational democracy, which expresses the empowerment and managerial participation of the employees in the narrow sense, can reduce the dysfunctional behaviours of the employees in the organisations, increase their organisational commitment, and also increase the productivity and performance of the organisation (Geçkil, 2017: 747).

Giving importance to the human element and the values aggrandised by the society is now a desirable situation in the market. For this reason, organisations that have an obligation of not contradicting with the demands of the market in order to maintain their existence should be able to read the demands of the market and prepare a working environment in which employees can express their opinions freely in order to provide improvement. This can only happen with the preparation of the organisational democracy environment.

REFERENCES

Akbolat, M., Işık, O. ve Tengilimoğlu, D. (2015). Personel Uygulamalarının Örgütsel Bağlılığa, Örgütsel Bağlılığın İş Tatminine Etkileri, İş, Güç Endüstri İlişkileri ve İnsan Kaynakları Dergisi, 17(2), 3-27.

Akpınar, M. (2011). Gün Işığında Yönetim Açısından Türk Kamu Yönetiminde Açıklık ve Şeffaflık Sorunu, Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 16(2), 235-261.

Altuntuğ, N. (2012). Kuşaktan Kuşağa Tüketim Olgusu ve Geleceğin Tüketici Profili, Organizasyon ve Yönetim Bilimleri Dergisi, 4(1), 203-212.

Ataç, L. O., ve Köse, S. (2017). Örgütsel Demokrasi ve Örgütsel Muhalefet İlişkisi: Beyaz Yakalılar Üzerine Bir Araştırma. İstanbul Üniversitesi İşletme Fakültesi Dergisi, 46(1), 117-132.

Bakan, İ., Güler, B., ve Kara, E. (2017). "Örgütsel Demokrasinin Örgütsel Adalet ve Örgütsel Destek Algıları Üzerine Etkileri: Otel Çalışanlarına Yönelik Bir Araştırma", Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 22(4), 1031-1048.

Clegg, S., ve Bailey, J.R. (2007). International Encyclopedia of Organization Studies: SAGE Publications.

Colquıtt, Jason A., Donald E. Conlon, Michael J. Wesson, Christopher O. L. H. Porter ve K. Yee Ng.; (2001), "Justice at the Millennium: A Meta-Analytic Review of 25 Years of Organizational Justice Research", Journal of Applied Psyhology, 86(3), 425-445.

Çankaya, M. (2018). Personel Güçlendirmenin Örgütsel Etkililiğe Katkısı Üzerine Bir Alan Araştırması, Çorum: Hitit Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı, Yayımlanmamış Doktora Tezi.

Çiftçi, G. E. (2017). "Örgütsel Ustalık Çalışmalarının Personel Güçlendirme Üzerinde Etkisi", International Journal of Academic Value Studies, 3(10), 188-202.

Davies, B., (1967). "Some Thoughts On Organizational Democracy", Journal of Management Studies, 4(3), 270-281.

Demirkıran, A. G. Ö., Eser, H. B., ve Keklik, B. (2011). Demokrasinin Tabana Yayılması, Yönetimde Şeffaflık ve Hesap Verebilirlik Bağlamında Bilgi Edinme Hakkı Kanunu, Alanya İşletme Fakültesi Dergisi, 3(2), 169-192.

Duman, F. (2008). Sınıf Siyasetinden Kimlik Siyasetine: Radikal Demokrasi ve Yeni Toplumsal Hareketler, Demokrasi Platformu, 15(4), 113-141.

Eren, M. Ş. Tokgöz, E ve Saylan, O. (2014). "Stratejik İnsan Kaynakları Yönetiminin İşgören Katılımı Üzerindeki Etkisi: İş Zenginleştirme ve Güçlendirmenin Düzenleyici Etkisi", Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 19(2), 89-106.

Erkal Coşan, P. (2012). Örgütsel Demokrasi: Kamu ve Özel Sektör Çalışanlarına Yönelik Bir Araştırma, Manisa: Celal Bayar Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı, Yayımlanmış Doktora Tezi.

Erkal Coşan, P. ve Altın Gülova, A. (2014). Örgütsel Demokrasi, Yönetim ve Ekonomi, 21(2), 231-248.

Foley, J. R, ve Polanyi, M. (2006). Workplace Democracy: Why Bother? Economic and Industrial Democracy, 27(1), 173-191.

Forcadell, F.J. (2005). Democracy, Cooperation and Busines Success: The Case of Modragon Corporacion Cooperativa. Journal of Business Ethics, 56, 255-274.

Geçkil, T. (2013). Örgütsel Demokrasi ile Örgütsel Vatandaşlık Davranışları Arasındaki İlişki: TRB1 Bölgesindeki

Üniversite Hastanelerinde Bir Uygulama, Sivas: Cumhuriyet Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı Yönetim ve Organizasyon Bilim Dalı, Yayımlanmış Doktora Tezi.

Geçkil, T., ve Tikici, M., (2015). "Örgütsel Demokrasi Ölçeği Geliştirme Çalışması". Amme İdaresi Dergisi, 48(4), 41-78.

Geçkil, T. (2017). "Örgütsel Demokrasi: Örgüte Neler Kazandırabilir?", Researcher: Social Science Studies, 5 (4), 747-755.

Harrison, J. S, ve Freeman, R.E. (2004). Special Topic: Democracy in and Around Organizations Is Organizational Democracy Worth The Effort? The Academy of Management Executive, 18(3), 49-53.

https://dusunbil.com/demokrasi-en-kotu-yonetim-bicimidir/ (Erişim Tarihi: 4.8.2018).

İçerli, L. (2010). Örgütsel Adalet: Kuramsal Bir Yaklaşım, Girişimcilik ve Kalkınma Dergisi, 5(1), 67-92.

Kesen, M. (2015). Örgütsel Demokrasinin Çalışan Performansı Üzerine Etkileri: Örgütsel Özdeşleşmenin Aracılık Rolü, Çankırı Karatekin Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 6(2), 535 - 562.

Koç, F. (2017). Türkiye'de Stratejik Yönetim Anlayışı Çerçevesinde Hesap Verebilirlik Mekanizması, Akademik Sosyal Araştırmalar Dergisi, 5(63), 230-244.

Koçel, T. (2014). İşletme Yöneticiliği, İstanbul: Beta Yayıncılık, 9. Baskı.

Kongar, E. (2002). Demokrasi ve Kültür, (4.Baskı). İstanbul: Remzi Kitabevi.

Mısır, M., (2003). Gerçek Demokrasi Olanağı: Paris Komünü Praksis Kapitalizm ve Demokrasi Dergisi, 10, 105-122.

Öge, H.S. ve Çiftçi, N. (2017). Örgütsel Demokrasi Algısının İç Girişimcilik Eğilimine Etkisi, Türk & İslam Dünyası Sosyal Araştırmalar Dergisi, 4(15), 450-462.

Powley, E. H, Fry, R. E., Barrett, F. J. ve Bright, D. S. (2004). Dialogic Democracy Meets Command and Control: Transformation through the Appreciative Inquiry Summit. Academy of Management Executive, 18, 67-80.

Saat Ersoy, M. ve Ersoy, A. (2011). Kalite Yönetimi: Toplam Kalite Yönetimi ve Kalite Denetimi, Ankara: İmaj Yayınevi.

Sadykova, G., ve Tutar, H. (2014). "Örgütsel Demokrasi ve Örgütsel Muhalefet Arasındaki İlişki Üzerine Bir İnceleme", İşletme Bilimi Dergisi, 2(1): 1- 16.

Sinclair, A. (1995). The Chameleon of Accountability: Forms and Discourses. Accounting, Organizations and Society, 20(2-3), 219-237.

Sözen C., Yeloğlu, H.O., Ateş, F., (2009). "Eşitsizliğe Karşı Sessiz Kalma: Mavi Yakalı Çalışanların Motivasyonu Üzerine Görgül Bir Çalışma", Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 22, 395-408.

Şen, E. ve Bolat, M. (2015). "İşletmelerde Demokratik Yönetim Anlayışının İnovasyon ve Firma Performansı Üzerine Etkisi: İstanbul Avrupa Yakası Lojistik İşletmeleri Üzerine Bir Uygulama", İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi, (27), 149-172.

Vurucu, İ. (2009). Türk Dünyasında Demokrasiyi Anlamaya Giriş (Kazakistan Merkezli Bir Çözümleme). Hacettepe Üniversitesi Türkiyat Araştırmaları Dergisi, (8), 389-408.

CHAPTER 2:

THE EVALUATION OF MEDICAL ERRORS ACCORDING TO THE NATIONAL SAFETY REPORTING SYSTEM

Res. Asst. Gamze Kutlu (1)
Res. Asst Fatih Durur (2)
Prof. Yasemin Akbulut (3)

(1)Department of Health Care Management, Ankara University An kara, TURKEY, gkutlu@ankara.edu.tr
(2) Department of Health Care Management, Ankara University An kara, TURKEY durur@ankara.edu.tr
(3) Department of Health Care Management, Ankara University An kara, TURKEY akbulut@health.ankara.edu.tr

INTRODUCTION

Malpractice, derived from the Latin word "mala-praxis", is the damage of a patient due to the lack of knowledge, experience, or ignorance, and poor practice of profession of physician (Rules of Occupational Ethics of Turkish Medical Association, Matter 13). Medical error has been defined by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) as the damage of the patient as a result of improper and unethical behavior of a healthcare professional, and being inadequate and negligent in professional practices (Korhan et al., 2017). According to another definition, malpractice is an undesirable action, a plan that does not achieve the intended result, the failure of the planned action to be completed as intended, or the use of a wrong plan to achieve a goal. The medical error is defined as an unexpected event caused by an unintended disruption during the healthcare service offered to the patient (Makary and Daniel, 2016).

Medical errors may occur in hospitals, pharmacies, clinics, polyclinics, nursing homes or patients' homes. The best way to understand how errors occur and can be prevented is by analyzing and classifying errors. Different classifications have

been made regarding the medical errors. In general, medical errors are approached in two groups as latent and active errors. Active errors are actions performed by people who are in direct contact with the patient or system. Latent errors occur not by the healthcare professional, but errors like inadequacy of design, improper care of patient, bad management decisions. Latent errors are often hidden within an organization until they are triggered by an event that can lead to serious consequences. Unlike active errors, which are often more difficult to predict, latent errors can be identified and eliminated before unfavorable situations occur (La Pietra et al., 2005). Another classification is the classification of medical errors in terms of cause and type of error. Hereunder, according to the root cause, medical errors are classified as errors related to process (doing wrong operation), negligence and practice (applying correct operation wrongly). According to the type, the errors are related to medication errors, surgical errors, and errors in diagnosis, errors due to the system insufficiency and other errors (Canatan et al., 2015). The most common errors in the literature are medication errors (La Pietra et al., 2005; Cebeci et al., 2013; Canatan et al., 2015), nosocomial infections (Özata

and Altunkan, 2010), patient falls (Demir Dikmen et al., 2013) and material related problems (Uçar et al., 2013).

Healthcare service delivery focuses on the safety of patients and healthcare professionals, and at the same time ensuring the patient safety at every stage of healthcare service, and is one of the priorities of the health system (Kurutkan and Bulun, 2012; Güven, 2007). In hospitals, undesirable events are encountered due to many factors such as environmental characteristics, medical processes, technology used, teamwork, communication, so patients and employees are harmed. This can cause serious injuries, prolonged length of hospital stays, disability, and even death of patients (Kurutkan ve Bulun, 2012; Gökdoğan and Yorgun, 2010). In 2007, the World Health Organization (WHO) announced that the causes of deaths include medical errors. WHO has emphasized that in Europe alone, one out of every 10 patients hospitalized is subject to preventable medical error, but more research is needed to better understand the impact of patient safety (WHO, 2007). The Medical Institute in the USA found that 44,000-98,000 people died in hospital each year due to medical errors and the cost of medical errors is $ 8.8 billion. The results of many studies on medical errors suggest that medical errors are

not only costly, but also preventable (Park, 2018). According to a report by the European Union (EU) in 2006, 4 out of every five citizens of EU member states (78%) stated that medical errors are a major problem in their countries. Except Finland, in all the countries participated in the survey, most citizens see medical errors as a major problem in their countries. When the country level results are analyzed, Italy perceives the medical error as a significant problem with a rate of 97% and in Finland it is 48%.

In Turkey, medical errors are included on the agenda as an important issue. In this context, 295 files received in 2004 by institution of forensic medicine for medical error report increased to 3,600 in 2013 (Öz, 2016). In the study by Can et al. (2011), the files of 30 cases that were submitted to the Supreme Court in Turkey between the years 1978-2006 has been examined. Among the identified causes of defect, it was found to be inattentive and careless (33%), neglect (13%), and diagnosis error (2%), with the wrong treatment (47%) in the lead. According to the results of another study, the medical errors are caused by the factors due to the physician ($\rho = 0.66$), nurse ($\rho = 0.42$), workplace environment ($\rho = 0.14$) and lack of communication ($\rho = 0.14$) (Işık et al., 2012).

Patient safety is one of the most recent and important issues discussed in recent years in improving healthcare quality. Patient safety is defined as all of the measures taken by healthcare organizations and employees in these organizations in order to prevent harm of the healthcare services to the patient (İntepeler and Dursun, 2012). In this context, the reduction and elimination of medical errors is one of the main goals of patient safety. Reporting the medical error has a key place in achieving this goal. Physicians, nurses, pharmacists and administrators share a common goal to identify medical errors, understand their causes and reduce medical risks. Reporting errors is the primary component of this goal (Cohen, 2000). In the "Err is Human" report of Medical Research Institute, it is recommended to establish centralized reporting systems for making changes within the system to identify medical errors, understand their causes and reduce their frequency. They have identified seven characteristics for the success of reporting systems (Kohn et al., 2000).

- Nonpunitive: Practitioners must believe that they will not be punished.
- Confidential: Identities should not be disclosed to a third party.

• Independent: The system is not controlled by an organization that is authorized to punish practitioners.

• Analyzed by experts: Reports should be reviewed by trained people to identify the root causes and recognize the work environment.

• Timely: Especially when errors involve a significant risk, analyzes are accelerated and recommendations are forwarded.

• Systems oriented: Analysis should focus on systems and processes, not on the individual's performance.

• Responsive: Practitioners and organizations are ready to carry into action in accordance with the recommendations.

In the USA, public policy debates in 2000 concentrate on the risks and benefits of mandatory and voluntary reporting systems to identify the most effective ways of promoting clear disclosure of medical errors. In this context, the Institute of Safe Drug Applications has been a strong advocate of nonpunitive, voluntary error reporting programs. There are national models in the USA in both mandatory and voluntary error reporting programs (Cohen, 2000). In Turkey, the studies on development of such reporting systems made and since July

1, 2011 it has been decided to establish "Safety Reporting System" in healthcare organizations (Efficiency in Health, Quality and Accreditation Department, 2017). In line with these developments, it is aimed to examine the medical error reports made from the organizations affiliated to the Ministry of Health in 2017 according to the error types and numerical distribution.

Material and Method

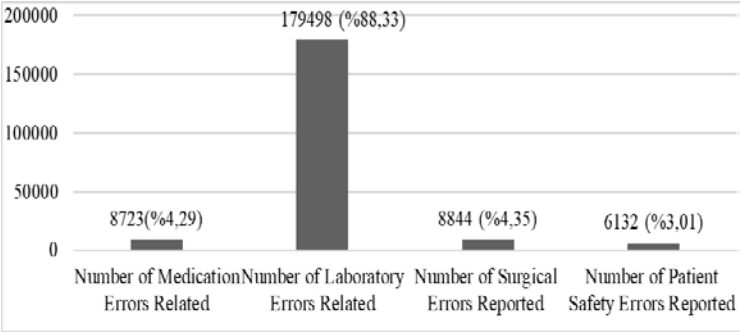
One of the most important obstacles to the reduction and prevention of errors in healthcare services is the inadequacy of data related to the incident. Although medical errors are encountered at a high rate, they are not frequently reported in healthcare institutions. In order to eliminate this problem, a platform known as "Safety Reporting System", where healthcare facilities and professionals can report errors encountered in the medical process, get information about errors commonly occur in Turkey and measures for their improvement has been created. In this study, the types of medical errors reported and their numerical distribution were obtained from the web-based Security Reporting System of Ministry of Health. Reports provided through the system are based on voluntariness. There is no user input or limitation in

this system. In order to eliminate this disadvantage, it is planned to prevent false reports by using the analyzes made by using error date and report date. In addition, it has been stated that a software where healthcare facilities can see their own errors and can analyze them on this data has started to be designed and will be published later (National Safety Reporting System of Ministry of Health, 2016).

RESULT

Within the scope of the study, medical errors have been collected in four groups as, surgical, medication, laboratory and patient safety errors. In this context, the first ten errors of the most frequently reported ones; the distribution of medical errors according to the time intervals and occupational groups and the data of the units where errors were made has been examined. Accordingly, a total of 203,140 medical errors were reported in 2017, of which 88% were laboratory, 4,4% were surgery, 4,3% were medication and 3% were patient safety errors (Figure 1).

Figure 1. Total Numbers of Medical Errors (2017)



Among the error types, when the first ten laboratory errors reported the most frequently were examined, hemodialysis samples (32.5%), thromb samples (29%), inadequate samples (14.9%), incorrect test system (5.7%), not recording the time of sampling (3.9%), inappropriate sampling (3.89%), incorrect sample cup (3.81%), arrangement of request form (2.48%), non-timely results (2.18%) and incorrect registration (2.03%) has been determined. Moreover, it is noteworthy that approximately 98% of the errors occurred in the preanalytical period (Table 1).

Table 1. The First 10 Laboratory Errors Reported Most Frequently

Notification Number	Main Parameter	Percent	Sub Parameter
52210	Preanalytic	32.44	Hemodialysis samples
46191	Preanalytic	28.70	Thromb samples
23941	Preanalytic	14.88	İnadequate samples
9157	Preanalytic	5.69	Incorrect test system
6282	Preanalytic	3.90	Not recording the time of sampling
6266	Preanalytic	3.89	Inappropriate sampling
6126	Preanalytic	3.81	Incorrect sample cup/tube
3989	Preanalytic	2.48	Arrangement of request form
3504	Postanalytic	2.18	Non-timely result
3274	Preanalytic	2.03	Incorrect registration

Among the error types, when the first ten surgical errors reported the most frequently were examined, it has been found that the operation area was not recorded (22.7%), patient ID, operation place and surgical procedure were not confirmed (9.2%), the team members did not introduced themselves to the patient (8.9%), the materials were not controlled if they are ready and sterile (8.7%), critical events that may occur due to the surgery were not evaluated (8.6%), required surgical prophylaxis was not applied (8.5%), critical events that may occur due to the anesthesia were not evaluated (8.4%), the necessity of blood glucose were not evaluated (8.3%), required dvt-prophylaxis was not applied (8.3%), the use of anticoagulant was not questioned (8.3%). In addition, most of

these errors are due to deficiencies in performing pre-operative controls (Table 2).

Table 2. The First 10 Surgical Errors Reported Most Frequently

Notification Number	Main Parameter	Percent	Sub Parameter
1310	Clinical Surgery Preparation	22.68	Operation area was not recorded
533	Preoperative Controls	9.23	Patient ID, operation place and surgical procedure were not confirmed
516	Preoperative Controls	8.93	The team members did not introduced themselves to the patient
501	Preoperative Controls	8.67	The materials were not controlled if they are ready and sterile
497	Preoperative Controls	8.60	Critical events that may occur due to the surgery were not evaluated
492	Preoperative Controls	8.52	Required surgical prophylaxis was not applied
484	Preoperative Controls	8.38	Critical events that may occur due to the anesthesia were not evaluated
482	Preoperative Controls	8.34	The necessity of blood glucose were not evaluated
482	Preoperative Controls	8.34	Required dvt-prophylaxis was not applied
480	Preoperative Controls	8.31	The use of anticoagulant was not questioned

Among the error types, when the first ten medication errors reported the most frequently were examined, they are found as request of wrong dose (25%), request of wrong drug (15.9%), lack of communication (11.1%), preparation of wrong drug (10.9%), transfer of wrong drug from the pharmacy (8.4%), selection of wrong drug through electronical environment (7.7%), incorrect packaging of drugs (6.4%), incompatibility of temperature and humidity (5.9%), illegible

handwriting (4.4%), wrong drug (4.1%). In addition, 64% of these errors occur during the request of the drug (Table 3).

Table 3. The First 10 Medication Errors Reported Most Frequently

Notification Number	Main Parameter	Percent	Sub Parameter
1354	Request	25.07	Request of wrong dose
861	Request	15.94	Request of wrong drug
598	Request	11.07	Lack of communication
588	Preparation	10.89	Preparation of wrong drug
456	Transportation	8.44	Transfer of wrong drug from the pharmacy
417	Request	7.72	Selection of wrong drug through electronical environment
348	Preparation	6.44	Incorrect packaging of drugs
320	Conservation	5.92	Incompatibility of temperature and humidity
239	Request	4.43	Illegible handwriting
220	Inject	4.07	Wrong drug

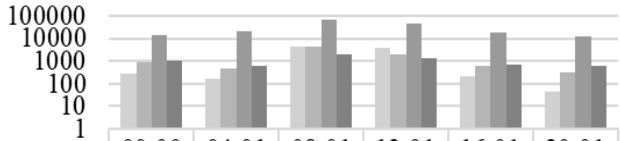
Among the error types, when the first ten patient safety errors reported the most frequently were examined, they are found as fall of patient (59%), misidentified of patient (7%), having complications of the patient due to the delay in care/treatment (6.2%), not conforming the patient ID before care/treatment (5.4%), improper delivery of patient (5.1%), being stuck of the patient due to the break of elevator (5%), failure to repair the defective equipment in time (4.5%), incorrect recording of the care/treatment to the medical records (4.3%) (Table 4).

Table 4. The First 10 Patient Safety Errors Reported Most Frequently

Notification Number	Main Parameter	Percent	Sub Parameter
1815	Patient/Companion Welded Errors	49.93	Fall of patient
318	Errors Related to Maintenance, Diagnosis and Treatment Process	8.75	Fall of patient
253	Medical Record and Clinical Evaluation Errors	6.96	Misidentified of patient
226	Errors Related to Maintenance, Diagnosis and Treatment Process	6.22	Having complications of the patient due to the delay in care/treatment
196	Errors Related to Maintenance, Diagnosis and Treatment Process	5.39	Not conforming the patient ID before care/treatment
185	Errors Related to Maintenance, Diagnosis and Treatment Process	5.09	Improper delivery of patient
181	Errors Associated with Building Structure	4.98	Being stuck of the patient due to the break of elevator
164	Device/Equipment/System Welded Errors	4.51	Failure to repair the defective equipment in time
156	Medical Record and Clinical Evaluation Errors	4.29	Incorrect recording of the care/treatment to the medical records
141	Communication Errors	3.88	The patient is not informed about the applied care, diagnosis method or treatment

It has been found that the medical errors made the most frequently between the hours 08.00-12.00. It has been reported that the time in second place when the errors made are the most frequently between the hours 12-01-16.00 (Figure 2).

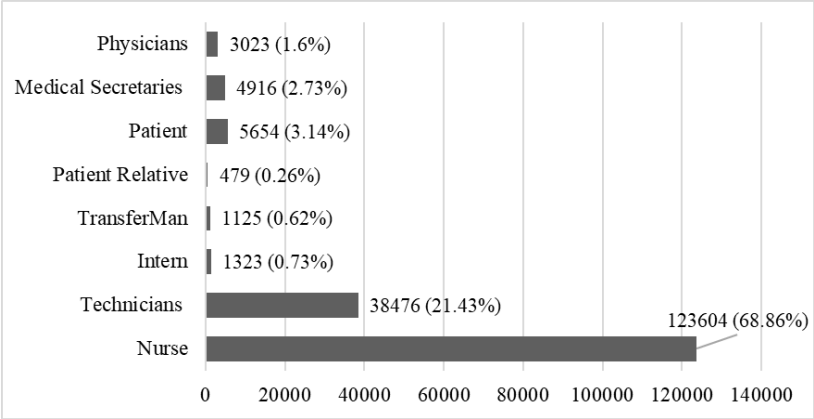
Figure 2. Distribution of Medical Errors According to Time Intervals



	00:00 - 04:00	04:01 - 08:00	08:01 - 12:00	12:01 - 16:00	16:01 - 20:00	20:01 - 23:59
Surgical Errors	290	163	4516	3614	218	43
Surgical Errors	877	452	4528	1955	582	329
Laboratort Errors	13740	21110	69807	43922	17754	13158
Patient Safety Errors	1031	592	1971	1263	694	581

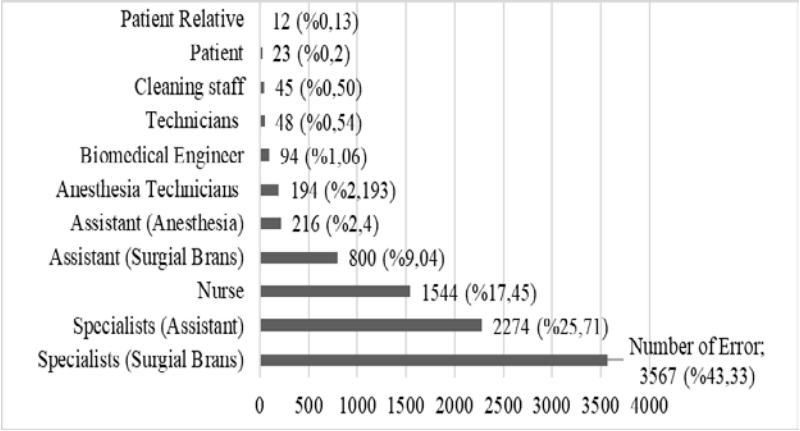
When the distribution of laboratory errors according to occupational groups was examined, the nurses has been found with the highest rate of error 68% This has been followed by technicians (21%), medical secretaries (2.7%), and physicians (1.6%) (Figure 3).

Figure 3. Distribution of Laboratory Errors According to Occupational Groups



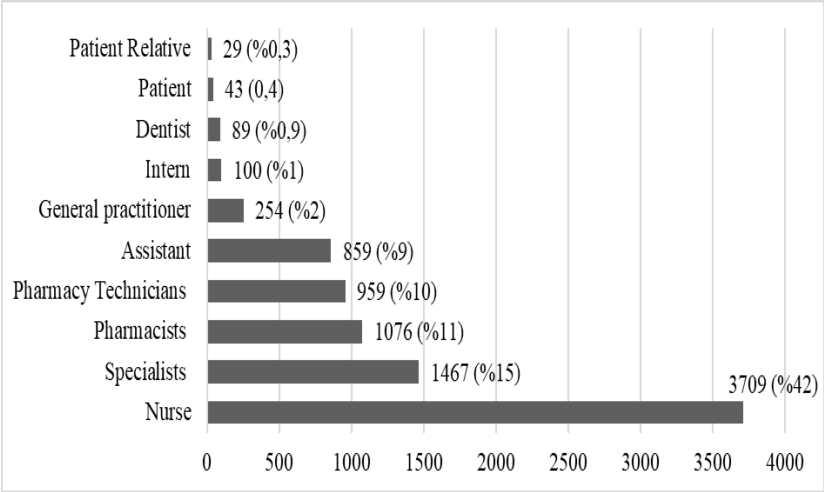
When the distribution of those who made mistakes according to occupational groups were examined, it has been found that 43% of those who performed the most of the surgical safety errors were specialists. This has been followed by physician assistants (26%), nurses (17.5%), anesthetist assistants (2.4%), anesthesia technicians (2.2%) and biomedical engineers (1%) (Figure 4).

Figure 4. Distribution of Surgical Errors According to Occupational Groups



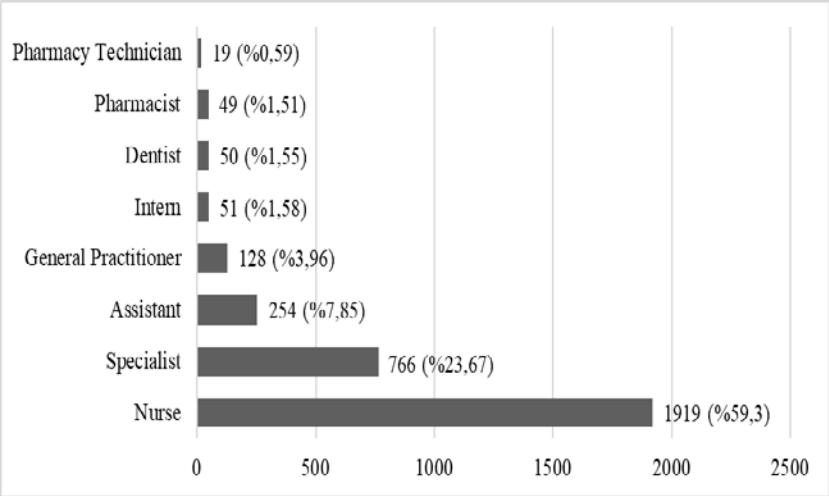
When the distribution of medication errors according to occupational groups was examined, the nurses has been found with the highest rate of error 42% This has been followed by specialists (15%), pharmacists (11%), pharmacy technicians (10%), assistants (9%) general practitioners (2%), intern (1%) (Figure 5).

Figure 5. Distribution of Medication Errors According to Occupational Groups



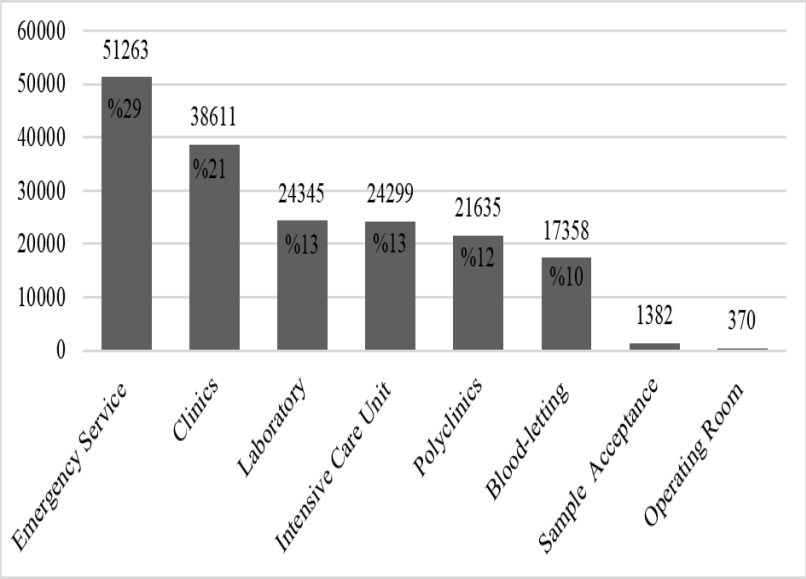
When the distribution of patient safety errors according to occupational groups was examined, the nurses has been found with the highest rate of error 59% This has been followed by specialists (23.7%), assistants (7.9%), practitioners (4%), trainees (1.6%) and dentists (1.5%) (Figure 6).

Figure 6. Distribution of Patient Safety Errors According to Occupational Groups



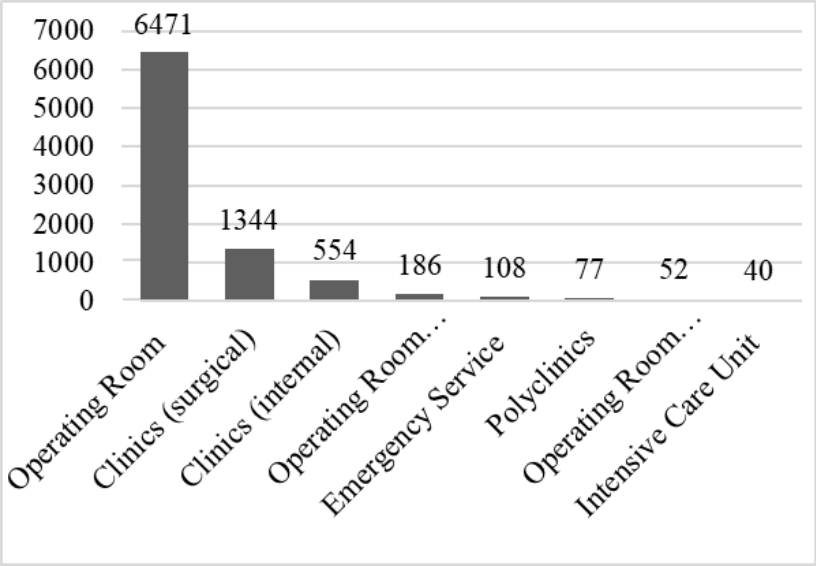
When the distribution of the reports according to the location of the laboratory errors were examined, emergency service has been found with 29%. In addition, it has been reported that clinics (21%), laboratory (13%), intensive care unit (13%), polyclinics (12%), blood collection unit (10%) were the other units where errors were made (Figure 7).

Figure 7. Distribution of Laboratory Errors According to the Location



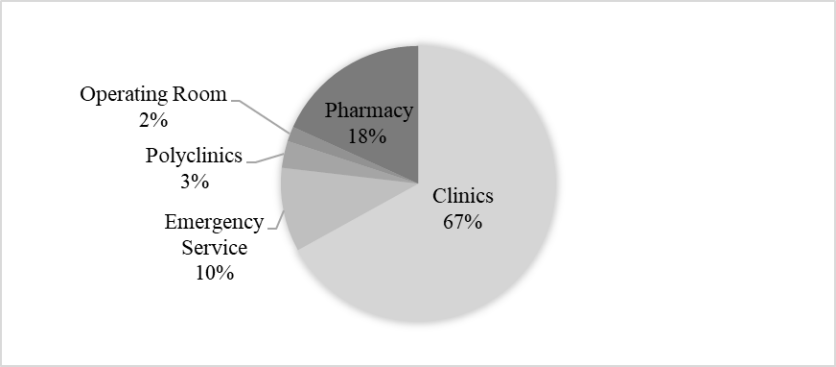
When the distribution of the reports according to the location of the surgical errors were examined, operating rooms has been found with 73%. In addition, surgical and internal clinics, emergency services, polyclinics and intensive care units are among the other units where errors are made (Figure 8).

Figure 8. Distribution of Surgical Errors According to the Location



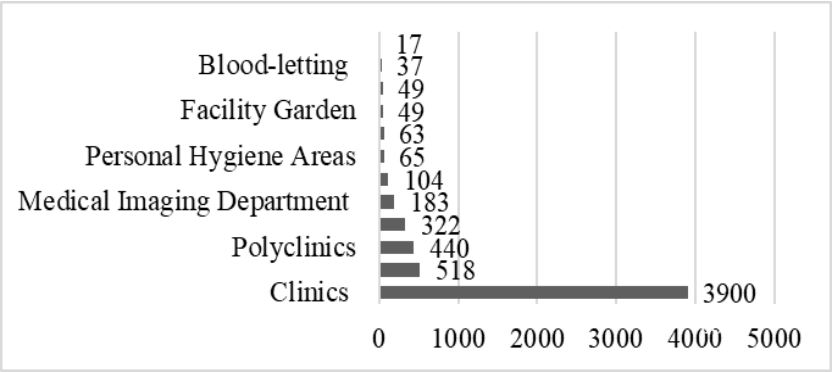
When the distribution of the reports according to the location of the medication errors were examined, clinics has been found with 67%. In addition, pharmacy (18%), emergency service (10%), polyclinics (3%) and operating rooms (2%) has been reported as other units where errors were made (Figure 9).

Figure 9. Distribution of Medication Errors According to the Location



When the distribution of the reports according to the location of the patient safety errors were examined, clinics has been found with 64%. In addition, other units where errors are made are emergency services, polyclinics, operating room, medical imaging unit, laboratory, pharmacy, facility garden, technical unit and so on. (Figure 10).

Figure 10. Distribution of Patient Safety Errors According to the Location



CONCLUSION AND RECOMMENDATIONS

The first way to prevent or reduce medical errors is to ensure errors to be reported (Saygın, 2014). Thanks to accurate reporting, the reasons for the occurrence of medical errors can be analyzed. With the results obtained, it will be possible to take necessary measures and reduce the medical error rates (Güven, 2014). As a result of the study, medical errors reported to the Safety Reporting System of Ministry of Health in 2017 were collected in four groups as surgical safety errors, medication errors, laboratory errors and patient safety errors. According to this, 88% of total 203,140 medical error reports made in 2017 constitute laboratory errors. It has been determined that the mostly reported type of error among

laboratory errors is hemodialysis sample (32.5%), and that approximately 98% of errors occurred in the pre-analytical period. In the study conducted by Plebani (2006), it was stated that 46.2-68.2% of laboratory errors occurred in the pre-analytical period and 18.5-47% in the analytic stage. The best management of laboratory errors requires inter-departmental cooperation. Because the most important reason for these errors is directly out of control of the laboratory personnel. Laboratory professionals need to be the leader in ensuring patient safety both inside and outside the laboratory.

The share of surgical safety errors in total reports is 4.4%, whereas not recording the operation area (22.7%) has the largest share. While the request of wrong dose (25%) is in the first place among medication errors, fall of patient (59%) has been the most reported type of error among patient safety errors. It has been seen that the medical errors occur the most frequently between the hours 08.00-12.00. When the distribution of errors according to occupational groups was examined, it has been determined that nurses are in the first place in laboratory, medication and patient safety errors and specialists are in the first place in surgical safety errors.

There are obstacles to reporting errors such as the education and attitude of physicians. During the care of a patient, especially the physician who makes a mistake that damages the patient may experience shame, guilt and failure. He may think that explaining the error to the patient will be detrimental to the physician-patient relationship and the patient's confidence in the healthcare system in general. In addition, physicians are not very educated about how to communicate with patients and their relatives (Twersky, 2007). Therefore, the reporting systems have been relatively ungainly. The process of filling the forms in detail, presenting them to the senior management, and participating in meetings and interviews prevented many healthcare professionals from reporting all errors. The success of the system depends on the healthcare professionals to feel safe while reporting the errors and the fact that it becomes an activity considered as an organizational culture. Until healthcare institutions adopt such a culture, reporting of medical errors will continue to be an unused resource.

The complexity of healthcare services and the provision of services with a crowded team make medical errors inevitable (Güven, 2014). At this point, what is important is to prevent mistakes and correct errors (Erduğan, 2017). In the

light of this information based on the literature, (Yıldırım et al., 2009; Tansüyer, 2010; Paese and Sasso, 2013; Ulrich and Kear, 2014; Saygın, 2014; Özer et al., 2015; Yücesan and Alkaya, 2017) recommendations for preventing and reducing medical errors are listed below:

- In the legal arrangement related to medical errors, instead of increasing the penalties with the "accusatory-punisher model", a settlement free from the compensation pressure and focusing on reducing the errors.
- Increasing the quality of healthcare personnel training will be effective in reducing medical errors.
- Training programs should be made permanent in order for healthcare professionals to have basic and legal knowledge about medical malpractice.
- Patient safety culture should be developed in healthcare institutions.
- Clinical practice guidelines should be established.
- It is recommended that organizations paying healthcare services should provide priority and incentives to institutions that improve patient safety.

- Enhancing access to information and improving automation systems are recommended.
- Quality tools such as lean management, kaizen, six sigma, error types and impact analysis can be used to reduce medical errors.
- Making quality studies a culture and accreditation efforts are recommended for prevention and reduction of errors.

Medical errors can be caused by many reasons such as fatigue, inadequate training, communication problems, administrative structure, insufficient automation and insufficient devices. In addition, all processes in healthcare services are interdependent and affected each other. Therefore, dealing with the processes related to prevention and reduction of medical errors with the system approach will increase the success rate.

REFERENCES

Can, İ.O., Özkara, E., Can, M. (2011). Yargıtay'da Karara Bağlanan Tıbbi Uygulama Hatası Dosyalarının Değerlendirilmesi, *DEÜ Tıp Fakültesi Dergisi.* 25 (2): 69-76

Canatan, H., Erdoğan, A., Yılmaz, S. (2015). Hastanelerde yapılan tıbbi hataların türleri ve nedenleri üzerine bir araştırma: İstanbul ilinde özel bir hastane ile ilgili anket çalışması ve konuya ilişkin çözüm önerileri. *Health Care*, 2 (2): 82-89

Cebeci, F., Karazeybek, E., Sucu Dağ, G. (2014). Öğrenci Hemşirelerin Hastane Uygulamaları Sırasında Tanık Oldukları Tıbbi Hata Durumları. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 3 (2): 736-748

Cohen, M.R. (2000). Why error reporting systems should be voluntary. *BMJ,* 320: 728–9

Demir Dikmen, Y., Yorgun, S., Yeşilçam, N. (2014). Hemşirelerin tıbbi hatalara eğilimlerinin belirlenmesi. *Hacettepe Üniversitesi Hemşirelik Fakültesi Dergisi*, 1 (1): 44-56

DSÖ (2007). Access Address:

http://www.who.int/mediacentre/news/releases/2007/pr52/en/

Erduğan, N. (2017). Tıbbi Hatalarla Örgütsel Güven Arasındaki İlişki. Yüksek Lisans Tezi, Çanakkale On Sekiz Mart Üniversitesi Sağlık Bilimleri Enstitüsü, Çanakkale

European Commission (2006). Medical errors. Special Eurobarometer. Access Adresse: http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_241_en.pdf

Gökdoğan, F., Yorgun, S. (2010). Araştırma Sağlık Hizmetlerinde Hasta Güvenliği ve Hemşireler. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*. 13 (2): 53-59

Güven, M. (2014). Hasta Güvenliği ve Tıbbi Hatalar Antalya Atatürk Devlet Hastanesinde Çalışan Hemşirelerin Hasta Güvenliği İhlali ve Tıbbi Hata Tanıklıkları. Yüksek Lisans Tezi, Beykent Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul

Güven, R. (2007). Dezenfeksiyon ve Sterilizasyon Uygulamalarında Hasta Güvenliği Kavramı. 5. Ulusal Sterilizasyon Dezenfeksiyon Kongresi. 4-8 Nisan 2017

Rules of Occupational Ethics of Turkish Medical Association (1999). Access Adresse: http://www.ttb.org.tr/mevzuat/index.php?option=com_content&view=article&id=65:hekl-meslek-etkurallari&catid=4:t&Itemid=31

Işık, O., Akbolat, M., Çetin, M., Çimen, M. (2012). Hemşirelerin Bakış Açısıyla Tıbbi Hataların Değerlendirilmesi. *TAF Preventive Medicine Bulletin*. 11 (4): 421-430

Intepeler, Ş.S., Dursun, M. (2012). Tibbi Hatalar ve Tibbi Hata Bildirim Sistemleri. *Journal of Anatolia Nursing and Health Sciences*, 15 (2): 129-135

Kohn, L.T., Corrigan, J.M., Donaldson, M.S. (2000). To Err is Human. Building a Safer Health System. Washington, DC: National Academy Press

Korhan, E.A., Dilemek, H., Mercan, S., Uzelli Yilmaz, D. (2017). Determination of Attitudes of Nurses in Medical Errors and Related Factors. *International Journal of Caring Sciences*, 10 (2): 794-801

Kurutkan, M.N., Bulun, M. (2012). Global Hasta Güvenliği Endeksi. Access Adresse:

https://www.researchgate.net/publication/321018501_Global_Hasta_Guvenligi_Endeksi

La Pietra, L., Calligaris, L., Molendini, L., Quattrin, R., Brusaferro, S. (2005). Medical Errors and Clinical Risk Management: State of the Art. *Acta Otorhinolaryngologica Italica*, 25 (6): 339.

Makary, M. A., Daniel, M. (2016). Medical error—the third leading cause of death in the US. *BMJ*, 353: i2139

Öz, E. (2016). Access Adresse: http://www.milliyet.com.tr/hekimler-malpraktis-davalarina-nasil-yaklasmali--pembenar-yazardetay-saglik-2272000/

Özata, M., Altunkan, H. (2010). Hastanelerde Tıbbi Hata Görülme Sıklıkları, Tıbbi Hata Türleri ve Tıbbi Hata Nedenlerinin Belirlenmesi: Konya Örneği. *Tıp Araştırmaları Dergisi*. 8 (2): 100-111

Özer, Ö., Taştan, K., Set, T., Çayir, Y., Şener, M.T. (2015). Tıbbi Hatalı Uygulamalar. *Dicle Tıp Dergisi,* 42 (3): 394-397

Paese, F., Sasso, G.T.M. D. (2013). Patient Safety Culture in Primary Health Care. *Text Context Nursing Florianpolis*, 22 (2): 302-310.

Plebani, M. (2006). Errors in Clinical Laboratories or Errors in Laboratory Medicine? *Clin Chem Lab Med*, 44 (6): 750–759

Security Reporting System of Ministry of Health (2016). Access Adresse: https://grs.saglik.gov.tr/GBM.aspx

Health Productivity, Quality and Accreditation Department (2017). Access Adresse: http://www.kalite.saglik.gov.tr/TR,9065/guvenlik-raporlama-sistemi.html

Saygin, T. (2014). Sağlık Hizmeti Kullanıcılarının Tıbbi Hatalar Hakkında Görüşlerinin Değerlendirilmesi. Yüksek Lisans Tezi, Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü, Isparta.

Tansüyer, T. (2010). Hasta Güvenliği ve Tıbbi Hatalar Konusunda Sağlık Personelinin Görüşlerini Belirlemeye Yönelik Bir Alan Araştırması. Yüksek Lisans Tezi, Gazi Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

Twerski, R.A.J. (2007). Medical Errors: Focusing More on What and Why, Less on Who. *Journal of Oncology Practice*. 3 (2): 66-70.

Uçar, N., Yıldırım, G., Eser, D., Özçelik, Z., Ayhan, B., Pamuk, A.G., Akıncı, S.B., Aypar, Ü. (2013). Gece ve Gündüz Şiftlerinde, Sağlık Çalışanlarının Hata Bildirimlerinin Değerlendirilmesi. *Türk Yoğun Bakım Derneği Dergisi.* 11: 93-100

Ulrich, B., Kear, T. (2014). Patient Safety and Patient Safety Culture: Foundations of Excellent Health Care Delivery. *Nephrology Nursing Journal*, 41 (5): 447-456.

Yıldırım, A., Aksu, M., Çetin, İ., Şaha,n A.G. (2009). Tokat ili Merkezinde Çalışan Hekimlerin Tıbbi Uygulama Hataları ile İlgili Bilgi, Tutum ve Davranışları. *Cumhuriyet Tıp Dergisi*, 31: 356-366.

Yücesan, A., Alkaya, S.A. (2017). Bireylerin Tıbbi Hatalara İlgili Görüş ve Deneyimleri. *Dicle Tıp Dergis*i, 44 (1): 25-34.

CHAPTER 3:

INNOVATION

Fatih ORHAN[1]

Emine ORHANER[2]

[1] PhD, Lecturer, Health Sciences University, Gülhane Vocational Scholl of Health, Ankara/Turkey
[2] Prof.Dr. Ankara Hacı Bayram Veli University, Health Care Management Department, Ankara/Turkey

INTRODUCTION

In today's world, where the fact that “The only thing that doesn't change is change itself” comes to the fore and it also started to be called the “imagination age”, the health system is also affected by this change, innovation and learning-oriented conditions. Enterprises that can adapt to this rapid change come to the forefront with the fast and effective decision mechanisms in global competition.

The aforementioned change will be carried out by organizations that give importance to knowledge, open to innovation, learn faster and more effective than their competitors and has turned innovation culture into an institutional climate. In this context, it is very important to reveal the perspectives of health workers in terms of learning orientations, organizational learning capacities and learning-oriented innovation activities, especially in hospitals which are the building blocks and an indispensable element of the health system. When the relevant literature was reviewed, it was observed that there was not enough research on innovation in health enterprises.

Organizations need to feel the dynamics of information revolution, technological developments and globalization in

their organizational structures and should be aware of changes in order to survive and be long-lived. They should also keep up with this process of change and innovation, and even lead to change. Because, as with many areas, there is a competitive competition in the health system with the wide opportunities provided by globalization and technology.

In these environments where changes are fast, the most important power for organizations is knowledge. The understanding that knowledge is power or the source of power is the most basic understanding that constitutes the source of today's science and technique. This conception first formed the most basic dynamics of the renaissance and later the enlightenment era and industrial revolution. Indeed, Francis Bacon (1561-1626) stated that “Knowledge itself is power” (Ipsa scientia potestas est.).

It is best seen in medical science and its applications how technology based on knowledge is a power, how it develops and transforms life and people. The contribution of information and technology is very high while realizing the main purpose of medical science which is to reduce pain, alleviate suffering and keep people healthy. Throughout history, human beings have tried many different methods to get rid of pain and

suffering and become immortal and even though it has experienced numerous disappointments throughout history, this inexhaustible quest has continued to this day.

Mankind has always tried throughout history to get rid of pain and suffering and to find solutions to immortality. These endeavors began to bear fruit only as a result of knowledge, learning and innovations in the 19th and 20th centuries. Throughout history, the indescribable pain and suffering suffered by human beings have diminished slightly and prevented the early termination of life. The most important indicators of this is the existence of remedies for infectious diseases which are the cause of mass deaths and increase the average life expectancy from the ages of 35-40 to 80-85 years at the beginning of the 20th century. The process of mummification, which humanity has begun to implement in ancient Egypt with its immortality efforts, continues to be carried out under the multi-dimensional, multidisciplinary and multisectoral innovation studies of medical science.

These efforts include the replacement artifacts for the organs that have completed their lives or cannot perform their duties over time or removing the cells that are aging in our body and that show us old in time with the capsule machines in

the dimensions of one billionth of a millimeter. Innovative projects, such as body freezing (Cryonics) and finally digital brain, show that human beings have not given up or abandoned the goal of living longer or being immortal since the ancient times. As long as this target exists, it is clear that information, learning, technology and innovation will be needed more and more.

In this book prepared within this framework; a basic reading text was prepared in terms of innovation and innovation in health and basic concepts such as innovation, innovation management, innovation types, innovation determinants and innovation process were explained.

1. INNOVATION

In this section, topics such as innovation concept, types, purpose, process and importance for enterprises are explained.

1.1. Innovation Concept and Types

Akalın, in his article (2007:483-486) entitled, "Innovation, İnovasyon: Yenileşim" emphasizes that the "innovation" word is neither an innovation nor an invention, but an innovation including development and enhancement after he examined the use of innovation word in

the country and abroad, made a deep analysis and made some inferences.

When the Latin origin of the word “innovation” is examined, it also names the product, information or technology that is the result of this time as well as the renewal time. Renovation and innovation are included in this word. That is why; innovation in production, technological evolution or innovation in science gives significant advantages compared to the previous position. The word innovation, which is translated into Turkish as “yenilik” comes to different meanings such as pioneer, first, change and renewal (Naktiyok, 2007; Arpacı, 2011).

According to Schumpeter (1934), the concept of innovation was said to be ‘constructive / creative destruction. According to Schumpeter, innovation is not only the creation of new products, but also the transformation of a product into commercial value, the rebuilding of the system, in addition to the improvements made in the current services and products in line with a commercial objective, the applicability of the current method, product or service in different sectors or areas is also innovation (Karahan and Dinç, 2015:250-261).

The word “inovasyon” has entered our Turkish language in parallel with the word “innovation” in English. Although the word does not correspond to a clear way, it means renewal, newness, enhancement and innovation. This word is derived from the Latin word “innovare” and means to do something new (Biçkes, 2011: 96). According to Webster, innovation is a new and different result. Although it is mentioned in Turkish with the words of newness and renewal, it can only explain a part of the word “innovation”. When we look at the innovation conceptually, it carries so wide meaning that it is difficult to say in one word. For this reason, the word “innovation” has been accepted as a technical term and it is placed in our language just like the word “motivasyon”(Eraslan and others. 2008: 9).

Schumpeter proposed a list of five types of innovation:

- Entry of new products into the market,
- Formation of new production models,
- Opening of new markets,
- Development of resources for raw materials and other products,

• Creation of different market types in the new industry (OECD Oslo Guide, 2005: 33).

Schumpeter first explains innovation as the active time of creative destruction, which helps economic progress, but later refers to this word as the accumulation of creativity in some technological units and markets, which are regarded as the engines of economic appreciation at the enterprise level (Demir, 2014: 5).

It is not possible to mention a definition that has been settled on innovation and everyone has agreed on it. There are many different forms of expression related to innovation. For these reasons, new meanings are offered by emphasizing the issues of innovation which are far from homogeneity and high level of importance according to all branches of science (Kılıç and Keklik, 2012:97). In one of the researches on 76 different meanings of innovation; it was concluded that the majority of the participants did not make a clear definition, the meanings in the expressions could be divided into more than one class, and the parties who insisted on the expressions could change in long processes (Güleş and Bülbül, 2004:124).

There are approaches that define innovation as a process and as a result of conditions (Damanpour and Gopalakrishnan, 1999:2, Eraslan and others. 2008:10). If we take innovation as a concept, it defines the process, namely renewal and enhancement, on the other hand, the result, namely innovation. When we look at the history of OECD and EU, innovation as a process refers to the transformation of the idea into a high output or service with the ability to market, improved or new distribution or production method, or service method in relation to a new society. In addition, the word “innovation” refers to a marketable, improved product or new method or service (European Commission, 1995).

Szeto (2000: 149) approached the definition of the concept of innovation with different perspectives: From an administrative point of view, innovation is defined as managing all resources inside and outside of the enterprise in order to prepare the ground for new ideas and developments.

Innovation is expressed as new service, goods or time periods which is perceived as important and worthy by the people to use and obtained by the interpretation and merging of raw information obtained (Biçkes, 2011: 98).

1.2. The Importance of Innovation

Innovation is important not only for commercial enterprises and organizations, but also for public enterprises. When the OECD (2000) report is examined; it is emphasized that innovation and technology help to increase the success of enterprises and are the most important factors of economic growth. Countries gain the benefits of economic growth through innovation. Countries that give importance to innovation, create new technological products, and highlight the adaptation of these new technologies show a faster development than others. If a long-term economic success is desired, it is very important to create innovative floors that support these new technologies and innovation and to support these floors continuously (Arpacı, 2011: 112 and OECD Oslo, 2005).

Three competitive strategies have been determined by Porter (1990), a veteran of competitive strategies, to create a supportable position at a general level and at a long period and to eliminate all competitors in their fields. These; overall cost leadership, differentiation, and focus. It is not difficult to understand that there is innovation in all of these strategies. Reducing costs, differentiating the products and focusing are

the applications that can be achieved through innovation (Sözbilir, 2013: 121).

As Drucker says that long-term firm performance is directly proportional to innovation, Schumpeter says that economic development is directly proportional to innovation. If we think of innovation as ropes connecting organizations to life and future, innovation is in a complex and risky time due to the ever-increasing competitive pressures, changes in rapid and radical technological developments and changes in consumer expectations. However, the only source of organizational adaptation and renewal and sustainable competitive advantage in the knowledge economy is innovation (Biçkes, 2011: 100-101).

1.3. Types of Innovation

Schilling (2017: 48-51) defined four different dimensions:

- Product innovation versus process innovation;
- Radical innovation versus incremental innovation;
- Competence-enhancing innovation versus competence-destroying innovation;
- Architectural innovation versus competent innovation.

Industrial innovation includes both large (radical) and small (incremental) technological developments. The successful commercialization of innovation may involve wider organizational changes. Besides technological innovation, there are administrative and organizational changes, which can often be called innovation (Gökpınar, 2013: 47).

In another classification, Trott (2008) has gathered the innovation types under seven headings: Type of innovation and examples are given in Table 1:

Table 1. Typology of innovations

Type of innovation	**Example**
Product innovation	The development of a new or improved product
Process innovation	The development of a new manufacturing process such as Pilkington's float glass process
Organizational innovation	A new venture division, a new internal communication system;
Management innovation	TQM (total quality management) systems, BPR (business process re-engineering); introduction of SAPR3
Production innovations	Quality circles, JIT manufacturing system, new production planning software, e.g. MRP II, new inspection system
Commercial/marketing innovations	New financing arrangements, new sales approach, e.g. direct marketing
Service innovations	Ebay; Internet banking, etc.

Source:

Trott, Paul. (2008) “Innovation Management and New Product Development” (Fourth Edition), Prentice Hall Financial Times

Different categories of innovation are already available. Varieties are generally divided according to the innovation structure and the level of the types (OECD, 2005). In addition to these various types of innovations, some researches were made on different types of innovation and different classifications were observed. Some of these types are given below (North and Smallbone 2000; Utterback,1996; Damanpour and Gopalpkrishanan, 1999; Boer and During, 2001; Yiğit, 2014; Francis and Bessant, 2005).

- Organizational innovation,
- Sustainable innovation
- Process innovation
- Destructive innovation
- Marketing innovation
- Behavioral innovation
- Product innovation
- Discontinuous innovation,
- Paradigm innovation
- Progressive innovation

In the literature, usually four types of innovation are more common. These; process, product, organizational and market innovations. Innovation can be created by combining one or more of these types (Hjalager, 2002). According to the OECD Oslo Manual Guidelines (2005: 51-60), there are four types of innovation. In the light of these explanations, different types of innovation are briefly explained below:

1.3.1. Product innovation

It is a necessity for the modern period organizations to continue their lives, to outgrow, to increase their market share and to increase their market values and to make their competitive positions sustainable and developable. Product innovation is the introduction of labor to the market and an output that is new and/or has been significantly improved in terms of its features or uses (Eraslan and others., 2008:12). This includes significant improvements and enhancements in parts, specifications and materials, in-board software, ease of use or other functional qualities.

Credit card with mirror feature developed by ladies, air pass textile products, light but strong composites and environmentally friendly plastics can be given as examples.

1.3.2. Process innovation

A process innovation is the implementation of a new or significantly improved production process, distribution method, or support activity for your goods or services. (The Fourth Community Innovation Survey, 2004). Process innovation includes new and significantly improved production technology, new and significantly improved methods of supplying services and of delivering products. The outcome should be significant with respect to the level of output, quality of products (goods/services) or costs of production and distribution (Innovation Survey, 2000-2002). Process innovation can be combined or finalized with product innovation.

Process innovation is the implementation of a new or significantly improved / enhanced production or distribution method. This includes significant changes in techniques, equipment and / or software. Industrial design using computer-aided software and real-time sensors that automatically correct processes can be given as examples.

1.3.3. Market innovation

Market innovation is concerned with improving the mix of target markets and how chosen markets are best served. Its purpose is to identify new or better potential markets; and new or better ways to serve target markets. (Johne,1999). A marketing innovation is the implementation of new or significantly improved designs or sales methods to increase the appeal of your goods and services or to enter new markets. Significant changes to the design or packaging of a good or service (exclude routine/ seasonal changes such as clothing fashions) and new or significantly changed sales or distribution methods, such as internet sales, franchising, direct sales or distribution licenses are methods of market innovation (The Fourth Community Innovation Survey, 2004).

Examples include the sale of cheeses sliced and a new appearance by giving big changes to the design of a furniture series and increasing its attractiveness.

1.3.4. Organizational innovation

An organizational innovation is the implementation of new or significant changes in firm structure or management methods that are intended to improve your firm's use of knowledge, the quality of your goods and services, or the

efficiency of work flows. Organizational innovation is to bring differences in the functioning of enterprises, in the organization of work within your enterprise and in the relations with other firms or public enterprises. (The Fourth Community Innovation Survey, 2004). Organizational innovation is implementation of new organizational methods in business practices, workplace organization or external relations.

Examples include the efforts of international firms to build a new supply chain management structure to increase their sales potential, restructuring the business, lean manufacturing and quality management systems.

1.4. Characteristics and Purpose of Innovation

According to Drucker (2001: 22), the characteristic of efficient innovation is the difference that creates a new potential of satisfaction rather than the improvement in the product or service. The characteristics sought in innovation are as follows (Sözbilir, 2013: 133):

- Better and more economical products and services,
- Different product (released for the first time), not an improvement of an existing product.
- Creating new areas of use for old products.

The factors that increase the attractiveness of innovation are as follows (OECD, 2011: 62):

- Creating jobs with high skill levels,
- Strengthening R & D (creating and developing R & D laboratories),
- Increasing innovation capacity (at the technological level of organization and marketing),
- Providing technology transfer in patent, license, know-how, technical assistance and other issues.

Innovation aims to find solutions to company problems. According to Kongar (1995: 73-77), innovation has three main objectives: To maintain the existence of the enterprise, to increase the profit and to become the leader in the market.

According to Afuah, there are various factors that encourage enterprises to make innovation: (Afuah, 2009: 109);

- Growth desire
- Testing source and capabilities in a different area
- Economic scales and opportunities
- Financial position of business
- Market power
- Personal administrative reasons

1.5. Innovation Process

The process from the emergence of a new idea to the creation of an element of value for the users can be called the innovation process. While the innovation process is a complex process, it is not a process that will result in absolute success. Therefore, it is important to create and implement a process in order to develop and deliver innovations successfully. In parallel with the environmental changes, it is seen that the innovation process has shifted from simple activities to sophisticated applications. Innovation activities vary according to organizations and enterprises as well as being carried out with simple or complicated applications (Biçkes, 2011: 120).

Biçkes (2011: 120-121) explained the opinions of some scientists about the innovation process in his research: Becker and Whisler (1967) set up the innovation process in four steps: the emergence of the elements that triggered innovation, the conceptualization of the idea, the formal presentation of the idea to other individuals in the organization, and the adoption or rejection of the idea. Pierce and Delbecq (1977) focuses upon three innovation process in their article; (a) initiation of an idea or proposal that when adopted and implemented will lead to the enactment of some change within the organization;

(b) adoption of the idea or proposal, a phase that represents a decision being made by the appropriate organization decision maker(s) providing mandate and resources for the change; (c) implementation, the installation of the adopted idea into a sustained recognizable behavior pattern within the organization. Flynn (1985) lists the innovation process as idea formation, pre-selection and application. McDaniel (2000) states that the developmental stages of innovation can be considered as research, development, implementation and commercialization. Jones (1995) and Von Stamm (2008) list the innovation process as developing innovation strategies, collecting ideas of innovation, evaluating and extracting ideas, commercial analysis, development, market testing and commercialization.

According to Sattler (2011: 12), the innovation process takes place in three basic stages. These are first, the idea generation and selection, second the idea realization, and third the idea commercialization. The first stage of the innovation process consists of idea generation and selection of appropriate ideas (Figure 1). At this stage, the organization collects and selects new ideas for innovation in research on internal and external environmental factors. These ideas can be shaped by

pushing the existing technological opportunities or by pulling the demand in the market.

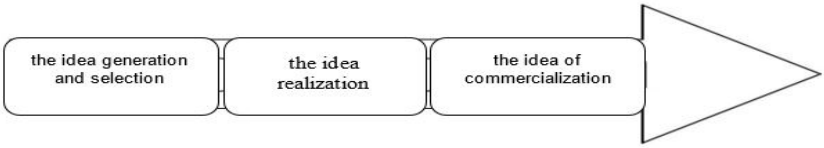


Figure 1. Innovation Process

Source: Sattler, 2011:12

After the technology and market-oriented feasibility of ideas, the second stage is the *technological realization (development) of ideas* and the evaluation of potential economic success in the target market (Sattler, 2011: 12).

The concept of commercialization is defined as the introduction of a new product, service or production / service method to the customer. This final phase of the innovation process is related to the production of innovation, its presentation to the target market. At this stage, a commercial form of innovation work is realized (Sattler, 2011: 12). Many innovation initiatives fail in the commercialization phase. According to the data of some enterprises conducting market research in the US, it is noteworthy that 70% - 75% of the new

products offered to the market are unsuccessful (Aksay and Orhan, 2013: 14).

2. Innovation in Health Care

This chapter, which covers topics such as the importance and features of the scope of innovation, covers all enterprises as well as health institutions. In this part, the basic concepts of innovation are tried to be explained in a holistic way.

In the health sector, which is the integrated system where different services are provided; there is a paradigm shift resulting from development activities for change, transformation and innovation in recent years. Health systems that cannot adapt to this dynamic process and cannot prepare themselves for the environmental conditions occurring in the macro and micro plan cannot survive for a long time. For this reason, the process of correctly identifying problem areas in health systems and organizing remedial activities related to these problem areas is both an ethical responsibility and a need to provide a continuously improved, quality health service. In the context of change, innovation and continuous improvement activities and its direct relation to human health, an important issue in recent years is the relational link between learning and innovation and the analysis studies on this subject.

Basic concepts related to innovation in health services will be briefly mentioned in this section in order to attract the attention of the actors in the sector and raise the level of awareness about innovation and learning based practices. In order to understand the vital importance of innovation in terms of medical science and its applications, it would be useful to briefly look at the historical background.

Medicine has evolved from past to present as a field of application that uses other sciences and technology for its purpose, not just a science. We can clearly see this evolution of medicine in the process of change and transformation of practices in different civilizations. In human history, we see that a mix of religious and magical medical practices with empirical medical practices has continued in different societies for centuries. The transformation of hypocratic medicine to Galenic medicine which is the basis of today's medicine and the scientific and observational practices gained by the Islamic medicine have gained a new perspective in Europe since the fifteenth century. With the introduction of renaissance, medical science and its applications have entered a rapid process of innovation. When we look at this innovation process historically, we see that the basic dynamics of rapid change and

transformation of medical science are formed by the concepts of learning, learning tendency and innovation.

Many scientists, such as Fractorius (1484-1553), Servetus (1509-1553), Paracelsus (1493-1541), Andreas Vesalius (1514-1564), Fallobius (1523-1562), Harvey (1578-1657) and Decartes (1596-1650), who laid the foundations of modern medicine, have opened the way for the rapid renewal and development of medical knowledge by introducing the method of measurement and proof in addition to observation and experimental learning in medical science.

Over time, in the light of new information, learning, learning tendency and innovation have gained a new impetus. The most striking examples of this situation; Antonie Philips van Leeuwenhoek's (1632-1723) discovery of the microscope, Francesco Redi’s (1626-1781) proof with experiment showing that aristotelian abiogenesis theory is false and revealing the biogenesis theory, Ignaz Philipp Semmelweiss’s (1818-1865) proof that infections can be prevented by disinfection in clinical applications, Louis Pasteur’s (1822-1895) new breakthrough in medical science with germ theory and vaccine studies and Joseph Lister’s (1827-1912) asepsis and antisepsis methods developed to increase the success of surgical

interventions can be given as examples. When we look at the last five centuries of the development of modern medicine, all these examples show that science and technology combine numerous inventions with creative ideas. All these examples show how important innovation is and innovation is the basic fact that constitutes the basic dynamic of development.[3]

There are many features that differentiate health services from other goods producing companies as well as from service producing enterprises. Health care is a sector that holds all these different fields of expertise together and the application of the 8-P[4] approach by the integrated service marketing experts and competitive advantage can be achieved in this sector (Lovelock and Wright, 2002: 13-15). On the other hand, health services are a set of services that involve a variety of activities that are so risky that they need to work in perfect harmony with their different fields of science and expertise (Aksay and Orhan, 2013). If we look at this event from a holistic point of view, perhaps the most important issue among

[3] http://www.academia. edu/5605485/Tip_tarihi_gibi

[4] Lovelock and Wright (2002) refer to these concepts as the 8P of the Marketing Mix for Service Enterprises; "Price, product, promotion, place, process, people, physical environment, productivity and quality"

these is that the health system is a must to live in the wind and atmosphere of change and innovation[5]. As with all enterprises that cannot keep up with changes and innovations, health enterprises will lose their competitiveness over time and be condemned to disappear. Health businesses have to deal very closely with all human, human life diagnostics, treatment and rehabilitation innovations[6].

Health institutions are experiencing a rapid change and movement, while technology and labor intensive hospitals are the most affected by the wind of learning and innovation in order to achieve competitive advantage. When the relevant field is examined in the literature, it is seen that these two basic issues are not examined enough to the extent that it affects the health system. It is seen that the subject is evaluated and scored on some basic statistical R & D indicators. Here, comparative

[5] With hundreds of applications such as digital hospital, tele medical applications, business intelligence - data mining approaches, 3-D technology and hologram technology, innovation and change are the most intense areas of health sector and this is a very difficult area to follow in extent

[6] Considering the fact that the fingerprints of each human being on the earth are different from each other, with the approach that every human being should be accepted as a brand new project facing the health worker, it is as difficult as it is necessary to adapt to this rapid movement and changing paradigms.

analyzes of countries, organizations and sectors with some key indicators are given. For example, according to The Global Innovation Index ranking the innovation performance of 128 countries and economies around the world, based on 82 indicators, Turkey was at the 58th position in the Global Innovation Index in 2015; next year it went up 16 steps with 39.03 points to the rank of 42nd.(http://www.tim.org.tr). This issue is very important for countries and organizations to be able to make comparisons in terms of innovation indicators, to analyze current situation, to plan their strategic planning and to be open to improvement. On the other hand, In order to create a culture of learning and innovation, there are also some studies on the perspectives of employees and the effects of organizational learning and learning organization on innovation. However, it is a fact that these studies are very limited especially in the field of health workers.

According to Akalin (2009), innovation cannot be defined as finding new diagnostics, new drugs or new forms of diagnosis and methods, but it can be defined as the existence and application of new, better and much better treatments for treating patients with innovation in health. Akalın explained innovation in medicine in four main titles (Akalın, 2009;

Girgin, 2015). These items are briefly described below by the author (Figure 2):

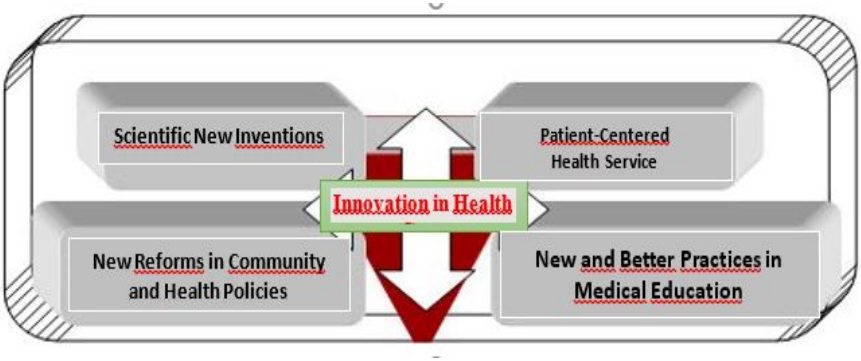


Figure 2: Innovation dimensions in medical services

Patient-centered health service:

This title indicated the importance of increasing and improving the quality of health services, achieving better clinical outcomes and providing reliable and efficient health services.

New and better practices in medical education:

The aim of this title is to emphasize the identification the best candidates for the preparation of future leaders.

New reforms in community and health policies:

The aim of this title is to explain the importance of leadership of reliable and impressive leaders to improve the quality of health of society.

Scientific new inventions:

In order to be able to keep up with the developing technology, initiatives such as providing information technology infrastructure with new diagnostic methods and integration of necessary drug, vaccine and surgical methods to the system are explained in this title.

In the developed countries, the health sector is one of the service sectors that grows more than other sectors. The value of health sector goods and services constitutes 7% of GDP in EU-15 countries and 10% of total employment is created by health sector activities. Approximately 2.3 million jobs were created in the health sector in about 5 years. Excessive demand for innovative technologies comes from the health sector. Health sector is one of the leading sectors which use innovative technologies (TÜSİAD, 2011: 51; Girgin, 2015: 61).

Innovative activities create new production and service processes (e-health) with new products (medicine, medical equipment and technology). Effective, early diagnosis and treatment are provided with innovative health products. Thus, more costly medical treatments can be prevented in the future. Better quality and efficient service can be provided by using

high technology and qualified labor force in health sector. The use of new treatments, medicine and medical technology devices are important intermediate inputs, and health service performance increases due to technological advances in this sector. The e-health services implemented with the sharing and follow-up of medical and financial information will increase the quality, reliability and efficiency in service delivery and will enable more effective decisions in health care financing. Innovation is an important factor that increases accessibility and productivity to health services in both areas (TÜSİAD, 2011: 51; Girgin, 2015: 61).

As a result of an effort to improve the quality of life of human beings, many innovations have emerged in health materials, medicine and treatment methods. For this reason, health is one of the areas where innovation and R & D activities are the most important. Health technology has been developing continuously and rapidly with the R & D activities carried out (Girgin, 2015: 62).

In this context, all stakeholders in the health system, where rapid change and movement are experienced, have to accelerate their work on innovation in order to achieve competitive advantage by adapting to these innovations in

micro, meso and macro plan. All enterprises and organizations that cannot adapt to the wind of change and innovation are doomed to lose.

REFERENCES:

Afuah, A. (2009). Strategic innovation, new game strategies for competitive advantage, Routledge, New York.

Akalın, Ş.H. (2007). Innovation, İnovasyon: Yenileşim. TDK Yayını, Türk Dili Dil ve Edebiyat Dergisi, XCIII(666), 483-486.

Akalın E. (2009). Enfeksiyon hastalıkları ve inovasyon, (http://saglikekonomisi. omegacro.com/enfeksiyon-hastaliklar-ve-inovasyon)

Aksay, K. ve Orhan, F. (2013). Assessment of innovation process in hospitals for risk management: a model proposal: University of Dicle Journal of Faculty of Economics and Administrative Sciences Archive Volume 2, Issue 3

Arpacı, İ. (2011). Kamu kurumlarında teknolojik inovasyon ve inovasyon politikası. ODTÜ Gelişme Dergisi, 38(2).

Biçkes, M. (2011). Örgütsel öğrenme, inovasyon ve firma performansı arasındaki ilişkiler: İnovasyonun aracılık etkisine yönelik büyük ölçekli işletmelerde bir araştırma. Doktora Tezi, Erciyes Üniversitesi, Sosyal Bilimler Enstitüsü.

Boer, H. and During, W. (2001). Innovation, what innovation? A comparison between product, process and organisational innovation. International Journal of Technology Management, 22(1), 83-107.

Damanpour, F. and Gopalakrishnan, S. (1999). Organizational adaptation and innovation: The dynamics of adopting innovation types. In the dynamics of innovation. Springer Berlin Heidelberg, 53-80.

Demir, A. Z. (2014). Ar-Ge ve inovasyon tercihlerinin incelenmesi. Doktora Tezi, Ondokuz Mayıs Üniversitesi Fen Bilimleri Enstitüsü.

Drucker, S.F. (2001). Management Challenges for the 21st Century. HarperB usiness; 1st Edition, New York, 224.

Eraslan, H., Bulu, M. ve Bakan, İ. (2008). Kümelenmeler ve inovasyona etkisi: Türk turizm sektöründe uygulamalar. Seyahat ve Otel İşletmeciliği Dergisi, 5(3), 15-29.

European Commission, (1995). Green Paper on Innovation, December.

Francis, D. and Bessant, J. (2005). Targeting innovation and implications for capability development. Technovation, 25(3), 171-183.

Girgin, M. (2015). Örgütsel öğrenme kapasitesi ile inovasyon eğilimi arasındaki ilişki: bir araştırma. Yüksek Lisans Tezi, İnönü Üniversitesi Sosyal Bilimler Enstitüsü, Malatya.

Gökpınar E.S. (2013). Türk savunma sanayinin bir inovasyon sistemi olarak incelenmesi. Doktora Tezi, Kara Harp Okulu Savunma Bilimleri Enstitüsü.

Güleş, H.K. ve Bülbül, H. (2004). Yenilikçilik, işletmeler için stratejik rekabet aracı. Birinci Baskı. Ankara: Nobel Yayınları.

Hjalager, A.M. (2002). Repairing innovation defectiveness in tourism. Tourism Management, 23, 465-474.

http://www.tim.org.tr

http://www.academia. edu/5605485/Tip_tarihi_gibi

Innovation Levels in SMEs, (2000-2002). An Empirical Investigation, Statistical Service, the Irish Journal of Innovation Survey, 1444.

Johne, A. (1999). Successful market innovation. European Journal of Innovation Management, 2(1), 6–11.

Karahan, M. ve Dinç, H. (2015). Türkiye'deki işletmelerin yenilik faaliyetleri ve karşılaştıkları sorunların

belirlenmesi. Fırat Üniversitesi İnovasyon 2023 Sempozyumu Kitapçığı, Elazığ.

Kılıç, R. ve Keklik, B. (2012). Kobi'lerde genel firma özelliklerinin inovasyon uygulamalarına etkisi: Balıkesir ilinde bir araştırma. Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 39, 93-118.

Kongar, E.N. (1995). İnovasyon: Yenilik. Bitirme Tezi, Yıldız Teknik Üniversitesi, Endüstri Mühendisliği.

Lovelock Christopher and Laura Wright, Principles of Service Marketing and Service Management, 2nd Edition, World Scientific Publishing, 2002, 13-15,USA.

Naktiyok, A. (2007). Yenilik yönelimi ve örgütsel faktörler. İktisadi ve İdari Bilimler Dergisi, 21.

North, D. and Smallbone, D. (2000). The innovativeness and growth of rural SMEs during the 1990s. Regional Studies, 34(2), 145-157.

OECD, Oslo Kılavuzu, (2005). Yenilik Verilerinin Toplanması ve Yorumlanması için İlkeler. 3. Baskı, TÜBİTAK.

OECD, 2011. Attractiveness for Innovation: Location Factors for International Investment, OECD Publishing. http://dx.doi.org/10.1787/9789264104815-en

OECD, OSLO Manual. (2005). The Measurement of Scientific and Technological Activities. http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/OSLO/EN/OSLO-EN.PDF

Porter, M.E. (1990). The Competitive Effect of Nations. Harvard Business Review, March-April.

Sattler, M. (2011). Excellence in innovation management: A Meta-Analytic Review on the Predictors of Innovation Performance", Gabler Verlag Springer Fachmedien Wiesbaden GmbH.

Schilling, M.A. (2017). Strategic management of technological innovation. Mc-Graw- Hill Education, Fifth Edition.

Sözbilir, F. (2013). Bilişim teknolojileri, bilgi yönetimi ve inovasyon ilişkisi: Türkiye'de bir alan araştırması. Doktora Tezi, Kahramanmaraş Sütçü İmam Üniversitesi Sosyal Bilimler Enstitüsü.

The Fourth Community Innovation Survey (CIS IV) (2004), Statıstık Austrıa.

Trott, P.(2008). Innovation management and new product development (Fourth Edition), Prentice Hall Financial Times.

TUSİAD, (2011). Türkiye'nin Avrupa Birliğine Üyelik Sürecinde Sağlıkta İnovasyon, İstanbul: Sis Matbaacılık.

Utterback, J. M. (1996). Mastering the Dynamics of Innovation. Boston: Harvard Business School Press.

Yiğit, S. (2014). Kültür, örgüt kültürü ve inovasyon ilişkisi bağlamında "İnovasyon Kültürü". KMÜ Sosyal ve Ekonomik Araştırmalar Dergisi, 16 (27), 1-7.

"This book is a part of PhD thesis of Dr.Fatih ORHAN (Thesis Advisor Prof.Dr. Emine ORHANER) entitled "Effect of Learning Orientation and Capacity in Healthcare Organizations on Innovation: An Example of a University" approved by Gazi University Social Sciences Institute in January 2017".

CHAPTER 4:

Health Innovation And Management

Asst. Prof. Dr. Aktürk, Benhur Esin[1*]

[1] İstanbul Aydın University, İstanbul, Turkey, esinakturk@aydin.edu.tr

Introduction

Organizations and institutions that provide health services have started to run introductory campaigns by using mass media with the development of the technology. Day by day, the development and the innovation in the organization and distribution of health services have gained importance because of the gap between the information and practice, cost increase and medical errors. Within today's complex structure and rapidly changing world, only providing any kind of services is almost impossible and this goes for the health sector. On contrary, health sector is a field in which prices continuously increase, the structure of diseases constantly change and the use of technology increases for the diagnosis and treatment, and providing services by one organization rather than various corporate partnerships has become hardly possible.

Marketing and innovation are inter-connected and in a considerable amount. Especially in the health sector, they are important in terms of the human health and the continuity of life. With the developed technology, there have been a great deal of innovation in the health sector. New technological devices, methods and treatments have emerged.

1. Health Services

1.1. The Concept of Health

While health concept, in a traditional sense, is assumed to be as not being sick or injured, it is also perceived in the society in the same way (Öztüre, 2010). With respect to this definition, the concept of illness has emerged, the health of people and society are evaluated depending on this concept and people, who do not have certain symptoms or disabilities, are accepted as healthy.

1.2. The Concept of Health Services

Health services include all provided services to prevent diseases for health protection and taking step regarding health, treat with necessary substructure works in order to make early diagnosis, prevent disabilities and plan necessary services for his purpose, provide services for the social welfare of disabled people and enable people to lead a qualified, happy and long life (Kesgin & Kubilay, 2014).

1.3. The Features of Health Services

Health Services have some kind of features such as:

1. Having expensive supply
2. Consumer has no effect on the determination of demand
3. The communal feature belongs to one part of the society

4. Social-oriented rather than profit-oriented
5. The sameness of demand
6. Provided in terms of strict and demand flexibility

Health services provided by public or private organizations can be in a corporate structure as well as in an individual structure. In the developed countries, high-level institutionalization is the reason for the fact that providing health services by organisations is common (Odabaşı & Oyman, 2002).

2. Marketing

2.1. The Concept of Marketing

Marketing is the training of internal costumer, the determination of market situation and necessary operations to accelerate the sales of services and goods (Yıldırım, 2015).

2.2. The Importance and Features of Marketing

Marketing covers all kinds of processes, elements, mediums, methods, individuals, organizations and activities that affect the human life and have a role in shaping of consumptions experience. Marketing is related to the products that have financial value. The understanding of modern marketing is adopted by several non-profit organizations (Altunışık et. al., 2014).

Putting aside the fact that interpersonal communication is associated with virtual communication and contradiction in terms, benefits of internet lead to review behavioural differences, all disciplines under the communication and the effect of communication which emerge depending on the communication (Odabaşı & Oyman, 2005). There have been many important changes in several issues from the human psychology to issue having social validity.

A situation has emerge to be evaluated in a broad perspective from reading habit to shopping styles or communication between each other to correlation with the technology (Bulunmaz, 2016). Consumer know the differences of an easy sale in company with natural organizations arisen from an institution or brand (Zhu & Blanco, 2005).

Product: Today, organizations should consider the presentation of product as a staging activity to provide their value in an effective, eye-checking way and make it an unforgettable memory in their mind, organize them accordingly, and design all process (Altunışık et. al., 2014).

Pricing: It is the total of the values, exchanged by costumers for accessing to products or the benefits, the result of using them. The most important matter to be considered

while pricing, one of the 4Ps of the marketing, is to find the price which the seller would want to sell and the buyer would show consent to buy.

Promotion: The combination of promotion has an important place among the elements of marketing combination.

Place: Due to the features of services like inseparableness, impartibility, not-overflow and non-storability etc., direct place comes into question in the organizations of services (Işık, 2012).

2.3. Customer Satisfaction

Customer satisfaction is the meeting the customers' expectations regarding goods and services provided by an organization. Today, customer satisfaction, main differentiating factor in a competitive market, is an inseparable part of the organizational strategies. Nowadays, organizations are taking their customers' satisfaction to the forefront. For this purpose, they develop several strategies, tactics and policies.

Companies, which want to reach their works to the success, should hold their customers for a while. For the customer satisfaction, it is necessary to make customers feel to be cared sincerely. One of the simplest way of this is the use of social media. Today, many companies share social media posts

either in a formal or informal language to contact their customers. In this manner, they easily make interactions with their customers. As a result, they both communicate with their existing customers in a closer way and get the attention of potential customers.

2.4. Criticisms Regarding Marketing

Academic and commercial collaborative sanctions remain in the forefront with their studies regarding entrepreneurship depending on the innovation. One of the most proper example is that 20% of the medicines that penetrates into important markets, especially USA and European markets, is produced in India (Elçi, 2008). In this study regarding health sector, products, process, marketing and organizational innovations in the Oslo guideline are determined and explained. Some of these kind of innovations are as follows:

3. Innovation

Innovation is “innovatus” in Latin and defined as the use of new methods in the social, cultural and administrative environments (Elçi, 2006). The Turkish Language Association defines innovation as “*yenilik*” and “*yenileşim*” (TLA, Grand Turkish Dictionary). “*Yenilik, yenileme, yenilenme, yenilikçi*”

are other Turkish equivalent in different sources. Innovation, which have a broad meaning, is accepted as a technical term in the literature.

3.1. The Concept of Innovation

This concept, derived from originally “innovatus” in Latin, is defined as the use of new methods in terms of administrative, social and cultural sense (Biçimveren, 2017).

In the abstract, innovation refers to both a process (innovating) and a result (innovation). In a simple sense, innovation is to develop new ideas and apply them. They are the ideas, developed in order to solve the unsolved problems and meet the unmet needs.

3.2. The Importance and the Features of Innovation

In terms of the economic progress regarding the corporate and organizational structuring of countries, innovation systems have an eye-catching and great importance. Institutional structuring of innovation systems, upper structures, which provide the coordination and interaction between innovation activities and partners in the country, take charge of organizing innovation activities and conduct and carry of competitive development programmes. When a

creative convenience product comes to exist, which geography it arises loses its importance and it spreads all over the world.

Developing technologies, new methods, re-organization of institutional structure, innovative institutional structures to decrease in cost are innovative studies that would increase the productivity. In addition, production costs may be decreased in order to enable the use of innovation sources in a more rational way and production can be increased (Gökçe, 2010).

3.3. Types of Innovation

The most important activity, which is necessary for the innovation, is Research and Development. If people in the R&D do not have the ability of entrepreneurship, they cannot create value: the results of R&D cannot be turned into the innovation. While innovation activities, conducted in all of the companies apart from technology-based companies, cover "organizational innovation" and "marketing innovation" as well as "technological innovation", a successful line cannot be accepted in the technology-based companies, concentrate on technological innovation, unless adequate sources are transferred to organizational and marketing innovation. Also, products, which are purchased from other companies and put on market, are out of this kind of innovation scope (Can, 2012).

Product innovation; No matter how this terms is defined as the development of product with new features or putting on market by improving the existing product, it is rather related to the development of new product. Product innovation has an importance in the organizations in terms of offering the advantage of competition (Johne, 1999).

Marketing innovation; Marketing innovation is defined as marketing method, which covers activities such as design, packing, positioning, promotion. The aim is to find a goal in the markets and position in the markets as a new way. The most important feature is the use of a brand-new marketing method by the company (Papinniemi, 1999).

Service innovation; It covers developing a new and different service, providing it to the customers and changing providing services in a way that gets the customers' attention and differentiating them (http://www.gelisenbeyin.net/inovasyon-cesitleri.html / 19.09.2018). With its monotype practice, remote health services serves as an example of service innovation.

Organizational innovation; It is defined as the use of organization administration style in the market by innovating it. It is an innovation activity which covers inter-organizational or out-of-organizational relations.

Integration with other companies, purchasing or growth strategies can be given examples, which are not accepted as innovation activities (Aktürk, 2016). If company renews its organizational methods in a unique way, this is accepted as an organizational innovation. (OECD, 2005).

Process innovation; It is a brand-new change in delivery or production method. In these types of innovation techniques, crucial change in software and substructure, while existing and producing in the market with different products decreased the costs, it leads improvement in the market by changing their perspectives (OECD, 2005). For example, Coca Cola Company got into the act by releasing Coca Cola Zero with the Coca Cola and putting both of them in the same commercial film and doing their marketing.

Organizational structure; Organizational structure has importance in the success of innovation activities as well as other conditions. Innovation is such a process which includes constant change and research and development, and the organizational structure features, hindering and supporting the innovation are shown in Table 3 (Pervaiz, 1999).

Organizational culture; It is related to the behavioural change of individuals during the innovation process and plays a key role considering the reactions (Uzkurt, 2008).

Employee empowerment; Employee empowerment is related to feeling the sense of belonging by employees, seeing themselves a part of the company if they feel happy and safe, and working in a place which is the most proper and active place for them.

Customer focus; Relationship between customer focus and customer satisfaction is linear and determination of the innovation procedure according to the customer potential by determining the customer target is defined as customer focus. Performance and determination measure, based on customer, vary and are structured depending on customer or is designed by proceeding according to the different perceptions. Organizations, which conduct innovation process, are always closer to the customer and organize management policies dependently (Duma, 2002). Therefore, especially taking steps towards the protection of consumer and environment are the developments that have accelerated the development of social responsibility in marketing since 1970s.

4. The Effect Of Marketing And Innovation On Health Services

As globalization makes itself evident in today's conditions, it can be said that a competition environment, in which more difficult conditions for organizations dominate, has emerged. Rapid changes create difficulties and as a result of this environment; it can be suggested that the prerequisite of the competitive advantage and surviving for the organizations is to perpetuate the change in accordance with the environment conditions and find a proper position for themselves in line with the innovation (Kılıçarslan,2018)

When the health legislation mechanism in our country is considered, health services, in which there is a limitation in the advertisements, include matters that try to prevent unfair competition and enable them to be thought differently from other profit making commercial services (Temel & Akıncı, 2016). With the innovation in health and the increase in health competition, sector has grown rapidly and demands gradually increase (Kılıçarslan, 2018). Innovation in health is followed as:

Call centre; It is related to the centres in which medical consultation services are provided by operators.

Electronic medical record; Electronic records, which replace paper folders, offer the opportunity to monitor health records of patients in a more effective way.

5. Conclusion

Today, developments in the health services affect directly the human life. With the developing technology, techniques and treatments, which are used currently, tend to reach top level. Hospitals, polyclinics, customers, competitors, suppliers and partners, providing health services have an effect in the development of them. Turkey can keep up with advanced countries that have health sectors with high technology by developing the ability to create technology rather than just using it and achieving continuous innovation. Marketing of health services is defined as the determination of the services, which customers need, providing new services with the effect of innovation and use of these services by customers.

REFERENCES:

Aktürk, E. B. (2016). *Perception regarding ethical rules implemented in the context of corporate governance: A study in banking sector* (Master's Thesis). Retrieved from The Council of Higher Education database. (Accession No. 445669)

Ayhan, E. (2011). *Importance of innovation in health services marketing an aplication in hospitals that activity in Malatya* (Master's Thesis). Retrieved from The Council of Higher Education database. (Accession No. 163102)

Avcı, P. (2017). Innovation in Health Organizations. *Kırklareli Üniversitesi İktisadi Ve İdari Bilimler Fakültesi Dergisi, 6*(5), 24-36.

Biçimveren, L. (2017). *Market orientation, innovation orientation, marketing innovation and international market performance: A study toward foreign trade firms in Balıkesir and Bursa* (Master's Thesis). Retrieved from The Council of Higher Education database. (Accession No. 464636)

Bulunmaz, B. (2016). Evolution in Marketing Methods with Developing Technology and Digital Marketing. TRT *Akademi, 1*(2), 348-365.

Can, P. (2012). *A study on the impact on innovation strategies of marketing processes.* (Doctoral Dissertation). Retrieved from The Council of Higher Education database. (Accession No. 306608)

Çetin, A. (2017). Awareness Of The E-Pulse Application In The Scope Of Health Care Delivery And Social Marketing. *International Journal of Health Management and Strategies Research, 3*(1), 88-103.

Durna, U. (2002). *Yenilik Yönetimi*. Ankara: Nobel Yayın Dağıtım.

Elçi, Ş. (2006). *İnovasyon – Kalkınmanın Ve Rekabetin Anahtarı*. (2nd Edition). Ankara: Nova Yayınları.

Johne, A. (1999). Successfull Market Innovation. *European Journal Of Innovation Management*, *2*(1), Brussels, 3-16.

Kaptanoğlu Özyurt, R. (2016), *A research on the relationship between perceived value, customer satisfaction and brand loyalty, and the role of distinction in brand attitudes and product involvement levels*. (Doctoral Dissertation). Retrieved from The Council of Higher Education database. (Accession No. 425297)

Kılıçarslan, M (2018). Innovation in the Health Sector. In Rasim Yilmaz and Günther Löschmigg (Ed), Studies On Balkan And Near Eastern Social Sciences (pp. 115-125). Pertalng Germany.

Işık, N., & Kılınç, E. C. (2012). Innovation System Approach And Geograph Of Innovation: Turkey Sample. *Bilgi Ekonomisi ve Yönetimi Dergisi, 6*(1), 169-198.

OECD, Frascati Kılavuzu : (2005). "Araştırma Ve Deneysel Geliştirme Taramaları İçin Önerilen Standart Uygulama", Çev. Tubitak, 3.Baskı.

Odabaşı, Y., Oyman, M. (2002). Marketing Communication Management.

Öz, M., & Uyar, E. (2014). A Research on Determining the Đmpact of Word of Mouth Marketing on Percieved Service Quality and Customer Satisfaction. *KMÜ Sosyal ve Elektronik Araştırmalar Dergisi, 16*(26), 123-132.

Pervaiz, A. (1998). Culture and Climate for Innovation. *European Journal of Innovation Management, 1*(1), 30-34.

Sarı, Y., Yıldırım, G. (2015). The Middle East market within the context of Turkey's tourism: an application in Rize. (Master's Thesis). Retrieved from The Council of Higher Education database. (Accession No. 364761)

Sarı, Z. E., Işık, Ö. (2011). The Synergy of Innovation And Strategic Management: Strategic Innovation. *Celal Bayar Üniversitesi Sosyal Bilimler Dergisi*, *9*(2), 520-556.

Şengün, H. (2016). Innovation in Health Care Delivery. *Bahçeşehir Üniversitesi*. The Medical Bulletin of Haseki Training and Research Hospital.

TDK Büyük Türkçe Sözlüğü. Retreived from http://tdkterim.gov.tr/Bts/ 20.03.2017

Temel, K., & Akıncı, F. (2016). The Role Of Advertising And Social Media In Health Services Marketing. *Hastane Öncesi Dergisi, 1*(2), 27-37.

Tengilimoğlu, D. (2014). Marketing Mix in Health and Care Marketing. *Ankara Üniversitesi Sbf Dergisi, 55*(1), 187-202.

Uzkurt, C. (2008). *Yenilik Yönetimi Ve Yenilikçi Örgüt Kültürü*. İstanbul: Beta Yayınları.

Wan,D., Ong, C.H. Ve Lee, F. (2005). Determinants of Firm Innovation İn Singapore. *Technovation, 25*(3), 262-270.

Yılmaz, E. (2011). Word Of Mouth Marketing In The Health Services. *The Journal of Marmara Social Research, 1*, 50-62.

Yılmaz, Y. (2006). An Integrated Dimension In Marketing Communication: Integrated Marketing Communication. *Elektronik Sosyal Bilimler Dergisi*, *5*(18), 54-75.

Zhu, Y. C., Blanco, C. A., Portilla, M., Adamczyk, J., Luttrell, R., & Huang, F. (2015). Evidence of Multiple/Cross Resistance to Bt And Organophosphate İnsecticides İn Puerto Rico Population Of The Fall Armyworm, Spodoptera Frugiperda. *Pesticide Biochemistry and Physiology*, *122*, 15-21.

Retrieved from HYPERLINK "http://www.gelisenbeyin.net/inovasyon-cesitleri.html%20/%20" http://www.gelisenbeyin.net/inovasyon-cesitleri.html / : 19.09.2018

CHAPTER 5:

Strategical Cooperation in the Health Institutions

Menekşe KILIÇARSLAN[1],

[1] Health Management Department, Istanbul Aydin University, Istanbul- TURKEY
* meneksevarol69@gmail.com

Today's competition environment shows that managers should focus on their central capacities. Therefore, several managers participate in cooperation relationships to maintain their basic services. Main changes in the external environment make difficult for them to compete successfully by themselves. By providing support for internal and external development and collective synergy for the managers, cooperation between organizations is seen as a tool, which is a strategy to get the competition advantage, keep an organization alive and reinforce the growth under difficult conditions (Castelles, 2000).

As managers depend on the cooperation more, this strategy becomes a vital issue beyond being just a tool in order to get material, resource or operational logistic. Cooperation between institutions is seen as an information-based resource and capacity acquisition mechanism and helps collective actions and resource to reach mutual goals. Therefore, resource-based theory has become a dominant perspective in the cooperation between organizations and it has been used extensively to discover relationships. According to this theory, managers are dependent on work environment for the necessary inputs because they cannot produce internally the

necessary resources and cooperate with other directors of organization in order to get them (Marchi et. al, 2007).

In last ten years, managers, from various sectors, have applied to cooperation between organizations in order to increase their competition advantage more and more. Intense competition continues to promote regulations based on cooperation between health managers. In many countries, threats of health system, pressure and slow financial growth force managers to increase their efficiency to provide satisfying health care without compromising on quality (Bernardo, 2012).

With technological progresses, innovation by new strategies and applying to new buildings are important factors, which would increase the value and efficiency. Intergrowth requires strategical areas, internal reorganization, quality in coping with public opinion, developing new treatment methods, modernizing, and strengthening the equipment. All of these can be too expensive and risky to be produced. Therefore, hospital managers get valuable resources like financial, human capital and management expertise by cooperating with other institutions and, by this way; decrease their dependency on external factors. In addition, they can share cost, resources and

skills with other parties and they have the opportunity to reach the market (Marchi et. al., 2007).

Health services managers around the world increase their cooperation within their institutional environment. Under these circumstances, theoretical and empirical studies are few as well as the recognition of cooperation between organizations within the context of health. In this regard, the question how the collaborative regulations improve community health care organizations remains unanswered (Salge et. al., 2009).

1. Cooperation Between Organizations

There are different definitions and forms like strategical alliances, partnerships or cooperation. Accordingly, relationships between organizations are perceived as regulations similar to the network, based on relational communication, which requires the exchange of resource. According to the resource-based perspective, only valuable, rare, inimitable and unchangeable resources create competitive advantage. Resources include "*all assets, skills, organizational processes, company features and information*". Competence-based theory becomes an independent perspective from resource-based views. Organizational competences are not necessarily internal resources; it accepts logic and open

borders, in other words; the sustainability of competitive resources generally depends on the network of the organization/cooperation and mixing with partner organizations abilities. Thus, competence-based theory sees the competition as relational. (Castelles, 2000).

Cooperation in management studies has consistently developed since 1980s. Since that time, managers have realized that their operations are more efficient by establishing relationships based on cooperation and creating mutual dependency with other individual and/or organizations. The benefits of cooperation between organizations, which include increasing environmental adaptations such as creating competitive advantages, access to crucial resources, extended market power, are widely documented in the literature. There are important findings regarding cost sharing, risk reduction, developed flexibility also collaborative relationships that show the definition possibility of financial and social aspects which are the main variables, affecting these relationships. Castells states that there are transformations in the social relationships in last twenty years. This change constitutes Castells' cooperation of social vision, which proves to have a structure in which the society seeks the connection, creates information

regarding individual, and develops cultural features that are reorganized and repeated in several sub-connections. Creating strong connections between member organizations can decrease the monitoring and integration costs. In addition, their collaborative relationships ease the transfer of crucial information that increases the cost efficiency in a rapid and proper way.

According to Marchi and Wittmann (2007), relationship between organizations based on cooperation is a determinant for the determination of cooperative system in sake of the cooperation's success. Good internal connections can increase the information flow and promote creating a strong connection between partnerships. This harmony can decrease the risks related to the operations, ease the safety and develop the cooperation. Bernardo et. al. (2012) argues that relationships based on cooperation reach a critical target, enter new markets, every party balances their special resources and earns new competences with the organizational learning. Salge and Vera (2009) and Bernardo et. al. (2012) state that cooperation allows more specialization in the interconnected organizations that increase the information and diversity. For Peci (1999), managers who choose to cooperate should prepare for

significant changes in the management. Managers need to learn to talk about confidence because partnership is the main characteristic. Integration with other companies, purchasing or growth strategies can be given examples, which are not accepted as innovation activities (Aktürk, 2016).

Several studies on operation cost theory have defined confidence as the key factor for the determination of cooperation between organizations (Mjoen and Tallman, 1997). Heide and John (1990) agree that confidence replaces control mechanisms or completes these mechanisms in order to guarantee the beneficial exchanges. Besides, previous studies show that it is easier to cope with environmental uncertainties, instability and organizational changes when confidence exists (Zaheer and Venkatraman, 1995). In addition, confidence can increase the communication between partners and information flow and this produces a positive effect on the cooperation between organizations (Zaheer et. al., 1998).

2. Motives of Strategical Cooperation

Strategical cooperation is an effective merger method in the world market for entering to the market in a rapid way, decreasing the operation cost and making a difference. These mergers increase generally purchase or the physical power as

merger (Bernardo et. al., 2012). The reasons for strategical cooperation are as follows:

1. Being strong with the integration of assets and skills: Organizations merge their assets and skills by cooperating in order to protect superiority over their competitors.
2. Undertaking new risky projects and capital needs to develop new work flows are determined.
3. Avoiding uncertainty: Sharing information is easier in the cooperation between companies in order to avoid uncertainty, which is high in goods or markets.
4. Sharing of new period, technology and information: Organizations, which operate in different and dissimilar goods markets and do not directly compete with each other, cooperate by sharing period, technology and information in order to create synergy.
5. Increase in the rate of rapid technological changes and consequently increase in the short product life cycle, rapid changing of customer tastes.
6. Organizations sometimes cooperate in order to keep up with their competitors.

3. Strategical Cooperation

Practices of cooperation between organizations are classified in various ways.

3.1. Franchising

The word of franchising derives from the “to free” verb in English (Can, 2012). Franchising is contractual relationship between legally independent partners, which are called the franchiser and franchisee (Nart, 2005). With the franchising contract, there is a continual debtor-creditor relationship between franchiser and franchisee (Aslanoğlu, 2007). Generally, it can be formed within two ways, either franchise fee or royalty (Külter & Demirgüneş, 2006).

3.2. Joint Venture

Joint venture deals with the cooperation which is generated by gathering around an unincorporated agreement by more than one independent companies, specialized in a specific business field, in order to do a certain business and gain profit (Çelik, 2002).

3.3. Contract Production

Within the contract production, organizations that participate in international marketing activities do not have to

establish a production unit in the foreign market (Can, 2012). Products, which are produced in a country under contract, can be sold to other countries as they can be put on domestic market.

3.4. Montage Operations

It is related to assembly or regulation of produced parts. Montages, which require *elaborare*, are possible where workmanship is abundant and production is cheap (Can, 2012).

3.5. Consortium

Within the consortium, organizations, from same or different countries and same or different professions field, generally cooperate by integrating financial and technological means in order to win a national or international tender for full-scale contacting works (Can, 2012).

3.6. Turnkey Projects

Projects, which a transnational company trains its personnel by building facility and make facility operationalized at end of the project, are called turnkey projects (Engin, 2005).

3.7. Build-Operate-Transfer Agreements

Build-operate-transfer model is a brand-new cooperation type, which aims to finance and enter the private sector for the

main infrastructural investments, and run huge investment projects like power plants, dams and airports, highways and subways (Can, 2012).

3.8. Licensing

It is called “License” to transfer a technology into a second party under the “Know-how” for a price.

3.9. Know-How Agreement

Within this type of cooperation, organizations, experienced and acquainted regarding the main product, offer consulting services on technical information and experience regarding activities related to the main product to the organizations that engage in a productive activity in a different regional markets but do not have enough information and experience.

One of the fundamental reasons of strategical cooperation is that organizations do not have the capacity of General Motors, which produce 1940s’ technology all by itself, any more. Generally, organizations in the technology intensive industries do not have the necessary power to get the necessary important technology by themselves. Rapid changes create difficulties and as a result of this environment; it can be suggested that the prerequisite of the competitive advantage

and surviving for the organizations is to perpetuate the change in accordance with the environment conditions and find a proper position for themselves in line with the innovation (Kılıçarslan,2018).Experts working in the field of psychology made different definitions of intelligence deducted from abilities they thought forms intelligence (Kaptanoğlu,2016)

Strategical cooperation is encountered in the international companies. Growing competition increases the speed of cooperation. This cooperation has started to accelerate in order to compete in a rapid way in the marketing. This bound is a commercial partnership that increase the competitive strategical activities of parties by the exchange of technology, expertise or product (Castelles, 2000). Strategical cooperation have differences from abovementioned other types of cooperation:

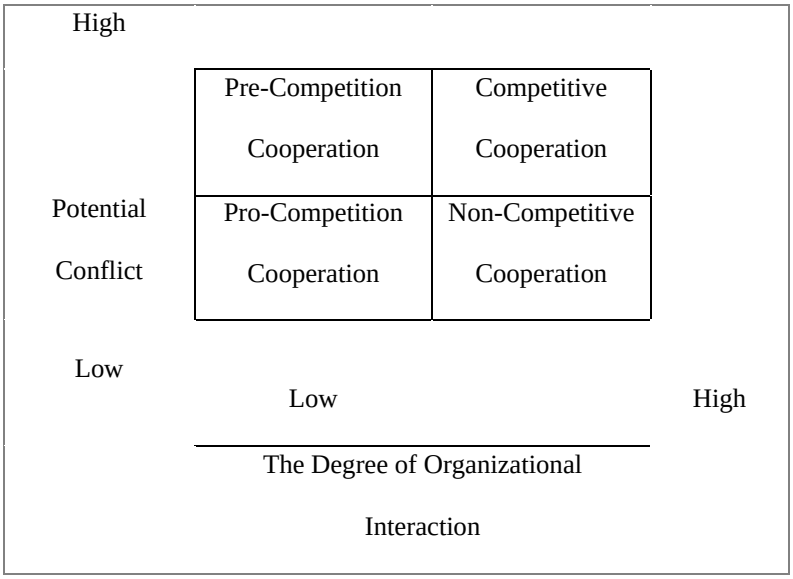
1. Overseas dealerships of transnational organizations are not a type of cooperation even if they are co-investments. These are generally the tactical reacts of transnational organizations to the pressures of government of host country and cultural barriers. Co-investing is generally a reconciliation rather than a goal.

2. Partner companies and branches do not constitute a strategical cooperation because they are not independent companies that have separate aims.
3. Agreements like simple goods and raw material *emptiovenditios* do not include long-term mutual dependence, shared administrative control, constant technology or product contribution. Therefore, they are not strategical cooperation.
4. Mergers that a firm takes the control of a new asset or taking in hand another organization and gaining profits by this way are not strategical cooperation.
5. Licensing or dealership agreements do not require constant technology, product or expertise transfer between partners so they are not strategical cooperation. Mutual licensing agreements, which require constant exchange of technology but do not require a shared control on the responsibilities related to the technology, are not strategical cooperation.

It is not necessary to capital investment to be a strategical partner. At the heart of the cooperation, there are growth by using someone else's capital; growth by using someone else's resources and skills; and growth targets without increasing the

own capital, investing and buying a company. For example, under the cooperation, Mc Donald's should take along Coca Cola in every country in which a branch is opened or increase the sales if a branch has already been opened in that country. There is no chance to drink Pepsi Cola in the Mc Donald's (Castelles, 2000). The typology of cooperation can be seen in Figure 1.

Figure 1. Cooperation Typology



4. Cooperation in The Health Organizations

In time, organizations have been faced with a more saturated market with adopting different positions in order to survive, continue to operate and provide customer satisfaction in the health organizations and services. Generally, several organizational development can be referred to these changes. In case of the danger of access to the critical resources and putting forward new difficulties to the health services providers, managers try to increase their advantages and decrease the environmental uncertainties by cooperating (Mascia et al., 2012; Pend & Bourne, 2009). These forms between organizations are characterized with a simple relationship between organizations which cannot be obtained by a single company and designed to reach long-term goals. In a study regarding the hospitals in the Taiwan, Chu and Çan (2013) found hospital managers in a relationship between organizations which would increase the own efficiency as well as protect their organization. To obtain scale and scope economy, increase the gains and hold the important resources, extend income and services, increase their effects and improve their market position, a cooperation between organizations is made (Zuckerman and D'Aunno, 1990).

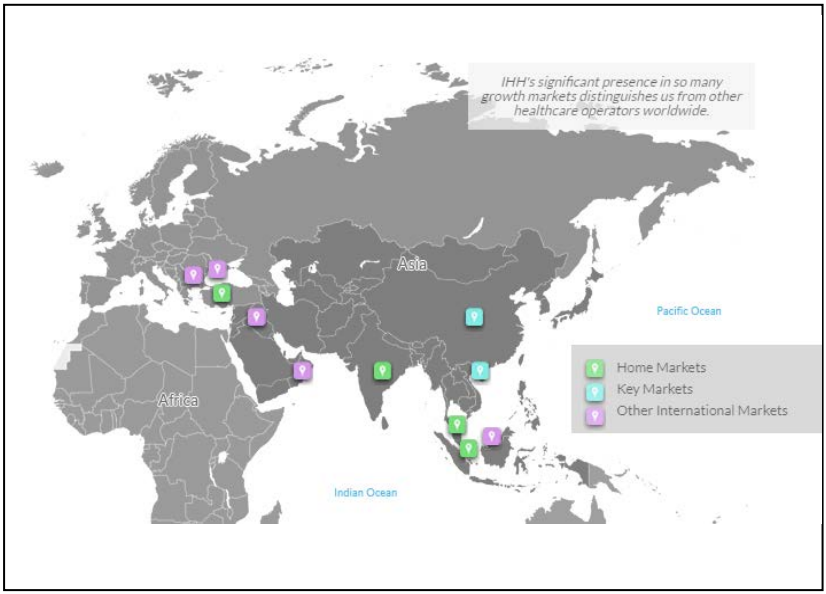
Hospitals can have valuable resources like financial and human capital and gain expertise by cooperation with other organizations (Bazzoli et. al., 2000) and decrease their dependency on external factors. Bachelors of education or technology, personal and organizational knowledge and skills, investments on public policies, coordinated act, which determine the individual and collective action in the health sector, are the factors that lead cooperative regulations.

With the perspective based on competence, these types of relationships provide an advantage for hospital managers. Previous studies show that cooperation, which aims to ease the information flow, improve competences and other resources, is the prerequisite for providing care in a high quality way (Jenkinson et. al., 2002; Ommen et. al., 2007). Creating cooperation between organizations is plainly related to collective safety and organizational surviving rather than reaching a more economical performance (Song, 1995). This shows two important issues in the health sector; lack of resources and sharing competences. These are among the fundamental reasons of cooperation by managers.

To survive under the gradually differentiating condition, it has become a compulsory for the organizations to try

different forms. Within a different point of view, to make several changes such as resource policies, finance and production policies, several technical human relations policies, from finance policies to production techniques, strategical cooperation emerges as an important way (Çelik, 1999).

Figure 2 shows countries where Acıbadem Healthcare Group is



effective by strategical cooperation.

Figure 2. Influence area of Acıbadem Healthcare Group

As seen in the Figure 2, Acıbadem Healthcare Group finds itself an important place in providing health services in the Far East, Balkans and Middle East. Population in these regions constitutes of 17% of the world population.

Due to the strategical cooperation, Acıbadem Healthcare Group moves to mutual goals with the organizations within this cooperation. In addition, necessary investment planning should be made to reach these goals. This provides an important advantage for Acıbadem Healthcare Group in the health sector.

Conclusion

Strategical cooperation is a kind of partnership, which is created to provide a global competitive superiority, between two or more organizations. Within these types of alliance or cooperation, parties share long-term goals and move together. Cooperation between organizations is accepted as a mechanism in order to overcome the lack of resources without losing organizational control and flexibility, an important investment and cost. Therefore, organizations should be continuously updated to maintain providing performance and services. Thus, cooperating between organizations may be a proper strategy in

order to increase competitiveness. This relationship between organizations can gradually perform complex tasks and increase health services. In fact, cooperation is especially important in health sector in which there are pressures of financial and social responsibilities.

Hospital cooperation that shows high performance is one of the places in which there is a good human relationship without neglecting working conditions and rights between patients and personnel in high-level organizations while having personnel professionalisms. Besides these advantages, sharing of information, competence and experience between specialists (physician, health professionals and managers) extends service quality and innovation and adopts new clinical practices. Cooperation at this level can lead to gain an attractive fame.

Because of the high costs in health sector, private health organizations go towards cooperation with both public and other private health organizations. With the increase in the number of private organizations in our country, competition has increased and organizations seek to expand abroad and share in the money in the world's health market. With this purpose, private health organizations have strategically cooperated with various health organizations. This cooperation

includes not only drug companies and various laboratories but also healthcare groups, which have a voice in the world. When the potential of our country in the health sector and its geographical features are considered, it can be said that cooperation between health organizations would increase.

REFERENCES:

Aktürk, E. B. (2016). *Perception regarding ethical rules implemented in the context of corporate governance: A study in banking sector* (Master's Thesis). Retrieved from The Council of Higher Education database. (Accession No. 445669)

Aslanoğlu, Suphi, (2007). Bir Büyüme Stratejisi Olarak Franchising Sistemi; Firmalar Açısından Önemi, Mevzuat Boyutu ve Muhasebe Uygulaması. *Afyon Kocatepe Üniversitesi, İktisadi ve İdari Bilimler Fakültesi Dergisi*, *9*(1), 77-78.

Bazzoli, G.J., Chan, B., Shortell, S.M., & D'Aunno, T. (2000). The financial performance of hospitals belongings to health networks and system. *Inquiry*, *37*(3), 234-252.

Bernardo, M., Valls, J., & Casadesus, M. (2012). Strategic Alliances: An Analysis of Catalan Hospitals. *Revista Panam Salud Publica*, *31*(1), 40-47.

Can, E. (2012). *Uluslararası İşletmecilik Teori ve Uygulama*. 4th Edition. İstanbul: Beta Yayıncılık.

Castells, M. (2000). *The Rise of the Network Society*. Cambridge, MA:Blackwell Publishers Inc.

Chu, H.-L., &Chiang, C.-Y. (2013). The effects of strategic hospital alliances on hospital efficiency. *The Service Industries Journal*, *33*(6), 624-635.

Çelik, A. (2002). Joint Venture. *Yaklaşım Dergisi*, (111), 72-77.

Engin, E. (2005*). İşletmelerin Uluslararası Rekabet Stratejileri ve Uygulamalı Bir Araştırma* (Unpublished master's thesis), Trakya Üniversitesi, Edirne.

Heide, J., & John, G. (1990). Alliances in industrial purchasing: the determinants of joint action in buyer-supplier relationships. *Journal of Marketing Research*, *27*(1), 24-36.

Jenkinson, C., Coulter, A., Bruster, S., Richards, N. and Chandola, T. (2002), "Patients' experiences and satisfaction with health care: results of a questionnaire study of specific aspects of care", ***Quality & Safety in Health Care***, Vol. 11 No. 4, pp. 335-339.

Rana Özyurt Kaptanoğlu**.** "*The Effect of Clients Emotional Intelligence on Advertising Perceptions*" l International Journal of Social and Related Science (IJSoReS) Volume 2016, 1(2), http://dergipark.gov.tr/ijsores/issue/29061/310873

Külter, B. & Demirgüneş, K. (2006). Franchise Değeri ve Franchise Değerinin Tespit Edilmesine Yönelik Bir Uygulama. *Dokuz Eylül Üniversitesi İ.İ.B.F. Dergisi, 21*(2), 95.

Marchi, J.J., &Wittmann, M.L. (2007). *Relevância Dos Factores Sociocomportamentais De Atores Envolvidos Em Redes Estratégicas.* São Paulo: Santa Cruz do Sul.

Mascia, D., Di Vincenzo, F., & Cicchetti, A. (2012). Dynamic analysis of interhospital collaboration and competition: empirical evidence from an Italian regional health system. *Health Policy*, *105*(2-3), 273-281.

Mjoen, H., & Tallman, S. (1997). Control and performance in international joint ventures. *Organization Sciences*, *8* (3), 257-274.

Nart, S, (2005). Türkiye'de Franchising Sisteminin Gelişimi ve Franchise Alan Girişimcilerin İş

Memnuniyeti Belirleyicilerinin Analizi Üzerine Bir Araştırma. *Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 10*(2), 124.

Peci, A. (1999). *Emergência e Proliferação de Redes Organizacionais: Marcando Mudanças No Mundo Dos Negócios.* Presented at 23rd Encontro Nacional da ANPAD, Curso de Mestrado em Administração Pública da EBAP/FGV.

Salge, T.O., & Vera, A. (2009). *Does innovation matter in the public sector: a service-user perspective*. Presented at the *13th Annual Conference of the International Research Society for Public Management (IRSPM),* Copenhagen, April.

Song, Y.I.L. (1995). Strategic alliances in the hospital industry: a fusion of institutional and resource dependence views. *Academy of Management Journal*, *38*(3), 271-275.

Zaheer, A., McEvilvy, B., & Perone, V. (1998). Does trust matter? Exploring the effects on international and interpersonal trust on performance. *Organization Science*, *9*(2), 141-153.

Zaheer, A., & Venkatraman, N. (1995). Relational governance as an interorganizational. strategy: an empirical test of the role of trust in economic exchange. *Strategic Management Journal*, *16*(5), 373-392.

CHAPTER 6:

CUSTOMER RELATİONS AND MARKETİNG IN HEALTH

Rana Özyurt KAPTANOĞLU * ,

* ranaozyurt77@gmail.com

Marketing concept began its formation in U.S.A at the beginning of the 20 th century. Later on, issues such as special and monopolistic sales, distribution and sales management have been emphasized. Later in the 60s, new concepts (organizational marketing, social marketing, marketing management, service marketing and international mrketing) began to emerge with marketing mixture (Altunışık vd.2001:3).

If we look at the development of the concept of marketing, it has been seen that this concept has gained many meanings in terms of product understanding during the phases it has been in until today. Marketing activities did not occur during the period of product conception. Later on, marketing is identified with the concept of sales, in the sense that businesses adopt when they have a shot at the desire of product. But at this time, the proliferation of enterprises and the increase in competition, the marketing and business circles in the

businesses have changed, as the customers requirements of marketing have changed, it is understood that these changes are aimed at giving the necessary response (Kılıç ve Kendirli, 2005: 34).

In another definition, marketing can be said to be an action aimed at satisfying people's needs and desires using changes. If we go on from this definition, it is possible to see that marketing is based on changes. Without change, marketing cannot occur. Marketing actions are fulfilled to facilitate exchange (Rızaoğlu, 2004: s 1).

1.1.Properties of Marketing

The understanding of marketing is gathered on consumer demand and needs. Because the focal point of marketing activities is consumer and society. Businesses try to attract consumer and community attention while activating their marketing activities (İslamoğlu, 2002:15).

If this is to be looked at, the marketing features and aspects may include the following (Mucuk, 2002:4).

•Marketing is a system consisting of many and varied activities.

•Marketing is activities that allow people to meet their needs.

•Marketing, services, goods and ideas are relevant.

•Marketing can be said that a product does not consist of advertising or sales. It takes the processes related to price, hold and distribution, starting from the process of pre-production, planning and development of the product from the time it was an idea.

•Marketing is a dynamic structure that can change continuously. Marketing, which is conducted in appropriate environments, is also a group of busness activities. Marketing mix elements are known as 4p. These are products, prices, clinging, distribution. Some researchers did not see the 4p adequately, and then added the 3p. These are; Processes, people and physical environment.

A) Products: all inputs and outputs offered to the market in order to satisfy human need and demand are expressed as manufactured (Dincer and Ertuğral, 2009:50).

It constitutes the marketing activities of the finished business. In the finished component, many subjects such as

quality, type, brand, style, warranty are discussed (Akkılıç, 2008:447).

b) Price: The price is called for businesses, their products, and the money they pay to get the goods. The price is the only element that provides income to the business. In this respect, you need to perform a good pricing strategy (Yalçın and Sezer, 1995:125).

c) Holding: the areas in which it is used, informing about the products and creating an awareness. Therefore, the expenditure on the hold is also high. These activities are made to brand the product and create an image (Balyemez vd. 2005:84)

d) Distribution: a product is referred to as a chain distribution channel from the manufacturer to the consumer. The distribution channels play an important role for manufacturers to provide superiority over their competitors (Yılmaz vd. 2002:81).

e) Processes: It is a consistent presentation of the quality of service that a consumer needs at the same time and the services it has produced. The availability of services in the service sector is only for the inability of consumers to meet the service (Karadeniz, 2006:16).

f) People: All perceptions of the customer receiving the service and the delivery of services constitute the human factor. In the service sector, businesses meet the personnel carefully selected human element to ensure customer satisfaction (yunus.hacettepe.edu.tr).

g) Physical environment: services are delivered to the customer in physical environments. Customers behave according to physical environment and some tips when reviewing their satisfaction levels. Physical environment, plant dimensions, environmental design, surrounding conditions (color, sound, odour, music etc. factors), layout, etc. are shown in the physique environment (Erturan, 2003:130-131).

1.2.Relational Marketing Concept

After these changes occurring in our age, businesses want to ensure that feedback is achieved by keeping the customer relationships at a high level with various strategies, and they are in the effort to minimize the expense items, such as advertising and so on. One of the issues that has been important lately is the concept of "relational marketing" and businesses are trying to increase their profits by treating consumers to the extent required by relational marketing.

The point of origin in relational marketing is in the form of marketing services with industrial market. Several researchers from northern Europe worked in these areas, creating a new approach in the late 70s. This new perspective has been developed against the idea that marketing is governed by the factors called 4p (Ertaş vd. 2008:29-30)

After this period, the issues of establishing and strengthening the customer relations are emphasized.

The focal point of this marketing aims to achieve personal and organizational objectives and develop customer relations, both in profit and in the commercialization of the relationship. This newly developed theory has been called by researchers as a theory of network or interaction. According to this theory, 4p is not sufficient in the industrial market and international transactions. At the same time, the suppliers, customers, society, distribution channels has argued that relations with the the individual and the state were critical. It was seen that America was influenced by the movements in northern Europe and relational marketing began to be spoken in the business world of America (Ertaş vd. 2008:29-30).

In the service sector, the concept of "4p" was not sufficient and the marketing activities were not adequte, and in

addition to the 4p, which was insufficient to express modern marketing understanding in the service sector, 3p was proposed. These are processes, people and physical elements. Therefore, the marketing mix in marketing of tourism movements consists of 7p (Altunışık, 2004:298-299).

As a result, some additions to the concept of 4 "P" were used as 5, 6, 7, or even 8 "p", although temporary solutions were sought in the historical process (Bozkurt, 2005:9-10).

The next stage is the relationship marketing phase and businesses invest in closer interaction and relationships with their customers and create the marketing karma by ensuring that the relationship is created (Yükselen vd. 2008:11).

1.3.Relational Marketing

1.3.1.General View to Relational Marketing

The idea of the old economy was to reach the economy with the production, but recently the sector with information has emerged. As a result, changes have emerged with the use of this information. In the new economic environment, which is formed by the use of knowledge and information, changes have occurred in business and marketing tactics. During the period of change, the companies have gained a concentration on the competitive advantage that is achieved by the use of the

information they acquire. Further use of the information leads to customer-oriented development of business and marketing methods. A change that is parallel to these changes leads to marketing insights that see relationships with customers in the form of a main axis. In the 1970s, two schools of thought emerged. The common deconces of these two schools of thought are the hypothesis that marketing is a factor of administration rather than an element, and that managerial marketing is based on the relationship. "Relationship building" and "managing" are the philosophical cornerstones of the two schools in question (Zengin ve Demirel, 2004:668). One of the common opinion today is that selling to existing customers is less costly and easier to sell. Any adaptation that will make the customer permanent affects the rate of profitability (Reicheld, 1993; Clark, 1997).

1.3.2.Definition of Relational Marketing

As a result of the rapid development and change in technology, the qualitative and quantitative progress of competition in the market, the impact of various factors such as change in customer demands and expectations; Customer relationship management, also known as relational marketing, is a customer-centric approach to the approaches that focus on

customer from product-centric approaches to marketing understanding. On the basis of relatinal marketing, it is a long-term relationship with the trust relationships established with customers (Demir ve Şahin, 2001, s. 220).

Relational marketing is the idea of what the individual customer is saying to the company and the willingness of the company employees to change their behaviour and practices in a manner that is willing to know about the customer (Odabaşı, 2000).

In the basic sense, relational marketing; is a concept that focuses on achieving and developing relationships with existing customers rather than finding new customers (Öztürk, 2003).

Relational marketing is a marketing method that can be used in tourism companies in order to satisfy the employees and customers by satisfying loyalty (Erdem ve Şahin, 2007:110).

1.3.3.Purpose of Relational Marketing

The purpose of relational marketing; "The result of long-term customer relations is to uncover customer loyalty. For this reason, it is occasionally utilized from incentive rewards programs to increase the frequency and amount of customers '

purchases. In these programmes, consumers have a certain percentage of points in exchange for each amount they spend on shopping, with the accumulation of points, consumers have the opportunity to obtain various prizes, discounts "(Oyman, 2002, p. 175).

"Businesses are trying to provide a competitive advantage through establishing, developing, and enhancing their relationship with existing customers. Basically, the understanding of relational marketing aims to transform new and existing customers into loyal and real customers who regularly purchase products and services ". Although different relational marketing objectives are specified by the authors, these are the common points (Demir ve Şahin, 2001, s.16);

Improve customer satisfaction; To better serve the result of close relationships to customers of the business, keeping promises to customers, making them feel valuable, i.e. increasing the quality of the relationship between the buyer and the seller, the customer satisfaction accordingly Increase.

Keeping the customers and creating loyalty; It is accepted by businesses that the cost of keeping existing customers is less than the cost of obtaining new customers. With the effect of this, the establishment of good relations with

customers, responding to changing requests and needs, to respond with goods and services, the formation of a trust bond as a result of the rutinization of some works, wasting the efforts of other enterprises, the customer It is possible to create loyalty.

Create customer value; Creating value for the customer is an approach to what customers want and what product they have acquired after they buy and use, and customers are generally best adapted to their needs to keep the benefits they receive from the enterprise at the highest level They search for the product that provides. On the other hand, the businesses try to increase the value it offers. At this point, the understanding of relational marketing plays an important role.

Providing customer interaction; Establishing a one-to-one and close contacts with customers, exchanging information and communicating efficiently, ensuring customers ' proximity to businesses and motiting them to choose the same business for the next acquisition. In particular, it plays a role in enhancing the level of relational marketing interactions.

Obtaining customer information; It is possible to collect and analyse data through technological infrastructures established to respond to customers continuously and healthily.

This enables the correct determination of the needs and desires, and allows the problems to be resolved in a short time.

Cross-selling customers; One of the objectives of relational marketing is to keep the customer in life, and to think about what can be sold differently than the changing needs. To increase the possibility of cross-selling. Because of their relationship with customers, they need to make more contributions to them by producing the other products they require. This will increase the loyalty of the satisfied customers to the businesses.

1.3.4. Importance of Relational Marketing

Relational marketing 20. It is a concept that has gained importance in the last 10 years of the century. Enterprises increased, quality, the customer gained importance during this period, which emerged under the name of modern marketing relational marketing, the next century is claimed to be a marketing strategy (Gülmez ve Kitapçı, 2003, s.88).

Relational marketing is shown as one of the important changes that arise in marketing understanding. The changing dynamic conditions of the market have resulted in new searches in the competition. In this case, businesses have cared about the structure and character of the relationship in addition

to the functioning of the buyer seller relationship in the shopping process which constitutes the basis of marketing. If we refer to another definition; They focus on the imortance of the relationship between the quality of the change and the sides of the exchange, not on the values that are subject to change in the buyer-seller relationship (Altunışık, Özdemir ve Torlak, 2004, s.22; Kanagal, 2009, s.109).

It is important to share information and adopt by different departments in order to be able to implement marketing-oriented management (Grönroos, 1994). Customer satisfaction is a natural output of relational marketing as well as a prerequisite in terms of customer loyalty and continuity (Egan, 2000).

1.3.5. Benefits of Relational Marketing

The emergence of the advantages of the long-term company-customer relations and the emergence of deficiencies in the operational marketing approach make it necessary to implement the relational marketing approach. In this sense, the benefits of relational marketing to a service business can be sorted as follows.

• Increase in customer retention rate and customer loyalty-they do better with customers, buy more and more often.

• Increase in customer profitability-profitability of the customer to the business increases. This is not only because customers buy more, they also;

-It is not necessary to acquire a lot of customers in order to have a lower cost of customer obtaining and to create a balanced throughput,-as existing customers are more responsive, the cost of sales is reduced. In terms of customer, there are several benefits to building long-term relationships with a business. Establishing long-term relationships with the service server makes the customer feel good and contributes to the quality of life (İnal ve Demirer, 2001).

1.3.6.Concept of Customer Loyalty in Relational Marketing Definition

Establishing long-term relationships with customers and providing customer loyalty is one of the most important aspects of the understanding of relational marketing. Customer loyalty is accomplished by proper management of marketing resources, aiming to provide the greatest value to customers. This indicates that the effectiveness of the relationship change

in terms of service businesses where individual relationships are outweighs can only be achieved by acting in the framework of the relational marketing approach (Yüksel, 1997). One of the common blood today is that selling to existing customers is less costly and easier to sell. Any adaptation that will make the customer permanent affects the rate of profitability (Reicheld, 1993; Clark, 1997)

1.4.Components of Relational Marketing

1.4.1.Trust

It means establishing an independent relationship between customer and business, where everyone trusts the other for the solution and success. If the customer believes in the relationship and gives value; As a result, the business establishes a common bond with the customer based on trust and gain approach. Businesses should now be established and operate based on trust. With such a relationship based on trust, the customer will clearly specify the request, and the seller determines its behaviour against the customer and can change its product for the customer. As a result, a business that relies on its business believes it is less at risk and will be less damage than the purchases it makes (Kırım, 2000, s.81)

In deciding for a customer who trusts the business, uncertainty will be reduced, risk perception will be eliminated and the customer will have a tendency to choose the business (in terms of product or service), and it will increase the likelihood of being a loyal customer at a later time (Yağan, 2010, s.76).

In order for a business to be able to trust its customers, every visit, every purchase and event must maintain that trust in every effort or email that is made. If a business fails to relive this trust, the customer will continue its relationship with the business by completing a different business (Kutlugöz, 2007, p. 74).

1.4.2.Competency

The basis of relationships constitutes human factor. Human beings are also one of the inner rings of relational marketing. Therefore, the information level of the business employees is of great importance in the relationship of the business with the Customers (Gordon, 1998, p. 25).

1.4.3.Commitment

Another concept that is mentioned with confidence in relational marketing and has a close relationship with trust is making commitments. Like Trust, making commitments,

which is one of the indispensable of long-term relationships, is an important variable in understanding the power of marketing relations and as a useful component in measuring customer loyalty and future purchasing frequency (Sayıl, 2014, s.24).

1.4.4.Communicatin

Communication is a member of the community, realizing itself as a social being, and from being a biological entity in another expression. Communication in customer relations is extremely important. Especially the body language should be used very well. On the other hand, one of the most important objectives of communication is to enable the interaction and modification of the other members of the community through communication. The resulting influencing, routing and sharing process will contribute to the formation of common values, judgments, thoughts and therefore common objectives in society (Kavak ve Vatansever, 2007, s.122).

In order to be successful in communication, it is necessary to have a long time and be successful in this regard. For successful and long-term communication, expectations on both sides must be answered from the correct channel. In an effective process, the most important element should be a quality communication based on trust. Communication

established in these phases will play an effective way for businesses to develop healthier and longer-lasting relationships and create loyalty (Hacıefendioğlu, 2005, s. 74).

1.4.5.Conflict Management

It is possible to talk about conflict in the environment of people. As the general communication in the service sector is verbal, it is more appropriate to use more carefully selected phrases and clear expressions. The outcome of such situations will continue in conflict when there is a difference in the beliefs and interests between people interacting (Batman ve Arpacı,2008, s.118).

As long as the conflict is well managed, it will give managers more flexibility in the formation of different alternatives. Creativity is increased with these alternatives and it holds an important place in ensuring the continuation of the enterprises (Hacıefendioğlu, 2005, s. 81).

It is also possible that conflict can have a negative impact on businesses and can make a positive impact in good management.

CONCLUSİON

Both in the service sector and in the production sector the most important communication in terms of marketing and

customer relations is known to be very important for customers. Especially in relational marketing, it is becoming increasingly important today because of the competition. The quality of the service we provide for health and marketing and advertising is the most accurate goal to market a new service after customer satisfaction. Rapid changes create difficulties and as a result of this environment; it can be suggested that the prerequisite of the competitive advantage and surviving for the organizations is to perpetuate the change in accordance with the environment conditions and find a proper position for themselves in line with the innovation (Kılıçarslan,2018)

Another issue is reaching the goals in terms of quality of internal customer satisfaction and marketing. In most of the academic studies on relational marketing, there is no complete application model, focusing on the subheadings of the image. Sharing information within the organization is crucial to creating a company's memory. In addition to the CRM system, the sharing of all kinds of information about the customer from different systems (e.g. accounting system, Dealer systems) is important for the success of relational marketing. Technology is an important tool for relational marketing. However, in many applications, it is seen that technology is not a tool. Loyalty

programs, such as the Internet, are not sufficient for the successful adaptation of relational marketing. All these tools should be supported with robust strategies and an operational model. Despite the intensity of academic studies in the field of relational marketing, an operational model recommendation is minimal.

REFERENCES

Akkılıç, M. Emin (2008), "Turizm Literatürlerinde Pazarlama Kavram ve Anlamlarına İlişkin Yaşanan Bazı Kargaşalıkların Tespiti", III. Balıkesir Ulusal Turizm Kongresi, 17-19 Nisan, s:447-448

Aktürk, e. (2016) ''Kurumsal Yönetim Çerçevesinde Uygulanan Etik Kurallara İlişkin Algı: Bankacılık Sektöründe Bir Araştırma '' Beykent Üniversitesi Doktora Tezi, İstanbul

Altunışık, R, Özdemir, Ş. ve Torlak, Ö. 2004. Modern pazarlama, 3. Baskı. İstanbul: Değişim Yayınları.

Altunışık, R, Ş, Özdemir ve Ö. Torlak (2001), Modern Pazarlama, 1. Basım, Değişim Yayınları, Adapazarı.

Demir, H. ve Şahin, A. 2001. Endüstriyel malların pazarlanmasında ilişki pazarlamasının önemi. Pazarlama Dünyası. 15 (3), 15-24.

Dinçer, F. İstanbullu ve S. Muğan Ertuğral (2009), "Turizm İşletmelerinin Pazarlamasında Ürün", Editör: Cevdet Avcıkurt, Şehnaz Demirkol ve Burhanettin Zengin, Turizm işletmelerinin Pazarlamasında 7P ve 7C, Değişim Yayınları, İstanbul

Erdem, Barış ve Bayram Şahin (2007), "Konaklama İşletmelerinde Uygulanan Modern Pazarlama

Tekniklerinin Analizi: Ampirik Bir Araştırma", Çeşme Ulusal Turizm Sempozyumu, 21-23 Kasım, İzmir.

Ertaş, F. Coşkun vd. (2008), "Tokat İli Müşteri Memnuniyeti Araştırması", Gaziosmanpaşa Üniversitesi, İ.İ. B.F. Yayınları, No:8, Araştırma Seri No:7.

Egan J. (2000). Drivers to relational strategies in retailing, Retail & Distribution Management, 28, 8.

Erturan, Ayça (2003), "Menkul kıymetlerin Pazarlanması ve Aracı kurumlar Üzerine Bir uygulama", Basılmamış Yüksek Lisans Tezi, Ankara Üniversitesi Sosyal Bilimler Enstitüsü

Gordon, I.H. 1998. Relationship Marketing, Etobicoke Ontario: John WileyandSons.

Grönroos, C. (1994). From marketing mix to relationship marketing – towards a paradigm shift in marketing, Management Decision, 35, 4.

Gülmez M. ve Kitapçı, O. 2003. İlişki pazarlamasının gelişimi ve yakın geleceği. C.Ü. İktisadi ve İdari Bilimler Dergisi, 4 (2), ss.81-83.

Hacıefendioğlu, Ş. 2005. İlişki Pazarlaması ve turizm sektöründe bir saha araştırması. Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi. 9 (1) ss.89.

İnal M. E. ve Demirer Ö. (2001), "İlişki Pazarlamasına Genel Bir Bakış", Pazarlama Dünyası Dergisi, Y. 15, İstanbul: 26, 29.

İslamoğlu, A. Hamdi, Kenan Aydın, Burcu Candan ve Şenol Hacıefendioğlu (2006), Hizmet Pazarlaması, Beta Yayınları, 1. Baskı, Ekim. İstanbul.

Karadeniz, C. S. (2006), Kişisel Satış Yönteminin İlaç Pazarlaması Üzerine Etkisi, Basılmamış Yüksek Lisans Tezi Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü.

Kavak, B. ve Vatansever, N. 2007. Hizmet sektöründe örgüt içi iletişim bileşenleri ve işgören verimliliği üzerindeki etkileri: Ankara'daki beş yıldızlı otel işgörenlerinin düşünceleri. Ticaret ve Turizm Eğitim Fakültesi Dergisi. (22), pp.120-140

Kılıç, Sabiha ve Çağıran Hülya Kendirli (2005), "Endüstriyel Pazarlarda İlişkisel Pazarlamanın Yeni Ekonomideki Yeri ve Önemi" 3. Sektör Kooperatifçilik Dergisi, Sayı: 148.

Kırım, A. 2001. Strateji ve birebir pazarlama. İstanbul: Sistem Yayıncılık

Kılıçarslan, m (2018). Innovation in the Health Sector. In Rasim Yilmaz and Günther Löschmigg (Ed), S

Kutlugöz, H. (2007). İlişkisel pazarlama çerçevesinde alıcı ve tedarikçi arasındaki ilişki kalitesi ve bir uygulama. Yüksek Lisans Tezi. Eskişehir: Anadolu Üniversitesi SBE

Mucuk, İsmet (2002), Temel Pazarlama Bilgileri, 1. Baskı, Türkmen Kitabevi, İstanbul

Odabaşı Y. (2000). Satışta ve Pazarlamada Müşteri ilişkileri Yönetimi, Sistem Yayınları: 19, 93.

Oyman, M. 2002. Müşteri sadakati sağlamada sadakat programlarının önemi. Kurgu Dergisi. (19), 169-185

Ozkurt, İzzet (2005), Bütünleşik Pazarlama İletişimi: Halkla İlişkiler Temelli Bir Model, 2. Baskı, Media Cat Yayınları, İstanbul.

Öztürk S. A. (2003). Hizmet Pazarlaması, Ekin Kitabevi, İstanbul: 179-180.

Kaptanoğlu özyurt, R. (2016), Algılanan Değer, Müşteri Tatmini Ve Marka Bağlılığı İlişkisi, Marka Tutumları Ve Ürün İlgi Düzeylerinde Farklılığın Rolü Üzerine Bir Araştırma, Beykent Üniversitesi Doktora Tezi, İstanbul.

Rızaoğlu, Bahattin (2004), Turizm Pazarlaması, 4. Baskı, Detay Yayıncılık, Ankara

Reicheld, F. E. (1993). Loyalty based management, Harvard Business Review, 71 Mart-Nisan.

Sayıl, E. M, (2014). İlişkisel pazarlama stratejisi ile müşteri değeri ve davranışı arasındaki ilişkilerin analizi: bankacılık sektöründe bir uygulama. Doktora Tezi. İstanbul: Haliç Üniversitesi SBE

Yağan, E. 2010. İlişki pazarlaması uygulamalarının müşteri sadakati yaratmadaki rolü. Yüksek Lisans Tezi. Ankara: Ankara Üniversitesi SBE

Yalçın, F. Asuman ve İ. Füsun Sezer (1995), Pazarlama Bilgileri, Bilim Teknik Yayınevi

Yılmaz, C. E. T. Kabadayı ve B. Sezen (2002), "Dağıtım Kanallarında Üretici-Bayi İlişkilerinde Bağımlılık Kavramı ve Bağımlılığın İşbirliği, Bağlılık ve Memnuniyet Üzerine Etkileri", Doğuş Üniversitesi Dergisi. (5). 181-192

Yüksel, B. (1997). "Hizmet Pazarlamasında İlişki Değişimi ve Değişimin Etkinliğini Arttırmada İlişki Pazarlamasının Rolü", Celal Bayar Üniversitesi, Yönetim ve Ekonomi Dergisi, Manisa, 3: 437-463.

Yükselen, C. A. Koçak ve S. Oflazoğlu (2008), "Pazar Yönlülük Kavramındaki Yeni Yaklaşımlar: Girişimcilik

Perspektifinden Ele Alınışı", Nevşehir Üniversitesi İ.İ.B.F, 13. Ulusal Pazarlama Kongresi, 25-29 Ekim, s: 10-20, Nevşehir

Zengin, Hayrettin ve Ömer Fahrettin Demirel, (2004), "Türk Yöneticilerin Pazarlamaya Bakışı" 3. Ulusal Bilgi, Ekonomi ve Yönetim Kongresi, 25-26 Kasım, Eskişehir.

CHAPTER 7:

THE IMPORTANCE OF OPTICIAN EDUCATION AND EMPLOYMENT OPPORTUNITIES IN HOSPITALS IN TURKEY

Mehmet Murat YAŞAR*

Mustafa Şerif KİRİŞÇİ*

Hüseyin ERİŞ*

*** Health Services Vocational School-Şanlıurfa, Harran University / TURKEY**

1. Introduction

Opticianry programs are available on-site health services vocational high schools at about a hundred university in Turkey. Every year hundreds of people who have graduated from the opticianry program be served only in optical stores. The optician does not work in any of the public and private hospitals. Taking into consideration that they have received training to work in the hospital opticians can be a great advantage for Turkey. A different employment area can be created and can contribute to public health. For this purpose, quality will be increased in optician sector.

2. Optician Education in Turkey

The term 'optic' comes from Greek and means 'to see' [1]. It is a science that covers the events related to light and vision. An optician refers to a person who makes or sells various optical equipment, including glasses. In addition, the number of (graded) eyeglass and eyeglass frame to sell, glasses and all kinds of prescription lens to make the optician profession to perform the sale, optician in the field of at least an associate degree in vocational education and training is the person who graduated from college.

The optician must have an optician-related curriculum from the relevant institution. For this purpose; optician must studied courses such as physics, geometric optic, visual optics, eye anatomy, eye physiology, public health, emergency aid, optician applications, optical instruments, package program applications, store management, public relations, behavioral sciences, occupational health and safety, store management and hospital management in the program. In addition to the theoretical knowledge of these courses, they must also receive training in practice. Opticianry is a health program based on both theoretical knowledge and dexterity.

It is very important to take physics training as the optician is related to the light related events. Physics is an area that forms the basis of an optician's theoretical knowledge of light. There is no need for any medium for the light to propagate by means of an electromagnetic wave. The light travels at a certain speed in a direction perpendicular to the magnetic field and the electric field [2]. In opticianry, it is important to know topics such as displacement, vectors, velocity, acceleration, wave theory when based on light.

In the field of geometric optics, the direction of light and direction change are examined spatially by various physical

phenomena occurring when changing the light's environment. For this purpose, geometric optics education is learned about the situations that occur when the light passes through the optical instruments. Lenses, mirrors, polarization, spectroscopic methods are some of the topics covered in geometric optics. In visual optics, the events occurring in the image are examined in detail.

Two of the subjects that an optician should be trained are eye anatomy and eye physiology. The aim of the optician is to make patients with vision problems a suitable sight vehicle with the guidance of the ophthalmologist. In this context, the optician must know the anatomical and physiological structure of the eye. Knowing the structure of the eye plays an important role in the selection of optical instruments.

Since the profession of optician is related to one-to-one people, public relations and behavioral sciences are also important. To see a person with visual impairment, to be able to see the individual optical instrument can be personalized, the correct orientation of the optician takes place. The person's work, daily activity, height, neck length and facial structure affect the type of optical instrument to be used. The optician

must have the necessary information to obtain this data from the person. This is about how to be treated in human relations.

Applied vocational courses in optician training are the main components of education. In the applied courses, the optician is able to mount an eyeglass lens to the frame. The optician learns the types of frames, types of lenses, techniques of measurement using laboratory tools in practical courses. The optician learns to determine the types of lenses depending on the nylor, facet and bone frame (Figure-1) types.

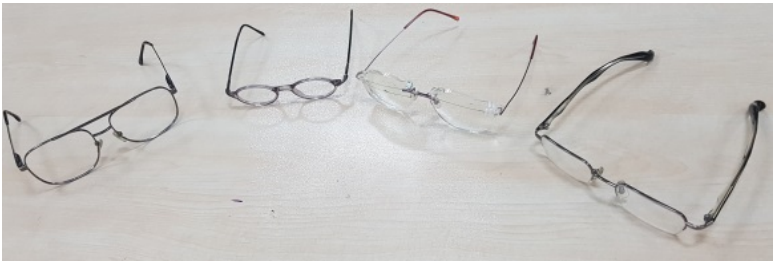


Figure-1 nylor, facet and bone frame types.

A student with optician training, the optical workshop tools used to mount the lenses to the frame are briefly: Manual or digital focimeter (Figure-2), pupilmeter (Figure-3), hand stone (Figure-4) or automatic glass cutting machine (Figure-5), nylor (Figure-6) and glass drill (Figure 7). Since the use of these devices requires manual dexterity, work must be carried out continuously on optical lenses in practical courses.

Figure-2 Manuel and Digital Focimeter

Figure-3 Pupilmeter.

Figure-4 Hand Stone.

Figure-5 Automatic glass cutting machine.

Figure-6 Nylor.

Figure-7 Glass drill.

3. Employment Opportunities of Opticians in Hospitals

Opticianry, as a health care profession, should include ophthalmology, quality management systems, public health, emergency aid, hospital or store management, professional ethics, labor and social security law and medical terminology. With these courses, They should be able to work in the units related to the title of optician in any health institution. According to the data of 2015 the number of hospitals that connected to the health ministry is 865, the number of university hospitals is 70, the number of private hospitals is 562 in Turkey. According to the data of 2015, There are 1497 hospitals in Turkey [3]. These hospitals have eye polyclinics and serve thousands of patients every year. Most of the patients in the ophthalmology clinic are people with visual impairment. After the doctor's examination, they provide eyeglasses from the optics store.

The absence of optician employment in these hospitals is a major shortcoming in the optician sector. There are advantages to employers in hospitals. They may be helpful in lens and frame selection of patients who undergo an eye examination. In this way, when the patients goes to an optical

shop, they will be able to choose the appropriate lens and frame for them.

The optician will carry out transposing procedures in the prescriptions and will eliminate this procedure in optical stores. Since the prescriptions will be made in a regular manner, the optical store will be able to order lens orders without any action. This will reduce the workload.

The presence of opticians in the hospital will increase the knowledge of the public about visual defects. The reasons for the occurrence of each vision defect, the purpose of using the lenses, the care and use of the glasses will be provided by the optician will be able to learn and understand. Opticians will also be able to contribute to teaching patients' daily eye exercises.

An optician training person can also work in hospital management as they are trained in hospital management and quality management systems. In this way, better quality and more suitable devices can be provided in the purchasing process of the optical instruments used in the eye policlinics in each hospital. It is obvious that the people who have received sufficient education in their profession increase their quality standards by taking part in the institutions.

Starting from the above-mentioned situations, the fact that opticians work in public and private hospitals will benefit both in terms of the awareness of society and in terms of employment and in achieving high quality of institutions.

4. REFERENCES

A. Mark Smith, (2015). From Sight to light, Univercity of Chicago,

Raymond A., Servay and chris Vuille, (2015).Collage Physics

Directorate General of Health Services in Turkey.

CHAPTER 8:

ANAEMIA IN PREGNANCY

Lecturer Feray BUCAK(1)

(1) Faculty of Health Sciences, Department of Nursing, Harran University Sanliurfa Turkey,feraykabalcioglu@hotmail.com

Anaemia is physiologically defined as a reduction in the oxygen-carrying capacity of blood and blood haemoglobin (Hb) concentration in the blood below the normal values (1-8). Anaemia is clinically defined as blood Hb or haematocrit (Hct) value below the reference range valid for age and gender. The reference values have been determined according to haemoglobin or haematocrit values of a healthy group of individuals and have been defined as the range of values covering 95% of the population. Hb and Hct values vary according to age, gender, physiological and pathological conditions of the person, socioeconomic status, pregnancy and its different stages, environmental factors, altitude of residence location (elevation above sea level), and smoking habit (10 - 16). Anaemia in pregnant women is a common public health problem associated with morbidity and mortality risk (17). In 1989, the Centre for Disease Control and Prevention (CDC) defines anaemia in pregnancy as haemoglobin value below 11 g/dl in the first and third trimesters of pregnancy and below 10.5 g/dl depending on increased plasma volume in second trimester (18-23). According to indices of World Health Organisation (WHO), anaemia in pregnancy is stated as Hb value below 11 g/dl and it is generally used as limit in clinical

practices. This definition was made in 2001 and is still valid today (24).

Although the above limits are given, some studies have stated that it is necessary to investigate the causes of anaemia and to treat anaemia in cases where it falls below 10 gr/dl or 10.5 gr/dl (25 – 28).

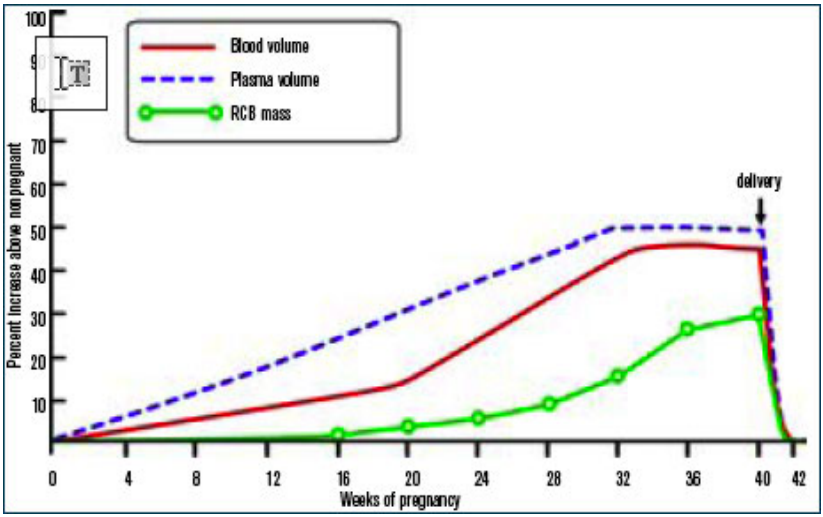
Haematological Changes in Pregnancy

The most significant haematological changes during pregnancy are changes in blood volume and coagulation mechanism (29).

Blood volume increases significantly during pregnancy. It was observed that blood volume increased by 40-45% in normal near-term pregnancies compared to the prepregnancy period. The increase in blood volume may vary in every woman. The increase in blood volume during pregnancy is approximately 1500-1750 ml (40-45%) in singleton pregnancies and 2000-2500 ml in twin pregnancies. This volume increase consists of 1000 ml plasma and 450 ml erythrocyte (30). Plasma volume begins to increase in the first trimester and reaches its maximum value at 24 weeks of pregnancy in the second trimester. The maximum increase is seen in the second trimester. Plasma volume slowly increases

in the third trimester and then continues in plateau in the last weeks of pregnancy. It peaks at 32 to 34 weeks of pregnancy and slowly decreases towards 40th week (31-35).

Chart 1. Blood volume changes during pregnancy (36).



Erythrocyte volume increases by 17-25% so that it begins at the end of the first trimester and lasts throughout the entire pregnancy. During a normal pregnancy, blood volume and erythrocyte increase by 47% and 17%, respectively, resulting in haemodilution. Haemodilution reaches its maximum level at 22-34th weeks. This dilutional anaemia is considered as physiological anaemia of pregnancy. Although haematocrit, haemoglobin concentration and erythrocyte count decrease due

to the increase in plasma volume during pregnancy, there is no change in their number and quantity. Although the mechanism of this event seems complicated, physiological anaemia during pregnancy has positive aspects. The decrease in blood viscosity is estimated to have benefits such as decreasing the risk of thrombus formation in the mother, increasing placental perfusion, and thus facilitating oxygen transport to feed fetal and maternal tissues until delivery (39-39).

Causes and Classification of Anaemia in Pregnancy

The majority of anaemia in pregnancy are induced by iron deficiency, followed by folic acid and vitamin B12 deficiencies, sickle cell anaemia, and thalassemia (40-42).

Table 1. Causes of Anemia in Pregnancy (43-45).

Acquired	Hereditary
➢ Iron deficiency anemia ➢ Anemia due to acute blood loss ➢ Anemia due to inflammation or malignancy ➢ Megaloblastic anemia ➢ Acquired hemolytic anemia ➢ Aplastic or hypoplastic anemia	➢ Thalassemia ➢ Sickle cell hemoglobinopathy ➢ Other hemoglobinopathies ➢ Hereditary hemolytic anemias

Classification of anaemia in pregnancy:

No clinical anaemia: Hb > 11 g/dL, no pallor.

Moderate anaemia: Hb 7-11 g/dL or palmar or conjunctival pallor.

Severe anaemia: Hb < 7g/dL and/or severe palmar or conjunctival pallor. There is also at least one of the following findings: fatigue, shortness of breath at rest, respiratory rate > 30/min,

Critical anaemia: Hb < 4 g/dL (43,46-48).

Maternal Risks of Anaemia in Pregnancy

Severe anaemia in pregnancy has a negative effect on maternal and fetal outcomes. Maternal risks show a greater increase than fetal risks (48,49). The maternal mortality is 5 times higher in pregnant women with anaemia than those without anaemia. Moreover, complications such as obstetric haemorrhage and shock that may threaten maternal health are seen in pregnant women with anaemia (50).

Anaemia causes the mother to feel more tired during pregnancy and the postpartum period and leads to cardiological problems in pregnancy and birth (51-53).

The maternal outcomes of anaemia in pregnancy include cardiovascular symptoms, decreased physical and

mental performance, decreased immune function, fatigue, reduced peripheral blood reserve and thereby an increased risk for blood transfusion in the postpartum period (54-55). Anaemia increases the risk of hypertension in pregnant women. The healing of episiotomy or incision after delivery may delay. In addition, anaemia accelerates the formation of infection, and anaemia-induced diseases have worse clinical course.

Severe maternal anaemia has been reported to cause complications such as pyelonephritis, puerperal fever, preeclampsia, and placental insufficiency (56).

Iron Deficiency Anaemia

Iron deficiency is the most important cause of anaemia. Although it varies according to local causes in various populations, 50% of anaemia cases is associated with iron deficiency. Iron deficiency anaemia (IDA) is characterized by reduced or depleted iron stores, low serum iron level, low transferrin saturation, low haemoglobin concentration, and haematocrit level.

Iron deficiency is the most common nutrient deficiency in the world (57-61). Nutritional anaemia is a condition in which the haemoglobin content of the blood is less than normal level as a result of the lack of one or more of the essential

nutrients. Although it is widespread all over the world, it is more severe in developing countries because nutritional problem cannot be solved sufficiently (62,63).

Low socioeconomic status, inadequate iron intake with diet, iron malabsorption, chronic blood loss, the use of iron for foetal and infant erythropoiesis during pregnancy and lactation, haemoglobinuria, intravascular haemolysis or combination of all factors underlie the pathogenesis of IDA (64,65).

Iron deficiency anaemia in reproductive-age women occurs during periods when iron requirements increase such as excessive haemorrhage, parasitic infections, chronic infections, micronutrient deficiencies, hemoglobinopathies, inadequate iron intake, poor iron absorption in diets high in phytate and phenolic compounds, and growth and pregnancy (66-70).

The practical method commonly used to understand whether or not anaemia occurs due to iron deficiency is the examination of Hb and Hct response 1-2 months after iron intake. An increase of 1 g/dL in Hb level or 3% in Hct indicates iron deficiency (71).

The Causes of Iron Deficiency Anaemia in Pregnancy

1- Inadequate iron intake in daily diet (72-75)

2- Impaired iron absorption (76)

3- Increased iron requirement of the organism (Iron consumption increases due to increased requirements of the foetus and increased blood volume in pregnancy. Despite the fact that iron absorption increases especially in the second and third trimesters during pregnancy, dietary iron is not enough to meet the need. Therefore, iron supplementation is required)

4- Pathological events leading to iron loss (bleedings), depleted iron stores

5- Impaired iron utilisation (77)

6- Poor absorption in the digestive tract or absorption disorders (78)

7- Frequent pregnancies and recurrent abortions (79-81)

8- The diet of majority of the community is usually based on cereals and rarely meat products

9- A certain amount of iron is used for infant (82)

10- Iron depots are empty or at low level due to frequent infections and especially parasitic diseases (83-86)

11- Iron-rich foods are not given on time and sufficiently due to lack of adequate information and poor socioeconomic status (87-91)

12- Consumption of large amounts of tea and coffee with meals (92,93)

13- Consumption of phytate and unleavened bread: Cereal brans, cereal grains, highly purified flours, legumes, and phytates found in nuts and seeds inhibit iron absorption by making water-insoluble and non-reducing compounds with dietary iron. Germination, fermentation and cooking of foods can enhance iron bioavailability by reducing the phytate content. Fermentation of foods such as bread and doughnuts and soaking dried legumes in water increase iron absorption by reducing the effect of phytates (94,95).

14- Pica habits: It can be defined as ingestion of non-food substances for at least 1 month. Many matters such as salt, ice, peanut, starch, coffee bean, soil, hair, faeces, paint, lime, tomato seed, paper, cigarette but have been defined as pica objects. The physiopathology of pica has not yet been elucidated. These non-food substances cause the development of anaemia by binding iron and reducing iron absorption in the bowels (96-104).

15- Individuals do not have enough knowledge about factors that increase and decrease iron absorption (105-108).

Clinical Symptoms of Iron Deficiency Anaemia

Iron deficiency anaemia is not only a haematological disease determined with anaemia, but also a systemic disorder that affects many functions. There are few symptoms in the early stages of iron deficiency. The symptoms become more pronounced as the severity of iron deficiency increases. In moderate anaemia, symptom may not be present, but palmar and conjunctival pallor can be seen (38).

All systems are affected by iron deficiency anaemia. There are no specific clinical findings in iron deficiency anaemia (109). Iron deficiency anaemia begins insidiously, and its clinical symptoms progress very slowly. There may be secondary clinical findings, but routine blood tests cannot reveal any other finding than anaemia (110). The symptoms accompanied by iron deficiency depend on the speed at which anaemia develops. The most common specific clinical symptoms for iron deficiency anaemia are lethargy and fatigue (111). Other symptoms may include one or several of headache, paraesthesia, burning tongue, pica, spoon nails, and blue sclera triad.

Pallor becomes more prominent on the palmar surface of the hands and in the nail beds, conjunctiva, and mucous membranes. Angular stomatitis, glossitis, cheilosis, koilonychia, retinal haemorrhage, conjunctivitis, tachypnoea, tachycardia, and splenomegaly can be seen in cases of severe anaemia. Some authors support the correlation between iron deficiency anaemia and defective cellular immunity and decreased leukocyte defence against bacteria. However, the correlations between immunity and susceptibility to infections in iron deficiency are not clear.

Fatigue in iron deficiency anaemia develops due to decreased iron-containing enzymes in vital tissues and reduced energy production in muscles (112). When the amount of haemoglobin in the blood decreases, the amount of oxygen delivered to the tissues decreases and tissue hypoxia occurs. Hypoxia causes a deterioration in the function of many tissues. Therefore, the symptoms and findings of anaemia are related to many organ systems. In cases of chronic insidious iron deficiency, the findings are obscure, and the clinical symptoms progress slowly. There are symptoms such as weakness, fatigue/decreased exercise tolerance, loss of appetite, irritability, persistent headache, numbness in the extremities,

shortness of breath, palpitation, cracking at the corners of the mouth, and difficulty swallowing (113-118).

Clinical symptoms such as pallor, palpitation, tachycardia, cardiomegaly, systolic murmur, tinnitus, headache, irritability, fatigue, and mouth sores that are seen in all types of anaemia can be also seen.

Treatment of Iron Deficiency Anaemia

The severity of iron deficiency anaemia and its underlying causes determine appropriate treatment approach. The aetiology should be precisely defined and treated in the treatment of patients with iron deficiency anaemia. Laboratory tests are performed before the treatment of iron deficiency anaemia, and the type and duration of treatment are decided. Iron deficiency anaemia cannot be treated only with diet (119).

The goal of iron therapy is to eliminate iron deficiency anaemia and to fill empty iron stores as soon as possible. It is also very important to remove the underlying cause.

The treatment of anaemia during pregnancy is very important for the maternal and foetal health. Appropriate treatment and diagnostic methods positively affect infant and maternal health and pregnancy outcomes (120).

The mother needs iron of approximately 1130 mg for pregnancy and birth. 270 – 300 mg, 50- 90 mg, 150 mg, and 450 mg of this iron are required for foetus, placenta and cord, normal physiological bleeding during labour, and erythrocyte mass, respectively (121). For most women living in developing countries and in Turkey, dietary iron does not meet the increased need during pregnancy, and iron stores become empty (122). If iron deficiency anaemia is detected during pregnancy, treatment should continue during pregnancy and the postpartum period, as well. The haemoglobin limit as criterion for initiation of iron therapy in pregnancy is recommended to be 11 g/dl during the first and third trimesters and <10.5 g/dl during the second trimester (123).

In order to fill iron stores and to stimulate erythrocyte production, iron support should be performed especially during pregnancy. Iron replacement can be made orally or parenterally. If there is no any condition that prevents oral administration of iron preparations, oral iron therapy should be definitely preferred (124).

Oral Iron Therapy

Oral iron therapy is usually used since it is effective, safe, and economical and has no systemic and local side effects. 200 mg per day can be supplied by the administration of oral iron compounds containing elemental iron (ferrous sulphate, fumarate, gluconate) and simple iron compounds (125).

Ferrous sulphate is the most effective and cheapest iron preparation. It is administered two or three times a day. Iron preparations are recommended to be taken on an empty stomach. Its absorption is much more when one is hungry (126-128).

Iron salts are astringent and may cause gastric irritation. Nausea and epigastric pain are associated with the dosage. When these side effects associated with the gastrointestinal system are seen, patients can take drug between meals and even after meals.

Thein-containing foods (tea), cereals (bran, cereal) or medical therapies reduce iron absorption by increasing the pH level of gastric acid (129).

Iron salts are better absorbed in the acidic environment. For this reason, its absorption increases when taken with

ascorbic acid and orange juice or with red meat foods (130,131).

Most of pregnant women do not have any side effect due to iron administration. However, iron-related side effects can be seen in 10-20% of patients. The most important side effect of oral iron therapy is gastrointestinal irritation. Therefore, nausea, vomiting, abdominal pain, constipation, and diarrhoea may occur. Iron preparations change stool black.

Parenteral Iron Therapy

Oral iron therapy is sufficient in most of pregnant women with iron deficiency. However, parenteral iron therapy is recommended of IDA patients in case of iron malabsorption due to the reasons such as atrophic gastritis, gastric surgery and celiac disease, intolerance and/or inadaptability to oral iron therapy, chronic haemodialysis, high iron deficiency compared to oral iron therapy, intolerance to oral iron supplementation, ulcerative colitis, disease exacerbation due to oral iron intake, patient's distrust of drug, haemoglobin below 6 g/dL, and inadequate tissue perfusion (132,133).

It is also administered when Hb values must be increased rapidly and/or iron absorption is insufficient. Parenteral iron therapy may be painful and expensive and may cause

anaphylactic reaction. It can be given intravenously (IV) or intramuscularly (IM) (134).

In intramuscular administration, a test dose of 0.5 mL is initially injected deeply into the upper and outer quadrant of the gluteal region. The complete dose is administered one hour after assessment of hypersensitivity. Parenteral iron therapy should be applied by specialist physicians in a hospital environment. It should be very careful not to leak out under the skin during intramuscular iron therapy. The most important side effect of intramuscular iron therapy is the formation of abscess at the injection site. This becomes more serious due to repeated injections (90).

The maximum daily dose is 100 mg (2ml) iron. It is absorbed by 65% 72 hours after injection. 25% of them stay there for at least 4 weeks, perhaps no benefit from it (111,135).

Intracellular iron enzymes function 12-24 hours after the start of treatment. Irritability and lack of appetite begin to heal. After 36-48 hours, bone marrow response begins, and erythroid hyperplasia develops. Reticulocytosis begins 48-72 hours later and reaches its peak level on days 5-7. Hb level increases on days 4-30. Iron stores are filled up in months 1-3 (136,137).

The Role of Midwife/Nurse in the Prevention of Iron Deficiency Anaemia in Pregnant Women

WHO divided countries into three main groups according to the prevalence of anaemia (138).

Evaluation of Strategies for the Prevention of Iron Deficiency according to Groups:

>20% → Iron prophylaxis is implemented to all populations at risk without the need for investigating the aetiology of anaemia because iron deficiency is the most common cause of anaemia.

5–20% → Treatment is administered following the application of basic screening tests for iron deficiency.

<5% → Since there is a high risk of anaemia due to reasons other than iron deficiency, screenings are made for not only iron deficiency but also other anaemia factors.

Complications during pregnancy, labour and postpartum are the leading causes of death and disability among women of reproductive age in developing countries. Anaemia is one of the most important factors that increase maternal mortality (139). All women of childbearing age should be examined for anaemia before, during and after pregnancy. It is especially

crucial to identify women at risk for anaemia and at risk for developing anaemia. The most important activity in the prevention of iron deficiency anaemia in pregnant women is to determine the prevalence of anaemia (94).

Excessive fertility, which is one of the main causes of anaemia, giving birth in unhealthy conditions, prenatal and postpartum care deficiencies, nutrition and educational deficiencies, and the woman' having insufficient information about her health adversely affect maternal health and increase maternal mortality (90). For this reason, antenatal care (ANC) that has an important place in mother and child health services is basically a preventive health service. ANC is highly beneficial for women of childbearing age in developing countries with high mortality. The antenatal period gives pregnant women an opportunity to reach vital interventions for their health and their children's health.

Five main applications are important in the prevention of IDA. These applications include respectively:

- ✓ Determination of anaemia prevalence,
- ✓ Nutrition education,
- ✓ Iron support,
- ✓ Control of viral, bacterial and parasitic diseases,

✓ Enrichment of foods with iron.

Precautions to protect against iron deficiency anaemia:

✓ Increasing the quantity and quality of ANC services,

✓ Performing routine laboratory tests in pregnancy,

✓ Preventing excessive fertility and giving importance to family planning services for this purpose,

✓ Giving iron and folic acid supplements to pregnant women in the preconception period,

✓ Providing necessary training for mothers with low socioeconomic and educational level in order to provide adequate and balanced nutrition and iron support during pregnancy,

✓ Training pregnant women for adequate and balanced nutrition during follow-up,

✓ Comprehending the importance of iron-rich foods and promoting their consumption,

✓ Reducing consumption of beverages such as coffee, tea and cola, and preventing ingestion of them with foods especially in breakfast and meals,

✓ Fruits and vegetables rich in vitamin C should be given in the diet since they increase the bioavailability of iron,

✓ Fermentation of foods such as bread and pastry and soaking dried legumes in water increase iron absorption by reducing the effect of phytates,

✓ Calcium suppresses iron absorption. In order to overcome the negative effects of calcium on iron absorption, practical solutions are to increase iron intake and its bioavailability and to avoid consumption of calcium- and iron-rich foods in the same meal. Milk, cheese and other dairy products should be consumed between meals, rather than meal time,

✓ Improving environmental health and preventing frequent infections and especially parasitic diseases,

✓ Adhering to recommended treatment and informing about the side effects of treatment (140).

REFERENCES:

Banhidy F, Acs N, Puho HE, Czeizel EA. Iron deficiency anemia: pregnancy outcomes with or without ıron supplementation; Nutrition 27. 2011; 65–72.

Casanova BF. Iron deficiency anemia in pregnancy, Postgraduate Obstetrics&Gynecology, 2006; 26 (7):1-5.

Cunningham FG, Gant NF, Leveno KJ. et al. Williams Doğum Bilgisi, 21. Baskı, Nobel Tıp Kitabevleri, 2005; 1307-1336.

Kaleli B, Yıldırım B. Gebelik ve Hemotolojik Hastalıklar Obstetrik; Maternal fetal tıp ve perinatoloji. Ankara: Medikal Network, 2001;682– 696.

Polat SA, Ozan T, Açık Y, Güngör Y. Abdullahpaşa eğitim ve araştırma sağlık ocağı bölgesinde yasayan gebelerde anemi prevalansı ve gebelerin anemi konusundaki bilgi, tutum ve davranışları, OMÜ Tıp Dergisi,2001; 18, 249-257.

Scholl TO. Maternal nutrition and preterm delivery. In: Bendich A, Deckelbaum RJ, editors. Preventive nutrition. Totowa, NJ: Humana Press,2005; p. 629–63.

Smith C, Marks AD, Lieberma M (Editör: İnal ME, Atik U, Aksoy N, Haşimi, A) Temel Ttıbbi Biyokimya, Klinik Yaklaşımlar. 2. Baskı, Güneş Tıp Kitabevi, 2007; pp. 808

Smith RP. Netter's Obstetrics, Gynecology and Womnen's Health. Icon Learning Systems. Canada, 2002.

WHO. Worldwide prevalence of anaemia, 1993–2005. Global Database on Anaemia Geneva, World Health Organization, 2008.

Birinci Basamak Sağlık Hizmetlerinde Demir Eksikliği Anemisinin Önlenmesi ve Kontrolü. Halk Sağlığı Kurumu Derneği, Sağlık ve Sosyal Yardım Vakfı. Teknik Rapor No:7.

Durmuş İmamoğlu N. Anne kanındaki demir bağlama kapasitesi ve ferritin düzeylerinin fetal değerler ile ilişkisi. Bakırköy Doğumevi Kadın ve Çocuk Hastalıkları Eğitim Hastanesi, Uzmanlık tezi, İstanbul,2005.

Cunningham FG, MacDonald PC, Gant FN, Leveno KJ, Gilstrap III LC, Hankins GDV, Clark SL, Stamford C. Hematological disorders. In: Williams Obstetrics: 20th ed, Appletion&Lange, Inc, 1997; pp:1173-202.

Guideline: Daily iron and folic acid supplementation in pregnant women; World Health Organization, 2012; S: 1 -32.

Güleç Küçükgöz Ü, Özgünen Tuncay F, Evrüke Cİ, Demir C S. Gebelikte anemi; Archives Medical Review Journal 2013; 22(3):300-316.

McLean L, Cogswell M, Egli I, et al. Worldwide Prevalence Of Anemia İn Preschool Aged Children, Pregnant Women And Non-Pregnant Women Of Reproductive Age. Kraemer

William F. Kern MD. Hemotology PDQ, 1.Baskı, İstanbul, İstanbul Medikal yayıncılık. 2005;1-15

Huchon C, Dumont A, Traoré M, Abrahamowicz M, Fauconnier A, Fraser W, Fournier P. A prediction score for maternal mortality in Senegal and Mali. Obstetrics & Gynecology, 2013; 121(5), 1049-1056.

Akış N, Pala K, Aydın, N, Sarı H, Tugay Aytekin N.: Nilüfer halk sağlığı eğitim ve araştırma bölgesindeki gebelerde risk etmenlerinin saptanması ve doğum öncesi bakım hizmetlerinin değerlendirilmesi. Sağlık ve Toplum. 2004;14(3):65-72.

CDC criteria for anemia in children and childbearing-aged women. MMWR Morb Mortal Wkly Rep. 1989; 38:400.

Cunningham FG, Gant NF, Leveno KJ. et al. Williams Doğum Bilgisi, 21. Baskı, Nobel Tıp Kitabevleri, 2005; 1307-1336.

Dursun P. Hematolojik Hastalıklar ve Gebelik. Günalp S., Tuncer S., Kadın Hastalıkları ve Doğum. Tanı ve Tedavi, Pelikan Yayınları, 2004; 273-289.

Lowdermilk DL, Perry SE. Maternity&Women's Health Care. Mosby Inc.2004.

Utkualp N, Oğur P, Ersöz H. Bir Doğumevine Başvuran Gebelerde Doğum Öncesi Beslenme Durumlarının Değerlendirilmesi; 15. Ulusal Halk Sağlığı Kongresi Bursa , 2-6 Ekim 2012 ;s:926- 927

WHO. World Health Organization. Iron deficiency anaemia assessment prevention and control: a guide for programme managers. Geneva: World Health Organization; 2001;132 (WHO/ NHD/01.3)

Greer JP, Foerster J, Lukens JN, Rodgers George M, Paraskevas GB. Wintrobe's Clinical Hematology. Lippincott Williams&Wilkins, 2004.

Novak JC, Brom B L. Maternal and Child Health Nursing. Mosby Year Book,1999.

Sullivan KM, Mei Z, Laurence Grummer-Strawn, Parvanta I. Haemoglobin adjustments to define anemia. Trop Med and Intern Health. 2008; 13(10): 1267–1271.

Susan T, Blackburn DO. Maternal, Fetal, & Neonatal Physiology: A Clinical Perspective. Qualitative Health Research. 2007; 11(6): 780-794.

Kimya Y, Cengiz C. Gebeliğe bağlı annedeki sistemik değişiklikler. Obstetrik; Maternal-Fatal Tıp ve Perinatoloji, Ankara, Medikal Network, 2001; 676–681.

Simpson KR, Creehan PA. Perinatal Nursing, Lippincott Company,2001.

Goonewardene M, Shehata M, Hamad A. Anaemia in pregnancy; Best Practice & Research Clinical Obstetrics and Gynaecology 26,2012; 3–24.

Larciprete G, Valensise H, Vasapollo B, Altomare F, Sorge F, Casalino B et al. Body composition during normal pregnancy: referance ranges. Acta Diabetol. 2003 October; 40 Suppl 1: S:225 – 232.

Sarıyıldız L, Akdağ T. Hamilelikte Gözlenen Bazı Hematolojik ve Metabolik Değişiklikler; Journal of Clinical and Analytical Medicine; 2013;4(3): 245-8.

Tripathi R, Tyagi S, Singh T, Dixit A. ve ark. Clinical evaluation of severe anemia in pregnancy with special reference to macrocytic anemia. J. Obstet. Gynaecol. Res., January 2012;Vol. 38, No. 1: 203–207.

Yenicesu İ. Gebelik ve Anemi (Ed) Maternal-fetal tıp ve perinatoloji 2.Baskı, Ankara,2001.

BeachR.http://www.thehospitalist.org/details/article/239003/Pregnancy_Perils.html}

Cunningham FG, Gant NF, Leveno KJ. et al. Williams Doğum Bilgisi, 21. Baskı, Nobel Tıp Kitabevleri, 2005; 1307-1336.

Ekşi Z. Gebelikte Anemilerde Semptom Değerlendirmesi ve Hemoglobin Renk Skalasının (WHO Haemoglobın Colour Scale) Kullanımının Etkinliği, Doktora Tezi, İstanbul, 2006.

Uçan BG, Bilgin N. Afyon ili II ve IV nolu sağlık ocağı bölgelerindeki gebelerde anemi prevalansı ve anemiyi etkileyen bazı etmenlerin incelenmesi, Sağlık ve Toplum, 2002; 2, 43-53.

Greer JP, Foerster J, Lukens JN, Rodgers George M, Paraskevas GB. Wintrobe's Clinical Hematology. Lippincott Williams&Wilkins, 2004.

Küçük M, Yavaşoğlu İ, Kadıköylü G, Bolaman Z. Gebelik ve Hematoloji. Nobel Med,2011; 7(3): 10-17

Uçan BG, Bilgin N. Afyon ili II ve IV nolu sağlık ocağı bölgelerindeki gebelerde anemi prevalansı ve anemiyi etkileyen bazı etmenlerin incelenmesi, Sağlık ve Toplum, 2002; 2, 43-53.

Kanber AN. Gebelere verilen beslenme eğitiminin anemi üzerine etkisi, Yüksek Lisans Tezi, Afyonkarahisar, 2008.

Smith C, Marks AD, Lieberma M (Editör: İnal ME, Atik U, Aksoy N, Haşimi, A) Temel Ttıbbi Biyokimya, Klinik Yaklaşımlar. 2. Baskı, Güneş Tıp Kitabevi, 2007; pp. 808

Tavmergen E. Gebelikte Hematolojik Hastalıklar, Ege Kadın Doğum, Ders Notları, İzmir Güven Kitabevi, 2005; 337-341.

Lewis SM. Anaemia and Rural Haemoglobinometry in Rural areas. Medcal Progress January, 2003.

www.ism.gov.tr/indir/Gebelerde_demir_dest_%20bilgi.doc.

Ateş S, Savan K. Tekrarlayan Gebelik Kaybı Sonrası Oluşan Gebeliklerde Doğum ve Neonatal Bulguların Karşılaştırılması, Uzmanlık Tezi. İstanbul, 2007.

Geelhoed D, Agadzi F, Visser L, Ablordeppey E, Asare K, O'Rourke P, Van Leeuwen JS, Van Roosmalen J. Maternal and fetal outcome after severe anemia in pregnancy in rural Ghana. Acta Obstet Gynecol Scand. 2006; 85(1): 49-55.

Rizwan F, Qamarunisa H, Memon A. Prevalence of anemia in pregnant women and ıts effects on maternal and fetal morbidity and mortalit. Pak J Med Sci January - March 2010;Vol. 26 No. 1 92-95.

Breyman C. Iron deficiency and anemia in pregnancy: modern aspects of diagnosis and therapy. Europan Journal of Obstetrics & Gynecology and Reproductive Biology, 2005;123:3-11.

Levy A. Maternal anemia during pregnancy ıs an independent risk factor for low birthweight and preterm delivery. European Journal of Obstetric & Gynecology and Reproductive Biology, In Pres, Correct Prof, Available Online, 20 March 2005.

Sharma BJ. Effect of dietary habits on prevalence of anemia in pregnant women of Delhi. The Journalof Obstetrics And Gynaecology Research, 2003;29(2):73.

Charles M A, Campbell – Stennett D, Yatich N, Jolly E P. Predictors of anemia among pregnant women in Westmoreland, Jamaica. Health Care Women International. 2010 July; 31(7): 585–598.

Dursun P. Hematolojik Hastalıklar ve Gebelik. Günalp S., Tuncer S., Kadın Hastalıkları ve Doğum. Tanı ve Tedavi, Pelikan Yayınları, 2004; 273-289.

Lee Ian A, Okam MM. Anemia in Pregnancy. Hematol Oncol Clin N Am 25, 2011; 241–259.

Ahmed F., Al-Sumaie A.M. : Risk factors associated with anemia and iron deficiency among Kuwaiti pregnant women, International journal of food sciences and nutrition, September 2011; Vol. 62, No. 6, s: 585-592

Jiang T, Christian P, Khatry SK, Wu L, West KP. Micronutrient deficiencies in early pregnancy are common, concurrent, and vary by season among rural nepali pregnant women. The Journal of Nutrition,2005; 135: 1106–1112.

Johnson-Wimbley TD, Graham DY. Diagnosis and management of iron deficiency anemia in the 21st century. Ther Adv Gastroenterol 2011;4(3):177–84.

Liabsuetrakul T. Is international or asian criteria-based body mass index associated with maternal anaemia, low birthweight, and preterm births among thai population?—An observational study; J Health Popul Nutr 2011 Jun;29(3):218-228.

McLean E, Cogswell M, Egli I, Wojdyla D, DeBenoist B. World wide prevalence of anaemia, who vitamin and mineral nutritionin formation system,1993-2005. Public HealthNutr.2009; 12, 444–454.

Özçakır A. Kadınların Beslenme Sorunları. Erişim:www.uludag.edu.tr.

Pasricha SR, Drakesmith H, Black J, Hipgrave D, Biggs BA. Control of iron deficiency anemia in low and middle in come countries. Blood, 2013; 121, 2607–2617.

Durmuş İmamoğlu N. Anne kanındaki demir bağlama kapasitesi ve ferritin düzeylerinin fetal değerler ile ilişkisi. Bakırköy Doğumevi Kadın ve Çocuk Hastalıkları Eğitim Hastanesi, Uzmanlık Tezi, İstanbul, 2005.

Greer JP, Foerster J, Lukens JN, Rodgers George M, Paraskevas GB. Wintrobe's Clinical Hematology. Lippincott Williams&Wilkins, 2004.

Baig-Ansari N, Badruddin SH, Karmaliani R, Harris H. Anemia prevalence and risk factors in pregnant women in an urban area of Pakistan; Food Nutr Bull. 2008 June; 29(2): 132–139.

Batkın D. Gebe Kadınlara Verilen Beslenme Eğitiminin Aneminin Önlenmesine Etkisi, T.C. Cumhuriyet Üniversitesi Sağlık Bilimleri Enstitüsü Halk Sağlığı Anabilim Dalı, Doktora Tezi, Sivas, 2011.

Gülertan Yavuz S. Demir Eksikliği Anemisi Olan Kadın Hastalarda Oral Demir Tedavisinin Etkinliğinin Değerlendirilmesi. Uzmanlık Tezi. Haseki Eğitim Araştırma Hastanesi, 2008.

Tapalı A, Bozkurt Aİ. Denizli İl Merkezinde Anemi Prevelansı ve Etkileyen Faktörler; 15. Ulusal Halk Sağlığı Kongresi, Bursa 2012; S:935.

WHO. Worldwide prevalence of anaemia, 1993–2005. Global Database on Anaemia Geneva, World Health Organization, 2008.

Andrews NC. Disorders of iron metabolism and heme synthesis: iron deficiency and related disorders . In: Greer JP, Foerster J, Lukens JN, Rodgers GM , Paraskevas F , Glader B editor. 11th ed.. Wintrobe's Clinical Hematology . Vol 1: Philadelphia, Pa: Lippincott Williams & Wilkins; 2004;p. 979–1009.

Coşkun A, Özdemir Ö. Gebelikte vitamin – mineral kullanımı ve beslenmenin irdelenmesi; Türk Jinekoloji ve Obstetrik Derneği Dergisi, (TJOD Derg), 2009; Cilt: 6 Sayı: 3 Sayfa: 155- 70.

Deegan H, Bates HM, McCargar LJ. Assessment of iron status in adolescents: dietary, biochemical and lifestyle determinants. J Adolesc Health 2005;37:75.

McMahon LP. Iron deficiency in pregnancy; Obstetric Medicine 2010; 3: 17–24.

Vijaynath, Patil Ramesh S, Jitendra, Patel Abhishek. Prevalence of anemia in pregnancy. Indian Journal of Applied Basic Medical Sciences. 2010; 12B:15.

Sukrat B, Suwathanapisate P, Siritawee S, Poungthong T, Phupongpankul K. The prevalence of iron deficiency anemia in pregnant women in Nakhonsawan Thailand. J Med Assoc Thai 2010; 93 (7): 765-70.

Tolentino K, Friedman JF. An Update on Anemia in Less Developed Countries. Am. J. Trop. Med. Hyg. 2007; 77(1): 44-51.

www.saglik.gov.tr/TR/dosya/1-46686/h/gebelerde-demir-destek-yeni-rehber.doc

Amar R Shah, Neha D Patel, Menka H Shah. Haematological parameters in Anaemic pregnant women attending the Antenatal clinic of rural teaching hospital. Innovative Journal of Medical and Health Science. 2012; S: 70 – 73.

Seren Z. Kadınların Diyetlerinde Bulunan Demir Ve Demir Emilimini Etkileyen Etmenler Hakkında Bilgi Ve Uygulamalarına Eğitimin Katkısı. Yüksek Lisans Tezi, TC. Gazi Üniversitesi Eğitim Bilimleri Enstitüsü Çocuk Gelişimi ve Ev Yönetimi Bölümü Aile Ekonomisi Beslenme Eğitimi Anabilim Dalı, Ankara, 2002.

Usha S, Sohan Pal S, Ashutosh N, Shailja S, Arati S, Hemant Kumar S. Prevalence of anaemia in pregnancy in Rural Western U.P: A prospective study. Indian Journal of Public Health Research and Development. 2011; 2(2).

www.nice.org.uk/nicemedia/pdf/CG062NICEguideline.pdf

Boccio JR, Iyengar V. Iron deficiency: Causes, consequences, and strategies to overcome this nutritional problem. Biol Trace Elem Res 2003;94:1–32.

Jong E. Intestinal parasites, Prim Care 2002;29(4):857-77.

Korkmaz M. Barsak Helmintleri; ANKEM Derg 2006 ;20(Ek 2):170-176

T.C. Sağlık bakanlığı ana çocuk sağlığı ve aile planlaması genel müdürlüğü. Emzirmenin korunması, özendirilmesi, desteklenmesi ile demir yetersizliği anemisinin önlenmesi ve kontrolü. Ankara, 2004;4-8.

Balarajan Y, Ramakrishnan U, Özaltin E, Shankar A H, Subramanian SV. Anaemia in low-income and middle-income countries. The Lancet, 2012; 378(9809), 2123-2135.

Casanueva E, Viteri EF, Mares-Galindo M, Meza-Camacho C, Lorı´a A, Schnaas L, Valde´s-Ramos R. Weekly ıron as a safe alternative to daily supplementation for nonanemic pregnant women; Archives of Medical Research 37, 2006; 674–682.

Gautam CS, Saha L, Saha Kumar P. Iron deficiency in pregnancy and the rationality of ıron supplements

prescribed during pregnancy; Medscape J Med 2008; 10 (12): 283.

Kaya D. Bir sağlık ocağı bölgesinde gebelerde anemi görülme sıklığının incelenmesi, T.C. Mersin Üniversitesi Sağlık Bilimleri Enstitüsü Ebelik Anabilimdalı Yüksek Lisans Tezi, 2006.

Xing Y, Yan H, Dang S, Zhuoma B, Zhou X, Wang D. Hemoglobin levels and anemia evaluation during pregnancy in the highlands of Tibet: a hospital-based study. BMC Public Health 2009;9:336.

Baysal A. Beslenme. Yenilenmiş 10. baskı. Hatiboğlu Yayınevi. Ankara 2004.

Upadhyay S, Kumar S. Iron deficiency anaemia in pregnancy and the efficacy of iron supplements prescribed during pregnancy; J Food Process Technol 2012, 3:10.

HASAK Teknik Rapor No 7: Birinci Basamak Sağlık Hizmetlerinde Demir Eksikliği Anemisinin Önlenmesi ve Kontrolü, 2003.

Thankachan P, Muthayya S, Walczyk T, Kurpad AV, Hurrell RF. An analysis of the etiology of anemia and iron deficiency in young women of low socioeconomic status

in Bangalore, India; Food and Nutrition Bulletin, 2007; vol. 28, no. 3 s: 328 – 336.

Corbett RW, Ryan C, Weinrich SP. Pica in pregnancy: does it affect pregnancy outcomes? MCN Am J Matern Child Nurs. 2003;28(3):183-191.

Emmungil H. Demir Eksikliği Anemisi Tespit Edilen Hastalarda Bu Duruma Sebep Olabilecek Gastrointestinal Patolojilerin Varlığını Öngörmeye Yarayan Basit Klinik Bulgular ve Laboratuar Testlerinin Belirlenmesi, T.C. Hacettepe Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı, Uzmanlık Tezi, Ankara, 2008.

Kim HK, Nelson LS. Are you what you eat? Pica in pregnancy; Emergency Medicine July 2012; S: 4 – 11.

López LB, Langini SH, Pita de Portela ML. Maternal iron status and neonatal outcomes in women with pica during pregnancy. Int J Gynaecol Obstet., 2007; 98(2):151-152.

López LB, Ortega Soler CR, Portela ML. Pica during pregnancy: a frequently underestimated problem; Arch Latinoam Nutr. 2004 Mar; 54(1):17-24.

Njiru H, Elchalal U, Paltiel O. Geophagy during pregnancy in Africa: a literature review. Obstet Gynecol Surv. 2011;66(7):452-459.

Obse N, Mossie A, Gobena T. Magnıtude of anemıa and assocıated rısk factors among pregnant women attendıng antenatal care ın Shalla Woreda, West Arsı Zone, Oromıa Regıon, Ethıopıa, Ethiop J Health Sci. 2013; Vol. 23, No. 2 S: 165- 173.

Schrier SL. Causes and Diagnosis of Anemia Due to Iron Deficiency, Uptodate, http://www.uptodate.com/contents/causes-and-diagnosis-ofanemia-due-to-iron-deficiency.

Young SL. Pica in pregnancy: new ideas about an old condition. Annu Rev of Nutr. 2010;30:403-422.

Annibale B, Capurso G, Delle FG. The stomach and iron deficiency anemia :a forgetting link.Dig Liver Dis 2003;35(4): 288-95.

Duffy TP. Mikrositik ve hipokromik anemile. In Goldman L, Ausiello D, editors. Cecil textbook of medicine, (çev. ed. Ünal S.) Cilt 1. 22.B İstanbul: Güneş Kitabevi, 2006; s.1003-1013.

Dündar S. Demir eksikliği anemisi. Yasavul Ü, Çelik İ, Arıcı M. In Hacettepe İç Hastalıkları kitabı. 2B. Ankara, Hacettepe Üniversitesi Yayınları, 2004. s.867-72

Eastwood M. Principless Of Human Nutrition. 2nd Edition, Edinburg: Blackwell Science Ltd, 2003; 329-335.

Lozoff B, Andraca I, Castillo M, Smith B, Walter T, Pino P. Behavioral and Developmental Effects of Preventing Iron Deficiency Anemia in Healthy Full- Term Infants. Pediatrics 2003; 112: 846-854.

Diri H. Demir eksikliği anemili kadın hastalarda ferik demir ve ferröz demir tedavilerinin karşılaştırılması, Uzmanlık Tezi, TC İnönü Üniversitesi Tıp Fakültesi İç Hastalıkları AD. 2007.

Ülkü B. Demir eksikliği anemisi, Klinik hematolojinin ABC'si İ.Ü.Cerrahpaşa Tıp Fakültesi Sürekli Tıp Eğitimi Etkinlikleri, 2001;25:23–32.

Vural H, Erel Ö, Koçyigit A. Demir eksikliği anemisi eritrositlerinde oksidatif stres. Genel Tıp Dergisi. 1997; 7 (2): 77-80.

Akman N. Erişkinde Anemilere yaklaşım. İstanbul Üniversitesi Cerrahpaşa Tıp Fakültesi Tıp Eğitimi Etkinlikleri, Anemi Sempozyumu. İstanbul, 2001; 9–6.

Dinçol G, Pekçelen Y, Atamer T, Sargın D, Nalçacı M, Aktan M, Beşışık S. Klinik Hematoloji. Nobel Tıp Kitabevleri,2003.

Glader B. Anemia: general considerations. In; Greer J P, Rodgers G M, Foerster J et all. (Eds). Wintrobe's Clinical Hematology. 11th Philadelphia. Williams & Wilkins, 2004; 947–978.

Kligman RM, Behrman RE, Jenson HB, Bonita FS. Nelson Textbook of Pediatrics. 18th ed. Philadelphia: W B Saunders Company, 2007;2003–17.

Smith RP. Netter's Obstetrics, Gynecology and Womnen's Health. Icon Learning Systems. Canada, 2002.

Gümrük F, Altay Ç. Demir metabolizması ve demir eksikliği anemisi. Katkı Pediatri Dergisi. 1997; 16: 265-285.

Oral E, Kumbak B, Şentürk L, Aksu F. Gebelikte profilaktik demir tedavisi gerekli mi? Jinekoloji ve Obstetrik Dergisi, 2002; 16:219 – 222.

Breyman C. Iron deficiency and anemia in pregnancy: modern aspects of diagnosis and therapy. Europan Journal of Obstetrics & Gynecology and Reproductive Biology, 2005;123:3-11.

Pehlivanoğlu Bayer F. Dr. Lütfi Kırdar Kartal Eğitim Araştırma Hastanesi Gebe Polikliniğine Başvuran Gebelerde Anemi Prevalansı ve Etyolojsi Uzmanlık Tezi, İstanbul, 2008.

Galloway R, Dusch E, Elder L, et al. Women's perceptions of iron deficiency and anemia prevention and control in eight developing countries. Social Science & Medicine, 2002; 55(4):529-544.

Göynümer G, Sav N, Sümbül M. Gebelikte Demir Kullanımı Ve Hematolojik Yansımaları. Perinatoloji Dergisi, 2004;12(4):168-172.

Beutler E, Hoffbrand AV, Cook JD. Iron Deficiency and Overload, Hematology 2003; 40-61.

Gülertan Yavuz S. Demir Eksikliği Anemisi Olan Kadın Hastalarda Oral Demir Tedavisinin Etkinliğinin Değerlendirilmesi. Uzmanlık Tezi. Haseki Eğitim Araştırma Hastanesi, 2008.

Cunningham FG, Gant NF, Leveno KJ. et al. Williams Doğum Bilgisi, 21. Baskı, Nobel Tıp Kitabevleri, 2005; 1307-1336.

DeCherney AH, Nathan L. Current Obstetric and Gynecologic Diagnosis and Treatment, Ninth Edition, Lange Medikal Books/McGraw-Hill, 2002; 409-411.

Durhan B. Demir eksikliği anemisi tanısı konulan hastalarda pika görülme sıklığı ve pikanın anemi semptomları ile

ilişkisi; T.C. Afyonkarahisar Kocatepe Üniversitesi Sağlık Bilimleri Enstitüsü, İç Hastalıkları Hemşireliği, Yüksek Lisans Tezi, Afyonkarahisar,2007.

Kıllıp S, Bennett J, Chambers MD. Iron deficiency anemia. American Family Physician 2007; 75(5): 1-10.

Beşışık S. Demir Eksikliği Anemisi, Türkiye Klinikleri, Hematoloji, Anemiler Özel Sayısı, 2004; 2(2):96-102.

Koç SM. Demir eksikliğine Bağlı Reaktif Trombositozu Olan Hastalarda Helicobakter Pylori Sıklığının Araştırılması, T.C. İnönü Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı, Uzmanlık Tezi, Malatya, 2012.

Durhan B. Demir eksikliği anemisi tanısı konulan hastalarda pika görülme sıklığı ve pikanın anemi semptomları ile ilişkisi; T.C. Afyonkarahisar Kocatepe Üniversitesi Sağlık Bilimleri Enstitüsü, İç Hastalıkları Hemşireliği, Yüksek Lisans Tezi, Afyonkarahisar,2007.

Tahtacı M. Demir Eksikliği Anemisinde Periferal Nöral Fonksiyonun Sinir Uyarılabilirliği Testleri İle Elektrofizyolojik İncelenmesi; Uzmanlık Tezi, TC Abant İzzet Baysal Üniversitesi İzzet Baysal Tıp Fakültesi İç Hastalıkları AD. Bolu – 2008.

Nevruz O, Güvenç B. Demir Eksikliği ve Diğer Hipoproliferatif Anemiler, Sağlıker Y. (edt), Harrıson İç Hastalıkları Prensipleri, , Nobel Tıp Kitabevleri Ltd. Şti., 2004; Cilt 2, 15. Baskı, 660-666.

Gülertan Yavuz S. Demir Eksikliği Anemisi Olan Kadın Hastalarda Oral Demir Tedavisinin Etkinliğinin Değerlendirilmesi. Uzmanlık Tezi. Haseki Eğitim Araştırma Hastanesi, 2008.

Glader B. Iron-deficiency anemia. In: Behrman R, Kliegman R, Jenson H (eds). Nelson Textbook of Pediatrics. 17th ed. Philadelphia. W.B Saunders, 2004; 1614-6.

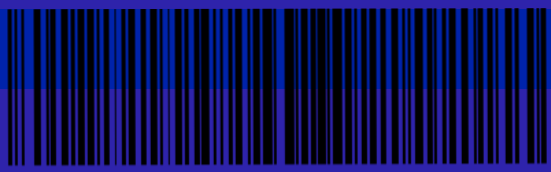
Kalayoğlu S. Demir Eksikliği Anemisi. Büyüköztürk K (editör). İç Hastalıkları. 1.Baskı, Nobel, İstanbul, 2007;603-609.

Tolentino K, Friedman JF. An Update on Anemia in Less Developed Countries. Am. J. Trop. Med. Hyg. 2007; 77(1): 44-51.

www.asm.gov.tr/UploadGenelDosyalar/Dosyalar/143/E%C4%9E%C4%B0T%C4%B0M/25_01_2011_15_42_40.pdf}.

Thompson B. Food-Based Approaches for Combating Iron Deficiency. in. Kraemer K., Zimmermann M.B., (Edt)

Nutritional Anemia. Sight And Life Press. ,2007; 337-358.



978-605-7923-21-9