

# A Study on The Patients Perspectives and Social Aspects on Disease-Modifying Antirheumatic Drugs in The Treatment of Rheumatoid Arthritis in Turkey

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## Abstract

The aim of the study is to provide a comprehensive assessment of “patient perspectives and social aspects” dimension of Health Technology Assessment Method for DMARDs, used in treatment of Rheumatoid Arthritis (RA) in Turkey. Delphi panel technique and interviews with representatives of patients’ associations were used to collect data. As a result of the study, it was observed that there was no difference between individuals within the scope of social security institutions in terms of access to DMARDs, but there were regional differences regarding access to rheumatologists due to their low number. The study also found that patients did not face any significant social or economic barriers to accessing DMARDs, but their knowledge of RA was both insufficient and unequal among patients. A full understanding of the benefit and safety of treatment by patients; Adherence to treatment is important for achieving the planned goal and the success of policies created for RA management. Therefore, at all levels of disease management, it would be beneficial to consider joint decision-making by the patient / caregiver-physician, the use of informed consent forms and the vital role of health professionals.

**Key Words:** Health Technology Assessment, Rheumatoid Arthritis, DMARDs, Patient Perspectives, Social Aspects

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## **1. Introduction**

Health Technology Assessment (HTA) is a comprehensive assessment and interpretation of the technologies used in health services and within the definition of health technology; drugs, medical devices, medical treatment methods, surgical techniques, health care systems and similar applications (National Library of Medicine, n.d). Scientific evidence is taken into consideration in all stages of the HTA, to which multiple stakeholders and experts contribute and which are carried out in a transparent process (Sorenson et al., 2008). Assessment of health technology is primarily done in terms of clinical effectiveness and patient safety; then, economic analysis, organizational ethics, patient, social and legal aspects are evaluated and finalized with a report (EUnetHTA, 2016). The patient perspectives and social aspects is one of these domains, put patient in the middle of the diagnosis, treatment and follow up process of the health case/illness. This applies equally to medical and lifestyle choices (Bridges et al., 2007). Especially illness like Rheumatoid Arthritis (RA) has huge/broad effect on patient and their social life.

Rheumatoid Arthritis is a disease with high public health burden and significant societal costs, often-needing aggressive management to reduce the patient suffering

and complications that are often in the bony joints (World Health Organization, n.d.). The current pharmacological treatment options for RA is include the conventional syntheticDisease-Modifying Antirheumatic Drugs (csDMARDs), biological DMARDs (bDMARDs) and targeted synthetic DMARDs (tsDMARDs) (Smolen et al., 2019). The treating physicians have a choice of using these DMARDs drugs as monotherapy or in different combinations, which is often decided based on a variety of factors related to the patient (Singh et al., 2015).

This study provides comprehensive assessment of patient perspectives and social aspects for RA drugs (conventional synthetic, biological and targeted synthetic disease modifying anti-rheumatoid drugs-DMARDs) used in treatment in Turkey. Data collected from discussions with experts on the current policies, practices and key gaps in treatment of RA in Turkey and in-depth interviews with representatives of patients' associations. The aim of the research is to produce evidence on patient perspectives and social aspects to help policy-makers and health professionals to make more effective decisions for better outcome about RA treatment.

## **2. The Patient Perspectives and Social Aspects**

Patients, caregivers or individuals can provide unique perspectives about experiences, attitudes, preferences, values and expectations concerning health, illness, service delivery and treatments that can inform HTA (Facey et al., 2010; Gagnon et al., 2011). Patients, caregivers and individuals will have a range of perspectives and HTA should seek to gather as much evidence as possible to understand these wide-ranging views. There is a general consensus on the need for more patient-centered HTA methods and academics associated with HTA are now considering ways to incorporate the patients' or, more generally, the public's perspectives in their methods (Gagnon et al., 2011; Kleme et al., 2014).

The patient perspectives and social aspects domain takes patients or individuals in whose care a health technology use as a point of reference in an HTA. Patients' aspects relate to issues relevant to patients, individuals and caregivers. Patient refers to a person who receives (or has received) and uses (or used) health technologies and health services in the healthcare sector (EUnetHTA, 2016). The term individual sometimes use synonymously with 'patient', but it can also refer to a healthy individual, who receives health technologies, e.g. a person taking part in a

screening program. The term caregivers (sometimes referred to as careers) refers to family, friends and other persons from the patient's/individual's social network, who provide care to the patient and are in other ways involved during the course of the disease. It excludes those paid to give care, such as healthcare professionals (EUnetHTA, 2016).

Social aspects related to social groups that is specific groupings of patients or individuals that may be of specific interest in an HTA such as older people, people with learning disabilities, ethnic minorities, immigrants etc. There may be some social groups that are particularly important to consider for a specific health technology or for which there is a policy imperative for special consideration (such as those with disabilities) or in which the value of the technology may be different (such as ethnic minorities) and these may need to be specified. Hence, social groups are also important consideration in HTA (EUnetHTA, 2016).

A technology may be implemented in a hospital or at home. However, implications for patients may extend far beyond the original setting of the technology. Patients and caregivers attribute specific meaning and significance to health technologies, to which they may attach feelings of hope, fear, perhaps uncertainty, as well as societal values.

### 3. Method

A Delphi method of interviewing experts in Turkey was formulated along with in-depth interviews with representatives of patients' associations (03 March-24 June 2018). Ten expert panelist attended Delphi exercise. Two rounds of the Delphi exercise were conducted, and the resulting quantitative data averaged. Moreover, the findings from in-depth interviews with two patient representatives was also included in consolidating the findings. The data were subjected to thematic analysis.

During Delphi exercise, stakeholder comments were received that provided significant insight of the local context related to the treatment of RA in Turkey. A modified Delphi survey method was adopted, and a team of research experts guided the technical team in the formulation and validation of the survey tools at each round of the survey.

Survey provide answers to the questions include for "Patients perspectives and social aspects" in the assessment element tables (3.0) of the HTA Core Model® (EUnetHTA, 2016). Not all the topics are relevant for DMARDs and hence only those that are within the context of the DMARDs have selected for the study. Therefore, patients perspectives and social aspects domain for DMARDS includes three (3) topics and nine (9) issues (Table 1.)

**Table 1. Assessment Areas in Patients and Social Aspects of DMARDs**

Topic	Issue
Patients' perspectives	<ol style="list-style-type: none"> <li>1. What are the experiences of living with the condition?</li> <li>2. What expectations and wishes do patients have with regard to the technology and what do they expect to gain from the technology?</li> <li>3. How do patients perceive the technology under assessment?</li> <li>4. What is the burden on caregivers?</li> <li>5. In What way is the quality assurance and monitoring system of the new technology organized?</li> </ol>
Social group aspects	<ol style="list-style-type: none"> <li>1. Are there groups of patients who currently do not have good access to available therapies?</li> <li>2. Are there factors that could prevent a group or person from gaining access to the technology?</li> </ol>
Communication aspects	<ol style="list-style-type: none"> <li>1. How treatment choices explained to patients?</li> <li>2. What specific issues may need to be communicated to patients to improve adherence?</li> </ol>

All the members from the expert panel, responded to the survey. Comments from Round 1 were then used to revise and refine the entire set of Delphi questionnaire. The questions/statements for which the consensus was reached in the first round did not feature in the next round. When there were low levels of disagreement, some questions were not edited and re-included in the next round. The new survey (Round 2) was then sent out to the whole panel of experts. In Round 2 all the panel members who took part in the first round responded. None of the experts used the option to

decline to participate in Round 1 and Round 2.

#### 4. Findings

The findings from the Delphi panel were consolidated with the findings gathered from the interviews with the patient's representatives. Findings are given below, grouped under two groups according to the main subjects.

##### 4.1. Patient Perspectives and Social group aspects

###### ➤ *Experiences of living with the condition:*

Patients diagnosed with RA live with constant pain that limits their daily activities. Patients with RA perceive reduced quality of life in several domains, such as physical health, level of independence, environment and personal beliefs, compared with the healthy population. Especially, morning pains and tiredness are reasons for a bad start to a day. Difficulty in self-care and daily housework is evident. Most of the complaints are difficulty in holding glasses due to swollen hands in the morning; difficulty in raising due to painful wrists; difficulty in sitting on and standing up the toilet bowl due to knees hurting and difficulty in walking in the morning due to inflammation in the toes. Patients often refrain from their social commitments because of the pains. Such

isolation may often decrease their self-confidence and increase their fear of dependence upon others for basic needs.

###### ➤ *Expectations and wishes from the DMARDs:*

A plethora of csDMARDs, bDMARDs and more recently also tsDMARDs, which can be used in different sequences and/or combinations, is at the disposal of rheumatology and Physical Therapy and Rehabilitation (PTR) specialists to offer to patients in the country. This, naturally, also implies choices to be made when deciding on the best treatment for a particular patient. Regardless of the disease activity levels, using a "treat-to-target strategy" than a non-targeted approach is noted to achieve better clinical outcomes. The ideal target for treatment with DMARDs was noted to be safer, lowering disease activity and to achieve clinical remission.

Safety is also one of the most important issue about DMARDs. So the overall risk-benefit options must be weighed before even minor safety concerns can be recommended for a particular DMARDs.

###### ➤ *Patients' perception of the technology under assessment:*

Patients' perception from DMARDs, which is under assessment, is to better clinical effectiveness, safer and easily accessible treatment.

➤ *The burden on caregivers:*

As RA particularly affects middle-aged group, it is not immediately a disabling condition and can be often managed with self-care. However, considering the mental and social impact of the disease, the support of family, friend and workplace colleagues is necessary particularly during periods of increased disease activity. The more the family members and relatives are informed about the disease and drugs, the better they can and adapt the expectations of the patients.

➤ *The quality assurance and monitoring system of the new DMARDs:*

Turkish Medicines and Medical Devices Agency (TMMDA) carry out the quality assurance and monitoring system of new DMARDs. TMMDA is the governmental regulatory authority responsible for regulation, evaluation, inspection, control and monitoring of human medicinal products, medical devices and cosmetics in Turkey. In the Country, the registration review process of pharmaceutical products is conducted in accordance with the “Registration Regulation of Human Medicinal Products,” which sets forth the principles, procedures, and policies regarding the registration of medicines.

➤ *Access to available treatments and factors and barriers that prevent access:*

Currently, early treatment of RA with csDMARDs is fully reimbursed in Turkey with proper documentation of disease progression. Disease activity scores for 28 joints (DAS28) is the key indicator to assess the response to the treatment. Treatments are usually changed either by additional of a second csDMARD or combination with a short trial of corticosteroid before starting with anti-TNF-inhibitor. Addition of a bDMARD also needs to be documented well by the relevant specialist for the treatment to be fully reimbursed the government funded insurance system.

Turkey has universal health coverage system (UHS) and reimbursement system carried out by Social Security Institution, under the UHS.

As per the information available through discussions with Turkish experts and patients’ representatives, the treatment for RA including the costs of the laboratory tests used in treatment monitoring is fully reimbursed by the SSI. The reimbursement guidelines are as per the recognized International Treatment Guidelines. However, the reimbursement procedures follow a process, which were relatively easier for csDMARDs, but was perceived to be slower and more cumbersome for bDMARDs. This perception by some patient representatives was because bDMARDs can be prescribed only by a rheumatologist or by PTR specialists who

are available only in larger cities. This may limited delay the availability of bDMARDs to patients living in rural areas and smaller towns.

Any significant social or economic barriers have not noticed by RA patients while accessing DMARDs and there are no differences among individuals with respect to access to DMARDs in Turkey. However, there are regional differences in terms of accessing rheumatologists due to their small number.

#### **4.2. Communication aspects**

RA patients are given information about DMARDs when such drugs are necessary. However, it was stated that the level of knowledge is not at the desired level. Knowledge about RA related process was positively influenced by education level and socioeconomic status. Knowledge levels of patients who had a family history of RA were higher compared to those who did not. Furthermore, the duration of disease also influenced the knowledge levels wherein patients with short duration of disease tend to be more receptive to receiving education about the disease and treatment more than patients with longer duration of disease.

#### **5. Discussions**

RA affects everything all aspects of a patient – medical, psychological, and social

(Matcham et al., 2014; NHS, n.d.; Talibova, 2015) Painful episodes lead to loss of productivity, loss of wages and periods of unemployment putting financial burden on the individual. Given such severe implications from the disease, it is only but natural that patients expect DMARDs to eliminate the symptoms of RA without creating any side effects and protect the life quality (Matcham, et al., 2014; NHS, nd.). In this respect, it is significant to remove the pain and loss of functionality in RA. Physical symptoms, which are more distressing, if relieved, also tend to improve the emotional pain too (Hennell et al., 2004; Maggs et al., 1996).

After the confirmation of diagnosis of RA, when physicians inform the patients that they may have to take medications for "a lifetime", it often brings a sense of helplessness and hopelessness among the patients (Arthritis Foundation, 2020). This feeling is often difficult to overcome and it takes serious efforts by the treating physician to counsel.

Clinical effectiveness and safety of DMARDs play a key role in the quality of life of RA patients. Safety is as important as clinical effectiveness in the treatment of RA. DMARDs have some side effects such as; suppress the immune system and associated with an increased risk of serious infection (Listing et al., 2013) and hepatic toxicity (Hennell et al., 2004; Maggs et

al.,1996). The main question comes about the treatment “is it effective and safe?”. So outcomes of clinical studies about the safety have robust effect to choose and continue the treatment.

Notwithstanding the strong provisions within the healthcare system for equitable access to care, there remain concerns with regard to effective communications between physicians and patients. It is always necessary to capture the end-beneficiary’s perspective in therapeutic decision and choice of health technologies (Sorenson et al., 2008). Shared decision-making is in good conformance to the principle of informed consent, and it has an important bearing on the compliance and adherence to the treatment (Sandman et al., 2012; Whitney et al., 2003). Proper execution of this process allows the patient to fully understand the benefit and safety of the treatment.

In the RA care setting, the decision-making interactions usually occur between the health care provider, patient, and some nurse educators. The process may range from an autonomous decision-making pattern, where the patient may be fully responsible for the decision taken, to the paternalistic decision-making pattern, where the health care provider assumes full responsibility for the decision taken (Whitney, et al., 2003). However, the ideal situation is one where a truly shared

decision-making process happens, in which the doctor and patient/parents work together to choose an evidence-based option, in line with the patient’s preferences and wishes. Informed consent is needed in shared decision-making (Whitney, et al., 2003). Because, informed consent is a principle that is observed to ensure that patient autonomy is preserved, requiring that competent patients are made aware of and understand enough about the intended benefits and possible risks of proposed treatment to make an informed decision (Mithani, 2012).

Understanding patients’ perspectives also becomes necessary considering the variable efficacies and safety profile of medications in RA. Hence, in this study, it is decided to interview representatives of patients to capture some of the above determinants.

Patient knowledge increased as education level increased. (Helliwell et al., 1999) For chronic diseases such as RA, sufficient information is very important for increasing patient compliance with treatment and willingness to take preventive precautions. Therefore, patient education is an integral part of RA management. Several studies have demonstrated increasing knowledge through patient education decreases RA disabilities (Sierakowska et al., 2016).

A study conducted by Bozbas and Gurer (2018) among RA patients in Turkey found that Turkish patients’ have inadequate

knowledge about the disease, and did not have sufficient information about the relationship between RA and exercise, as a result, many Turkish patients in this study did not regularly exercise. There were some more findings from this study which shed more light on the importance of good communications in the treatment process and what determines the knowledge levels of patients. It was also found that the level of patient knowledge decreased with age. Studies have demonstrated that the knowledge and awareness levels in patients on RA and about DMARDs generally is low, which may have an adverse impact on the ultimate adherence to treatment and outcomes (Bozbas and Gurer, 2018; Mäkeläinen et al., 2009). There is a need to further revisit and strengthen the communication strategies to ensure other physicians, nurses and family members of the RA patients are also adequately engaged in the care continuum. This will also need more involvement of private sector pharmaceutical and patient associations in the healthcare delivery process.

The number of rheumatologists is about 200 in Turkey (Nörobilim, 2020), so PTR specialists trained in the rheumatology. bDMARDs are prescribed only by rheumatologists and PTR specialists. Due to insufficient number of rheumatologists in Turkey, physical medicine and rehabilitation specialists have been leading

the care of RA patients. All the costs for the treatment for RA is fully reimbursed by the SSI although the process is more detailed for reimbursement of the bDMARDs, which often pose inconvenience for patients residing in rural and remote areas of the country. Non-availability of specialist physicians in rural and remote areas of the country also increases the indirect costs for the patients such as days off work, travels, lodging, etc. even for out-patient consultations.

According to the results, in Turkey, there is no distinction or discrimination between individuals for access to medicines and this is no different when it concerns the access to DMARDs for treating RA. Everyone, under the universal health coverage, has equal access to medicines. Equality and access to quality healthcare is assured to the citizens within the Turkish Constitution. Approximately 98% of the population in the country benefits from universal health insurance (OECD, 2017). The social security insurance provides coverage for most patients within Turkey and included medicines that are already approved for market authorization within the Country as well as medicines that are not yet approved for marketing in Turkey (Kockaya et al., 2017). This effectively means that RA patients can have access to all the relevant and quality medicines without having to worry about their availability or

affordability. However, this period is not long under the conditions of hospitals. It is not also practical to explain them to the patients one by one. Therefore, such information should be given via patient hospital or patient meetings. Patient associations may be active in this area. As indicated above, training may be given outside the hospitals if SSI accepts patient associations as its partner with respect to training of the patients and use its resources allocated to such training via patient associations. Today, patient training events are insufficient with respect to DMARDs.

## 6. Conclusion

RA patients did not face any significant social or economic barriers to accessing DMARDs. The treatment for RA including the costs of the laboratory tests used in treatment monitoring is fully reimbursed by the Social Security Institution within the universal health coverage. Approximately 98% of the population in the country benefits from universal health insurance. However, there were regional differences regarding access to rheumatologists due to their low number. RA patients' knowledge about RA was both insufficient and unequal among patients. A full understanding of the benefit and safety of treatment by patients; Adherence to treatment is important for achieving the planned goal and the success of policies created for RA management.

Therefore, at all levels of disease management, it would be beneficial to consider joint decision-making by the patient / caregiver-physician, the use of informed consent forms and the vital role of health professionals.

*Note: This study based on the Project: SAGEM/2016/CS/E.6.1.2.2.a.3/CQS/1 by Ministry of Health of Turkey.*

## References

- Arthritis Foundation (2020). Arthritis by the numbers Book of Trusted Facts & Figures 2020. <https://www.arthritis.org/getmedia/73a9f02d-7f91-4084-91c3-0ed0b11c5814/abtn-2020-final.pdf>.
- Bozbas, GT., Gurer, G. (2018). The Knowledge Level of Turkish Rheumatoid Arthritis Patients about Their Diseases. *Anadolu Kliniği Tıp Bilimleri Dergisi*, Ocak 2018; Cilt 23, Say 1.
- Bridges, JFP. and Jones, C. (2007). Patient-based health technology assessment: A vision of the future *International Journal of Technology Assessment in Health Care*, 23:1 (2007), 30–35. Cambridge University Press. U.S.A.
- EUnetHTA (2016). Joint Action on HTA 2012-2015 HTA Core Model Version 3.0 25 Jan 2016HTA Core Model Version 3.0. Access:21 June 2019. <https://eunetha.eu/wp-content/uploads/2018/03/HTACoreModel3.0-1.pdf>.
- Facey, K., Boivin, A., Gracia, J., et al. (2010) Patients' perspectives in health technology assessment: A route to robust evidence and fair deliberation. *International Journal of Technology Assessment in Health Care* 26(3):334-40 July 2010.
- Gagnon, MP., Desmartis, M., Lepage-Savary, D., Gagnon, J., St-Pierre, M., Rhainds, M., et al. (2011). Introducing patients' and the public's perspectives to health technology assessment: A systematic review of international experiences. *International Journal of Technology Assessment in Health Care*, 27:1 (2011), 31–42. Cambridge University Press 2011.
- Hennell, L., Brownsel, C. Dawson, JK. (2004). Development, validation and use of a patient knowledge questionnaire (PKQ) for patients with early rheumatoid arthritis. *Rheumatology (Oxford)*. 2004;43:467-71.

Helliwell, PS., O'hara, M. Holdsworth, J. Hesselden, A., King, T., Evans, P. (1999). A 12-month randomized controlled trial of patient education on radiographic changes and quality of life in early rheumatoid arthritis. *Rheumatology (Oxford)* 1999;38:303-8.

Kleme, J., Pohjanoksa-Mantyla, M., Airaksinenet, M., Enlund, H., Kastarinen, H., Peura, P., et al. (2014). Patient Perspective in Health Technology Assessment of Pharmaceuticals in Finland. *International Journal of Technology Assessment in Health Care*, 30:3 (2014), 306–311. Cambridge University Press 2014.

Kockaya, G., Yenilmez, FB., Sharaf, A., et al. (2017). Increasing Trend On Turkish Un-Licensed Medicine Market: A General Overview Analysis. *Abstract Only|Volume 20, Issue 9*, Pa668-A669, October 01, 2017.

Listing, J., Gerhold, K., Zink, A. (2013). The risk of infections associated with rheumatoid arthritis, with its comorbidity and treatment *Rheumatology*, Volume 52, Issue 1, January 2013, Pages 53–61, <https://doi.org/10.1093/rheumatology/kes305>.

Mäkeläinen, P., Vehviläinen-Julkunen, K., Pietilä, M. (2009). Rheumatoid arthritis patients' knowledge of the disease and its treatments: A descriptive study. *Musculoskeletal care*. 7. 31-44. 10.1002/msc.138.

Maggs, FM., Jubb, RW., Kemm, J.R., (1996). Single-blind randomised controlled trial of an educational booklet for patients with chronic arthritis. *Br J Rheumatol* 1996;35:775-7.

Matcham, F., Scott, IC., Rayner, L., Hotopf, M., Kingsley, GH., Norton, S. et al. (2014). The impact of rheumatoid arthritis on quality-of-life assessed using the SF-36: A systematic review and meta-analysis. *Seminars in Arthritis and Rheumatism* 44 (2014) 123–130.

Mithani, Z. (2012). *Virtual Mentor*, 012;14(7):576-581, doi:10.1001/virtualmentor.2012.14.7.oped1-1207.

National Library of Medicine, (n.d). HTA 101: Introduction to Health Technology Assessment, <https://www.nlm.nih.gov/nichsr/hta101/ta10103.html>.

NHS (n.d.). Symptoms, Rheumatoid arthritis. <https://www.nhs.uk/conditions/rheumatoid-arthritis/symptoms/>.

Nörobilim (2020). Türk Romatologlar Danimarkalı Hekimlere Türkiye’de Sık Görülen İnflamatuvar Hastalıkları Anlattılar. [https://norobilim.com/turk-](https://norobilim.com/turk-romatologlar-danimarkali-hekimlere-turkiye-de-sik-gorulen-inflamatuvar-hastaliklari-anlattilar/)

romatologlar-danimarkali-hekimlere-turkiyede-sik-gorulen-inflamatuvar-hastaliklari-anlattilar/

OECD (2017). “Population coverage for health care”, in *Health at a Glance 2017: OECD Indicators*, OECD Publishing, Paris.

Sandman, L., Granger, BB., Ekman, I., Munthe, C. (2012). Adherence, shared decision-making and patient autonomy. *Med Health Care Philos*. 2012 May;15(2):115-27. doi: 10.1007/s11019-011-9336-x. PMID: 21678125.

Sierakowska, M., Klepacka, M., Sierakowski, SJ., Pawlak-Buś, K., Leszczyński, P., Majdan, M., et al. (2016). Assessment of education requirements for patients with rheumatoid arthritis, based on the Polish version of the Educational Needs Assessment Tool (Pol-ENAT), in the light of some health problems - A cross-sectional study. *Ann Agric Environ Med* 2016;23:361-7.

Singh, JA., Saag, KG., Bridges, SL., Akl, EA., Bannuru, RR., Sullivan, MC. et al. (2015). Arthritis & Rheumatology, Vol. 68, No. 1, January 2016, pp 1–26. DOI 10.1002/art.39480VC2015.

Sorenson, C., Drummond, M. Kanavos, P. (2008). Ensuring Value For Money In Health Care The role of health technology assessment in the European Union. *Observatory Studies Series No 11*. [https://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0011/98291/E91271.pdf](https://www.euro.who.int/__data/assets/pdf_file/0011/98291/E91271.pdf).

Sorenson, C., Drummond, M., Kristensen, FB., Busse, R. (2008). How can the impact of health technology assessments be enhanced? World Health Organization 2008 and World Health Organization, on behalf of the European Observatory on Health Systems and Policies 200 [https://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0019/73225/E93420.pdf8](https://www.euro.who.int/__data/assets/pdf_file/0019/73225/E93420.pdf8).

Talibova, A. (2015). Romatoid Artrit Hastalarında Ve Birinci Derece Akrabalarında Yaşam Kalitesinin Değerlendirilmesi, Uzmanlık Tezi. T.C. Trakya Üniversitesi Tıp Fakültesi Fizik Tedavi Ve Rehabilitasyon Anabilim Dalı, Edirne.

World Health Organization (n.d.). Chronic rheumatic conditions, <https://www.who.int/chp/topics/rheumatic/en/Fet>.

Whitney, SN., McGuire, AL., McCullough, LB. (2003). A Typology of Shared Decision Making, Informed Consent, and Simple Consent, *Ann Intern Med*. 2003;140:54-59