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# BASIC HEALTH INDICATORS AND MIDWIFERY IN TURKEY, GERMANY AND GREECE

Türkiye, Almanya Ve Yunanistan'da Temel Sağlık Göstergeleri Ve Ebelik

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## ABSTRACT

**Purpose:** This study was conducted to compare the basic health indicators in Turkey, Germany and Greece and the status of midwives in the health workforce.

**Materials and methods:** The main health indicators for Midwifery, Women's and children's health in the three countries are taken from the World Health Organization (WHO), the European Commission database (EUROSTAT) and the country's official statistical institutions.

**Findings:** While the number of births in Turkey and Greece is declining, it remains stable in Germany. Among the three countries, the country with the highest female population of 15-49 years is Turkey. Turkey has a total fertility rate of 1.99, Germany 1.57, Greece 1.35. Cesarean section birth rates are the highest among OECD countries in Turkey at 54.9%. In Germany, it is 29.6%. According to local media in Greece, the cesarean section rate has increased from 50% to 70%. For all 3 countries, migrant and refugee Health is an important mother and child health problem. The number of midwives per 1000 people is 45.12 in Turkey, 31.75 in Germany and 32.79 in Greece. In all three countries, the most important problem for midwives is the confusion of the task experienced by gynecologists on pregnancy and childbirth. In the second place, income was reported to be low.

**Results:** Although basic health indicators differ in Turkey, Germany and Greece, midwives' problems are similar. Midwives working in these three countries need an empowered midwifery system that addresses the changing world, health policies and health needs. Further studies on health indicators and health economics that will arise with the effective use of the midwifery system are needed.

**Key Words:** Midwifery and Society, Midwifery, Midwifery and health indicators

## ÖZET

**Amaç:** Bu araştırma Türkiye, Almanya ve Yunanistan'daki temel sağlık göstergeleri ve sağlık iş gücü içerisinde ebelerin durumunu karşılaştırmak için yapılmıştır.

**Gereç ve Yöntem:** Üç ülkeye ait ebelik, kadın ve çocuk sağlığına ilişkin temel sağlık göstergeleri Dünya Sağlık Örgütü (WHO), Avrupa Komisyonu Veritabanı (EUROSTAT) ve ülke resmi istatistik kurumlarından alınmıştır.

**Bulgular:** Türkiye ve Yunanistan'da doğum sayıları düşüş gösterirken Almanya'da durağan seyretmektedir. Türkiye 1,99, Almanya 1,57, Yunanistan 1,35 toplam doğurganlık oranına sahiptir. Üç ülke arasında 15-49 yaş kadın nüfusunun en yüksek olduğu ülke Türkiye'dir. Sezaryen doğum oranları OECD ülkeleri arasında en yüksek Türkiye %54,9 iken Almanya'da %29,6'dır. Yunanistan'da yerel basına göre sezaryen oranı %50'den %70'e yükseldiği belirtilmiştir. Her 3 ülke için de göçmen ve mülteci sağlığı önemli bir ana çocuk sağlığı sorunu olarak karşımıza çıkmaktadır. 1000 kişiye düşen ebe sayısı Türkiye'de 45,12, Almanya'da 31,75, Yunanistan'da 32,79 dir. Her üç ülkede de ebelerin en temel sorunları jinekologlar ile gebelik ve doğum üzerine yaşanan görev karmaşası olup, İkinci sırada gelir düzeyinin düşük olması gösterilmiştir.

**Sonuçlar:** Türkiye, Almanya ve Yunanistan'da temel sağlık göstergeleri farklılık göstermesine rağmen ebelerin sorunları benzerlik göstermektedir. Bu üç ülkede çalışan ebeler, değişen dünya, sağlık politikaları ve sağlık ihtiyaçlarına yönelik, yetkilendirilmiş bir ebelik sistemine ihtiyaç duymaktadır. Ebelik sisteminin etkin kullanımı ile ortaya çıkacak sağlık göstergeleri ve sağlık ekonomisi üzerine daha fazla çalışma yapılmasına ihtiyaç duyulmaktadır.

**Anahtar Kelimeler:** Ebelik ve Toplum, Ebelik, Ebelik ve Sağlık Göstergeleri

## 1. ENTRY

Midwifery is not just a profession that consists of giving birth. Midwives are involved in the effective implementation of the health economy through public health practices and preventive health services. Midwives are also health manager, planner and health educator. Midwives play an important role in health problems, fertility outcomes, indicators and development in the country (Avcı,2012- Kalokairinou, 2015).

This study was conducted to compare the basic health indicators in Turkey, Germany and Greece and the status of midwives in the health workforce.

## 2. MATERIALS AND METHODS

This study, prepared within the scope of the First Touch project, was designed qualitatively with project partners and permission was obtained from Kayseri City Hospital Ethics Board.

Research teams from Greece, Germany and Turkey were formed and a standard form was prepared for the data to be compared. March - April 2020 collected the requested data and literature about each researcher country through the standard form and forwarded it to the research coordinator. The study was completed by the research coordinator.

## 3. FINDINGS

### 3.1. Statistical Indicators

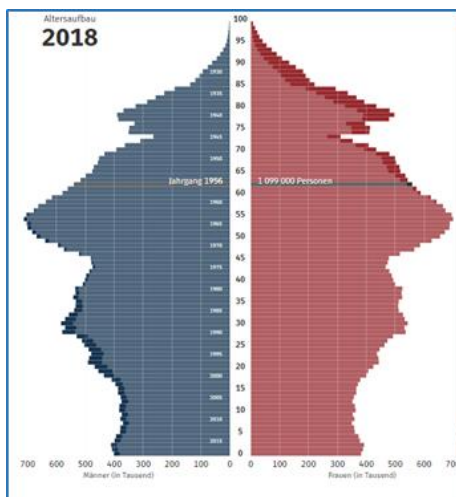


Figure 1. Population Pyramid Of Germany (Destatis,2018)

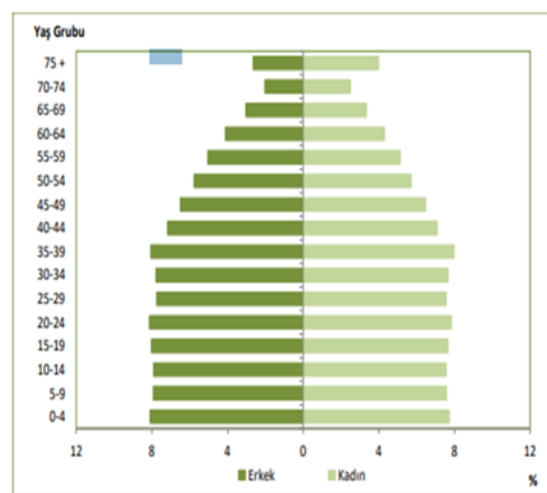
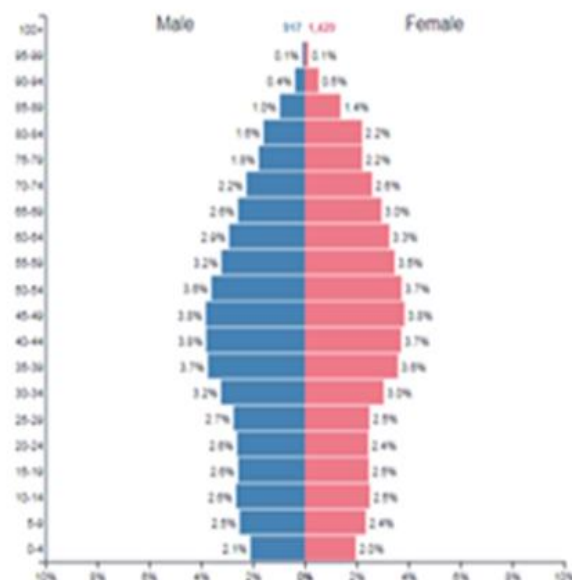


Figure 2. Turkey Population Pyramid (Tuik,2018)



**Figure 3.** Population pyramid of Greece ( PopulationPyramid.net)

Although Germany and Turkey have similarities in terms of population numbers, the population structure is different from each other. The mean age in Germany is higher than in Turkey. In Greece, we can also see that fertility rates are falling, the number of people in the middle age group is higher than others, and the number of young and old is close to each other. (Figure 1-2-3) (Table 1).

**Table 1.** Basic health indicators (WHO,2017-2018; Greekreporter,2018; SB,2018)

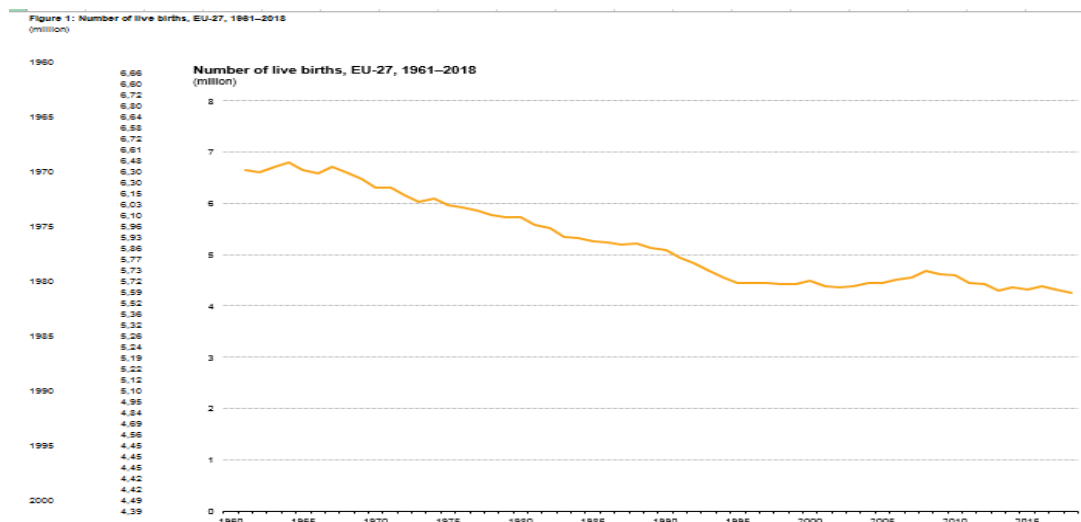
	Turkey	Germany	Greece
Country Population (Year 2020 )	83.154.997	83.019.213	10.724.599
Number of women aged 15-49 (2020 data)	21.988.068	16.800.042	2.197.026
Proportion of women aged 15-49 to general population %	26,4	20,2	20,4
Birth rate (birth rate per 100 people) (7)	16,2	9,4	7,8
Mortality rate under 5 (per 1,000 births)	9,97	3,35	4,1
Neonatal mortality rate (per 1000 births)	5,46	2,18	2,59
Infant mortality rate (1000 births)	9,1	3,01	3,63
Maternal mortality rate (100,000)	17	7	3
C-section birth rate (2018 data) %	54,9	29,6	56,8
Adolescent fertility rate between the ages of 15-19 (at 100 births)	26,56	8,1	7,22

In 2018, the total fertility rate in EU countries was 1.55 live births per woman. (1.56 in 2017). According to Eurostat 2018 data, Turkey has a total fertility rate of 1.99, Germany 1.57, Greece 1.35. But according to a study conducted in Turkey, this figure was reported as 2.3 (12). Among EU Member States, France had the highest total fertility rate in 2018 with a rate of 1.88, followed by Sweden and Romania with 1.76 live births, and Ireland with 1.75 live births in third place. The lowest total fertility rates in 2018 were reported from Malta (1.23), Spain (1.26), Italy (1.29), Cyprus (1.32), Greece (1.35) and Luxembourg (1.38).(13)

**Table 2.** Live birth numbers of countries (WHO,2017-2018; Greekreporter,2018; SB,2018)

	2015		2016		2017		2018
	Number	Rate Of Increase	Number	Rate Of Increase	Number	Rate Of Increase	Number
<b>Germany</b>	737.575	7,4	792.141	-0,95	784.901	0,33	787.523
<b>Greece</b>	91.847	1,15	92.898	-4,68	88553	-2,4	86440
<b>Turkey</b>	1.333.329	-1,6	1.311.895	-1,6	1.291.055	-8,3	1.183.652

Among the three countries, the country with the highest population of women aged 15-49 is Turkey with a rate of 26.4%, and the number of live births and rough birth rate are also higher than the others with a rate of 16.2%. Looking at the change in the number of births by year, it is seen that the decline in the number of births over the years in Turkey is observed in a certain number range, although there is an increase in Germany in 2016. The number of births in Greece has been falling for the last 2 years (Table 2). In general, it is reported that the number of live births in Europe has fallen over the years (Figure 4).



**Figure 4.** Change in the number of live births in EU countries (Eurostat,2018)

The age of being a mother for the first time in EU countries continues to rise and the average age is 29.3. The average age of being a first mother in Turkey is 23.3, Greece is 31.2, Germany is 29.7.(2018 TNSA and Eurostat 2018). One factor that could explain low levels of fertility in the EU is the increase in the age at which women give birth first. Factors that cause childbirth in later ages: women have higher participation rates in higher education and / or prefer to establish a career before starting a family more; the reduction of a job guarantee (low income levels); child-rearing and increased costs for housing; and a decrease in the number of traditional families (fewer marriages and more divorces), shows. (Eurostat,2020). Due to the impact of the 2007 economic crisis in Greece, it has been reported that women's fertility preferences, especially in metropolitan areas, have changed and there is a trend towards postponing birth.( Zambon,2018).

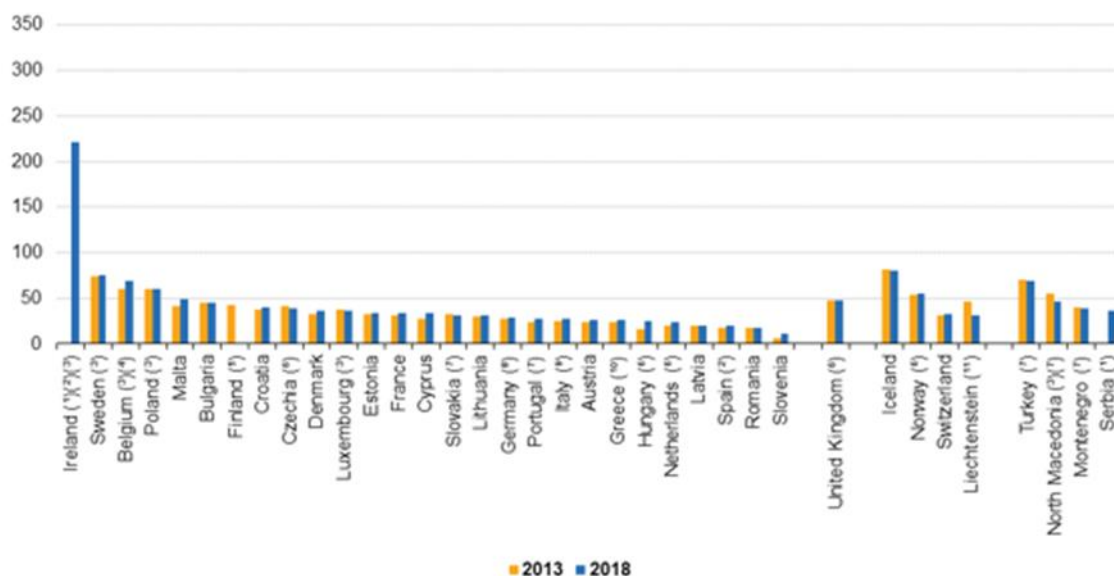
59% of births in Turkey occur in public hospitals and 40% in private hospitals. Less than 1% of births have been reported to occur at home (TNSA,2018). According to TUIK 2018 data in Turkey, the cities with the highest total fertility rate were Şanlıurfa with 4.13 children, followed by Şırnak with 3.6 children, Ağrı with 3.26 children and Muş with 3.23 children.(Tuik,2018). In Germany, 2.19% of all births take place outside the hospital (Quag,2018). The highest birth rate in Germany was reported from the states of Lower Saxony and Brandenburg with a rate of 1.62. The lowest birth rate is in Berlin, with a rate of 1.45. (Destatis,2018). According to our research, current perinatal Data of Greece was found to be insufficient, and no current data studies were found in the literature review.

C-section birth rates are highest among OECD countries, with Turkey at 54.9%, and Israel at least 1.49%. According to the OECD, the 2018 cesarean section birth rate is 29.6% in Germany. (OECD,2020). According to the Kathimerini newspaper, the rate of caesarean sections in Greece has increased from 50% to 70% (between 2007 and 2016). According to the same source, most caesareans are performed in a private hospital. (Table 1). (Ekathimerini,2015).

In recent years, one of the indicators that can be considered important in terms of women's and children's health is the number of immigrants and refugees. Migrants/ refugees and health problems caused primarily by the Syrian crisis are important for midwives in Turkey, Germany and Greece. Turkey and Greece are on the refugee transit route, with Turkey and Germany hosting the most refugees and migrants in Europe. According to the EU, the number of migrants per mean 1,000 is 5.4, with Germany 10.8, Greece 11.1 and Turkey 45. (Eurostat,2020).

### 3.2. Midwife numbers

According to data from Eurostat, the highest number of Midwives among EU member states in 2018 was reported to be 24,000 in Germany, 23,000 in France and 23,000 in Poland (2017 data). Ireland had the highest proportion of midwives by population size in 2017 (221 per 100,000 people), Sweden, Belgium and Poland were the other member states that recorded a rate of more than 50 midwives per 100,000 people.



**Figure 7.** Numbers of midwives in OECD countries (per 100,000 people) between 2013 and 2018)

The lowest proportion of midwives by a clear margin compared to the population is Slovenia, where in 2018 there were an average of only 11 Midwives per 100,000 people. Romania, Spain and Latvia each reported numbers of Midwives between 17 and 21 per 100,000 people. There was an overall increase in the number of midwives working according to population size in all EU Member States (out of 6) between 2013 and 2018. The largest increases in midwives were reported for Belgium, Hungary and Malta (Figure 7) (OECD,2018).

**Table 4.** The number of Midwives of countries (OECD, 2018)

	Midwife Number	Number Of Midwives Per 100,000 People	Number Of Midwives 1,000 Live Births	Number of Gynaecologists Per 100,000 (WHO-2013)
<b>Turkey</b>	56.351	69	45,12	9,03
<b>Germany</b>	25.000	30	31,75	20,49
<b>Greece</b>	2.834	26	32,79	25,89

### 3.3. General status of midwifery in countries

#### 3.3.1. Midwifery in Turkey

##### 3.3.1.1. Duties and responsibilities

According to the Ministry of Health;

1. In sexual health and reproductive health services, midwife provides preparation and execution of pregnancy preparation training and parenting and birth preparation programs in the pre-pregnancy period. Midwife monitors the reproductive health of women within the borders of fertility.
2. Midwife makes a diagnosis of pregnancy, conducts normal monitoring of pregnant women and necessary examinations, determines risky situations at an early stage, and directs them by taking the necessary precautions.
3. Midwife manages the birth process; monitors the health of the mother and baby during travay, performs normal births and emergency breech births in the absence of a doctor, performs an episiotomy when necessary. During the birth process, it determines deviations from normal, takes emergency measures and notifies the doctor, makes emergency intervention in accordance with the doctor's instructions.
4. In the postpartum period, midwife performs the first care and examination of the newborn, performs emergency resuscitation when necessary, gives breastfeeding training to the mother, makes care and monitoring of the mother, detects deviations from normal and sends them.
5. Applies drugs defined in accordance with the protocols organized by the Ministry in emergency obstetric cases.

6. Midwife provides the necessary training and counseling services to maintain and improve the health of the mother and baby during pregnancy, childbirth and postpartum period.
7. Midwife works in family planning services, screening programs for women and newborns.
8. 0-6 years of age monitors child care and development, takes part in infectious disease control programs and immunization services, especially pregnant and 0-6 years of age children vaccines. (Resmi Gazete,2014).

### 3.3.1.2. Problems With Midwifery

A large proportion of midwives in Turkey (90%) work in the public sector. Midwives working in the ministry have been made to do whatever work is to be done in non-midwifery work lines (Aybas,2019). With the transition to the family medicine system, midwives providing primary care services, nurses and emergency medical technicians began to work as family health workers and move away from field services (Turfan,2017). The fact that half of the births are performed by caesarean section medicalized the birth. In fact, according to a study conducted by ICM and who, There is medical pressure on maternal care in Turkey and the public considers midwives as carers or nursing assistants (WHO,2016).

### 3.3.1.3. Income level of Midwives

A newly appointed midwife in Turkey receives an average salary of £ 4800 (520 euros) (October 2020). There is a salary increase every 6 months at the rates set by the government. In Turkey, the fee of midwives working in the family medicine system is made according to the population registered with the family doctor. Freelance work is not very common, and no sources have been reached on their earnings. (Kamuajans, 2020).

## 3.3.2. Midwifery in Germany

### 3.3.2.1. Duties and responsibilities

The German midwifery law has been in place since 1985, when a midwife was identified as having medical staff trained to provide care and counselling to women in the normal pregnancy, childbirth and postpartum period. Midwives are legally entitled to provide independent medical care under normal circumstances. With this authority, it is imperative that a midwife is available for each birth, both at home and in the hospital. Doctors can make births accompanied by a midwife. Doctors can make births accompanied by a midwife. But cases of pregnancy, childbirth, and postpartum with complications should be referred to a doctor (scheuermann 1995). Midwives can also be referred to as "family midwives". Family midwives can provide health care to those with special needs (immigrants, women with disabilities, adolescent pregnancies, or families with low socio-economic levels). The government pays for these studies (Hebammenverband,2020).

1. Antenatal examination and pregnant monitoring,
2. Prenatal education classes and counseling,
3. Providing monitoring and treatment of chronic diseases during pregnancy under the supervision of a doctor
4. Manage normal labor, perform an episiotomy,
5. Follow-up of mother and baby for at least 10 days after birth (including feeding and breastfeeding).

### 3.3.2.2. Problems with midwifery

In Germany, midwives ' problems are similar to those of other countries. Because of the overlapping competencies of gynaecologists and midwives, the work responsibilities of midwives are under threat. Doctors do more prenatal care than midwives, and 98% of pregnancies followed by gynaecologists give birth in hospital. Most midwives, especially freelance midwives who work based on performance, are not happy with their income. (Emons, 2001).

### 3.3.2.3. Income level of Midwives

The mean monthly gross income of a full-time midwife in Germany is about € 3,400. This also depends on the active working time. A freelance midwife contracted to the hospital can earn more or less depending on the number of consultants and their services according to the official pay scale (Hebammenverband,2019).

### 3.3.3. Midwifery in Greece

#### 3.3.3.1. Duties and responsibilities

The law on midwifery in Greece has been updated, taking into account directive 2005/36 / EC of the European Parliament and Council. According to this law, the professional responsibilities of midwives are defined as follows. (EU,2015)

1. Providing information and counseling about family planning,
2. To make pregnancy detection, to follow normal pregnancies; to make the necessary examinations to maintain normal pregnancy,
3. Detecting risky pregnancies at the earliest, ensuring and recommending the necessary screenings,
4. Prepare a parenting preparation program and complete this program along with recommendations on hygiene and nutrition, including preparation for childbirth,
5. To assist and care for the mother during childbirth, to observe the condition of the fetus with appropriate clinical and technical methods,
6. Notice the warning indicators that may be in the mother and child, call a doctor when necessary, and then help. taking the necessary precautions if there is no doctor, especially removing the placenta and then controlling the uterus,
7. Examine and care for the newborn baby; perform the necessary procedures to revive the baby if necessary,
8. Observing and caring for the mother after birth, giving advice necessary for the mother to take care of her new child,
9. Continuing the treatment determined by the doctor,
10. Keep all necessary documents under record.

#### 3.3.3.2. Midwives ' problems

Although there is a midwifery law that clearly explains that the midwifery profession has an autonomous status, midwives in Greece are often subjected to the opposite practices, the situation of performing tasks below the level of Education. It has been reported that almost all births are conducted under the leadership of Obstetricians, while midwives act only in accordance with their current policy. Midwives are often unable to fulfill their responsibilities and only provide counselling. (Emons, 2001). ICM and WHO's publication stated that obstetricians took over the birth process in Greece, midwives gave them obstetric nursing, and they did not have the courage to express their views. (WHO,2016).

#### 3.3.3.3. Income level of Midwives

In Greece, health professionals working in the public sector are civil servants and receive the salary set by the government as a salary. Freelance midwives receive money based on their own set health service delivery fee. In general, midwives in the public sector receive a salary of about 650 euros (an increase of 10% every 3 years (last source 2012)), while midwives working in the private sector earn an average of 540 euros per month (Mywage,2020).

## 4. DISCUSSION

According to the data obtained from the study, the level of cesarean delivery in Turkey and Greece is high, and in Germany it is above 15%, which the WHO has indicated. As for the increase in C-sections, the causes of C-sections need to be questioned further. According to data from 169 countries, significantly high CS use was observed in low obstetric risk births among educated women. (Boerma, 2018). A study with obstetricians in the UK in 2002 found that they agreed C-section rates were rising, with many blaming the media and women for the rising trend. But it has also been noted that the same obstetricians often prefer cesarean section when there is no definitive medical indication. In the same study, it was emphasized that changes in the attitudes of clinicians should be made before starting to educate women about caesarean sections for non-medical reasons. (Kiran, 2002). 1/3 of all cases have a previous CS birth history when the causes of caesareans were examined in a hospital in Greece between 2004 and 2008. But the most indication is fetal distress. (Kalogiannidis,2011). In a 2014 study in Turkey, women who stated that they would prefer cesarean delivery are the reasons for their preference; 42.2% fear of vaginal birth, 31.6% lack of pain at caesarean delivery, 15.8% less damage to mother and baby during caesarean section, 10.5% higher risk of vaginal delivery (Çakmak, 2014). A study comparing C-section rates in different countries



found that although C-section is an effective intervention to save maternal and Infant Lives, C-section rates higher than about 10% at the population level were not associated with reductions in maternal and neonatal mortality, according to current ecological evidence (Ye, 2016).

The increase in cesarean birth rates is being monitored in almost all countries. C-section rates vary depending on the health policies of countries, the differences in the way doctors and people view the act of childbirth. Although pregnancy and childbirth are physiological events, normal birth is unpredictable and unplanned and has been identified with pain. This type of overview persuades women to give birth by caesarean section. From the point of view of doctors, even normal birth complications are considered malpractice, creating pressure and increasing the orientation of defensive practices and cesarean delivery rates. Health policies increase pressure on doctors to control cesarean delivery rates. A lack of trust between the patient, physician and the health system is one of the main reasons for the increase in cesarean delivery. (Çalı, 2012). More research is needed by reviewing the conditions that support the woman, such as the place of birth; medical personnel at the time of birth; whether the family and pregnant woman receive training in preparation for birth; receiving support for methods of coping with pain; whether the husband is with his. The strategic decisions that midwives will make to address the fear and anxiety that come with a caesarean section are very important.

The WHO has published the following research results on cesarean section births and should compare the rates of caesarean sections performed in the Robson classification;

1. Cesarean delivery is effective in saving the lives of mother and baby, when it is only necessary for medical reasons.
2. C-section rates higher than 10% at the community level are not associated with a decrease in maternal and neonatal death rates.
3. Because of cesarean birth can be seen, especially safe surgical and/or surgical complications had enough possibilities to treat lack of capacity in cases of significant permanent complications, disability and death. Caesarean section should ideally be performed only in medically necessary circumstances.
4. Instead of striving to achieve a certain rate of cesarean delivery, a caesarean delivery service should be aimed at women in need.
5. The effect of cesarean delivery rates on maternal and perinatal morbidity, pediatric outcome, psychological and social well-being is still unclear. Further research is needed to understand the early and future health effects of caesarean delivery (WHO,2020).

The increase in women's mean birth age suggests midwives should increase their level of expertise on risky pregnancy and infertility. Midwives need to do more research for the profession, keep up with technological developments and follow up on the results of the research because trained, investigating and questioning women will have higher expectations than midwives. On the other hand, due to the increase in the average age, women will need midwifery practices related to health problems other than fertility. Female life is divided into infancy, adolescence, reproductive age, climacteric period and older years, in addition to pregnancy and childbirth, known as life events specific to women, accompanied by significant hormonal changes. Health status at a given stage affects the next stage. Women's society has changed drastically over the past half-century, and a woman's life is now very different from the previous generation. It is important to pay attention to the psychosocial aspect of women's health and to apply clinical skills with a comprehensive perspective with this understanding, beyond biomedical problems (Takeda, 2010). Research studies on the stages of women's life related to midwives have not been found in the literature.

The number of migrant women of childbearing age, another group of women that closely concerns midwives, is increasing in Europe. Migrant women face worse pregnancy outcomes. Models of maternity care should be designed to meet the needs of all women in society to ensure equal access to services and address health inequalities. (Fair, 2020). Due to the high migrant population in all 3 countries included in our research, midwives should update their knowledge, especially in communication, midwifery services for different cultures, risky pregnancy, family planning. An EU project result report conducted in 14 European countries stated that migrant women need fair, high-quality and trauma-informed maternity care supported by interdisciplinary and interagency teamwork and continuity of care. Rather than clinical care, it has been emphasized that immigrant women need new models of maternity care that meet their socioeconomic and psychosocial needs.



The fact that the number of Obstetricians and midwives in the health sector in Greece is close to each other and the birth rate is low is a significant risk for the working area of Midwives. A decision similar to the practice in Germany could oblige midwives to take part in childbirth. In primary health care, Germany and Greece midwives are not as involved in the field as Turkish midwives. The majority of midwives in Turkey work in primary health care in the family medicine system. Therefore, the number of midwives per live birth is different and less than it seems. In order to increase the quality of pregnant and child monitoring, family planning services, immunization and cancer screening in primary health services, midwives should be the only competent employees in this field and the family midwifery system should be implemented. To be more effective for midwives in primary care services, in-service training programs, entitlement, personal rights by improving access to health care disparities and Infant Health Service implemented a woman of unique can also be prevented.

Among 3 countries, Turkey is the country with the highest maternal mortality rate. Turkey, 2012-2016 according to the autopsy, the leading direct causes of maternal mortality, obstetric haemorrhage (% 13.0) and obstetrics (pulmonary or amniotic fluid) embolism (% 12.4) and the main indirect causes of circulatory system diseases. (Keskin, 2018; Engin,2018). According to autopsy results conducted between 1984-2018 in Germany, cardiovascular events are the leading causes of deaths from natural causes, while suicides are the main cause of unnatural deaths. (Edler, 2019). According to Greek data, obstetric bleeding is the main cause of direct maternal deaths from 1996 to 2006, while heart disease is the most common cause of indirect deaths. (Vrachnis, 2011).

It is also known that Turkey is higher than other countries when we look at infant mortality rates. The best indicators to describe the change in the rate of infant mortality public health expenditure share of Gross Domestic Product (GDP), GDP per capita, the Gini coefficient (income inequality indicator), poverty rate (\$1 a day and the share of the population living under the total population), non-literate, the total share of women between the ages of 15-24, total fertility rate, life expectancy at birth has been reported (Ecevit, 2019).

## 5. CONCLUSIONS AND RECOMMENDATIONS:

Although basic health indicators differ in Turkey, Germany and Greece, midwives ' problems are similar. It is necessary to update the policy and authority of midwife training, health conjuncture of the country, numerical data of health manpower, taking into account integrated training programs and the change of health care groups. Further research is needed on health indicators and health economics that will emerge through the effective use of midwifery services.

## 6. CONTRIBUTIONS AND ACKNOWLEDGEMENTS

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