



# A Historical Review on Stigma of Epilepsy and its Interactive Factors



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## Abstract

Epilepsy and its stigma jointly emerged. For many centuries, for society and a great variety of intellectuals, epilepsy was a divine disease. Albeit Hippocrates stated epilepsy as a common disease, the stigma killed a lot of people. Epileptic people were accepted neither as employees nor as slaves. It was not until the Renaissance era that a noticeable change regarding the conceptualization of epilepsy from physicians and several, but not all, scientists focused on epilepsy took place. Citizens never stopped supporting the stigma of epilepsy. Throughout time, stigma affected relatives and caregivers of epileptic people. The law does not protect the human rights of epileptic people. Indeed, nowadays, epileptic people are afraid of declaring their health condition or having seizures in public places because of the stigma. The law's silence continues to stimulate stigma. As a consequence, the health of epileptic people gets worse, and they often die.

**Keywords:** Stigma; Epilepsy; Law; Society; Depression; Murders

## Introduction

In Ancient Times, for intellectuals and ordinary citizens, epilepsy was a synonym of demonism. Another paraphrase of epilepsy in Ancient Times was “contagious disease” and “punishment determined from the gods for the sins” of patients with epilepsy or their parents’ mistakes.

The explanation of epileptic people’s feelings and the scientific allegations that epilepsy was a brain disorder caused by human factors were too weak to win over the stigma and could not affect the lives of People with Epilepsy (PWE) positively.

The dominance of the stigma in medicine started to shake in the Renaissance. However, its practical weakness in the medical field came in the 19<sup>th</sup> century. Throughout time, the two constant factors of the stigma are its mortal impact on PWE and its invincible dominance in most citizens, especially in developing countries’ societies. Justice never stood against the stigma. Throughout time, the law has played a significant role in PWE’s death. Society isolates PWE. As a result, it deteriorates patients’ health conditions and leads epileptic people to death – not always because of suicide.

The current article intends to provide a systematic review of Stigma of Epilepsy (SoE). It does not neglect the interaction among

the stigma, scientists, and other intellectual fields. The more extensive focus on justice emphasized its permanent support to the stigma. All the factors mentioned above are linked to the health condition of PWE.

The chronology of the literature varies from 1992 to 2021. From the bibliography citation, it is evident that the stigma has been proved fatal to epileptic people.

## The stigma of Epilepsy in Doctors, Philosophers, Poets, and Society

### Ancient times

The first written traces of epilepsy confessed that epilepsy was not considered a common disease. The first texts about epilepsy were written in 2000 B.C. in the Akkadian language, a language spoken by the inhabitants of Mesopotamia [1,2]. From the content of the Akkadian papers, it resulted that epilepsy was a synonym of antasubbū that meant “the hand of sin,” a consequence of Goddess of Moon’s anger and in no way an ordinary agitated health condition [1,3,4].

Babylonian written thoughts asserted that people having epilepsy were evil spirits [1,4-6]. The children’s demise because of their epileptic condition was interpreted as the punishment

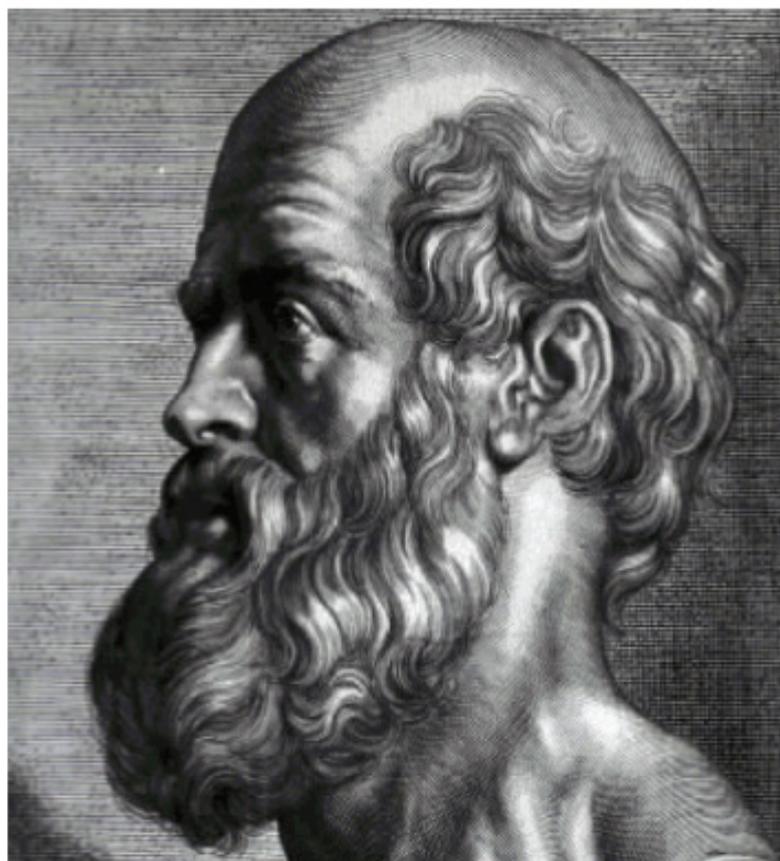
for the sins of their fathers [1]. Sakikku (All Diseases) was one of the more ancient Babylonian texts of medicine (1067-1046 B.C.) [2]. There epilepsy was called antasubba and miqtu, while seizures (AN.TA.SUB.BA) were synonyms of hands of sin [2]. The discrimination of PWE in their everyday lives has reached the point of being spat from their surroundings; non-epileptic citizens never accepted to use the same dishes as epileptic people [7]. The Indian medical writer Atreya in the 6th century B.C., in his paper Caraka Samhita – Sutra, ranked epilepsy among the brain and mind abnormalities [1,2]. However, the diagnosis of Atreya did not vanish the power of SoE even to the minimum degree in scientific or nonscientific environments [1].

### Ancient Greece

In Ancient Greece, epilepsy was ranked among sacred diseases [1,5]. Because of the mentality that epilepsy was the punishment by a Goddess of Moon, Selene (Σελήνη), a familiar name was seliniasmos (σεληνιασμός), which means a disease of the moon [1-4].

In his work *Lithica*, Orpheus characterized epilepsy as the revenge of the Goddess of the Moon, Mene, on human beings [1].

Another word for epilepsy was miasma (μίασμα) that meant “cast on the soul” [1]. Several other gods were blamed for epilepsy on human beings [1]. The god responsible for epileptic fits was revealed due to certain features of epileptic seizures [1]. In his papers, Hippocrates (Figure 1) explained that the symptoms of teeth-gnashing or convulsions on the right side showed that Cybele caused epilepsy, while when the patient screamed like a horse, it meant that Poseidon caused epilepsy [1,2]. Plutarch (50-120 A.D.) explained how the SoE was responsible for the brutal death of babies in Sparta [1,2]. A baby with epilepsy was abandoned in the Apothetai (Αποθέται), a chasm in the mountain Taygetus till death [1,2]. The first ancient Greek physician who ignored SoE and was referred to epilepsy as a brain dysfunction was Alcmaeon of Croton (6th century B.C.) [1,2]. Additionally, during 5th century B.C., Democritus of Abdera, famous for the synthesis of the atomic theory, left SoE out of his book on epilepsy (Περί επιληψίας) and linked epilepsy with brain dysfunctions 1. In the next century, the Father of History, Herodotus of Hallicarnassus (484-425 B.C.), in his third book *The Histories* (Thaleia), was concentrated on the genetic factors of the disease (εκ γενεής) [1,2]. Additionally, he interpreted the disease as the cause of erratic behavior and high intelligence evidence [1,2].



**Figure 1:** Hippocrates of Kos (460 BC – ca. 370 BC).

## Hippocratic era

In his classic paper *On the Sacred Disease*, Hippocrates of Kos provided a formal explanation of epilepsy as a common hereditary brain disease affected by climate fluctuations and diet that could be treated with drugs [1-3,5]. Furthermore, in the paper, Hippocrates of Kos composed offensive definitions toward the doctors who defended the divine origin of epilepsy [3]. In his *On Virginity* texts, Hippocrates recommended marriage and pregnancy to treat epileptic seizures during puberty [1]. Hippocrates continued his studies on epilepsy and made the first serious endeavor - until that time - to give a - free of stigma - scientific approach about the cause and therapy of epilepsy [1]. Furthermore, he provided a clinical analysis of epilepsy [1]. According to it, when PWE realized that they were about to have fits, they were looking for nonpublic places [1]. The volunteer seclusion of PWE from public places was because of embarrassment for their health condition [1]. It gets clear that PWE in their everyday life were negatively affected by the stigma to the degree of being ashamed about their epileptic condition. Aristotle confirmed the opinion of Herodotus that epilepsy was a genius sickness by explaining that: "epileptics have black bile in excess, as have geniuses who are prone to become melancholic by black bile." [1, p. 105]. The dictum of Aristotle in the *Problems* that the melancholic Hercules experienced mental derangement because of black bile was supported by Hippocrates [1]. In his treatise, *On Sleep and Waking*, Aristotle gave a free-of-stigma medical explanation on epilepsy [1]. Some of Aristotle's theories about epilepsy were reenacted, among others, by Galen [1].

## Post-Hippocratic era to the end of ancient times

Callimachus (circa 310-240 B.C.), a Greek poet born in Cyrene of Libya, narrates about a girl who decided to get married, contrary to Apollo's sister and Goddess of Moon's wish Artemis. As a consequence, the girl started to have epilepsy [1]. Many physicians postulated the claims of Aristotle, which the Catholic Church characterized as indisputable [1]. Aretaeus of Cappadocia (1<sup>st</sup>/55<sup>d</sup> century A.D.) stimulated SoE by determining epilepsy as a frightful disease [1]. Even though Aretaeus admitted that the head was the origin of epilepsy, he expressed his SoE about "epileptic personality" by portraying people with epilepsy as: "(L) anguid, spiritless, stupid, inhuman, and unsociable, at any period of life;" [1, p. 106]. Throughout these times, PWE in a significant part of the world never stopped to conceal their health condition [5].

## Roman empire

The derivation of the mentality that epilepsy was the punishment of angry Gods was well-grounded even in the Roman era [5]. The presence of a single epileptic seizure to a senator of the Senate during a Senate's session was enough to interrupt the session [1]. In everyday life, since epilepsy was considered a contagious disease and spitting as protection from contagious diseases, the humiliation of PWE reached the point of being spat

by everyone [5]. Aelius Galenus, or otherwise called Claudius Galenus (131- 201 A.D.), the most famous doctor of the Roman era, chose the scientific method for the analysis of epilepsy [1]. Galenus, in his classic papers *Medical Definitions*, stated epilepsy as a brain disease that: "can have its origin in any part of the body and then rises to the head in a way, which the patient can feel" [1, p. 106,2]. Nevertheless, Galen did not hesitate to propose magical "drugs" [1].

## Byzantine empire

The endeavors to explain epilepsy as a disease caused by human derangements like brain ailments and tumors were scarce [8]. Paulus of Aegina (7<sup>th</sup> century A.C.) put forward a clinical view of epileptic convulsions and status epilepticus [2,8]. However, these versions could not win over the stigma of divine and magic features attributed to PWE. Although in his paper *Twelve Books on Medicine*, Alexander of Tralles (525-605 A.C.) mentioned epilepsy as a brain disorder, he depicted the magic treatments of epilepsy [8]. In Arabia, there were a variety of explanations of epileptic seizures as disorders of the human organism [8]. Beyond that, SoE was predominating. Abu al-Qasim Khalaf ibn al-Abbas Al-Zahrawi (936-1013 A.C.), otherwise known as Abulcasis, one of the most known surgeons in the medieval Islamic era, introduced five causal categories of epilepsy [8]. The fifth category was the accursed *demos* or the otherwise called *allahin ablis* [8]. The Nestorian Christian physician of Baghdad, Yahya ibn Masawah in his *Grabadin, idest compedii secretorum medicamentorum*, ranked the extortion of a patient with epilepsy to the stages of epileptic treatment [8]. Although the translator of Greek medical and Islamic texts, Constantinus the African (1020-1087 A.C.), proposed the differentiation of epilepsy from demonism, he did not exclude the relationship between epileptic crisis and demonic powers [2,8].

## Middle ages

Albeit the physicians continued to agree with the explanations of Aristotle about epilepsy, the stigma was still prevalent [2]. Magical and religious treatments abounded [5,8]. Applying these practices meant that PWE were posed as sick, dirty, demonized persons with a contagious disease caused by Moon [8,9]. People having epilepsy were not allowed to frequent churches because of the prejudices that they were dangerous to the degree of destroying churches [7,8]. In 1426 the Cloister of Saint Valentine at Rufach inaugurated a hospital to exile PWE from society to the hospital [8]. Another reason for discriminating PWE was the assertion that every epileptic person had an infectious evil breath [7,8] "Falling evil" was a definition of epilepsy and a basic concept of the SoE during the Middle Ages [8, p. 692]. The Christian handbook *Malleus Maleficarvm* (Figure 2), written in 1487, explains that seizures were evoked by which powers and linked pejoration of epilepsy with the domination of non-human and non-natural factors [3,5]. Epileptic people were experiencing discrimination, the main consequences of which were exorcism and social isolation [5].

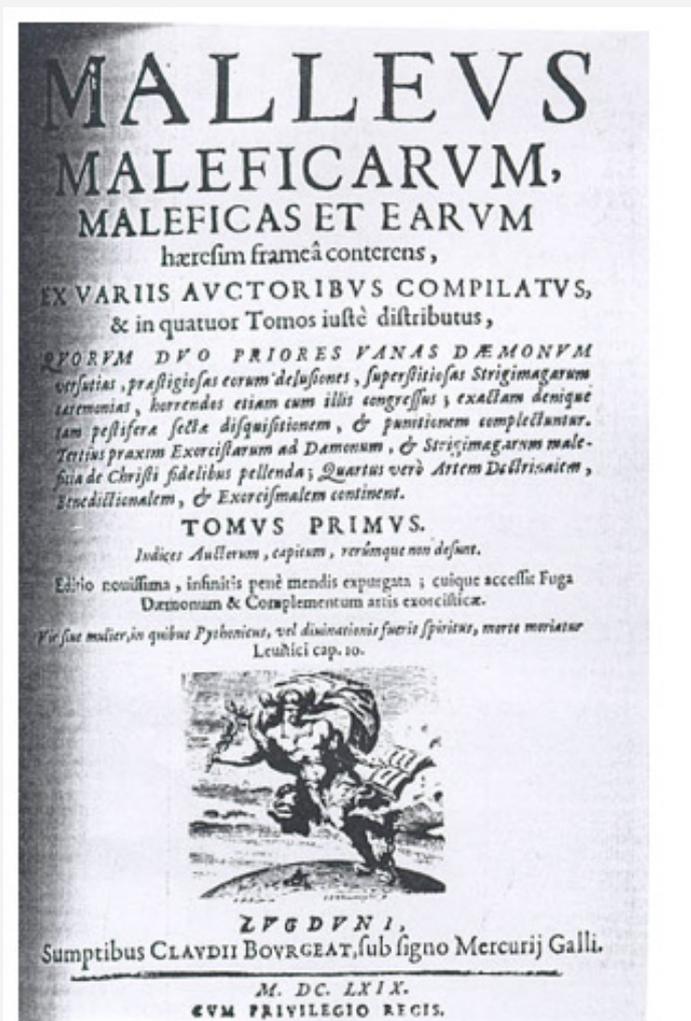


Figure 2: Frontpage of Malleus Maleficarum (Lyon edition, 1669).

## Renaissance and Enlightenment period

The Renaissance could be characterized as an era of scientific manifestation on analysis and treatment of the disease. The first worthy of consideration trial not to match the demonism with epilepsy was done by the Italian natural philosopher Andreas Caesalpinus (1519-1603 A.C.) [2,8]. The doctrine of epilepsy as a disease caused by natural disorders was induced amongst others, from the famous Dutch doctor Levinus Lemnius (1505-1568 A.D.), who wrote that “would persuade the ignorant people to think of no other cause of this disease, than the motion of the humours...men may not fear so much, when they see their mouths draw awry, their cheeks swollen, and strutting froth with frothy humour: and should not be dismayed to come near them, and lend them their help.” [2,8, p. 695]. Later on, the Dutch anatomist Volcher Coiter (1534-1600), made a great attempt to stand against SoE by assuring that epilepsy was not infectious [8]. The French physician Jean Taxil (17<sup>th</sup> century) rejected SoE and did not link epilepsy with demonism [8].

Regardless, it could not get over the cruel stigma. Another version of the SoE was that it was considered a disease improved only by cruel practices [8]. An exemplary paradigm was a young man cured by the German physician and alchemist Martinus Rulandus (1532-1602) [8]. The doctor alleged to have cured his patient with bloodletting, sternutatory, and a strong cathartic [8]. To the paper *Traicte' de l'e'pilepsie* (Figure 3) of the Swiss physician Simon August Andri David Tissot (1728-1787), published in 1770, trephination was proposed as a treatment of epilepsy, and marriage was defined as a compulsory prohibition for PWE [2,8]. At the end of the 17<sup>th</sup> century and through the Enlightenment in Western medicine and societies, an intensive fight against SoE began [3,7]. At the beginning of the 18<sup>th</sup> century, there was a tendency not to consider epilepsy a supernatural phenomenon [5,10]. Thus, the “witch therapies” started to vanish [5,10] However, the moon's role in the epileptic condition and the classification of PWE as evil, ill, dirty, and wicked people with a contagious disease was still vast [5,9]. Another factor estimated to be related to epilepsy was masturbation [5].



Figure 3: Frontpage of Traicte' de l'e'pilepsie.

### The 19<sup>th</sup> century

The SoE had almost disappeared from the mentality of the physicians who were occupied with the study of epilepsy [2,10]. The modern area of studying epilepsy began [5]. In 1857, the first hospital for PWE was established in France [11]. This time the scope of the hospital was not to isolate PWE from society but to help PWE deal with the disease [5,11]. During this century, while medical science generated the option that not all the patients had abnormal behavior, the behavior of society toward PWE was cruel, discriminative, and harmed the lives of PWE [5,7]. Texts written by authors of the late 19th century revealed that PWE were menaced, were not permitted to marry, or to experience any success because epilepsy was considered a contagious disease [5,9]. Moreover, PWE were evaluated as sick, demonized and dirty persons [9]. They were condemned in "death to the spirit" [7, p. 12].

### The 20<sup>th</sup> century

In the 20<sup>th</sup> century, the medical community - contrary to societies - was quite thoroughly free of the SoE's impact [12,13]. During this century, the developed states had not accomplished a considerable number of studies on the SoE [13]. As a result, the fact that SoE's power was more potent in developing countries should be interpreted with caution [13]. Some parents of children with epilepsy predicted a worse future for their children than children with asthma [7]. Other parents declared that they would prefer not to have born their children with epilepsy [14]. The SoE was extended to different educators and healthcare professionals, including social workers, psychologists, and vocational therapists [10,15,16]. Being epileptic was by itself enough for someone to be stigmatized by society [17,18]. In this century were present ancient versions of SoE that supernatural powers caused epilepsy and that it was contagious [14,19-23]. SoE made the personality

of PWE notorious [24]. Albeit there was no reliable scientific evidence, it was defined as “epileptic personality” [4,25]. The cruelest consequences of the stigma during this century were the risk of death and the bad quality of life in PWE, which came because of not few factors related to the SoE, such as social exclusion and financial challenges [12,13,26-28]. PWE were experiencing severe limits for their education to the point of not being accepted to the primary schools and several challenges when trying to get a job and maintain it [9,12,27,29-33]. In cases of employment, PWE experienced underemployment and other discrimination [9,30,33,34]. That meant low income [12,28]. Unemployment was a common and, no rarely, a permanent condition of PWE [9,28,33]. Furthermore, PWE were labeled as highly anxious, externally ugly, intellectually retarded, sexually deviant, with violent, antisocial, hostile behavior persons and not good partners [5,9,13,18,24,35,36]. Instead of support, these “ugly and behaviorally disordered” people were experiencing racism and isolation from substantial everyday social activities [6,18,24,36-38]. A significant impact of SoE on PWE were the deterioration of anxiety and depression, minimized self-esteem, higher seizure frequency, minimized control of seizures, and multi-AED therapy [20,21,25,26,28,31,38-40]. It was only circa during the last decades of the century the medical scientists began paying attention to the psychosocial conditions of PWE [10]. At the end of the century World Health Organization, International League Against Epilepsy, and International Bureau of Epilepsy collaborated and established the Global Campaign Against Epilepsy (GCAE): Out of the Shadows [3,10,13,14,18,22,29,41,42]. Its scope was the social acceptance and the positive attitude – of citizens and public or not institutions – to PWE as well as the prevention of epilepsy to an international degree [3,10,13,14,41,42]. According to the statistics of a study conducted in 1999, more than 50% of the subjects with epilepsy of the study declared their feeling of being stigmatized and, as a result, their attempts not to show their neurological disorder [5,24,43].

### The current century

Nowadays, the stigma continues to comprise an inescapable burden for PWE in many developing and developed countries worldwide [3,15,20,24,29,36,44-46]. Albeit that, a lot of developed and developing parts of the world have neglected the provision of knowledge that would reduce SoE [3,13,18,20,29,45,47].

The extreme version of stigma is the case of many Asian countries where the term “epilepsy” means non-logical, “unclean” condition [24]. In Greece, at the beginning of the century, Greek citizens would prefer to have close to them a person with diabetes, chronic respiratory and even cardiac problems than someone with epilepsy [13,47]. The SoE could produce significant damage to psychic, social, and clinical factors of PWE [4,18,20,21,26,27,29,31,33,39,41,43,47-51]. The main of these factors were proved to be self-esteem, the financial condition of PWE, the idea that PWE had for themselves, self-efficacy, stress levels, seizure frequency, socializing, and everyday activities

regarding entertainment and cultural events like theaters and clubs [4,6,13,16-20,26-28,30,32,34,35,37-39,43,44,46,51,52].

Due to SoE, many PWE are discouraged from making true self-evident – for any person – desires, as getting married and having children [4,12,13,16,17,20,23,26,27,32,43,47,50]. Because of SoE, PWE continue to be dissatisfied with their lives’ conditions [17]. Other factors related to the stigma were learning difficulties, obstacles to educational opportunities, and external dysfunctions [3,17,18,20,32,43,47,48,53]. An activity for which citizens, because of the SoE, instead of helping PWE impeded it, was employment [3,15,16,18,27,29,32-34,41,43,44,47,48,53]. It should be specified that employment could assume an outstanding role in the financial, self-esteem, and simple everyday activities of any person - three factors in the lives of PWE seriously exacerbated by the stigma [9,38]. Until the beginning of the century, in the United States of America (USA), a stable high percentage of unemployment was consolidated in PWE [9].

Media, which always had a sizeable impact on citizens’ opinions, while at the beginning of the century it provided a negative image of PWE, later on, it started to be more positive on supporting the fight against SoE [16,27,38,46,54]. The stigma deteriorated even the clinical part of epilepsy [15,37,38,51,55,56]. Indeed, to avoid the cruel consequences of stigma, PWE decide to be continually in quarantine – isolation. Isolation by itself comprises an essential stimulus for developing psychic disorders [57].

Depression and anxiety are two comorbidities of epilepsy affected to a substantial degree by the Stigma [4,20,26,34,37-39,41,51,55]. It was proved that depression comprises an inevitable psychic disorder because, except for stigmatization, it could result from the number of antiepileptic drugs and seizure frequency [37,56]. However, depression could not be an unchangeable condition [28]. The clinical factors related to depression could not be reduced without improvement in the epileptic condition. However, the stigma should be reduced until its final disappearance to improve the epileptic condition and, therefore, health and quality of life of a person with epilepsy and to avoid suicidal tendencies and sudden deaths of PWE [3,4,6,15,17,19,20,24,27,28,33,34,36,38,39,43,46,49,52-56]. In various cases, the non-clinical condition of PWE has been worse than their clinical condition [18,28]. Health-care professionals like psychologists and physicians claim the presence of “epileptic personality,” which comprises the new version of stigma to the intellectual circles [4,18,27,30,47]. Indeed, PWE still feel shy and continually try hiding their epileptic conditions, mainly because of the persistent negatively prejudiced perception about PWE either from simple citizens or intellectuals [3,4,15,20,23,29,30,32,38,40,42,43,46,47,49,51,58]. The stigma is experienced at a higher percentage from PWE, their families and caregivers, than from citizens and carers of citizens having other chronic diseases [6,9,20,23,26,28,32,38,41,54].

For that reason, a lot of PWE chose to stay away from their acquaintances [17,51]. Being related to a PWE was enough to experience stigma's burden on educational matters and several employment factors [9,18,53].

### The Law Support on the Stigma of Epilepsy

#### Ancient times

In Ancient Times, PWE, who were sold as slaves, were considered useless, and the customer who bought an epileptic slave was entitled to claim damages from the seller [5]. According to the Hammurabi Code, written in 1780 B.C., people suffering from seizures could neither get married nor appear in court as witnesses [15]. Additionally, where a slave had at least one seizure within three months from the sale, the new (lord) owner of the slave had the right to rescind the contract, return the slave and seek a refund [7]. The assumptions mentioned above regarding the trading of slaves mentioned in the medical text Sakikku (All Diseases) written around 1700 B.C., during the kingdom of Hammurabi, were modified to a certain degree. Specifically, Sakikku stated that if a slave started to suffer from seizures within a month after the sale, neither could the slave be returned nor a refund was permitted by law [1,12].

#### Ancient Greece

Plato (428/427–348/347 B.C.), in his texts *Laws*, proposed certain sanctions for the sellers of epileptic slaves: "[I]f a man sells a slave.... who has the disease of... epilepsy... if the purchaser be a physician or trainer, he shall have no right of restitution; nor... if the seller has told the truth beforehand to the buyer. But if a skilled person sells to another who is not skilled, let the buyer appeal for restitution within six months, except in the case of epilepsy, and then the appeal may be made within a year... and the defendant, if he loses the suit, shall pay double the price at which he sold. If a private person should sell to another private person, he shall have the right of restitution, and the decision shall be given as before, but the defendant, if he be cast, shall only pay back the price of the slave" [1, p. 105].

#### Middle ages

The Malleus Maleficarvm (Figure 2) alleged that the presence of seizures was equivalent to witch evidence and interpreted the deterioration of epilepsy as the seize of PWE with non-human and non-natural powers [5]. The tremendous outcome of the book was the legal massacre of PWE [3,5]. At least 20.000 of the victims were women [3,5]. According to certain evidence, the women's figure could have reached 1.000.000 [5].

#### The 18<sup>th</sup> to the 20<sup>th</sup> century

In 1757, Sweden approved the law prohibiting PWE from getting married [59]. Even though doctors proposed and proved that marriage for women could be a successful method of seizure control and that not always PWE were violent before, during, or

after seizures, the crime of Montgomery reinforced the stigma of epilepsy [5]. At the end of the 19th century, justice was negatively biased toward PWE, treating them as mad criminals and condemning them to eternal prison [3,13]. During the 20th century, there were various legitimate discriminative factors to the justice corps of Europe and North American countries [18]. In 1936, the American Neurological Association Committee's intervention gave PWE the right to decide their fertilization [10]. While 17 countries of the USA repealed these unjust laws in 1956, the last state of USA continued implementing these laws before 1980 [7,12,15]. In the United Kingdom (UK), the law which did not allow PWE to have a spouse was effective until 1970 [3,7,12,37]. In the USA, the law for the injunction of discriminating behavior toward people with physical disabilities was approved in 1973 [7]. Albeit that, it was only after the 1970s that people suffering from seizures were allowed to frequent public places, including theaters and other entertaining events [7]. Before the 1990s in the USA, marriage, fertilization, employment and driving were legally forbidden to PWE [5]. Driving barriers were a common practice of law in Western countries [60]. In the USA, PWE and their families were experiencing the legal stigma because of being the relatives of PWE [5]. The legal uniform solution for the persistent discrimination of people with disabilities was not achieved before 1990 [7].

#### The 21<sup>st</sup> century

The judiciaries of developing and developed countries remain silent and indifferent to the violation of human rights that PWE experience in their everyday lives. Only in 2016, the developed country of Japan approved the law that punishes discrimination against PWE [54]. There is no law for punishing the Health Insurance Companies in many developed countries, which refuse to firm healthcare contracts with PWE [12,38]. Therefore, the law system of these countries ignores the health risks PWE are exposed to, and no legal, financial enhancement is provided to PWE to cover their primary health expenses. Accordingly, due to SoE, PWE do not have enough money to live and cover health expenses. In developed countries where the rule of law heralds, as its primary intention, the protection of human rights, the human rights of PWE are violated to a dangerous degree. Albeit the confirmation of the law against the discrimination of PWE from UK justice, there is legal enforcement, which does not allow PWE to start a professional route in teaching, police and armed forces, medicine, fire company, and prison environments [14,18]. The USA legislations composed and approved the law against PWE discrimination non earlier than the 21st century [18].

The law of several countries, including Western countries, embraces SoE and as a result discriminates PWE in educational and everyday activities, like jobs and driving licenses [12,15,18,29,37,60]. In this century, the law in Colombia stands against discrimination toward people with epilepsy, and in India, it permits PWE to get married [3]. Moreover, in the 21st century,

as a consequence of the zero-intervention of the law, PWE are stigmatized [18]. Legislation should seriously address the fight against stigma because the minimization of stigma will lead to increased socialization of PWE, higher self-efficacy, better health condition, and less suicide and premature deaths of PWE [3,6,12,15,37,60]. According to scientific evidence, 30% of traffic accidents were estimated to be a consequence of alcohol [47]. Epileptic people were responsible only for 0.2% of the accidents [47]. In other cases, the probabilities of accidents for PWE had not a significant difference compared to those with healthy young male drivers [61]. Moreover, there is no scientific evidence to prove that PWE should not drive [47]. Albeit these, PWE are not legally permitted to have a driving license if they receive antiepileptic drugs and are not free of seizures [47]. As some jobs require a driving license, the drive-forbidden law stimulates unemployment and stigma.

It results that law hitherto stays silent to the violation of the human rights of PWE, including the summum bonum of life [7,12,15,37,60].

### Discussion

The stigma of epilepsy has been harsh and dangerous to people with epilepsy all through the time. The stigma of epilepsy was stimulated by the religious field and intellectuals engaged in studying the illness. It was in the Renaissance era that many intellectuals started to stand consistently against the stigma of epilepsy. The disappearance of the stigma from a significant part of the medical field was achieved in the 19<sup>th</sup> century. Nonetheless, the stigma has never disappeared from laypersons and certain professionals, including psychology and law. Violation of human rights of PWE was and continues to be a common practice in law settings worldwide. Law was for a lot of centuries tormenting people with epilepsy. Individuals with epilepsy are still discriminated from the justice corps. No law definitions provide health insurance and costs to individuals with epilepsy when health insurance companies reject firm contracts with PWE. Law neither stimulates the companies to firm the contracts with PWE nor defines punishments for the stigmatization of PWE in all fields and institutions. Individuals with epilepsy are estimated to be responsible for less than 0.5% of traffic accidents. Additionally, there were recorded almost the same percentages of traffic accidents between PWE and young, healthy male drivers. Albeit that, the law has serious driving restrictions for people with epilepsy. Since a driving license is a compulsory paper for many job posts, not having a driving license means stimulating unemployment and confessing indirectly but clearly the epileptic health condition. Hence, the law incites unemployment and stigma by not providing driving licenses to epileptic people. The deterioration of epilepsy and certain psychic disorders could trigger suicidal tendencies and, no rarely, lead to premature death – not always because of suicide. The negative impact of stigma should be considered at least as severe as the side effects of antiepileptic treatments of epilepsy. Trying to weaken the stigma

means ameliorating the lives of human beings, while disappearing stigma means saving the lives of PWE.

The European Court of Human Rights (ECHR) and the International Criminal Court (ICC) has defined as their priority the respect for human dignity, freedom, democracy, equality, being a fair state, and respect for human rights, including the rights of persons belonging to minorities [62,63]. As it gets clear from all the evidence presented above, in many countries which have firmed to respect the guidance lines of ECHR and ICC, PWE are humiliated. They are not free to choose their profession, their marital status and other parts of their lives' puzzle. Moreover they are discriminated, compared to other citizens, and no law definition ensures their rights – including not being hungry, having health insurance and avoiding the risk to die. Till today, PWE are more afraid of experiencing a seizure in a public place than from a seizure itself because they cannot stand the idea of being stigmatized and they believe that no one will help them [64,65]. In a recent verdict of ECHR the court stated that the act of depriving someone of hope and the opportunity to be free comprises torture and no one merits it, even a murder [66]. The current reality has deprived PWE of hoping that one day will be free to talk to others about their health condition, to choose what to do in their lives and to have the law support when their rights are violated. According to ICC and ECHR the act of remaining silent or/and supporting someone who commits a crime comprises complicity [67-69]. The abundant scientific studies have clearly stated that stigma can lead to death because of – amongst others - anxiety, depression and other psychic disorders, financial problems, missing health covering costs. The absence of the laws and factors that would discourage someone from adopting stigma toward PWE and will fight stigma and the consequences it has to PWE is a synonym of silence and support to stigma and the impact it has on PWE. Therefore, all the countries which have not added to their legislature the laws mentioned above could be accused of being accomplices to the violence of epileptic people's human rights and many deaths of PWE caused by the presence of stigma.

For all these reasons, further delay of the justice's fight against stigma could not be permitted and the presence of the later should not go unpunished.

### Conclusion

The stigma of epilepsy was born with epilepsy. The presence of stigma, which is supported by law, can deteriorate the clinical part of epilepsy and the psychic state of PWE and their carers to prevent people with epilepsy and their acquaintances from enjoying social activities and being employed. In various cases, the stigma of epilepsy and the support of the law can cause premature death.

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