BONES AND JUSTICE

ETHICAL DIMENSIONS OF THE USE OF SKELETAL AGE DIAGNOSIS FOR FORENSIC PURPOSES

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Thesis Abstract

Rüstem Ertuğ Altınay, "Bones and Justice: Ethical Dimensions of the Use of Skeletal Age Diagnosis for Forensic Purposes"

Forensic bioethics is a branch of bioethics that has traditionally enjoyed little interest. The aim of this thesis is to focus on skeletal age diagnosis, a popular forensic procedure in Turkey, to explore the ethical dimensions of the procedure. Since the concept of age is important for regulating civil life as well as criminal behavior, given that there is distrust in legal certifications about age in Turkey, forensic age diagnosis is widely used both on voluntary grounds and upon court demand. In Turkey, skeletal age diagnosis is used in all forensic age diagnosis procedures, often as the only method. Arguing that bioethical problems are often entangled with technical issues as well as their applications in particular socio-historical contexts, I explore the ethical problems concerning skeletal age diagnosis together with the technical problems and legal regulations. Moving from the basic concepts of bioethics such as nonmaleficence, beneficence and respect for autonomy, I seek to discuss how these problems are related to social problems like underage marriage in the context of Turkey. While doing this, I also discuss the differences between forensic bioethics and bioethics in therapeutic medicine, and how the forensic physician's dual role as medical and legal professional shapes the ethical concerns in the forensic context.

Tez Özeti

Rüstem Ertuğ Altınay, “Kemikler ve Adalet:

Kemik Ölçümünden Yaş Tayininin Etik Boyutları”

Adli tıp biyoetiği, biyoetiğin fazla ilgi görmemiş bir dalıdır. Bu tezin amacı, Türkiye’de yaygın biçimde kullanılan bir adli tıp işlemi olan kemik ölçümünden yaş tayinine odaklanarak işlemin etik boyutlarını incelemektir. Yaş kavramı hem medeni hayatın hem de suçlu davranışlarının düzenlenmesinde önemli olduğu ve yaşa dair yasal belgelere güvenilmediği için Türkiye’de adli tıpta yaş tayini hem isteğe bağlı olarak hem mahkeme talebi üzerine yaygın biçimde uygulanmaktadır. Türkiye’de kemik ölçümünden yaş tayini, adli tıptaki tüm yaş tayinlerinde, çoğu zaman yegane yöntem olarak kullanılır. Ben biyoetik sorunların çoğu zaman teknik meselelerle ve bunların belli toplumsal-tarihsel bağlamlardaki uygulamalarıyla iç içe olduğunu savunarak kemik ölçümünden yaş tayinine ilişkin etik sorunları, teknik sorunlar ve yasal düzenlemelerle birlikte ele alıyorum. Biyoetikteki zarar vermeme, yarar sağlama ve özerkliğe saygı gibi temel kavramlardan yola çıkarak bu meselelerin küçük yaştaki kişilerin evlendirilmesi gibi toplumsal sorunlarla nasıl iç içe olduğunu tartışıyorum. Bunu yaparken adli tıp biyoetiği ve sağaltıcı sağlık hizmeti bağlamındaki biyoetik arasındaki farkları ve adli tıp doktorunun sağlık ve hukuk profesyoneli olarak ikili rolünün adli tıp bağlamındaki etik kaygıları nasıl biçimlendirdiğini de tartışıyorum.

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APPENDICES

CHAPTER 1

INTRODUCTION

Written at a time when the problems in the Turkish forensic context have become most visible, this thesis aims to focus on the ethical dimensions of a commonly used forensic procedure in Turkey: skeletal age diagnosis. Skeletal age diagnosis is a basic method of forensic age diagnosis, used to confirm or change one's legal age, and therefore legal status. Due to the distrust in the legal certifications of age, combined with the legal community's deep trust in "objective", "scientific" evidence provided by the medical professionals, forensic age diagnosis is conducted both on voluntary grounds and upon court demand. The aim of this thesis is to focus on skeletal age diagnosis and its applications in the Turkish medico-legal context to discuss the ethical problems involved in the procedure.

Forensic bioethics in Turkey and elsewhere present peculiar ethical problems that arise from the ethical commitment of forensic medicine to both legal and medical fields as well as the social and political issues that shape the forensic context. In this thesis, my main focus is on skeletal age diagnosis in the Turkish medico-legal context. In order to present the approach I adopt in my analysis as well as the place of this study within the context of Turkish bioethics literature, and its relevance for the debates about ethical violations in the Turkish forensic context, I devote the rest of this chapter to a discussion on how the field of bioethics emerged as an academic and applied discipline, how it developed in Turkey, and the trends in Turkish bioethics literature. Arguing that ethical problems are often related to technical problems, particularly in the case of skeletal age diagnosis, I devote

Chapter 2 to a discussion of the clinical methods of skeletal age diagnosis and the technical problems involved. Since forensic age diagnosis is used to regulate one's legal status with respect to age, it is intrinsically related to the concept of legal age. In Chapter 3, I discuss the different uses of the concept of age in Turkish laws as well as the legal regulations concerning forensic age diagnosis procedures. In Chapter 4, I discuss the ethical problems involved in skeletal age diagnosis in the light of the basic concepts in bioethics. In Chapter 5, I provide some suggestions that may contribute to solving the ethical as well as technical problems involved in skeletal age diagnosis and its applications in the Turkish medico-legal context. In Chapter 6, I conclude with a general overview of the case and suggestions for further study.

Approaches in Bioethics and a Brief Overview of the Turkish Bioethics Literature

Although bioethics has its roots in fifth century B.C., in the work of Hippocrates, the establishment of bioethics, as a branch of applied philosophy and as a profession, is a recent phenomenon. Besides being a field of intellectual inquiry, bioethics also draws on moral philosophy, law, medicine, biology as well as some of its own documents and principles in an attempt to develop institutional structures that help people make decisions about health care, health research, and other research and applications related to biology[1].

As a field, bioethics has three interrelated major aspects[2]. First, it is an applied discipline. Experts in the field, who are usually employed in hospitals,

[1] Jonathan Baron, *Against Bioethics*, (Cambridge. Massachusetts and London, England: The MIT Press, 2006), p. 9.
[2] For the discussion on the three aspects of bioethics, I am indebted to Jonathan Baron, *Against Bioethics*, (Cambridge. Massachusetts and London, England: The MIT Press, 2006), pp. 9-10.

research centers and pharmaceutical companies, help other professionals in making decisions that have ethical implications. The second aspect of bioethics is the formulation of codes of ethics. On various levels, codes of ethics are formulated by groups of professionals. Some of these codes are national, and they apply to all professionals in the field. Others are developed for use in a specific organization. The third aspect of bioethics is an academic discipline. As the philosophical study of the ethical questions that arise in the intersections of philosophy, politics, law, life sciences, biotechnology, and medicine, bioethics emerged as an academic discipline in the 1960s. Technological advances, social movements, and issues in health economics, particularly social security, insurance policies and distribution of health care resources resulted in a rapid growth in the need and interest in bioethics as an academic field. In its embryonic years, discussions in bioethics were shaped by basic issues concerning research and patient-professional relationships as well as the ethical implications of technological advances[3], particularly in organ transplantation and end-of-life care. Later on, issues concerning boundaries of life, particularly the debates about abortion and euthanasia played an important role in shaping the discipline, and delineating the religious and bioethical approaches to issues concerning life and health. Today, bioethics is an academic discipline with its own journals, societies, departments and programs. However, not all areas of bioethics have enjoyed equal interest. A vast literature has accumulated on areas that have direct political and economical implications for societies, such as the allocation of health resources, as well as those related to culture and religion, such as multiculturalism in health care or abortion. Nevertheless, some areas of bioethics, such as forensic bioethics, have gone largely unnoticed.

[3] Albert R. Jonsen, "A History of Bioethics as Discipline and Discourse", in *Bioethics: An Introduction to the History, Methods, and Practice*, eds. Nancy Ann Silbergeld Jecker, Albert R. Jonsen and Robert A. Pearlman (Sudbury, MA: Jones and Bartlett Publishers, 1997): p. 3.

The development of bioethics in Turkey has largely been a reflection of the trends in the West, rather than a process governed and directed by local concerns and debates. The first legal document about bioethics was the Code of Medical Deontology in 1960[4]. The Constitution of 1982 became the first legal document to refer to the concept of consent. With the Health Services Fundamental Law passed in 1987, all medical research on humans involving drugs was forbidden unless the consent of the subject and the Ministry of Health was obtained. In 1993, the Ministry of Health published Regulations for Medicine Research. This was a milestone in the history of ethics committees in Turkey. The first ethics committee in the country had been established in 1986, but after 1993 it became a legal requirement to obtain the approval and supervision of an ethics committee for medical research[5]. Today, many hospitals have ethics committees. Decisions given by these committees regulate the clinical research and health care practices conducted in the institutions, and they can be extremely important in decision-making concerning some procedures such as abortion. It is worth noting that members of bioethics committees are often the medical professionals affiliated with the institutions, rather than experts in the field of bioethics. As such, the job prospects for people trained in bioethics are still fairly limited outside the academia, but it is possible to receive graduate-level bioethics education. These programs are offered mainly in the deontology departments located in medical schools, but it is also possible to focus on bioethics under philosophy departments. In 2008, Sağlık Hukuku ve Etiği Araştırma ve Uygulama Merkezi [Center for Health Law and Ethics Research and Application] was established in Marmara University "to conduct research and practice on the national and

[4] For the information on the history of bioethics in Turkey, I am indebted to Elif Atıcı, "Situation of Research Ethics Committees in Turkey", *Journal of the International Society for the History of Islamic Medicine* 5(9) (2006), p. 43-46.
[5] Ibid, p. 45.

international level in the areas of healthcare law, such as medical law, forensic medicine, drug law, medical ethics and similar areas"[6]. However, the center is not active yet, and there is no research institution in Turkey that focuses on bioethics only. The major bioethics society, Turkish Bioethics Association [Türkiye Biyoetik Derneği], was established in 1994, and it currently has 173 members. There is also a Medical Ethics and Medical Law Association [Tıp Etiği ve Tıp Hukuku Derneği] founded in 2004. Both organizations organize regular meetings, facilitate research and collaboration among their members. Other institutions that do not have an ethics focus, such as Turkish Medical Association [Türk Tabipler Birliği], also have ethics committees.

Turkish bioethics literature is shaped by a sharp distinction between philosophical/theoretical and empirical works. Works that fall under the first category reflect the international debates in the field, and explore issues like abortion[7], prenatal testing[8], organ and cell transplantation[9], stem cell and genetic

[6] Marmara Üniversitesi Sağlık Hukuku ve Etiği Araştırma ve Uygulama Merkezi Yönetmeliği, Madde 5. (Marmara University Center for Health Law and Ethics Research and Application Statute, Article 5). *Official Gazette* no. 26827 (March 25, 2008). Available [online]: http://www.resmi-gazete.org/sayi/1197/marmara-universitesi-saglik-hukuku-ve-etigi-arastirma-ve-uygulama-merkezi-yonetmeligi.html [June 10, 2009]

[7] Ömür Şaylıgil Elçioğlu, "Kürtaj ve Rıza ile İlgili Sorunlar", *Jinekoloji ve Obstetrik Dergisi* 7(3) (1993): pp. 135-137; Şahin Aksoy, "Kürtaj Sadece Tıbbi Bir Karar Olabilir mi? [Can Abortion Be a Medical Decision Only?]", *Türkiye Klinikleri Tıbbi Etik Dergisi* 4 (1996): pp. 12-15;
Ege E. Pasillioğlu "Doğum ve Kadın Sağlığı Hemşirelerinde Etik", *Atatürk Üniversitesi Hemşirelik Yüksek Okulu Dergisi* 3 (2000): pp. 44-50.

[8] Şahin Aksoy, -- "Prenatal Tanı Yöntemlerini Çevreleyen Etik Sorunlar [Ethical Issues Surrounding Prenatal Testing Techniques]" *Türkiye Klinikleri Tıbbi Etik Dergisi* 1998 (6): pp. 69-72.

[9] Arslan Terzioğlu, "Organ Transplantasyonu ve Getirdiği Etik Sorunlar", *Türkiye Klinikleri Tıbbi Etik Dergisi* 1(1) (1993): pp. 35-53; F. Akçiçek, G. Atabay, A. Başçı, J. Evert, M. Dorhout, "Organ Nakli ve Tıbbi Ahlak [Organ Transplantation and Medical Ethics]", *Türk Nefroloji ve Transplantasyon Dergisi: Official Journal of the Turkish Nephrology Association* 3 (1994): pp. 33-35; S. Salaçin, M.K. Gülmen, Z. Erkol, L. Dönbak, "Beyin Ölümü Kavramına Sosyal Yaklaşım: İki Ayrı Bölge Anket Çalışmasının Değerlendirilmesi", *Türkiye Klinikleri Tıbbi Etik Dergisi* 4 (1996): pp. 85-87; Ömür Şaylıgil Elçioğlu, İlhami Ünlüoğlu, and Atilla Yıldırım, "Fetal Hücre ve Dokuların Transplantasyonu: Karşılaşılan Etik Sorunlar ve Türkiye Uygulaması", *Jinekoloji ve Obstetrik Dergisi* 7(1-5) (1997); Nilgün Keçecioğlu, Levent Yücetin, Gülşen Yakupoğlu, Fevzi Ersoy, "Böbrek Transplantasyonunun Yasal, Etik, Psikososyal ve Finansal Yönleri", *Türkiye Klinikleri Nefroloji Dergisi* 1(1) (2003). Available [online]: http://www.turkiyeklinikleri.com/makale.php?id=5436 [21 June 2009]; A.Ç. Donutlu, "Organ Bağışı ve Naklinde Etik, Dinsel ve Yasal Yaklaşımlar", *Diyaliz, Transplantasyon ve Yanık* 15 (2004): pp. 69-76.

research[10], and euthanasia[11] that enjoy a significant global interest. Most of these works have little focus on the empirical roots of the problems or their implications in the Turkish context. The second trend in Turkish bioethics literature is based on empirical research. Curiously, these works are dominated by survey-based research conducted by researchers affiliated with deontology and public health departments. Most of these works focus on the beliefs or attitudes of medical professionals and students regarding major concepts in bioethics[12], often without exploring how these beliefs and attitudes are related to the ethical violations in biomedical practices or how they shape biomedical applications. In my interviews with doctoral students, I was told that this trend is caused by the comparative ease of making survey-based quantitative research as well as the students' beliefs concerning the likelihood of

[10] Zehra Genç and Ayşegül Adıan Erdemir, "Genetik Danışmanlığın Tıbbi Etik Açısından Önemi ve Bazı Sonuçları [The Importance of Genetic Counselling from the Point of View of Medical Ethics and Some Results]", *Türkiye Klinikleri Tıbbi Etik Dergisi* 5 (1997): pp. 72-79; Erdem Aydın, "Kök Hücre Çalışmalarında Etik", *Hacettepe Tıp Dergisi* 36 (2005): pp. 198-202.

[11] Arslan Terzioğlu, "Euthanasia (ötenazi) ve Getirdiği Etik Sorunlar", *Türkiye Klinikleri Tıbbi Etik Dergisi* 2 (1994): pp. 16-21; Ömür Şaylıgil Elçioğlu, Tarık Gündüz, Nedim Köşgeroğlu, "Tıp, Hukuk ve Etik Açıdan Euthanasia [Euthanasia: Point of View of Medicine, Law and Ethics]", *Türkiye Klinikleri Tıbbi Etik Dergisi* 2 (1994): pp. 64-70.

[12] Gülten Özaltın and Özlem Işıl, "Önlisans Hemşire Öğrencilerinin Ölüme İlişkin Yaklaşımlarının İncelenmesi [An Investigation of Nursing Students' Approaches to Death]", *Türkiye Klinikleri Tıbbi Etik Dergisi* 5 (1997): pp. 10-15; Fatma Öz, "Hemşire ve Hekimlerin Ötenazi ile İlgili Tutum ve Görüşleri", *Medical Network Klinik Bilimler ve Doktor* 5(4) (1999): pp. 450-459; E. Özkara, B. İnceer, İ. H. Hancı, G. Ozan, G. Oral, "Psikologların Ötenaziye Yaklaşımı." *Adli Psikiyatri Dergisi* 1(1) (2004): pp. 35-42; M. Naçar, F. Çetinkaya, D. Kanyılmaz, B. Tokgöz, C. Utaş, "Hekim Adaylarının Organ Nakline Bakış Açıları", *Türk Nefroloji Diyaliz ve Transplantasyon Dergisi* 10(2) (2001): pp. 123-128; Deniz Çalışkan, Oya Özdemir, Recep Akdur, "Abidinpaşa Sağlık Grup Başkanlığı Bölgesinde Çalışan Hekimlerin Ötenazi Konusunda Bilgi Tutum Davranışları ile İlgili Bir Çalışma [Knowledge Attitude and Behaviours of Doctors on Euthanasia in the Abidinpasa Primary Heath Care Area]", *Türkiye Klinikleri Tıp Etiği-Hukuku-Tarihi Dergisi* 11 (2003): pp. 91-101; Esin Ocaktan, Ayşe Yıldız, Oya Özdemir, "Abidinpaşa Sağlık Grup Başkanlığı Bölgesinde Çalışan Sağlık Personelinin Hasta Hakları Konusunda Bilgi ve Tutumları", *Ankara Üniversitesi Tıp Fakültesi Mecmuası* 57(3) (2004): pp. 129-137; Şahbal Aras, Semih Şemin, Türkan Günay, Esmahan Orçın, Sema Özan, "Lise Öğrencilerinin Cinsel Tutum ve Davranış Özellikleri [Sexual Attitudes and Behaviors of High School Students]", *Türk Pediatri Arşivi* 40 (2005): pp. 72-82; Kerim Özdemir and Fehim Göze, "Bandırma'da Hemşirelerin Sağlık Etiği Algılamaları", Paper presented at Sakarya Üniversitesi İktisadi ve İdari Bilimler Fakültesi 2. Siyasette ve Yönetimde Etik Sempozyumu, 2005. Available [online]: http://www.etiksempozyumu.sakarya.edu.tr/etik/1.2/ozdemir.pdf [May 12, 2009]; Hülya Kaya and Emine Akçin, "Hemşirelik Öğrencilerinin Ötenaziye İlişkin Görüşleri [The Views of Nursing Students about Euthanasia]", *Türkiye Klinikleri Tıbbi Etik Dergisi* 13 (2005): pp. 115-119; Abdulkadir Teke, Muharrem Uçar, Cesim Demir, Özay Çelen, Turgut Karaalp, "Bir Eğitim Hastanesinde Görev Yapan Hemşirelerin Hasta Hakları Konusundaki Bilgi ve Tutumlarının Değerlendirilmesi", *TSK Koruyucu Hekimlik Bülteni* 6(4) (2007): pp. 259-266; Oya Kavlak, Gül Ertem, Ümran Sevil, "Kanserli Hastalara Bakım Veren Hemşirelerin Kanserli Hastalara Doğruyu Söyleme Konusundaki Tutumları", *Türkiye Klinikleri Tıbbi Etik Dergisi* 16 (2008): pp. 1-7.

publishing quantitative research as opposed to qualitative or theoretical research: "We are expected to make publications to complete our doctoral studies. What our professors tell us, what has been tried and turned out to be successful is quantitative research, using surveys. This is why we do this kind of work"[13] (Esra, 29, doctoral student). Due to the belief in the higher likelihood of publishing quantitative research, and arguably because it is easier to conduct, since most researchers have access to people affiliated with a university or a medical setting, quantitative research, often based on small samples, has a dominant role in the current Turkish bioethics literature. As such, the trends in Turkish bioethics literature reflect the tensions between philosophical/theoretical bioethics and its social science critique. The social science critique of bioethics argues that "traditional philosophical bioethics gives a dominant role to idealized, rational thought, and tends to exclude social and cultural factors, relegating them to the status of irrelevancies"[14]. The philosophical/theoretical trend in Turkish bioethics literature is often indeed vulnerable to the social science critique, since these works tend to deal with concepts in a rather abstract manner, without exploring the empirical aspect of the situation. However, the empirical trend of conducting surveys in the medical contexts that dominates the Turkish bioethics literature is clearly not the solution, since these works move from key concepts in philosophical bioethics to measure people's beliefs and attitudes, and they rarely deal with the philosophical tensions involved in ethical decision-making or how these are entangled with real life situations. In that sense, what is largely missing in the Turkish bioethics literature is the critical bioethics approach, which requires the researcher to combine empirical research and

[13] "Doktoramızı tamamlamak için yayın yapmamız bekleniyor. Hocalarımızın bize söylediği, daha önce denenmiş ve başarılı olmuş olan da anket yöntemiyle yapılan niceliksel araştırmalar. Bu yüzden biz de bu tür çalışmalar yapıyoruz."

[14] Adam M.Hedgecoe, "Critical Bioethics: Beyond the Social Science Critique of Applied Ethics", *Bioethics* 18(2) (April 2004), p 120.

philosophical inquiry to challenge the existing theories and practices, and to contribute to relevant policy-making. There already are examples of critical bioethics in the Turkish bioethics literature[15], but it is important to promote this approach for the production of research that would be relevant to the problems experienced in the Turkish context, explore the local manifestations of international issues as well as the empirical roots and manifestations of the philosophical problems, and potentially contribute to the elimination of ethical violations.

In an academic environment shaped by international discussions rather than the country's internal dynamics, some areas of bioethics, such as forensic bioethics or military bioethics, that have enjoyed little interest in the West have also been ignored – although they are of particular significance in Turkey. The ethical violations in the Turkish forensic context have gained notoriety particularly after three cases in the last years: the Hrant Dink murder in 2007, the Hüseyin Üzmez case and the Münevver Karabulut case in 2009. The Hrant Dink murder exposed the unreliability of the forensic age diagnosis procedures[16]. The sexual abuse case of Hüseyin Üzmez exposed the ethical problems about the treatment of children in the forensic context, and the unreliability of the forensic reports, particularly those produced by forensic psychiatrists[17]. The Münevver Karabulut case showed the

[15] For an example of critical bioethics on ethical violations in dentistry education, see İlter Uzel, "Türk Diş Hekimliği Eğitimindeki Bazı Etik İhlalleriyle İlgili Tespitler", *Yaman Örs Armağanı*, eds. İlter Uzel, Nükhet Örnek Büken, Selim Kadıoğlu, Serap Şahinoğlu, Şahin Aksoy (Adana: Türkiye Biyoetik Derneği Yayınları, 2005): pp. 382-390.

[16] Dink murder will be discussed in detail in Chapter 3.

[17] Hüseyin Üzmez is a 78 year-old Islamist columnist, who sexually abused a 14-year-old child. During the case, Ayten Erdoğan, the only pediatric psychiatrist in Istanbul Forensics Institute resigned from the institution, arguing that the institution was going to prepare a report stating that the child had not been psychologically affected (Nail Kahraman, "Mağdur B. Ç., Muayene İçin Yarın Üçüncü Kez Adli Tıpta." June 3, 2009. *Milliyet*. Available at: http://www.milliyet.com.tr/Yasam/SonDakika.aspx?aType=SonDakika&ArticleID=1102406&Date=26.07.2009&Kategori=turkiye&b=Magdur%20B.C.,%20muayene%20icin%20yarin%203uncu%20kez%20Adli%20Tipta&ver=65 [July 20, 2009]). Erdoğan also claimed that she received death threats, and the institute lacked the necessary infrastructure to work properly, particularly with children. In the first report, it was indeed stated that the child's psychological or bodily health had not been affected

mistreatment of dead bodies, and the limited reliability of the methods to obtain forensic evidence[18]. Curiously, even these cases failed to spark an interest in the literature on forensic bioethics in Turkey. While there are a couple of exceptions[19], the few publications on forensic bioethics have a theoretical/deontological focus, and they don't say much about any of the specific problems in the Turkish context[20]. This thesis is one of the first examples of Turkish forensic bioethics literature with a focus on the specifics of the Turkish medico-legal context.

As Baron convincingly argues, bioethics not as a field of philosophy but as an applied field with rarely questioned laws and principles "lacks the authority that comes from a single, coherent guiding theory in which practitioners are trained" and the deontological and utilitarian approaches are too often used together in the bioethics literature in ways that are not necessarily compatible[21]. Given the interrelatedness of the three aspects of bioethics as an applied discipline, an academic discipline, and a discipline that works on the formulation of codes of ethics, this tendency towards deontology is not surprising albeit in most cases problematic. In my analysis, I take the generally accepted principles in bioethics into consideration as basic guidelines. Yet, being aware of the shortcomings of a deontological

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(Nail Kahraman, "İşte Hüseyin Üzmez'i Tahliye Ettiren Rapor", *Hürriyet*, June 3, 2009. Available [online]: http://arama.hurriyet.com.tr/arsivnews.aspx?id=10247703 [July 20, 2009]).

[18] Münevver Karabulut was an 18-year-old high school student "whose decapitated body was discovered in a bag in a dumpster with her head in a guitar case atop it in Istanbul's Etiler district" ("Governor: Media Irresponsibility Damaging Murder Case". *Today's Zaman*, July 26, 2009. Available [online]: http://www.todayszaman.com/tz-web/news-181114-governor-media-irresponsibility-damaging-murder-case.html [June 12, 2009]. After the analysis, Istanbul Forensics Institute wrote a report, saying that there were sperm stains on Karabulut's body, which belonged to more than one man. Later, it turned out that one of the sperm stains was the result of a contamination from another dead body in the institute, and the autopsy was partially conducted by a janitor ("Cesedine Sperm Nasıl Bulaştı?" *Hürriyet*. July 11, 2009. Available [online]: http://cep.hurriyet.com.tr/NewsDetail.aspx?ArticleID=13012&CategoryID=38 [June 12, 2009]).

[19] For one of the rare examples of forensic bioethics literature that has a focus on the specifics of the Turkish medico-legal context, see Ayşegül Yolga Tahiroğlu, Ayşe Avcı and Necmi Çekin, "Çocuk İstismarı, Ruh Sağlığı ve Adli Bildirim Zorunluluğu", *Anadolu Psikiyatri Dergisi* 9 (2008): pp. 1-7.

[20] See Fatma Yücel Beyaztaş, "Adli Rapor Konusunda Hekim Sorumluluğu", *Anadolu Psikiyatri Dergisi* 1(4) (2000): pp. 231-234

[21] Baron, p. 4.

approach without sensitivity to context, I adopt a critical bioethics approach to explore the complications involved in different uses of forensic age diagnosis, with a particular focus on how various social and political issues in Turkey affect the forensic procedure.

CHAPTER 2

CLINICAL METHODS OF SKELETAL AGE DIAGNOSIS

In this chapter, clinical methods of skeletal age diagnosis are presented to familiarize the reader with the Greulich and Pyle method, the only method of skeletal age diagnosis used for forensic purposes in Turkey, and to give an idea about the alternative methods. Exploring the history of skeletal age diagnosis, this chapter discusses the problems inherent to skeletal age diagnosis as well as those that stem from the applications in Turkey. These technical problems are particularly important since they are directly related to ethical problems.

Skeletal age is the measure of skeletal development of a child. The concept was first developed to set measurable, quantitative standards of normality regarding skeletal development. Skeletal age assessment is frequently performed in pediatric radiology to evaluate and examine growth disorder, determine growth potential, and monitor the effects of growth therapy[22]. Often based on a radiological examination of the left-hand wrist, skeletal age is assessed and compared with the chronological age. A discrepancy between the two values indicates an abnormality in skeletal development. In pediatrics, the procedure is used "in the management and diagnosis of endocrine disorders"[23]. It can also be used to measure the therapeutic effect of a treatment[24]. Generally, the procedure can indicate whether the skeletal growth of a patient is accelerating or decreasing. In many cases, the decision whether to treat a patient with growth hormones depends on the outcome of this procedure. Although

[22] Mahmut Haktan, "Computer Assisted Bone Age Assessment", unpublished MS thesis. Bogazici University, Institute of Biomedical Engineering, 2005, p. 1.
[23] D. Giordano, R. Leonardi, F. Maiorana, G. Scarciofalo, and C. Spampinato, "Epiphysis and Metaphysis Extraction and Classification by Adaptive Thresholding and DoG Filtering for Automated Skeletal Bone Age Analysis", Conference Proceeding, IEEE Engineering in Medicine and Biology Society 1 (2007), p. 6551.
[24] D. B. Darlin, *Radiography of Infants and Children*. 1st ed. (Springfield, IL: Charles C. Thomas, 1979), p. 370-372.

the pediatric use of the procedure also has ethical implications that stem from the (re)production of the concepts of "normality" in the medical context as well as the potential side-effects of hormone therapy, the focus of this thesis is on the use of the procedure for forensic purposes. Before going into the details of the forensic use of the skeletal age diagnosis procedure, I explore how skeletal age diagnosis was developed to discuss the differences in the use of the procedure in pediatric and forensic contexts, and the different methods available.

Skeletal Age and Its Diagnosis

Preliminary studies on human growth and development that would form the basis for a long-term investigation started in 1929 at the Western Reserve University School of Medicine in Ohio[25]. In a large-scale study that began in 1931, left shoulder, hand, hip and knee radiographs were taken from non-malnourished white children who were perceived to be healthy. In the first postnatal year, an examination was conducted every three months. From twelve months to five years, radiographs were taken every six months, and annually thereafter[26]. The study ran until 1942. In 1937, with the aid of the data collected for this study, *Atlas of Skeletal Maturation of the Hand* was published by Thomas Wingate Todd. In 1950, William Walter Greulich and Sarah Idell Pyle published a more developed atlas that was based on all the data collected until 1942. In total, they had from two to twenty-one hand radiographs obtained through successive examinations of 1,000 exclusively white,

[25] Haktan, p. 5.
[26] Concetto Spampinato, "Skeletal Bone Age Assessment", Available [online]: http://homepages.inf.ed.ac.uk/rbf/CVonline/LOCAL_COPIES/SPAMPINATO/SKELETALBONEAGEASSESSMENT.pdf [May 20, 2009], p. 1.

middle-class children[27]. Since the sex of the person influences skeletal growth, and females develop earlier than males, the atlas is divided into two parts for male and female children[28]. Each part contains standard radiographic images of the left hands of children ordered by chronological age. The Greulich and Pyle atlas also includes an elaborate description of the developmental stages of each bone. These descriptions provide the medical professionals with a general guideline to the development of each bone in the hand, rather than an instruction on how to rate a bone[29]. Today, most institutions use a more rapid modified version of the original atlas, which is also potentially less accurate[30].

In the first step of the procedure as applied in the pediatric context, the radiograph is compared with the images in the atlas that corresponds closest with the chronological age of the patient[31]. In the second step, the radiograph is compared with the adjacent images taken from younger and older children. When comparing the radiograph against an image in the atlas, there are certain features the medical professional should use as maturity indicators[32]. These features vary with the age of the child. In younger children, the presence or absence of certain epiphyseal ossification centers are used to determine the skeletal age of a child. In later ages, the shape of epiphyses and the level of fusion with the metaphysis are used as an indicator of skeletal age[33]. Once the atlas image that most resembles the radiograph is found, the medical professional should conduct a more detailed examination of the individual bones and epiphyses. When she is certain that the matching radiograph has

[27] Haktan, p. 6.
[28] Ibid., p. 7.
[29] Spampinato, p. 1.
[30] Ibid., p. 1.
[31] Haktan, p. 7.
[32] Spampinato, p. 1.
[33] Haktan, p. 8.

been found, the medical professional uses the skeletal age printed at the top of the page to identify the person's skeletal age[34].

The Greulich and Pyle method involves a complex comparison of all the bones in hand and wrist against an atlas of reference radiographs of different ages. This method is not always reliable, "in fact it depends on the doctor's subjectivity, and moreover, a specific x-ray may not match any of the atlas images"[35]. Because of these problems, Tanner and Whitehouse developed another method, known as TW1. In 1976, they developed TW2, a more accurate method[36]. TW2 method was created as a result of the problems perceived by Tanner and Whitehouse in the G&P method. First, they saw the subjective nature of the matching process as a weakness[37]. Often a specific radiograph does not match any of the images in the atlas exactly, and little guidance is given on how to balance out the discrepancies that arise from the differences between the levels of advancement of the bones[38]. Second, Tanner and Whitehouse were not satisfied by the scale used for expressing bone maturity in the G&P method. In that atlas, each radiograph is associated with the age of the child to whom it belongs. Thus, maturity is measured on an age scale. This is the reason why it can be used as an indicator of chronological age in the forensic context. Tanner and Whitehouse argued that there was need for a new, more sophisticated system that would measure maturity with a set of "maturity standards" rather than with direct reference to chronological age[39]. The TW2 method doesn't use a scale based on age. It is based on a set of bone's standard maturity for each age population. In this method, twenty regions of interest (ROIs) located in the main bones are considered

[34] Spampinato, p. 2.
[35] Giordano et. al., p. 6551.
[36] Phyllis B. Eveleth and James Mourilyan Tanner, *Worldwide Variation in Human Growth*, 2nd ed. (London: Cambridge University Press, 1976), p. 149.
[37] Haktan, p. 8.
[38] Giordano et. al., p. 6551.
[39] Spampinato, p. 2.

to evaluate skeletal age[40]. The development of each ROI is divided into discrete stages, and a numerical score is associated with each stage of each bone. By adding the scores of all ROIs, an overall maturity score is calculated[41]. This score correlates with the bone age differently for males and females. Despite the higher reliability of the TW2 method, the Greulich and Pyle method is still the most popular method for skeletal age diagnosis in Turkey and in other countries, particularly in the forensic context. The simplicity of the method and the use of chronological age rather than "maturity standards" or any other scale is the reason for this preference.

Although skeletal age diagnosis was developed for use in the pediatric context, later it was adopted by forensics experts. However the use of the procedure for forensic purposes follows a different route. In its application in the pediatric context, the atlas images represent an *ideal*. The children involved in the study for the formulation of the *Atlas of Skeletal Maturation of the Hand* were not selected because they represent an *average*. As non-malnourished, healthy, middle-class children, they were selected precisely because they represent an *ideal* for all (white) children at a certain age. Hence their radiographs were used to assess whether and how much a child deviates from the ideal of skeletal health for her age, as represented in the radiographs of healthy children. For this reason, skeletal age is also used as an indicator of malnutrition and child poverty[42]. However, things are different in the forensic context, where skeletal age diagnosis is used in the presence of doubt about a child's chronological age. In the forensic use of the procedure, the child's radiograph is again compared to the images in the atlas. When the most

[40] Giordano et. al., p. 6551.
[41] Spampinato, p. 2.
[42] For studies that discuss the use of skeletal age diagnosis to measure malnutrition and child poverty, see Barry Bogin and Robert B. MacVean, "The Relationship of Socioeconomic Status and Sex to Body Size, Skeletal Maturation, and Cognitive Status of Guatamala City Schoolchildren", *Child Development* 54, 1983: pp. 115-128 and K. Fleshman "Bone Age Determination in a Paediatric Population as an Indicator of Nutritional Status". *Tropical Doctor* 30(11) (2000): pp. 16-18.

similar image is found, it is assumed that the child is the same age as the child to whom the image belongs. In other words, the very images that represent an ideal in the pediatric context are treated as if they represent not even an average but a fact true for all children at a certain age in all forensic contexts where skeletal age diagnosis is used.

Problems with Skeletal Age Diagnosis

Even though it is often assumed in the legal context that the G&P method provides with an accurate assessment of the chronological age of the subject, data indicate that the overall precision of this technique in predicting age is extremely limited[43]. Even when it is applied by experienced radiologists in the American context for which there is a new specific atlas, the use of the G&P method "to verify chronological age lacks the precision needed and results in many false-positive tests (i.e. saying someone is over-age when in fact they are not) or false-negative tests (i.e. failing to detect an over-age participant)"[44]. The margin of error can sometimes be as much as 2 or 3 years on either side, or at best, 12 months, even by combined methods[45]. These differences are often crucial in the legal context. However, the G&P method is often used for forensic age diagnosis in Turkey and elsewhere because it is simple and it uses chronological age as the unit of estimation.

There are further problems that stem from the application of the method in Turkey. Today, standards of skeletal maturity are available for white US Americans

[43] S.C. Braude, L. M. Henning, M. I. Lambert, "Accuracy of Bone Assessments for Verifying Age in Adolescents – Application in Sport", *South African Journal of Radiology* 11(2) (June 2007), p. 4.
[44] Ibid., p. 6.
[45] Francesco Introna and Carlo P. Campobasso, "Biological vs Legal Age of Living Individuals", eds. Aurore Schmitt, Eugénia Cunha, Joao Pinheirp, *Forensic Anthropology and Medicine* (Totowa, NJ: Humana Press, 2006), p. 57.

as well as for North and Central Europeans. G&P standards used in Turkey are derived from the American population, and they differ significantly from the Turkish population[46]. In a recent study on the low-middle class children in Turkey, standard deviation at 12, 15 years of ages for girls and at 12, 15, 18 years of ages for boys was estimated to be more than 1 year[47]. The deviation may change depending on class, genetic and endocrinological factors as well as the practitioner.

Another important problem concerning the application of skeletal age diagnosis in Turkey is the lack of expertise. Research by Braude et.al. shows that even experienced radiologists may fail to provide a precise estimation of the chronological age of the subject[48]. In Turkey, there are very few clinicians whose area of specialization is skeletal age diagnosis[49]. Moreover, Turkish legal and medical systems allow inexperienced doctors to conduct the assessment. In fact, medical professionals are indirectly forced to conduct the procedure. Forensic procedures can only be conducted at forensics institutes and state hospitals. In other words, all medical professionals who are required to conduct forensic age diagnosis are state employees. As such, they are caught between their dual roles as medical professionals and state employees. As medical professionals, they are endowed with the status of "expertise." Hence their opinions are privileged over those of others. However, the title also comes with a responsibility: they have to assist other professionals with their expertise. In case they refuse doing so, their role as state

[46] See Ahmet Koç, Mustafa Karaoğlanoğlu, Murat Erdoğan, Mustafa Kösecik, and Yaşar Cesur, "Assessment of Bone Ages: Is the Greulich-Pyle Method Sufficient for Turkish Boys?", *Pediatrics International* 43(6) (2001): pp. 662–665 and Sıdıka Yüzügüllü, S. Zeki Ziylan, and M. Arif Akşit, "Bölgemizde 2-24 Ay Arasındaki Sağlıklı Çocuklarin Sol El-Elbileği Grafilerinde Kemiklerin Olgunlaşma Derecelerinin Greulich-Pyle İskelet Gelişme Atlasına Göre Uyumluluğunun Karşılaştırılması", *Uludağ Üniversitesi Tıp Fakültesi Dergisi* 30(2) (2004): pp. 75-79.
[47] Büken, Bora, Alp Alper Şafak, Burhan Yazıcı, Erhan Büken, Atilla Senih Mayda "Is the Assessment of Bone Age by the Greulich-Pyle Method Reliable at Forensic Age Estimation for Turkish Children?" *Forensic Science International* 173(2-3) (2007), p. 153.
[48] Braude et. al., p. 6.
[49] In my interviews, a forensic anthropology professor told met that there are only a couple of experts in skeletal age diagnosis in Turkey.

employees may be used against them, and they may find themselves under investigation and their careers under threat. As such, medical professionals are not only encouraged to but also forced to conduct forensic procedures which may not be in their area of expertise. However, as the G&P method is largely based on the interpretation of the medical professional, expertise is crucial. Lack of expertise may easily increase the margin of error and influence the outcome of the procedure. Hence the results of the skeletal age diagnoses conducted by different clinicians may differ significantly. In the year 2007, a girl who, according to her ID, was 10 years old, was raped by her mother's boyfriend[50]. After the incident, the court required forensic age diagnosis. In the skeletal age diagnosis conducted at the Samsun State Hospital, the girl's age was estimated to be 17. The procedure was repeated at the Istanbul Forensics Institute, and the girl's age was estimated to be 12. This case reveals how unreliable skeletal age diagnosis procedures can be.

A final problem with the G&P method and its use for the assessment of chronological age is the focus on the bones only. Although there are many other parameters including teeth, height, weight, signs of adolescence, hair, changes in the skin, changes in the eye and psychological factors, skeletal age assessment is often the only parameter used in Turkey and many other countries[51]. Some parameters such as teeth, height and weight seem to be taken into consideration only in cases

[50] İsmail Akduman, "Üvey Kızına Tecavüz Eden Babanın Cezası 5 Yıl İndi", *Milliyet*, 10 September 2007. Available [online]: http://www.milliyet.com.tr/2007/09/10/son/sontur40.asp [June 30, 2009].

[51] Several countries which have previously used this method in the forensic context have discontinued it, including Austria and Switzerland (Kate Halvorsen, *Report of a Workshop on Age Assessment and Identification* held by the Separated Children in Europe Programme, Bucharest March 20–22, 2003. Available [online]: www.separated-children-europe-programme.org/separated_children/publications/reports/report_workshop_age_assessment.pdf [12 June 12, 2009], p. 6). Still, there are many others in different parts of the world which still use it. Among these are are Sweden, South Africa, Australia, and Romania. In Sweden, dental and skeletal age assessment is the standard methodology. In South Africa, dental eruption and general bodily characteristics are used for the examinations. In Australia, an assessment of dentition is used in conjunction with skeletal data. (I would like to thank Henrik Druid, Steve R. Naidoo, Soren Blau for the country specific information.) In Romania, anthropometrical examinations, dental examinations and skeletal age assessment are used (Ibid., p. 2). Unfortunately, I have not encountered any detailed study on the use of these methods in any medico-legal context.

that have political significance while others, particularly the psychological factors, are virtually always ignored. This is a quite interesting phenomenon, considering the aim of forensic age assessment. On the one hand, the forensic age assessment in living individuals aims to estimate the chronological age of the person, which is important with respect to legal age. On the other hand, "legal age" as defined in multiple ways, including "age of consent," "age of criminal responsibility" and "marriageable age" points to a convention not only about the maturation of the body but also and more importantly the development of cognitive abilities such as the capability of decision-making and consent-giving. In that sense, while the ultimate goal of forensic age assessment is to measure cognitive abilities, they are never directly assessed.

In this chapter, I discussed the technical aspects of forensic age diagnosis and the problems with the procedure. In the next chapter, I discuss the importance of chronological age in Turkish law, and the uses of forensic age diagnosis to show the legal implications of the procedure in the Turkish medico-legal context.

CHAPTER 3

FORENSIC AGE DIAGNOSIS IN THE TURKISH MEDICO-LEGAL CONTEXT

Forensic age diagnosis is a medico-legal procedure used to confirm or change people's age, which is of significance with respect to the concept of legal age. The use of the procedure in the legal context has important ethical implications for people. In this chapter, I discuss how the concept of age is used in the law to regulate criminal behavior as well as civil life, in order to show the importance of forensic age diagnosis in the Turkish medico-legal context, and how people's lives are affected by the procedure. I also explore how forensic age diagnosis and its applications are regulated in the law to discuss how the absence of clear legal regulations results in the procedure being applied unnecessarily and unfairly, and cause serious ethical violations.

Consequences of Forensic Skeletal Age Diagnosis in the Turkish Legal Context

In the forensic context, skeletal age diagnosis in living subjects is mainly used to determine the ages of

a) convicts

b) injured parties

c) asylum seekers

d) individuals or their legal guardians who would like to change their ages

a) Convicts

Article 6 of Turkish Penal Code defines "child" as a person who is not yet over the age of 18[52]. According to Article 31, subsection 1, children who committed an illegal act when they were under the age of 12 do not have penal liability. They can only be subjected to special protective measures. According to subsection 2, children between the ages of 12 and 15 do not have penal liability if they can't understand the legal implications and consequences of their act or their ability to govern their actions is underdeveloped. If they are capable of understanding the act they have committed and acting accordingly, they have penal liability[53].

According to these articles, if the age of an underage convict is overestimated, she usually gets more punishment than designated by the law. If her age is underestimated, she gets lesser punishment than designated by the law. Moreover, statute of limitations also depend on the age of the convict.

A notorious example from Turkish history about the use of forensic age diagnosis on underage convicts that clearly shows the importance of the issue is the case of Erdal Eren. Born in 1963, Eren was a political convict during the military regime in 1980. Arrested in a highly controversial case, Eren was sentenced to death. However, since he was under the age of 18, it was not possible to execute Eren. Then, he was subjected to skeletal age assessment[54]. His chronological age was estimated to be

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[52] All references to the Turkish Penal Code are from Türk Ceza Kanunu, 2004. See Appendix A.

[53] However, in these cases, aggravated life sentence would be reduced to 9 to 12 years of prison time, and life sentence would be reduced to 7 to 9 years of prison time. Other sentences are mitigated by two thirds, and the punishment for each offense cannot be more than six years of prison time. According to subsection 3, in cases involving persons who were between the ages of 15 and 18 when they committed the crime, aggravated life sentence would be 14 to 20 years of prison time, and life sentence would be 9 to 12 years of prison time. Other punishments are mitigated by half, and the punishment for each offense cannot be more than six years of prison time. Article 66 of the Turkish Penal Code defines the conditions for decisions concerning statute of limitations. According to subsection 2 of the article, the time for statute of limitation is half of the regular time in cases where the convict is between the ages of 12 and 15, and two third of the regular time in cases where the convict is between the ages of 15 and 18. See Appendix A.

[54] "Eski Hakim: Erdal Eren Haksız Yere Asıldı", *Hürriyet*, September 12, 2007. Available [online]:

over the legal age of 18, and Eren was executed. Today, capital punishment has been abolished but age, and therefore forensic age diagnosis, still plays an important role in determining and implementing punishment.

b) Injured Parties

In the Turkish Penal Code, there are a number of articles to prevent the abuse of minors.

According to Article 102, the punishment for sexual violation of the body is two to six years of prison time[55]. According to Article 103, the punishment to be given is three to seven years of prison time in cases where a child is sexually abused[56]. In this context, if the age of an underage rape survivor is overestimated, the perpetrator gets lesser punishment than designated by the law. If her age is underestimated, the perpetrator gets more punishment than designated by the law. In most cases in the Turkish forensic context, children's skeletal ages are estimated to be higher than the ages stated in their IDs, resulting in the perpetrator's getting lesser punishment than designated by the law. This is most obvious in rape cases. An interesting example was the case of a gang caught in the city of Bolu in 2003[57]. Among their many crimes was the rape of two underage girls. In their defense, the men claimed that the girls are older than the ages stated in their ID's, and they demanded forensic age

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http://www.hurriyet.com.tr/gundem/7272006.asp?gid=180&a=570915 [25 July 2009].

[55] See Appendix A.

[56] Subsection 1 of the article defines sexual abuse as any sexual behavior involving a child who is under the age of 15, or who is over the age of 15 yet lacks the ability to understand the legal meaning and consequences of the act. According to the same subsection, sexual acts involving other children (i.e. children between the ages of 15 and 18) are defined as sexual abuse of the children if it is conducted on the basis of physical force, threat, deceit or any other factor that influences will power. See Appendix A.

[57] Gökçer Tahircioğlu and Türker Karapınar, "Bolu'daki Eşkiyanin "Kemik Yaşı" Oyunu", *Milliyet*, 12 December 2007. Available [online]: http://www.milliyet.com.tr/2003/12/12/yasam/ayas.html [August 2, 2009]

diagnosis. The ages of the girls were estimated to be 19 and 17 or 18 respectively, while according to their IDs, their ages were 16 and 14. This changed the definition of the crime in one case, and reduced the sentence in both.

In Article 104, sexual intercourse with minors is defined as a crime. In the presence of a complaint, sexual intercourse with persons under the age of 15 not involving force or deceit is to be punished by 6 months to 2 years of prison time. If the perpetrator is more than five years older than the child, the punishment is aggravated by twice. In that sense, the age of the child is important not only in absolute terms but also in relation to the perpetrator's age.

Age is also an important issue in defining crimes concerning solicitation[58], beggary[59], prostitution[60], providing people with substances that pose a health hazard to them[61], obscenity[62], gambling[63], kidnapping[64], murder[65], torture[66], torment[67], and

[58] According to the subsection 1 of Article 38, a person who solicits another to commit a crime is to be punished by the punishment for the crime. If the person enthused is a child, punishment should be aggravated by one third to half.
[59] According to Article 229, persons who abuse children as beggars are punished by 1 to 2 years of prison time.
[60] According to Article 227, persons who push children into prostitution, find or host children for this purpose or act as intermediaries are punished by 4 to 10 years of prison time and a fine.
[61] Article 194 penalizes providing children with substances that pose a health hazard to them.
[62] According to Article 226, providing or showing obscene material to children or showing them in venues where children may be present is a crime punishable by 6 months to 2 years of prison time.
[63] Article 228 penalizes providing venue and means for gambling as a crime punishable by up to 1 year of prison time and a fine. If the venue and means are provided for children to gamble, the punishment is aggravated by one.
[64] According to Article 109, illegally preventing a person from exercising their freedom to go to a place or stay in a place is punishable by 1 to 2 years of prison time. According to subsection 3, if the person is a child, punishment is aggravated by one. According to Article 234, if a parent who lost custody of the child or a blood relative up to third degree kidnaps or withholds a child under the age of 16 without using force or threat, the act is a crime punishable by 3 months to 1 year of prison time. According to subsection 2 of the article, punishment is aggravated by one if the child is under the age of 12.
[65] According to Article 82, in cases of deliberate murder, if the injured party is a child, the crime is punishable by aggravated lifetime prison sentence.
[66] According to Article 94, torture is a crime punishable by 3 to 12 years of prison time. According to subsection 2, if the injured party is a child, the crime is punishable by 8 to 15 years of prison time.
[67] According to Article 94, torment is a crime punishable by 2 to 5 years of prison time. According to subsection 2, if the injured party is a child, the crime is punishable by 3 to 8 years of prison time.

not reporting a crime[68]. The Turkish Penal Code also penalizes performing scientific experiments on children[69].

As we see in these articles, various legal precautions have been taken in order to protect children from different forms of violence and abuse. For this reason, the age of the person involved in an act changes the punishment to be given to the perpetrator or in some cases, such as the Article 226 on obscenity, defines whether an act is criminal or not. Although it can be potentially used in all cases involving children, forensic age diagnosis is most notably used in cases of sexual abuse and sexual intercourse. In these cases, underestimation in forensic age diagnosis results in the perpetrator getting more punishment while overestimation results in the perpetrator getting lesser punishment than designated by the law. As I explained in the last chapter, in Turkey, skeletal age diagnosis tends to overestimate age, resulting in the perpetrators getting lesser punishment.

c) Asylum seekers

In Turkey, the cases of child asylum seekers who are accompanied by their parents are evaluated together with their parents. If the parent is granted refugee status, the child is also granted one[70]. Children who arrive at the country without their parents are not required to submit any documents. If it is for the best interest of the child, a child's case can also be evaluated together with her guardian's. For these reasons, many underage asylum seekers destroy their documents and claim to be

[68] According to Article 278, not reporting a crime is punishable by up to one year of prison time. According to subsection 3, if the injured party is under the age of 15, the punishment is aggravated by half.

[69] See Appendix A, Article 90.

[70] United Nations Higher Commissioner for Refugees, "Çocuk Mültecilere İlişkin Türkiye'deki Yasal Çerçeve." Available [online]: http://www.unhcr.org.tr/MEP/index.aspx?pageId=152 [July 30, 2009].

minors to obtain a residence permit[71]. In this context, legal age and forensic age diagnosis are of utmost importance. If the age of asylum seeker is overestimated, she is not granted asylum although, according to the law, she should. On the other hand, if her age is underestimated, she is granted asylum even though it is not required on the basis of age.

d) Individuals or their legal guardians who would like to change their ages

The last purpose for which forensic age diagnosis is used, cases where individuals or their legal guardians who would like to change their ages, is probably the most complicated one. These cases reveal how people use medical technologies to negotiate with their own or their children's status with respect to legal age. This is also the category that clearly shows the social and political aspects of legal age, and the need for forensic age diagnosis.

In Turkey, all healthy men, and only men are required to perform the compulsory military service. According to the Legislation on the First Calling of a Roll of Those Who Have Reached the Age for Military Service [Askerlik Çağına Girenlerin İlk Yoklama İşlemleri Hakkında Yönetmelik], the age of military service is between the ages of 20 and 41[72]. In some cases, persons (or their parents) may want to change their ages to complete the compulsory military service at a young age.

People may also demand forensic age diagnosis to be eligible for retirement. According to the current Social Security Law, women need to be over the age of 58 and men need to be over the age of 60 to be eligible for retirement, on the condition

[71] Giordano, p. 6551.

[72] See Appendix B, Article 3.

that they have completed 25 years of work life. However, since skeletal age diagnosis is based on the level of ossification, it is bound to be extremely unreliable decades after the individual's bone ossification has been completed.

A more common and much more problematic reason for voluntary forensic age diagnosis is to legalize underage marriage. According to the Turkish Civil Code, a person is considered an adult after the age of 18[73]. According to Article 12, a person over the age of 15 can be legally given the status of an adult by the court if she requests and her guardian consents. According to Article 11, marriage also makes a person an adult. According to Article 124, persons are not allowed to marry until they are over the age of 17. Only in the presence of an important reason, persons over the age of 16 can marry[74].

There are a number of other legal issues related to age. According to the Article 40 of the Turkish Civil Code, a person needs to be over the age of 18 to undergo sex reassignment surgery. Articles 306, 307 and 308 detail the requirements for adoption in terms of age.

As we see in these articles, the concept of legal age is of high importance in regulating various aspects of daily life. Therefore, voluntary forensic age diagnosis may be used for a variety of purposes in the Turkish medico-legal context. In the next sections, I discuss how the nature of forensic age diagnosis and its applications in Turkey make it easier for people to instrumentalize the procedure to regulate their lives, and how their lives may be affected by the procedure.

[73] All references to the Turkish Civil Code are from Türk Medeni Kanunu 2001. See Appendix C, Article 11.

[74] If a person under the age of 18 marries without the consent of her legal guardian, the legal guardian may prosecute for the cancellation of the marriage. See Appendix C, Article 153.

Doubting the Benefit of the Doubt: Using Forensic Age Diagnosis in the Turkish Medico-Legal Context

Except for the voluntary cases, the purpose of forensic age diagnosis is to gain information about a person's age, in the presence of doubt. The issue has been particularly important in the Turkish legal context where age is a factor that regulates many aspects of life, yet the information about a person's age is not always reliable. Birth registration has been a requirement in Turkey since the Ottoman era. However, people sometimes avoid this procedure, due to the difficulty of accessing the relevant state institutions, the expenses involved or because of a lack of bureaucratic knowledge. Not speaking Turkish may also be an obstacle. The problems concerning the inaccessibility of state institutions have been solved to some extent. Since the availability of birth clinics increased, the trend has significantly shifted from home births to births in hospitals or birth centers in the last decades. Therefore, more people have official birth records. Still, the registration expenses persist, and a lack of bureaucratic knowledge is possible. In this context, people have found ways to ease the burden of policies regarding registration, such as postponing the registration until children reach schooling age, or giving a deceased child's ID to a younger sibling. The state seeks to prevent people from resorting to these solutions by means of law or with the aid of bureaucrats who are willing to take initiative. In my interviews, I was told a case from the 1950s. A man, who was living in a remote village in Erzurum, did not register his son until he reached the schooling age of six. When he went to the Census Bureau to register the son, the officer at the bureau thought that the boy was definitely older than six, and the father wanted to register him as younger to postpone the compulsory military service. Consequently, he

registered the boy's age as nine. Today, the Law of Population Registration [Nüfus Hizmetleri Kanunu] that has been in effect since 2006 requires every newborn child to be registered within 30 days of birth[75]. According to Article 16, for children who have not been registered until the age of 6, the age of the child is registered on the basis of the parent's declaration. For children over the age of 6, an age diagnosis is required. This requirement may be waived if there are official documents concerning the birth, which is possible only if the birth took place in a state hospital[76].

Despite the recent legal measures, the possibility of discrepancy between people's chronological and legal age is still considered a problem in the Turkish legal context. For this reason, forensic age diagnosis is a commonly used procedure in Turkey. In the Turkish forensic context, forensic medical procedures are defined under the Legislation on Body Examination, Genetic Examinations and the Identification of Physical Identity in Penal Judgment [Ceza Muhakemesinde Beden Muayenesi, Genetik İncelemeler ve Fizik Kimliğin Tespiti Hakkında Yönetmelik]. An outer body examination of a suspect or defendant can be conducted to obtain evidence concerning a crime[77]. For any such examination to be conducted, there should be no clear and predictable danger of harming the person's health. Under the same article, medical imaging is also defined as an outer body examination. This examination can be conducted by physicians or other medical professionals under the supervision of a physician. Injured parties and other persons may also be required to undergo medical examinations[78]. These interventions can only be conducted by a physician or other medical professionals under the supervision of a physician. Medical examinations are to be conducted with the aid of methods and tools accepted

[75] See Appendix E, article 15.
[76] See Appendix E, article 16.
[77] See Appendix D, Article 7.
[78] See Appendix D, Article 8.

by medical practice and medical science[79]. If there is a valid reason for a witness to withdraw from witnessing, the requirement for medical examinations can be waived[80]. These reasons are defined in the Article 45 of Penal Judgment Law[81]. Persons may withdraw from witnessing if their account may result in a charge against themselves or the persons defined in Article 45. [82]

Although the law details from whom, and to some extent how, medical evidence can be obtained, the conditions under which forensic examinations may be necessary is not clearly defined in the Legislation on Body Examination, Genetic Examinations and the Identification of Physical Identity in Penal Judgment or in any other law or legislation. It is the principle of reasonable doubt that governs these decisions. In cases where the judge decides that there is reasonable doubt about the person's age, forensic age diagnosis may be required. However, due to the vagueness of the concept of "benefit of the doubt," the procedure is by no means limited to the cases where there is no other proof about the person's age.

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[79] See Appendix D, Article 6.

[80] See Appendix D, Article 10.

[81] The following persons can withdraw from witnessing:
a) Fiancé/e of the suspect or defendant
b) Spouse of the suspect or defendant, even if the marriage has ended
c) Blood and non-blood lineal ancestors and descendants of the suspect or defendant
d) Up to third-degree blood relatives and up to second-degree non-blood relatives of the suspect or defendant
e) Persons who have a filial bond with the suspect or defendant

Persons who are not able to understand the importance of withdrawal from witnessing due to young age, mental disorder or mental weakness of intellect can be heard as witnesses with the permission of their legal guardians. If the person is able to understand the legal meaning and implications of witnessing, their opinion will also be asked. If the legal guardian is a defendant or suspect, they cannot decide on the person's withdrawal from witnessing. The decision is made by the judge. However, such evidence may not be used without the permission of the legal guardian, who is not a suspect or defendant. Lawyers, their assistants, law interns, medical professionals, financial advisors and notaries can also withdraw from witnessing regarding information they obtained through their professions. Except for lawyers, no professionals can withdraw from witnessing as long as the defendant or the suspect gives permission. See Appendix F, Articles 45 and 46.

[82] See Appendix F, Article 48.

There are two main interrelated problems involved in the use of forensic age diagnosis in Turkey. First, the court may require forensic age diagnosis even in cases where there is little reason to doubt the person's chronological age. The procedure is so common that the court may demand forensic age diagnosis even in the presence of birth certificates[83]. Second, since it is a "scientific" procedure, results of forensic age diagnosis may rank higher than other "non-scientific" evidence in the court, including witness accounts and official IDs. These problems were most obvious in the case of Ogün Samast. Samast was an ultranationalist young man who killed the Turkish Armenian journalist and human rights activist Hrant Dink in 2007. He was born in a state hospital and there were official records as well as witnesses that attest to his date of birth[84]. Moreover, it was revealed that Samast had not planned the murder by himself. In fact, as it is often the case in crimes committed by gangs or families, Samast was probably chosen to murder Dink precisely because he was under the age of 18, and he would get lesser punishment for the crime. However, due to the political significance of the case, the court required forensic age assessment, even though there was little reason to doubt that Samast's age was 17. In this case, skeletal age diagnosis was combined with other methods to increase reliability. The first diagnosis confirmed that he was 17. However, in the second diagnosis, Samast's age was estimated to be 18. In the end, the court used the results of the first estimation.

The Samast case is particularly important for our discussion not only because it shows the deep trust in forensic evidence despite the limited reliability of forensic

[83]For an example, see Atilla Memiş, "Üzmez'i Kurtaran Heyetten Yine Tartışmalı Bir Rapor", *Milliyet*, November 14, 2008. Available [online]: http://www.milliyet.com.tr/Guncel/HaberDetay.aspx?aType=HaberDetay&Kategori=guncel&KategoriID=24&ArticleID=1015911&Date=14.11.2008&b=Uzmezi%20kurtaran%20heyetten%20yine%20tartismali%20bir%20rapor [July 30, 2009]

[84] "Samast'ı Azmettirenler Kim?" *Samanyoluhaber*, January 24, 2007. Available [online]: http://www.samanyoluhaber.com/haber-35786.html [August 3, 2009]

age diagnosis as revealed in the discrepancy between Samast's chronological age and the result of the second forensic age diagnosis but also because it is an example of the use of different methods of forensic age diagnosis in different cases. In the next section, I discuss why medical professionals use combined methods in some cases, and only skeletal age diagnosis in others.

"We Choose the Easy Way": Medical Professionals and Responsibility

In Turkey, forensic age diagnosis procedures tend to change according to the nature of the case. In cases of certain political significance, like the Samast case, combined methods are employed. "Combined methods" refers to the use of other methods of age diagnosis together with skeletal age diagnosis. The use of combined methods is more time-consuming, yet it tends to produce more accurate results. Nevertheless, in cases of voluntary forensic age diagnosis or in ordinary crimes, skeletal age diagnosis is virtually always the only method used. In voluntary diagnosis, people are often aware that skeletal age diagnosis tends to overestimate age, and this is precisely the reason why they want to undergo it. Instrumentalizing this scientific problem, they change their legal status, which may be useful for a variety of reasons, as I discussed previously in this chapter. However, the use of the procedure for perpetrators or injured parties is quite problematic, since it is a violation of the principle of equality before the law.

The medical professionals in Turkey, at least some of them, are also well aware of the different degrees of accuracy involved in skeletal age diagnosis and the use of combined methods. The chair of a major forensics institute whom I interviewed told me that although he and other professionals at his institution are

aware of the problems involved in the use of skeletal age diagnosis in the Turkish context, they "choose the easy way" ["kolayına kaçıyoruz"] in cases of little political significance. A major reason for this attitude is the immense work load placed on the forensic institutes. He also added that in the reports they submit to the court, they mention whether they used skeletal age diagnosis or combined methods. However, this is still quite problematic. Medical reports may indicate which method has been used for the diagnosis. Yet they say nothing about the accuracy of the methods used or the alternatives available. The information that skeletal age diagnosis was the method employed tells little to anyone who does not have expertise on the subject. The legal professionals I interviewed had limited information about the medical side of forensic age diagnosis, and even its use in the legal context. The diagnosis is seen as the duty of the medical professionals, and the legal professionals are not interested in how the reports are produced, at least unless no laws have been violated. In that sense, medical professionals use their expertise as well as the structure and language of the medical reports to "choose the easy way" and avoid any extra burden in the presence of an immense workload. Moreover, many legal professionals show little effort to learn about the medico-legal procedures.

So far, I explored the legal and technical issues concerning skeletal age diagnosis in the Turkish medico-legal context. In the next chapter, I focus on the ethical implications of the procedure. Although some of the discussion may apply to other countries to different extents, my focus is on the Turkish medico-legal context.

CHAPTER 4

ETHICAL PROBLEMS IN SKELETAL AGE DIAGNOSIS

Approaches in Bioethics

In this chapter, I explore the ethical problems involved in skeletal age diagnosis and its applications in the Turkish medico-legal context. Since my analysis is based on the basic concepts of forensic age diagnosis, I start with exploring how these concepts have been developed, and how they came to dominate most discussions in bioethics. Then I discuss the concepts of nonmaleficence, beneficence, respect for autonomy, ethical issues concerning professional conduct, veracity, privacy, and duties of the forensic clinician, and how they relate to the case of skeletal age diagnosis.

Most works on bioethics tend to focus on certain basic principles, typically those listed in the Belmont Report (National Commission for the Protection of Human Subjects 1979): respect for persons, beneficence (and/or nonmaleficence), and justice[85]. These principles are by no means new to moral philosophy. The idea of respect for persons was emphasized most notably by Kant, beneficence and nonmaleficence by the utilitarians, and justice by the classical Greek philosophers[86]. But it was due to the particular historical experiences that gave rise to the establishment of bioethics as a discipline that these principles became basic guiding principles of bioethics: Nuremberg trials and the Tuskegee experiment.

[85] Baron, p. 12-13.
[86] Ibid., p. 13.

Modern bioethics began largely with the discovery of Nazi abuses committed in the name of medical research prior to and during World War II[87]. The prisoners had no option other than accepting being used in the experiments. These torturous and murderous experiments were uncovered at the Nuremberg war-crimes trials after Germany's defeat. In 1947, the Nuremberg Code was presented by American judges sitting in judgment of the Nazi doctors[88]. While the general belief is that the Nuremberg Code was generated by the judicial procedures, it had been under formulation since August 1946[89]. Although the Nuremberg code has not been "officially adopted in its entirety as law by any nation or as ethics by any major medical association"[90], it has formed the basis of all subsequent codes. Even though the term "informed consent" did not appear until the late 1950s and it did not receive detailed examination until the early 1970s[91], the first principle of the Nuremberg Code was about informed consent:

> The voluntary consent of the human subject is absolutely essential.
>
> This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, overreaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonable to be expected; and the

[87] Ibid., p. 10.
[88] Evelyne Shuster, "Fifty Years Later: The Significance of The Nuremberg Code, *The New England Journal of Medicine* 337(20) (November 1997), p. 1436.
[89] Paul Weindling, "The Origins of Informed Consent: the International Scientific Commission on Medical War Crimes, and the Nuremberg Code", *Bulletin of the History of Medicine* 75(1) (2001), p. 70.
[90] Shuster, p. 1439.
[91] Tom L. Beauchamp and James F. Childress *Principles of Biomedical Ethics*, 5th ed.. (Oxford: Oxford University Press, 2001), 77.

> effects upon his health or person which may come from participation in the experiment.
>
> The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity[92].

While this principle focuses on medical research, the rules about "informed consent" based on this principle have come to encompass all medical contexts. In later definitions, the focus has shifted from the medical professional's "obligation to *disclose* information to the quality of a patient's or subject's *understanding* and *consent*"[93] and the processes of obtaining consent have received extensive interest[94]. Since the 1970's, partially with the impact of the second-wave social movements, the feminist movement and the abortion debate in particular, the primary justification for informed consent has become autonomous choice[95]. Hence the concept of "respect for autonomy", which refers to respecting the decision-making capacities of autonomous persons, gained a major role in the bioethics debates with the societal demand concerning autonomy rights. However, reducing risk, avoiding unfairness and exploitation are still important concerns.

The Nuremberg Code inspired later codes, most notably the Declaration of Helsinki of 1964 (World Medical Organization 1966) and the Belmont Report (National Commission for the Protection of Human Subjects, 1979)[96]. The Belmont

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[92] qtd. in Shuster, p. 1436.
[93] Beauchamp and Childress, p. 58.
[94] For a discussion on the subject, see Alan Meisel and Mark Kuczewski, "Legal and Ethical Myths about Informed Consent", *Archives of Internal Medicine* 156 (1996): pp. 2520-2526. For examples of scholarly research focusing on the relationship between understanding and consent, see Michael K. Paasche-Orlow, Holly A. Taylor and Frederick L. Brancati, "Readability Standards for Informed-Consent Forms as Compared with Actual Readability", *The New England Journal of Medicine* 348(8) (2003): pp. 721-726; James Flory and Ezekiel Emanuel, "Interventions to Improve Research Participants' Understanding in Informed Consent for Research: A Systematic Review", *Journal of American Medical Association* 292(13) (2004): pp. 1593-1601.
[95] Beauchamp and Childress, p. 77.
[96] Baron, p. 11-12.

Report was also a response to the Tuskegee study of syphilis. In this study, 399 black men from Macon County, Alabama, who had syphilis, were monitored from 1932 to 1972 to observe the natural course of the disease[97]. Even though an effective treatment (penicillin) became available in the 1950s, the patients were not treated. The experiment ended with a scandal ignited by press coverage. In 1974, the United States Congress passed the National Research Act. An appointed commission produced the Belmont Report. Although this report, unlike the Nuremberg Code, never acquired the force of law, it has been the basis of United States policy[98].

Even though the principles of bioethics are reasonable, one should keep in mind that they do not necessarily solve all ethical problems. Moreover, in many cases they may conflict with one another. In this chapter, I discuss the ethical problems involved in the use of skeletal age diagnosis in the light of the main principles of bioethics: nonmaleficence, beneficence, respect for autonomy, and professional-patient relationships. However, instead of taking these principles as given, I use them to discuss how they would apply to different uses of skeletal age diagnosis for forensic purposes, and how these bioethical problems are entangled with social problems such as underage marriage.

Nonmaleficence

William Frankena divides the principle of beneficence into four general obligations[99]:

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[97] Vanessa Northington Gamble, "Under the Shadow of Tuskegee: African Americans and Heath Care, *American Journal of Public Health* 87(11) (1997), p. 1773. For a detailed history of the study, see James H. Jones *Bad Blood* (New York: Free Press, 1993).
[98] Baron, p. 12.
[99] William Frankena, *Ethics*,2nd ed (Englewood Cliffs, NJ: Prentice-Hall, 1973), p. 47.

1) One ought not to inflict evil or harm (what is bad).

2) One ought to prevent evil or harm.

3) One ought to remove evil or harm.

4) One ought to do or promote good.

The first of these obligations is what is generally termed as the principle of nonmaleficence. Later, the definition was extended to cover the concept of risk, and today it often refers to "not harming or putting people at risk for harm"[100]. The principle also implies that "if a physician is not technically competent to do something, he shouldn't do it"[101]. As such, the principle aims to prevent patients not only from harmful and dangerous medical procedures but also from incompetent clinicians. However, it is worth noting that the concept of "technical competence" is relative, and the principle of nonmaleficence with regard to competence should be understood as "in the presence of technically more competent people, a physician should not conduct a medical procedure".

Although the principle of nonmaleficence seems intuitive, its applications are not always clear. For example, the principle of nonmaleficence is often the main reason for nondisclosure[102], particularly in contexts like China where talking about death is a taboo[103]. However, the implications of the principle and its potential consequences depend not only on the cultural context but also on the specifics of

[100] Debra Gay Anderson and Diane C. Hatton, "Accessing Vulnerable Populations for Research", *Western Journal of Nursing Research* 22(2) (2000), p. 245.
[101] Gregory E. Pence, *Classic Cases in Medical Ethics: Accounts of Cases that Have Shaped Medical Ethics with Philosophical, Legal, and Historical Backgrounds*, 4th ed. (New York, McGraw Hill, 2004), p. 22.
[102] For the tensions between nonmaleficence and disclosure, see S. Li and J.L. Chou, "Communication with the Cancer Patient in China", *Annals of the New York Academy of Sciences* 809 (February 1997): pp. 243-248; J.L. Mitchell, "Cross-cultural Issues in the Disclosure of Cancer", *Cancer Practice* 6 (1998): pp. 153-160; S.M.C. Pang, "Protective Truthfulness: the Chinese Way of Safeguarding Patients in Informed Treatment Decision", *Journal of Medical Ethics* 25(3) (1999): pp. 247-253.
[103] C.Y. Tse, Alice Chong and S.Y. Fok, "Breaking Bad News: a Chinese Perspective", *Palliative Medicine* 17(4) (2003), p. 340.

every case and the persons involved. It is also worth noting that many effective treatments also have harmful side effects. Therefore, it is crucial to balance the principle of nonmaleficence with the principle of beneficence, and act accordingly. While analyzing nonmaleficence, it is important to note that the principle of nonmaleficence is not always limited to the persons who are immediately involved. For example, in the discussions around allocating health care resources, the principle of nonmaleficence applies not only to one patient but also to other patients and the society in general.

The principle of nonmaleficence is particularly complicated in forensic bioethics, since the concepts of benefit and harm should be discussed in legal terms as well as in medical terms. Only then would it be possible to understand all ethical problems involved. I would like underline that a distinction between benefit and harm on the legal and medical levels is useful, particularly for showing the difference between bioethics in the ordinary health care context and in the forensic context. However, in practice, there is no such clear-cut distinction. The harm experienced by children on the legal level is particularly problematic since it leads to psychological harm as well as physical harm, especially in cases involving underage convicts.

Skeletal age diagnosis as it is applied in the Turkish medico-legal context is problematic in terms of nonmaleficence both on medical and legal levels. First of all, in skeletal age diagnosis, individuals are exposed to potentially hazardous material. Today, it is a known fact that although the risk is low in one exposure, x–rays increase one's tendency to develop cancer[104], particularly at younger ages[105]. As

[104] For studies on the correlation between exposure to x-rays and cancer, see AB de Gonzalez and S Darby, "Risk of Cancer from Diagnostic X-rays: Estimates for the UK and 14 Other Countries", *The Lancet* 363(9406) (2004): pp. 345-351; Nadine Andrieu, Douglas F. Easton, Jenny Chang-Claude, Matti A. Rookus, Richard Brohet, Elisabeth Cardis, Antonis C. Antoniou, Teresa Wagner, Jacques Simard, Gareth Evans, Susan Peock, Jean-Pierre Fricker, Catherine Nogues, Laura Van't Veer, Flora E. Van Leeuwen and David E. Goldgar, **"**Effect of Chest X-Rays on the

such, in therapeutic use, they should not be applied unless the health benefits clearly outweigh the harm. Obviously, forensic age diagnosis has no health benefit to the patient, and the use of skeletal age diagnosis creates unwanted health risks. In that sense, the principle of nonmaleficence is violated. This principle is also violated in terms of psychological health and well-being. Many of the children who undergo skeletal age diagnosis are either underage convicts or survivors of sexual or other assaults. Consequently, they are likely to be suffering from various psychological and emotional disorders ranging from anxiety, shock, and depression to post-traumatic stress disorder[106], rape trauma syndrome[107], and other trauma-related mental health issues[108]. Therefore, these cases should be handled with utmost care in the medical and legal contexts. However, in contemporary Turkey, few forensics institutes and state hospitals have separate clinics for children who visit these institutions for forensic purposes. Distressingly, some clinics for children have been closed down, as has been the case at Istanbul Forensics Institute. Today, usually, the hospital staff who deals with these children has not been trained in working with traumatized children. As such, the medical procedure itself may become a source of

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Risk of Breast Cancer Among *BRCA1/2* Mutation Carriers in the International *BRCA1/2* Carrier Cohort Study: A Report from the EMBRACE, GENEPSO, GEO-HEBON, and IBCCS Collaborators' Group", *Journal of Clinical Oncology* 24(21) (July 2006): pp. 3361-3366; B.F. Wall, G.M. Kendall, A.A. Edwards, S. Bouffler, C. R. Muirhead and J. R. Meara, "What are the Risks from Medical X-rays and Other Low Dose Radiation?" *British Journal of Radiology* 79 (2006): pp. 285-294.

[105] See Ruth A. Kleinerman, "Cancer Risks Following Diagnostic and Therapeutic Radiation Exposure in Children, *Pediatric Radiology* 36(2) (September 2006): pp. 121-125.

[106] See Richard Meiser-Stedman, William Yule, Patrick Smith, Ed Glucksman and Tim Dalgleish, "Acute Stress Disorder and Posttraumatic Stress Disorder in Children and Adolescents Involved in Assaults or Motor Vehicle Accidents", *American Journal of Psychiatry* 162 (July 2005): pp. 1381-1383.

[107] See Rahul Jain, P. N. Mathur, N. S. Kothari and Phulvanti Mathur, "Medicolegal Evaluation of Sex Assault Cases Admitted at Sardar Patel Medical College & P. B. M. Hospital, Bikaner, India", *Medico-Legal Update – An International Journal* 8(1) (2008), Available [online]: http://www.indmedica.com/journals.php?journalid=9&issueid=119&articleid=1591&action=article [June 28, 2009].

[108] See Zeynep Belma Gölge, "Cinsel Travma Sonrası Oluşan Ruhsal Sorunlar", *Nöropsikiyatri Arşivi Dergisi* 42(1-4) (2005): pp. 19-28. Available [online]: http://www.turknoropsikiyatri.org/default.aspx?pfn=dergiOkur&iid=12&cl=en-US&modulePage=article&dt=tft&aid=10&cl=tr-TR [June 30, 2009].

trauma. Moreover, as I discussed in Chapter 3, in forensic age diagnosis, there is an objectification of the body as a source of evidence, often combined with a use against the well-being of the person. Such exploitation of the body which ignores the autonomy of the person may as well traumatize children.

In most cases, the principle of nonmaleficence is also violated because of the incompetence of the clinician. As I discussed in Chapter 3, medical professionals who are not experts in age diagnosis are not only encouraged but also forced to conduct the procedure. Even though this lack of competence may not cause direct physical harm, it may cause serious harm on the legal level, and lead to physical and psychological harm.

Since forensic age diagnosis is a medico-legal procedure, the principle of nonmaleficence applies both on medical and legal levels, and the violation of the principle is most dramatic on the legal level. In the case of underage convicts, overestimation in forensic age diagnosis may cause children to be tried as adults. In the past, this has even lead to capital punishment as was the case with Erdal Eren. In the case of asylum seekers, overestimation in forensic age diagnosis may cause children to be denied asylum. In the case of underage injured parties, particularly survivors of rape, overestimation in forensic age diagnosis may result in the perpetrator getting lesser punishment than designated by the law, causing a sense of injustice in the child that may lead to further trauma. However, although rare, there are also cases where skeletal age diagnosis may not be clearly harmful for underage persons. In that sense, it is difficult to make a universal claim about nonmaleficence as it pertains to forensic age diagnosis, and each case should be analyzed individually. In September 2007, a 15 year old girl gave birth in a state hospital[109].

[109] Ali Eyce, "15'lik Kızla Evlenen Babaya 8 Yıl Hapis", *Sabah*, August 24 2007. Available [online]: http://arsiv.sabah.com.tr/2007/09/24/haber,24157B5201B948339EF593219E4D0983.html [July 29,

She was legally married at the time. Since she was younger than 15 when the baby was conceived, the doctors reported the husband for sexual abuse of children. The court found the 21 year old husband guilty, and he was sentenced to eight years of prison time. In the court defense, the man's lawyer – who actually represented the wife as well – presented the results of the skeletal age assessment, and stated that the girl's skeletal age was over 17. In this example, one may talk about the sexual abuse of a minor, since the girl was too young to be able to give consent at the time of the sexual intercourse. However, at a time when the girl is married and she has already given birth, imprisoning the father would mean nothing but psychological, emotional and financial distress for the mother and the child. One may argue that the father should still serve time in prison but in the absence of any support systems for the girl and the baby, the supposed injured party of the crime would probably suffer more from the punishment than from the crime. In this case, skeletal age diagnosis is exploited by the persons involved to change the legal situation of the girl, and to avoid an unwanted suffering. In this case, it is difficult to argue that there is a clear violation of the principle of nonmaleficence in terms of the law. Still, since it ends up protecting a person who did have sexual intercourse with a minor, it is difficult to argue that the use of forensic age diagnosis in this case does not involve any harm at all. Nevertheless, there are also cases where the beneficence from the procedure is clearer. In Turkey, people give the ID cards and names of deceased children to newborn babies. This was a more serious problem when infant mortality rates were higher, but it may still persist. Because of this practice, there are people whose legal ages are older than their chronological ages. In case they are involved in a legal case, they will experience the problems I discussed in the last chapter. Therefore, a reliable

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forensic age procedure can save these people from receiving more punishment than designated by the law, losing their right to asylum, or prevent persons who harm them from receiving lesser punishment than designated by the law. In these cases, the use of forensic age diagnosis does not lead to any harm in terms of the law, and the potential physical harm is often outweighed by the benefit.

Generally speaking, since it involves a health risk not balanced by any therapeutic benefit, the use of skeletal age diagnosis for forensic purposes tends to violate the principle of nonmaleficence in terms of physical health. However, the case is slightly different in terms of the law and the medical implications of legal status. In cases involving persons whose legal age is older than their chronological age, forensic age diagnosis may as well be beneficial as long as their ages are estimated accurately. In such cases, the legal, psychological and sometimes even physical harm prevented by the procedure would outweigh the harm caused by it. In rare cases of skeletal age diagnosis conducted upon demand from the person or her parents, the principle of nonmaleficence may not be violated in terms of the law either.

In the forensic context, the principle of nonmaleficence covers not only the patients but also the justice system and the society in general. In that sense, one may argue that even when the physical, psychological, emotional and legal harm caused by the forensic age diagnosis to the persons is not outweighed by the benefits, the procedure should be retained in the name of justice. Using forensic age diagnosis in a case involving a convict whose legal age is younger than his chronological age may cause him to be judged as an adult, causing legal, and potentially bodily and physical harm. However, this harm is justified by the concerns about justice and the common good of the society. But generally, the use of skeletal age diagnosis in the Turkish

medico-legal context cannot be justified even by appeal to the concepts of justice and common good. This unreliable method that tends to produce wrong results, and the use of different methods of forensic age diagnosis in different cases undermines the juridical processes as well as the concept of justice. Hence the procedure actually violates the principle of nonmaleficence by hindering the implementation of justice in the Turkish medico-legal context.

Beneficence

Beneficence refers to "prevention of harm, the removal of harm, and promotion of good"[110]. In the health care context, the principle of beneficence requires the health care professional to further the patients' important and legitimate interests[111]. Generally, the principles of beneficence are distinguished from the principles of nonmaleficence in terms of the requirement that the agents "take positive steps to help others, not merely refrain from harmful acts"[112].

Although it seems like a very simple principle, the principle of beneficence is not always as straightforward as it seems. This is most obvious in assessing the value and quality of life in ending life decisions[113], and the issue of medical paternalism[114]. In the forensic context, the principle of beneficence is particularly complicated since it applies both on legal and medical levels.

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[110] Anderson and Hatton, p. 245.
[111] Beauchamp and Childress, p. 166.
[112] Ibid., p. 165.
[113] For a discussion on the principle of beneficence and ending life, see M.A. Branthwaite, and D. Jeffrey, "Should Patients Be Able to Choose Physician Assisted Suicide at the End of Their Lives?" *The Lancet Oncology* 7(7) (2006): pp. 602-604.
[114] For discussions on medical paternalism and ethics, see Michael Jefford, Julian Savulescu, Jacqui Thomson, Penelope Schofield, Linda Mileshkin, Emilia Agalianos and John Zalcberg, "Medical Paternalism and Expensive Unsubsidized Drugs", *British Medical Journal* 331 (2005): pp. 1075-1077 and R. Hanson, "Making Sense of Medical Paternalism", *Medical Hypotheses* 70(5) (2008): pp. 910-913.

In terms of physical health, forensic age diagnosis is not of any therapeutic benefit to the patients. On the contrary, it involves a health risk. As such, the principle of beneficence is violated in terms of physical health. However, this violation may be outweighed by the benefit in terms of the law, and its implications on the person's physical and psychological health and well-being.

As far as the legal status of individuals is concerned, the principle of beneficence is also violated in most cases in the Turkish medico-legal context. In cases where children are injured parties, perpetrators benefit from the results of skeletal age diagnosis, but it is not possible to define these as "legitimate interests." In cases where the person's legal age is higher than his chronological age, an accurate forensic age diagnosis may be beneficial by changing the person's legal status and preventing other physical and/or psychological harm. However, this is unlikely to happen in the Turkish context, because of the high likelihood of overestimation. In some cases, such as the case of the 15-year-old mother described in the previous section, underage persons may as well benefit from skeletal age diagnosis on the legal level by instrumentalizing this highly problematic medico-legal procedure.

In terms of the law, forensic age diagnosis may seem to be potentially beneficial to the persons involved as well as the legal community, since forensic procedures are supposed to aid the implementation of justice. However, this is not always the case with skeletal age diagnosis. Producing unreliable and often wrong results, the application of the procedure in the Turkish medico-legal context is actually an obstacle for the implementation of justice. It simply keeps the legal mechanisms running, without necessarily producing fair decisions. As such, it does not provide any benefit to the legal community or the society in general.

Respect for Autonomy

In the health care context, the principle of respect for autonomy acknowledges "the right and ability of a well-informed and competent individual to choose their own management plan, including end of life care, based on their values and beliefs"[115]. According to this principle, the person is regarded as "the sole rightful determinant of his actions, except where the interests of others need protection from him"[116]. Respect for autonomy applies not only to experiential interests, such as interests in health and integrity of the body, but also critical interests that reflect one's personality, such as religious or cultural concerns shaping medical decision-making[117]. The principle of respect for autonomy requires a respectful attitude as well as respectful actions. Besides health care, the principle is also of high importance in medical research. Since it is perceived as an "ethical panacea counteracting the potential danger of paternalistic and autocratic practices"[118] the rules about "informed consent" or, more broadly, "respect for autonomy" based on this principle are considered to be of high importance in all medical contexts.

Beauchamp and Childress define eight elements concerning informed consent[119]:

I. Threshold Elements (Preconditions)

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[115] J-L. Vincent, J. Berré and J. Creteur, "Withholding and Withdrawing Life Prolonging Treatment in the Intensive Care Unit: A Current European Perspective", *Chronic Respiratory Disease* 1(2) (2004), p. 116.
[116] T. Gutmann and W. Land, "Ethics Regarding Living-Donor Organ Transplantation", *Langenbeck's Archives of Surgery* 384 (1999), p. 516.
[117] Ibid., 516.
[118] Oonagh Corrigan, "Empty Ethics: the Problem with Informed Consent", *Sociology of Health and Illness* 25(3) (2003), p. 768.
[119] Beauchamp and Childress, p. 80.

1. Competence (to understand and decide)

2. Voluntariness (in deciding)

II. Information Elements

3. Disclosure (of material information)

4. Recommendation (of a plan)

5. Understanding (of 3. and 4.)

III. Consent Elements

6. Decision (in favor of a plan)

7. Authorization (of the chosen plan)

Obviously, this scheme is more relevant for medical practices conducted for non-forensic purposes, including therapeutic interventions as well as other medical procedures such as abortion and euthanasia. In the forensic context, especially in the case of forensic age diagnosis as conducted in Turkey, the issue of informed consent becomes particularly complicated. In order to discuss the problems regarding informed consent in detail, I explore each element of informed consent, focusing on how they relate to forensic age diagnosis.

Competence (to understand and decide)

The concept of competence or capacity is closely related to the concept of autonomy, and the standards of competence feature cognitive skills and independence of judgment. In medical contexts, a person would be considered competent if they have "the ability to understand information relevant to a decision

and to appreciate reasonably foreseeable consequences of a decision or lack of decision"[120].

In the case of forensic age diagnosis, the requirement of competence is problematic for various reasons. First of all, forensic age diagnosis is used in cases involving minors. Their ages may prevent these persons from fully understanding the forensic procedure, its potential health risks and implications in the legal context. Moreover, at least in the cases of forensic age diagnosis conducted upon court demand, many of the children involved are traumatized, and they may be suffering from various psychological and emotional disorders, which may affect their competence.

Since forensic age diagnosis is a procedure virtually always involving persons who are legally minors, one may argue that what is at stake is surrogate decision-making by parents or legal guardians. In that sense, it is not the children but their legal guardians or parents who should be competent. However, their legal guardians may as well be experiencing psychological and emotional disorders, and lack the competence to give informed consent even when they want to act according to the best interest of the child.

Voluntariness

In the bioethics context, voluntariness refers to "a patient's right to make health care choices free of any undue influence"[121]. Obviously, this definition is rather too idealistic. Even though it is not possible for any person to make any health

[120]Edward Etchells, Gilbert Sharpe, Mary Jane Dykeman, Eric M. Meslin, Peter A. Singer, "Bioethics for Clinicians: 3. Capacity", *Canadian Medical Association Journal* 155(6) (1996), p. 658.
[121]Edward Etchells, Gilbert Sharpe, Mary Jane Dykeman, Eric M. Meslin, Peter A. Singer, "Bioethics for Clinicians: 4. Voluntariness", *Canadian Medical Association Journal* 155 (1996), p. 1083.

care choice free of any undue influence, it is usually important to prevent obvious coercion - with the exception of the complicated cases of medical paternalism. In cases of forensic age diagnosis conducted upon court demand, one may not speak of voluntariness. The court requires persons to undergo forensic age diagnosis, and they do not have the chance to refuse the procedure. As such, it is difficult to talk about voluntariness in decision-making. In those cases, the issue of competence is also irrelevant.

However, there are also cases where forensic age diagnosis is requested by persons or, more accurately, their legal representatives. These cases are voluntary to the extent that they are not required by the court. Nevertheless, persons who undergo forensic age diagnosis "voluntarily" are legally minors, and the problem of surrogate decision-making applies to voluntariness as well.

Disclosure

The obligation to disclose information to patients is a main condition of informed consent. Medical professionals are

"generally obligated to disclose a core set of information, including:

1) those facts or descriptions that patients or subjects usually consider material in deciding whether to refuse or consent to the proposed intervention or research
2) information the professional believes to be material
3) the professional's recommendation
4) the purpose of seeking consent
5) the nature and limits of consent as an act of authorization"[122].

[122] Beauchamp and Childress, p. 81.

The list above is designed for the health care and research context. In forensic medicine, it is also important to disclose information about the legal implications of the procedure.

In the case of forensic age diagnosis, it is important to disclose information about the procedure that will be employed, potential health risks involved in the procedure, alternative procedures, the degrees of reliability and shortcomings of each procedure, and the legal implications of the results. Even if people may not have a chance to refuse to undergo forensic age diagnosis in cases conducted upon court demand, it is their right to know the details about the medical procedure they undergo. It is also the medical professional's duty of respect to the autonomy of the persons to inform them about the medical procedure. Moreover, if people know the details concerning the method, its reliability, and the alternative methods, they may appeal to the court for the age diagnosis to be repeated with other methods. This is particularly relevant in view of the difference of reliability between skeletal age diagnosis and combined methods.

While the primary responsibility of therapeutic medicine is to the patient, forensic medicine is responsible both to the persons involved in the case and the legal professionals. Therefore, disclosure should involve both parties. Current forensic age diagnosis reports do indicate the methods used, but this does not necessarily mean anything to the legal professionals. It is crucial to include information about the basics of the method used, reliability of the method in the Turkish context, and basic information about the alternative methods. This information will enable the legal professionals to make a better evaluation of the evidence they get from the medical professionals, and compare it to other evidence such as birth records and witness accounts.

Recommendation

In the health care context, recommendation refers to the medical recommendation made by the medical professional to the patient for therapeutic purposes. In cases of voluntary forensic age diagnosis, recommendation is still relevant and important for the persons who want to undergo the medical procedure without court demand. However, in the cases of forensic age diagnosis conducted upon court demand, it is up to the medical professional to decide the procedure to be used, and the patient does not have a say. Therefore, it is not really possible to talk about a recommendation made by the medical community to the persons who undergo the procedure or even legal professionals.

In forensic medicine, it would be useful for the medical community to prepare guidelines in which they compare and contrast different methods used to obtain the same information, and make certain recommendations. Such guidelines would show the weaknesses and strengths of different methods, and hopefully eliminate the use of some methods while improving others. These guidelines would prevent the medical professionals from using methods with low reliability in the name of "efficiency". They would also help the legal professionals to gain a better understanding of the medical reports they receive. In the light of such guidelines, it may also be possible to eliminate the use of less reliable methods when more reliable ones are available.

Understanding (of disclosure and recommendation)

In the ordinary health care context, understanding refers to the patient's understanding of information about diagnoses, procedures, risks, and prognoses. For

our purposes in this project, instead of delving into a detailed discussion about the nature of understanding, I prefer to accept the following definition: "persons understand if they have acquired pertinent information and have justified, relevant beliefs about the nature and consequences of their actions"[123]. It is worth noting that it is neither possible nor necessary for persons to have *full* information, but it is important for them to have *adequate* information about the procedure, its medical and legal implications.

In the forensic context, not only the patients but also the legal professionals should understand the procedures. In cases of voluntary forensic age diagnosis, persons should decide to undergo the procedure or not on the basis of an understanding of the basics of the procedure, the risks involved, and the possible legal implications of the procedure. In both voluntary and non-voluntary cases of forensic age diagnosis, it is crucial for the legal professionals to understand the procedure. However, in the Turkish context, neither persons who undergo the procedure nor the legal professionals are provided with adequate information. As such, people undergo a procedure which they do not understand, and legal professionals work with results obtained through a procedure which they do not understand.

Decision

In the ordinary health care context, decision refers to the patient's decision to undergo a certain medical procedure or not. In cases of forensic age diagnosis conducted upon court demand, decision of the person is not of relevance, since the

[123] Beauchamp and Childress., p. 88.

person has no choice but to undergo the procedure. In "voluntary" cases of forensic age diagnosis, the person's decision is of relevance. However, the decision-making process is always surrogate, and this is also problematic. Since any health problems experienced by persons lead to financial, emotional and sometimes even physical distress for the family members, a person's legal guardians are unlikely to desire anything that would not be for their best interest in the health care context. However, the forensic context is usually more complicated than the ordinary health care context. In cases of voluntary forensic age diagnosis conducted for purposes of marriage or compulsory military service, what may harm the children physically, emotionally or both may, for one reason or another, be desirable for their legal guardians. In such cases, even if the parents have the competence to understand the medico-legal procedure and to decide whether or not to have the children undergo the procedure, their decision may not necessarily be in the best interest of the children. In order to prevent any abuse, the applications for forensic age diagnosis should be well investigated, and the necessary steps should be taken to protect children and to act according to their best interest.

Authorization

In the health care context, authorization refers to the patient's authorization for certain medical applications, normally for diagnostic or therapeutic purposes. In the forensic context, authorization is to be given by the person for his/her body to be used as a source of evidence for legal purposes.

Authorization is particularly problematic in the Turkish medico-legal context. In cases of forensic age diagnosis conducted upon the demand of the court, no

authorization is taken from the subjects. Their autonomies are ignored, and their bodies are objectified as mere sources of evidence. It is also difficult to talk about authorization in cases of voluntary forensic age diagnosis, due to the problem of surrogate decision-making.

To conclude our discussion of informed consent, I say that various elements of informed consent are violated in forensic age diagnosis. The subjects who undergo the procedure rarely have the competence to understand the procedure. Moreover the legal professionals who are supposed to use the findings lack the information to understand and evaluate the forensic procedures and the evidence obtained through these procedures. Since the persons involved are underage, it is difficult to talk about the subject's voluntariness in deciding even in "voluntary" cases of forensic age diagnosis. The decision-making, whenever relevant, is always surrogate. The material information about the procedure and how it is conducted in the Turkish medico-legal context is rarely disclosed to the subjects. No recommendation is made to the legal community or to the persons involved about the method of forensic age diagnosis to be employed. The understanding of neither the subjects nor the legal community is fostered by the medical professionals. Subjects are not allowed to make a decision regarding the method of forensic age diagnosis or even whether or not to undergo the procedure. Moreover, their authorization of the subject for the procedure is not taken. As such, every element of informed consent as well as the subject's autonomy is usually violated in forensic age diagnosis.

Ethical Issues Concerning Professional Conduct

In the health care context, the physician professes two things: "to be competent to help and to help with the patient's best interests in mind"[124]. In the forensic context, the physician's obligations are complicated by his triple role as health care professional, legal professional and state employee. As a health care professional, the forensic physician has duties towards the patients and the medical community. As a legal professional, she has duties towards the other legal professionals. As a state employee, she has the duty to facilitate the working of medico-legal mechanisms as well as the ethical obligation to foster public benefit.

In this section, I focus on some of the virtues in the ethics of the medical profession, and how they apply to forensic age diagnosis in the Turkish medico-legal context.

The Problem of Veracity

Obligations and virtues of veracity were ignored in the codes of medical ethics for a long time. The Hippocratic Oath, the Declaration of Geneva of the World Medical Association or the Principles of Medical Ethics of the American Medical Association (AMA) prior to 1980 do not recommend veracity[125]. In its 1980 revision, the Principles of Medical Ethics of AMA recommended simply that physicians "deal honestly with patients and colleagues"[126]. Since then, particularly with the increasing emphasis on respect for autonomy, virtues related to veracity, such as candor,

[124] Edmund D. Pellegrino, "Professionalism, Profession and the Virtues of the Good Physician", in *Yaman Örs Armağanı*, eds. İlter Uzel, Nükhet Örnek Büken, Selim Kadıoğlu, Serap Şahinoğlu, Şahin Aksoy (Adana: Türkiye Biyoetik Derneği Yayınları, 2005), p. 338.
[125] Beauchamp and Childress, p. 283.
[126] American Medical Association, ix.

honesty and truthfulness, have gained unprecedented importance in the biomedical ethics discussions.

In the health care context, veracity in professional-patient relationships refers to "comprehensive, accurate, and objective transmission of information, as well as to the way the professional fosters the patient's or subject's understanding"[127]. Obligations of veracity are justified on the basis of three arguments[128]. First, respect for the autonomy of others requires veracity. Second, the obligation of veracity is closely related to obligations of fidelity and promise keeping. In most forms of communication, there is an implicit promise that people will speak truthfully, and they will not deceive their listeners. In the context of medical professional-patient relationships, it is the medical professional's right to expect full disclosure from the patients, and the patient's right to expect to hear the truth about their health condition as well as the medical procedures they undergo. Third, the relationships between medical professionals and their patients and/or research subjects depend on trust. The rules of veracity foster trust in the medical contexts.

In the forensic context, the obligations of veracity are not only towards the persons who undergo the medical procedures but also towards the court. Since the aim of forensic medicine is to obtain evidence to be used in the legal context, medical professionals are also responsible for the comprehensive, accurate, and objective transmission of information to the legal professionals, and fostering their understanding of the subject.

In the case of skeletal age diagnosis in the Turkish forensic context, the obligations of veracity are often ignored. First of all, the communication between medical and legal professionals is extremely limited. Therefore, the transmission of

[127] Beauchamp and Childress, p. 284.
[128] Ibid., 284.

information is limited to the medical reports, which are far from being comprehensive, accurate, and objective for various reasons. Most medical professionals are aware of the problems involved in skeletal age diagnosis. There are also published studies pointing to the limited reliability of the procedure[129]. However, these problems are not clearly mentioned in the medical reports. Many legal professionals do not even know how skeletal age diagnosis is conducted. In that sense, the principle of veracity is violated in the relationships between medical and legal professionals. Moreover, persons who undergo the procedure do not receive "comprehensive, accurate, and objective" information either. Just like the legal professionals, they do not receive the crucial information about the different methods used for forensic age diagnosis, their degrees of accuracy, the risks involved, or the degree of expertise of the medical professional. As such, the principle of veracity is violated both in relationships with the legal professionals and the patients. This violation is particularly important in view of the fact that combined methods in forensic age diagnosis tends to produce more reliable results, yet medical professionals prefer to use skeletal age diagnosis as the sole method for forensic age diagnosis, simply because it is easier and less time-consuming. Another significant problem about veracity is that medical professionals do not mention whether they have the necessary qualifications to conduct forensic age diagnosis. As I previously discussed, even when the medical professionals are willing to admit that they are not qualified to conduct forensic age diagnosis, they are discouraged to do so, because of their role as state employees.

[129] Koç et. al. 2001, Yüzügüllü et. al. 2004, Büken et. al. 2007.

The Principle of Privacy

In the medical context, privacy refers to the inaccessibility of a person. Although most definitions focus on the agency of the persons, and mention a *control* over access to themselves, privacy may as well exist for persons who do not have consciousness, yet are inaccessible[130].

Allen mentions four forms of privacy that refer to different forms of limited access to the person: informational privacy, physical privacy, decisional privacy, and proprietary privacy[131]. Beauchamp and Childress also mention a fifth form of privacy: relational or associational privacy[132]. Now I discuss each of these five forms of privacy, and how they relate to forensic age diagnosis.

Informational Privacy

Informational privacy refers to limited access to information about a person. In the ordinary health care context, this form of privacy refers to the information about a person's health condition or other information about her body. This form of privacy is particularly problematic in the forensic context, since forensic procedures are conducted only to obtain information about a person, and virtually always to share this information with members of the legal community. In that sense, one may not expect any informational privacy as far as the legal community is concerned, and this share of information is justified by the forensic expert's duty. However, there are also cases where the information is also shared with parties other than legal

[130] Beauchamp and Childress, p. 294.
[131] Anita L. Allen, "Genetic Privacy: Emerging Concepts and Values". In *Genetic Secrets: Protecting Privacy and Confidentiality in the Genetic Era*, ed. Mark A. Rothstein (New Haven, CT: Yale University Press, 1997): pp. 31-59.
[132] Beauchamp and Childress, p. 295.

professionals, most notably the media. In these cases, the violation of informational privacy is severe, and it cannot be justified by appeal to the forensic expert's duty.

Physical Privacy

Physical privacy focuses on persons and their personal spaces. It is of particular importance in dealing with traumatized children, since they can be extremely vulnerable in their interactions with people. This form of privacy is often violated in the Turkish forensic context, since there are no special clinics where the staff is qualified to deal with traumatized children. But the problems about physical privacy are not limited to the lack of specially designated space. Since the forensics institutes and state hospitals tend to be extremely crowded, persons undergo skeletal age diagnosis procedures in the presence of other patients as well as medical professionals who are not involved in the diagnostic procedure. Hence physical privacy of children is clearly violated.

Decisional Privacy

Decisional privacy refers to people's personal choices about the medical procedures they undergo. As I discussed in the section on autonomy, it is difficult to talk about decisional privacy in forensic procedures. In cases of forensic age diagnosis conducted upon court demand, the person has no option but to undergo the procedure, and even the decision about the procedure to be used is made by the medical professionals without consulting the patient. Cases of voluntary forensic age diagnosis is more complicated, since there is a decision made by the person's legal

representatives, but it is surrogate and involves the problems concerning surrogate decision-making.

Proprietary Privacy

Proprietary privacy refers to privacy concerning property interests in the human person[133]. In the law, property-like notions are extended to individuals' interests in possessing and controlling aspects of their person, including their name, portrait or picture[134]. According to this definition, a person's radiographs are also aspects of their person. In cases of skeletal age diagnosis conducted upon the demand of the court, people's radiographs are taken and the information is shared with the legal community without their consent. However, this production and share of material and information is justified by the forensic expert's duty. In cases of voluntary skeletal age diagnosis, persons are willing to have their radiographs to be produced, knowing that the information will be shared with legal professionals. In that sense, proprietary privacy is not violated in voluntary cases, but the problems about surrogate decision-making persist.

Relational or Associational Privacy

Relational or associational privacy assumes that intimate relations are central to people's lives and therefore their decision-making processes, particularly in the medical context where decisions may affect the person's family, partner and friends. This form of privacy "recognizes that limited access to intimate relationships is

[133] Ibid., 294.
[134] Ibid., 294.

central and that individuals, singly and jointly, make private decisions within these relationships"[135].

In cases of skeletal age diagnosis in Turkey, relational or associational privacy is not violated. However, its relation to decision-making is rather complicated. In cases of forensic age diagnosis conducted upon court demand, people undergo the procedure not because of a decision they make, but because of a decision made by the court. Therefore, relational or associational privacy is irrelevant. In cases of voluntary forensic age diagnosis, there is a decision made. However, it is not the persons themselves, but their parents or legal guardians who make the decision on their behalf. As such, a rather extreme version of relational or associational privacy exists in the cases of voluntary forensic age diagnosis, where relatives decide in the name of a person.

Duties of the Forensic Clinician and the Case of Skeletal Age Diagnosis

In the ordinary health care context, the medical professional's main responsibility is to aid the patient. However, in the forensic context, the main responsibility is to aid the legal community in implementing justice. In a discussion about forensic psychiatry, Appelbaum argues that while treating clinicians "have primary obligations to advance their patients' interests and avoid causing them harm, reflecting the principles of beneficence and nonmaleficence", forensic psychiatrists "work in an entirely different ethical framework, one built around the legitimate needs of the justice system. Their duties are to seek and reveal the truth, as best they can, whether or not that advances the interests of the evaluee"[136]. There is indeed a

[135] Ibid., 295.
[136] Paul S. Applebaum, "Ethics in Evolution: The Incompatibility of Clinical and Ethical Functions",

tension between the forensic clinician's obligations to the patient and the legal community. However, it is difficult to argue that the primary obligation is to serve the justice system or the interests of the patients. It is important to balance these two obligations created by the forensic clinician's dual role as medical professional and legal professional. On the one hand, forensic clinician has the duty of aiding legal professionals and the justice system. This may indeed come before the interests of the patients. For example, if a genetic analysis, in view of relevant evidence, reveals that a person is a serial killer, not revealing this fact would undoubtedly further his interests, but it would hinder the implementation of justice and potentially harm others. On the other hand, even if forensic procedures do not have a therapeutic purpose, bodily and health-related interests of the patient are still of relevance, as well as obligations of patient-professional relations. As such, serious risks to the patient's bodily and psychological health should be avoided. Moreover, since the terms "nonmaleficence" and "beneficence" apply both on medical and legal levels in the forensic context, the forensic clinician should also be very careful about the reliability of the information he produces, and how he communicates it. This is an obligation not only to the legal community but also to the persons who undergo the forensic procedures.

Although the principles of nonmaleficence and beneficence are to some extent violated in medical terms in forensic age diagnosis as well as other forensic procedures, particularly those involving a health risk, this is not necessarily the case in legal terms. Forensic procedures are conducted for the benefit of the legal community, and therefore the public. Ideally, they are supposed to produce reliable evidence that is to be used in the legal contexts for the implementation of justice.

The American Journal of Psychiatry 154(4) (April 1997): pp. 445-446.

Potentially, they may also aid the persons who undergo the procedures. In the case of forensic age diagnosis, if a convict's legal age is higher than her chronological age, a reliable forensic age procedure may save her from getting more punishment than designated by the law. Moreover, one's legal status often has health-related implications which may balance the harm inflicted by skeletal age diagnosis. Therefore, the health-related risks involved in the procedure may be outweighed by the benefit from it. However, mainly because of the technical problems involved in skeletal age diagnosis applications in Turkey, children's ages are virtually always overestimated. By producing results the reliability of which are extremely limited, and hence hindering the implementation of justice, the application of forensic age diagnosis in Turkey violates the principles of nonmaleficence and beneficence in legal terms. This violation affects not only the children who are immediately involved in the cases, but also the whole society.

Forensic age diagnosis may also be beneficent for underage persons in legal terms, particularly in cases of forensic age diagnosis demanded by the persons, precisely because of the technical problems involved in the procedure. As we saw in the case of the young mother, changing one's legal age to be older may help an underage person in regulating her life in one way or another. In these cases, one needs to evaluate the cases in detail to decide whether or not the principles of nonmaleficence and beneficence are violated, to what extent, and whether the child's best interest is protected or not. Since forensic age diagnosis is often entangled with social problems, most notably underage marriage, it is necessary to establish the infrastructure to protect the best interest of children involved in those cases, such as shelters and other support mechanisms.

In this chapter, I explored the ethical problems involved in forensic age diagnosis in the Turkish context. In the next chapter, I make some suggestions for solving some of the ethical as well as technical problems involved in forensic age diagnosis.

CHAPTER 5

SUGGESTIONS

Is Abolishing Skeletal Age Diagnosis a Solution?

Given the ethical violations involved in skeletal age diagnosis, it may seem to be a good idea to abolish the use of the procedure. However, it is difficult to argue that this would be a satisfactory solution, particularly because the need for forensic age diagnosis will persist.

In order to explore what may happen when skeletal age diagnosis is abolished, I would like to discuss the Austrian case[137]. In Austria, taking x-rays for non-therapeutic purposes has been banned in the name of patient and human rights. Therefore, skeletal age diagnosis cannot be conducted. In fact, in Austria, forensic institutions reject conducting any type of forensic age diagnosis, since they are not allowed to use the most reliable method for age diagnosis. This rejection is possible thanks to the protection they enjoy under the Ministry of Science. Since the ministry is the institution to which they report, the justice system cannot force forensics institutes to conduct any procedure. However, the abolishment of the method and the forensic experts' rejection to conduct age diagnosis does not eliminate the need. There is still a need for the procedure, especially to regulate the cases of asylum seekers. This problem is solved by resorting to other "experts." Although forensic experts can and do reject conducting the procedure without the necessary methods and instruments, there are other experts who can be forced by the legal system: the

[137] For the information on forensic age diagnosis in Austria, I am grateful to Professor Edith Tutsch-Bauer.

police doctors. The police doctors are medical doctors, who are not trained in forensics yet are responsible for assisting the legal community. As members of the police force, these experts cannot reject conducting forensic age diagnosis or any other legally allowed medico-legal procedure. However, since they cannot use skeletal age diagnosis, their means are extremely limited. Therefore, all they do is to talk to the person, observe his behavior and write a report indicating his estimated age. This report is considerably different from those that are produced in other European countries where skeletal age diagnosis is allowed, including those that were produced in Austria until the procedure was banned. Unlike those lengthy reports that give detailed information about the person and the findings, with extensive explanations of the methods used as well as references to the literature, the reports provided by the police doctors are in the form of questionnaires.

While it does save the persons from being subjected to x-rays without any therapeutic benefit, and solves the basic problems concerning nonmaleficence and beneficence in terms of health, the Austrian case involves a serious problem of reliability. Instead of any scientific method, the diagnosis is based only on the observation of a medical professional. In the absence of any objective criterion, the reliability of the procedure seems questionable. As such, in legal terms, the problems about nonmaleficence and beneficence persist. In view of the Austrian case, not using skeletal age diagnosis does not seem to be the best way to solve the ethical problems concerning the procedure. However, there is a clear need for improvement of the procedure, particularly in the Turkish context. In this chapter, I seek to present some measures to be taken to minimize the ethical problems involved in the procedure.

Bringing Reason Back to Reasonable Doubt

In contemporary Turkey, the biggest problem about forensic age diagnosis is probably resorting to the procedure unnecessarily. Being "objective" and "scientific," the procedures for forensic age diagnosis, particularly skeletal age diagnosis, are assumed to tell the "truth" about the human body and subjectivity better than any other form of evidence, including birth certificates and witness accounts. Therefore, these methods may also be used in cases where there is little reason to doubt that the person's ID or birth records reflect their chronological age correctly. To solve this problem, legal professionals should be informed about the nature of forensic age diagnosis procedures, and the problems of accuracy and reliability. It would also be useful to make legal regulations about when the court should demand forensic age diagnosis. This would reduce the number of cases for which forensic age diagnosis may be demanded. Moreover, it would disallow the parents' instrumentalizing the procedure for purposes like underage marriage, which would not necessarily be in the best interest of their children.

Increasing Reliability

Even after the number of cases for which forensic age diagnosis is demanded is minimized, it may still be necessary to resort to the procedure for cases where there is reasonable doubt about the person's age. For such cases, it is crucial to increase the reliability of forensic age diagnosis.

The first step to increase reliability would be to train experts in forensic age diagnosis. Once the number of cases is minimized, forensics institutes will be able to

satisfy the need for the procedure countrywide. Therefore, training a number of medical doctors and radiologists to conduct forensic age diagnosis at the institutes would be a big step towards solving the problems regarding reliability that are caused by the lack of expertise and experience in the medical professionals. In the name of convenience, the data from the individuals, such as radiographs, can be obtained at local state hospitals. However, they should be processed in forensics institutes by sufficiently trained experts.

The second step towards increasing reliability would be to develop the methods used. Büken et.al.[138] argue that unless some other method is proved more useful, it makes sense to use the G&P method cautiously in forensic age assessment. Research shows that the Thiemann-Nitz method, which is a new and less popular one, can prevent overestimation in forensic age assessment[139]. However, as far as the Turkish forensic context is concerned, I am not aware of any instance of the use of the Thiemann-Nitz method. No matter which method is to be used, it is crucial to develop an atlas derived from the Turkish population that would also acknowledge class and racial[140] differences if necessary[141].

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[138] Büken et. al., p. 146.

[139] Sven Schmidt, Beate Koch, Ronald Schulz, Walter Reisinger, Andreas Schmeling, "Comparative Analysis of the Applicability of the Skeletal Age Determination Methods of Greulich-Pyle and Thiemann-Nitz for Forensic Age Estimation in Living Subjects", *International Journal of Legal Medicine*.121(4) (July 2007): pp. 293-296.

[140] The term used in the forensic medicine literature is "ethnic". However, since ethnicity is a term more closely related to cultural identity in the social science literature whereas race refers to genetic identity as well as cultural identity, I prefer to use the term "racial".

[141] For the impact of race on skeletal growth and forensic age diagnosis, see Andreas Olze, Andreas Schmeling, Mari Taniguchi, Hitoshi Maeda, Piet van Niekerk, Klaus-Dieter Wernecke and Gunther Geserick, "Forensic Age Estimation in Living Subjects: the Ethnic Factor in Wisdom Tooth Mineralization", *International Journal of Legal Medicine* 118(3) (June 2004): pp. 170-173; Andreas Olze, Piet van Niekerk, T. Ishikawa, B. L. Zhu, R. Schulz, Hitoshi Maeda and Andreas Schmeling, "Comparative Study on the Effect of Ethnicity on Wisdom Tooth Eruption". *International Journal of Legal Medicine* 121, no. 6, November 2007; Andreas Schmeling, W. Reisinger, D. Loreck, K. Vendura, W. Markus, G. Geserick, "Effects of Ethnicity on Skeletal Maturation: Consequences for Forensic Age Estimations". *International Journal of Legal Medicine* 113(5) (August 2000): pp. 253-258.

A third step would be to implement control mechanisms such as inter-observer control and public supervision. At a time when the forensics institutes have gained notoriety, the implementation of a national committee of forensic bioethics with monitoring and sanctioning power would contribute to the elimination of the ethical problems in the forensic context in general.

A fourth step would be the use of the same methods for every case in which they can feasibly be used. Today, while combined methods are used in cases of certain political significance, skeletal age diagnosis is the only method used in other cases. If a skeletal age diagnosis method gives more accurate results when combined with other methods, which is often the case, these methods should not be reserved only for cases that have political significance. Or, in the name of fairness and efficiency, the other parameters should be abandoned in all cases. What we see in the contemporary Turkish medico-legal context is a violation of the principle of equality before the law.

Professional Freedom and Security

Once no one but real experts with sufficient training is asked to conduct forensic age diagnosis, medical professionals will not have reason to refuse to conduct the procedure. However, in case a medical professional feels that his expertise would not be adequate, she should be given the freedom to reject conducting forensic age diagnosis, and she should be protected from repercussions. In case of necessity, she should be re-trained.

Medical professionals should also be able to prepare the medical reports in a way they perceive to be most accurate. In an interview, a Turkish forensic

anthropologist told me about a case of age diagnosis using photographs. In that case, all that he could do with the aid of this method was to give an *age range*, rather than a definite chronological age. However, the court demanded him to submit a definite age in the report. Therefore, he ended up using his discretion. The same problem also exists in the skeletal age diagnosis reports. Rather than presenting a definite age, the reports should underline the margin of error and the age range. This would also help the legal professionals in assessing the reliability of the reports.

Treatment of Subjects

To make the medical procedures as non-problematic as possible, it is crucial to create the necessary infrastructure. Children who go to forensics institutes are often convicts or rape survivors, who suffer from severe psychological and emotional disorders ranging. Therefore, the first step towards eliminating the problems concerning treatment of subjects would be to train the medical staff on working with traumatized children so that the children's encounters with them will not harm them any further. Moreover, the children and their families should be provided with free psychiatric support. The second step would be to establish private clinics for children, particularly at the forensics institutes. Such infrastructure will ease the psychological and emotional burden of the procedure. Since persons are subjected to a potentially harmful medical procedure without any therapeutic benefit, and their bodies are exploited as sources of evidence, it would also be fair to compensate their effort to aid the judicial procedures in cases where forensic age diagnosis is conducted upon court demand. In case they experience any health problems that

might have been triggered by the procedure, their expenses and loss should be also compensated.

Taking these measures would be useful for solving some of the ethical problems involved in forensic age diagnosis. However, the problem of informed consent will persist. This is most problematic in "voluntary" cases where the procedure is used not to aid the judicial procedures but to change the legal situation of a person. In these cases, which are often used to legalize underage marriage, it is important for the situation to be evaluated well by legal professionals, and take the necessary measures to protect the best interest of the children. It is worth noting that for such measures to be taken, it is crucial for the necessary infrastructure to protect children to be established. In other words, unless adequate legal measures are taken and they are actually used in the court, and well working shelters and other support systems are implemented, the problems experienced by children, which manifest in the forensic context, cannot be eliminated.

CHAPTER 6

CONCLUSION

Forensic medicine, with its numerous applications ranging from parental testing to autopsies, is an important branch of medicine. Although forensic applications do not have any therapeutic benefit, they are used to regulate social life. As such, these applications are intrinsically related to law and concerns about justice. This unique relationship makes forensic medicine of special importance for bioethics. However, forensic bioethics has enjoyed relatively little interest in the literature. The only issues concerning forensic bioethics that have been discussed to some detail are forensic psychiatry, genetic screening and the use of bodily material.

In this thesis, I focused on a forensic procedure that is widely used in the Turkish medico-legal context: skeletal age diagnosis. Forensic age diagnosis in living subjects is an important procedure in Turkey, since the concept of legal age as well as age in general plays a major role in assessing and regulating illegal behavior as well as civil life, yet there is distrust in birth records combined with a trust in "objective" "scientific" medical procedures. In this context, forensic age diagnosis is conducted both upon court demand and upon the demand of parents and legal guardians.

Although it is a popular procedure, forensic age diagnosis is by no means unproblematic. In fact, it is an example that reveals how technical problems about a procedure, problems that stem from its application in a particular socio-historical context, and the ethical problems involved in the procedure are interconnected.

As a highly subjective medical procedure based on the false assumption that all human beings have the same level of skeletal development at a certain age, skeletal age diagnosis involves a major technical and scientific problem, unavoidably resulting in assessments with limited reliability. This technical problem, combined with the problems in the Turkish context, such as the lack of expertise as well as an atlas that reflects the skeletal development of the population, using different methods for forensic age diagnosis for different legal cases and legal professionals' ill-grounded trust in the procedure intensifies the problems concerning reliability. The technical problems and the problems that stem from the application of the procedure in Turkey affect legal cases and involve a number of ethical problems concerning a variety of issues including nonmaleficence, beneficence, and informed consent. Forensic age diagnosis cases can also be interpreted as manifestations of various forms of violence and abuse involving children. As such, the case of forensic age diagnosis in living subjects reminds us how bioethical problems are entangled with technical and social problems, and why it is important to focus on the technical aspects of the medical procedure as well as the legal and social contexts to understand the bioethical problems, and to make relevant suggestions.

In this discussion about the ethical dimensions of skeletal age diagnosis, I also explored the differences between ethics in the context of therapeutic medicine and in the forensic context. The primary responsibility of therapeutic medicine is to the patient while forensic medicine is responsible both to the persons involved in the case and the legal professionals. Hence forensic experts are responsible for protecting the patients as well as fostering justice by aiding the legal community. As such, it is not possible to talk about an absolute privacy or confidentiality in the forensic context. The principles of informed consent and respect for autonomy are

also violated, since no consent is required or obtained to perform forensic age diagnosis on persons upon court demand. However, this can be justified in the name of justice and the benefit of the society as long as the harm to the persons is kept at minimum and compensated, the reliability of the process is maximized, and the legal professionals are fully informed about the strengths and weaknesses of the procedure. Another difference between the two contexts is that unlike the context of therapeutic medicine, where veracity can be sacrificed in the name of beneficence and nonmaleficence, it is always of primary importance in forensic medicine, since the procedures are conducted to obtain evidence. One last major difference between bioethics in the ordinary health care context and forensic bioethics is that in the forensic context, the concepts of harm and beneficence apply both on medical and legal levels.

The case of forensic age diagnosis also shows us the major problem with the deductive normative approach based on principles or theories in bioethics, and does not take the applications of medical procedures into account. Although it has been largely abandoned in the Western context, this approach is still strong in the Turkish bioethics literature. With its voluntary and non-voluntary uses, and its medical and legal aspects, skeletal age diagnosis is difficult to be categorized as “nonmaleficent” or “beneficent”. It is difficult to make an analysis of forensic age diagnosis or skeletal age diagnosis without looking at the particular cases where they are used. In that sense, the case of forensic age diagnosis shows us that even though the key concepts in bioethics may be useful as guidelines for analysis, a deductive normative approach merely based on principles or theories would be too limited for understanding the varying ethical implications of the same medical procedure in different cases.

Skeletal age diagnosis is a widely used procedure, but little has been written on the social and ethical aspects of the subject. In this thesis, I focused on skeletal age diagnosis and its applications in Turkey. Due to the scope and limits of my research, I could not discuss a number of important issues, such as the very concept of legal age and its role in regulating biological and sexual citizenship, how forensic procedures are involved in the dynamics of biolegitimacy and citizenship or how fantasies about science and objectivity shape forensic age diagnosis procedures. A more comprehensive study that would address to these issues would undoubtedly facilitate our understanding of the concept of legal age as well as forensic age diagnosis.

Although I tried to cover information about the use of forensic age diagnosis procedures in other countries, the literature was extremely limited and the information I used was largely based on interviews with professionals. A comparative study on the use of the procedure in different forensic contexts, and the legal regulations concerning the procedure would enhance our understanding of forensic age diagnosis, and potentially develop relevant policy-making that may aid us in solving the ethical problems involved in the procedure.

APPENDIX A

TÜRK CEZA KANUNU

Kanun No. 5237 Kabul Tarihi : 26.9.2004

Tanımlar

MADDE 6. - (1) Ceza kanunlarının uygulanmasında;

a) Vatandaş deyiminden; fiili işlediği sırada Türk vatandaşı olan kişi,

b) Çocuk deyiminden; henüz onsekiz yaşını doldurmamış kişi,

c) Kamu görevlisi deyiminden; kamusal faaliyetin yürütülmesine atama veya seçilme yoluyla ya da herhangi bir surette sürekli, süreli veya geçici olarak katılan kişi,

d) Yargı görevi yapan deyiminden; yüksek mahkemeler ve adlî, idarî ve askerî mahkemeler üye ve hâkimleri ile Cumhuriyet savcısı ve avukatlar,

e) Gece vakti deyiminden; güneşin batmasından bir saat sonra başlayan ve doğmasından bir saat evvele kadar devam eden zaman süresi,

f) Silâh deyiminden;

1. Ateşli silâhlar,

2. Patlayıcı maddeler,

3. Saldırı ve savunmada kullanılmak üzere yapılmış her türlü kesici, delici veya bereleyici alet,

4. Saldırı ve savunma amacıyla yapılmış olmasa bile fiilen saldırı ve savunmada kullanılmaya elverişli diğer şeyler,

5. Yakıcı, aşındırıcı, yaralayıcı, boğucu, zehirleyici, sürekli hastalığa yol açıcı nükleer, radyoaktif, kimyasal, biyolojik maddeler,

g) Basın ve yayın yolu ile deyiminden; her türlü yazılı, görsel, işitsel ve elektronik kitle iletişim aracıyla yapılan yayınlar,

h) İtiyadi suçlu deyiminden; kasıtlı bir suçun temel şeklini ya da daha ağır veya daha az cezayı gerektiren nitelikli şekillerini bir yıl içinde ve farklı zamanlarda ikiden fazla işleyen kişi,

i) Suçu meslek edinen kişi deyiminden; kısmen de olsa geçimini suçtan elde ettiği kazançla sağlamaya alışmış kişi,

j) Örgüt mensubu suçlu deyiminden; bir suç örgütünü kuran, yöneten, örgüte katılan veya örgüt adına diğerleriyle birlikte veya tek başına suç işleyen kişi,

Anlaşılır.

Yaş küçüklüğü

MADDE 31. - (1) Fiili işlediği sırada oniki yaşını doldurmamış olan çocukların ceza sorumluluğu yoktur. Bu kişiler hakkında, ceza kovuşturması yapılamaz; ancak, çocuklara özgü güvenlik tedbirleri uygulanabilir.

(2) Fiili işlediği sırada oniki yaşını doldurmuş olup da onbeş yaşını doldurmamış olanların işlediği fiilin hukukî anlam ve sonuçlarını algılayamaması veya

davranışlarını yönlendirme yeteneğinin yeterince gelişmemiş olması hâlinde ceza sorumluluğu yoktur. Ancak bu kişiler hakkında çocuklara özgü güvenlik tedbirlerine hükmolunur. İşlediği fiili algılama ve bu fiille ilgili olarak davranışlarını yönlendirme yeteneğinin varlığı hâlinde, bu kişiler hakkında suç, ağırlaştırılmış müebbet hapis cezasını gerektirdiği takdirde dokuz yıldan oniki yıla; müebbet hapis cezasını gerektirdiği takdirde yedi yıldan dokuz yıla kadar hapis cezasına hükmolunur. Diğer cezaların üçte ikisi indirilir ve bu hâlde her fiil için verilecek hapis cezası altı yıldan fazla olamaz.

(3) Fiili işlediği sırada onbeş yaşını doldurmuş olup da onsekiz yaşını doldurmamış olan kişiler hakkında suç, ağırlaştırılmış müebbet hapis cezasını gerektirdiği takdirde ondört yıldan yirmi yıla; müebbet hapis cezasını gerektirdiği takdirde dokuz yıldan oniki yıla kadar hapis cezasına hükmolunur. Diğer cezaların yarısı indirilir ve bu hâlde her fiil için verilecek hapis cezası sekiz yıldan fazla olamaz.

Azmettirme

MADDE 38. - (1) Başkasını suç işlemeye azmettiren kişi, işlenen suçun cezası ile cezalandırılır.

(2) Üstsoy ve altsoy ilişkisinden doğan nüfuz kullanılmak suretiyle suça azmettirme hâlinde, azmettirenin cezası üçte birden yarısına kadar artırılır. Çocukların suça azmettirilmesi hâlinde, bu fıkra hükmüne göre cezanın artırılabilmesi için üstsoy ve altsoy ilişkisinin varlığı aranmaz.

(3) Azmettirenin belli olmaması hâlinde, kim olduğunun ortaya çıkmasını sağlayan fail veya diğer suç ortağı hakkında ağırlaştırılmış müebbet hapis cezası yerine yirmi yıldan yirmibeş yıla kadar, müebbet hapis cezası yerine onbeş yıldan yirmi yıla kadar hapis cezasına hükmolunabilir. Diğer hâllerde verilecek cezada, üçte bir oranında indirim yapılabilir.

Zincirleme suç

MADDE 43. - (1) Bir suç işleme kararının icrası kapsamında, değişik zamanlarda bir kişiye karşı aynı suçun birden fazla işlenmesi durumunda, bir cezaya hükmedilir. Ancak bu ceza, dörtte birinden dörtte üçüne kadar artırılır. Bir suçun temel şekli ile daha ağır veya daha az cezayı gerektiren nitelikli şekilleri, aynı suç sayılır.

(2) Aynı suçun birden fazla kişiye karşı tek bir fiille işlenmesi durumunda da, birinci fıkra hükmü uygulanır.

(3) Kasten öldürme, kasten yaralama, işkence, cinsel saldırı, çocukların cinsel istismarı ve yağma suçlarında bu madde hükümleri uygulanmaz.

Dava zamanaşımı

MADDE 66. - (1) Kanunda başka türlü yazılmış olan hâller dışında kamu davası;

a) Ağırlaştırılmış müebbet hapis cezasını gerektiren suçlarda otuz yıl,

b) Müebbet hapis cezasını gerektiren suçlarda yirmibeş yıl,

c) Yirmi yıldan aşağı olmamak üzere hapis cezasını gerektiren suçlarda yirmi yıl,

d) Beş yıldan fazla ve yirmi yıldan az hapis cezasını gerektiren suçlarda onbeş yıl,

e) Beş yıldan fazla olmamak üzere hapis veya adlî para cezasını gerektiren suçlarda sekiz yıl,

Geçmesiyle düşer.

(2) Fiili işlediği sırada oniki yaşını doldurmuş olup da onbeş yaşını doldurmamış olanlar hakkında, bu sürelerin yarısının; onbeş yaşını doldurmuş olup da onsekiz yaşını doldurmamış olan kişiler hakkında ise, üçte ikisinin geçmesiyle kamu davası düşer.

(3) Dava zamanaşımı süresinin belirlenmesinde dosyadaki mevcut deliller itibarıyla suçun daha ağır cezayı gerektiren nitelikli hâlleri de göz önünde bulundurulur.

(4) Yukarıdaki fıkralarda yer alan sürelerin belirlenmesinde suçun kanunda yer alan cezasının yukarı sınırı göz önünde bulundurulur; seçimlik cezaları gerektiren suçlarda zamanaşımı bakımından hapis cezası esas alınır.

(5) Aynı fiilden dolayı her ne suretle olursa olsun tekrar yargılanması gereken hükümlünün, sonradan yargılanan suça ait üçüncü fıkrada yazılı esasa göre belirlenecek zamanaşımı göz önünde bulundurulur.

(6) Zamanaşımı, tamamlanmış suçlarda suçun işlendiği günden, teşebbüs hâlinde kalan suçlarda son hareketin yapıldığı günden, kesintisiz suçlarda kesintinin gerçekleştiği ve zincirleme suçlarda son suçun işlendiği günden, çocuklara karşı üstsoy veya bunlar üzerinde hüküm ve nüfuzu olan kimseler tarafından işlenen suçlarda çocuğun onsekiz yaşını bitirdiği günden itibaren işlemeye başlar.

(7) Bu Kanunun İkinci Kitabının Dördüncü Kısmında yazılı ağırlaştırılmış müebbet veya müebbet veya on yıldan fazla hapis cezalarını gerektiren suçların yurt dışında işlenmesi hâlinde dava zamanaşımı uygulanmaz.

Nitelikli hâller

MADDE 82. - (1) Kasten öldürme suçunun;

a) Tasarlayarak,

b) Canavarca hisle veya eziyet çektirerek,

c) Yangın, su baskını, tahrip, batırma veya bombalama ya da nükleer, biyolojik veya kimyasal silâh kullanmak suretiyle,

d) Üstsoy veya altsoydan birine ya da eş veya kardeşe karşı,

e) Çocuğa ya da beden veya ruh bakımından kendisini savunamayacak durumda bulunan kişiye karşı,

f) Gebe olduğu bilinen kadına karşı,

g) Kişinin yerine getirdiği kamu görevi nedeniyle,

h) Bir suçu gizlemek, delillerini ortadan kaldırmak veya işlenmesini kolaylaştırmak amacıyla,

i) Kan gütme saikiyle,

j) Töre saikiyle,

İşlenmesi hâlinde, kişi ağırlaştırılmış müebbet hapis cezası ile cezalandırılır.

İşkence

MADDE 94. - (1) Bir kişiye karşı insan onuruyla bağdaşmayan ve bedensel veya ruhsal yönden acı çekmesine, algılama veya irade yeteneğinin etkilenmesine, aşağılanmasına yol açacak davranışları gerçekleştiren kamu görevlisi hakkında üç yıldan oniki yıla kadar hapis cezasına hükmolunur.

(2) Suçun;

a) Çocuğa, beden veya ruh bakımından kendisini savunamayacak durumda bulunan kişiye ya da gebe kadına karşı,

b) Avukata veya diğer kamu görevlisine karşı görevi dolayısıyla,

İşlenmesi hâlinde, sekiz yıldan onbeş yıla kadar hapis cezasına hükmolunur.

(3) Fiilin cinsel yönden taciz şeklinde gerçekleşmesi hâlinde, on yıldan onbeş yıla kadar hapis cezasına hükmolunur.

(4) Bu suçun işlenişine iştirak eden diğer kişiler de kamu görevlisi gibi cezalandırılır.

(5) Bu suçun ihmali davranışla işlenmesi hâlinde, verilecek cezada bu nedenle indirim yapılmaz.

Eziyet

MADDE 96. - (1) Bir kimsenin eziyet çekmesine yol açacak davranışları gerçekleştiren kişi hakkında iki yıldan beş yıla kadar hapis cezasına hükmolunur.

(2) Yukarıdaki fıkra kapsamına giren fiillerin;

a) Çocuğa, beden veya ruh bakımından kendisini savunamayacak durumda bulunan kişiye ya da gebe kadına karşı,

b) Üstsoy veya altsoya, babalık veya analığa ya da eşe karşı,

İşlenmesi hâlinde, kişi hakkında üç yıldan sekiz yıla kadar hapis cezasına hükmolunur.

Cinsel saldırı

MADDE 102. - (1) Cinsel davranışlarla bir kimsenin vücut dokunulmazlığını ihlâl eden kişi, mağdurun şikâyeti üzerine, iki yıldan yedi yıla kadar hapis cezası ile cezalandırılır.

(2) Fiilin vücuda organ veya sair bir cisim sokulması suretiyle işlenmesi durumunda, yedi yıldan oniki yıla kadar hapis cezasına hükmolunur. Bu fiilin eşe karşı işlenmesi hâlinde, soruşturma ve kovuşturmanın yapılması mağdurun şikâyetine bağlıdır.

(3) Suçun;

a) Beden veya ruh bakımından kendisini savunamayacak durumda bulunan kişiye karşı,

b) Kamu görevinin veya hizmet ilişkisinin sağladığı nüfuz kötüye kullanılmak suretiyle,

c) Üçüncü derece dahil kan veya kayın hısımlığı ilişkisi içinde bulunan bir kişiye karşı,

d) Silâhla veya birden fazla kişi tarafından birlikte,

İşlenmesi hâlinde, yukarıdaki fıkralara göre verilen cezalar yarı oranında artırılır.

(4) Suçun işlenmesi sırasında mağdurun direncinin kırılmasını sağlayacak ölçünün ötesinde cebir kullanılması durumunda kişi ayrıca kasten yaralama suçundan dolayı cezalandırılır.

(5) Suçun sonucunda mağdurun beden veya ruh sağlığının bozulması hâlinde, on yıldan az olmamak üzere hapis cezasına hükmolunur.

(6) Suç sonucu mağdurun bitkisel hayata girmesi veya ölümü hâlinde, ağırlaştırılmış müebbet hapis cezasına hükmolunur.

Çocukların cinsel istismarı

MADDE 103. - (1) Çocuğu cinsel yönden istismar eden kişi, üç yıldan sekiz yıla kadar hapis cezası ile cezalandırılır. Cinsel istismar deyiminden;

a) Onbeş yaşını tamamlamamış veya tamamlamış olmakla birlikte fiilin hukukî anlam ve sonuçlarını algılama yeteneği gelişmemiş olan çocuklara karşı gerçekleştirilen her türlü cinsel davranış,

b) Diğer çocuklara karşı sadece cebir, tehdit, hile veya iradeyi etkileyen başka bir nedene dayalı olarak gerçekleştirilen cinsel davranışlar,

Anlaşılır.

(2) Cinsel istismarın vücuda organ veya sair bir cisim sokulması suretiyle gerçekleştirilmesi durumunda, sekiz yıldan onbeş yıla kadar hapis cezasına hükmolunur.

(3) Cinsel istismarın üstsoy, ikinci veya üçüncü derecede kan hısmı, üvey baba, evlat edinen, vasi, eğitici, öğretici, bakıcı, sağlık hizmeti veren veya koruma ve gözetim yükümlülüğü bulunan diğer kişiler tarafından ya da hizmet ilişkisinin sağladığı nüfuz kötüye kullanılmak suretiyle gerçekleştirilmesi hâlinde, yukarıdaki fıkralara göre verilecek ceza yarı oranında artırılır.

(4) Cinsel istismarın, birinci fıkranın (a) bendindeki çocuklara karşı cebir veya tehdit kullanmak suretiyle gerçekleştirilmesi hâlinde, yukarıdaki fıkralara göre verilecek ceza yarı oranında artırılır.

(5) Cinsel istismar için başvurulan cebir ve şiddetin kasten yaralama suçunun ağır neticelerine neden olması hâlinde, ayrıca kasten yaralama suçuna ilişkin hükümler uygulanır.

(6) Suçun sonucunda mağdurun beden veya ruh sağlığının bozulması hâlinde, onbeş yıldan az olmamak üzere hapis cezasına hükmolunur.

(7) Suçun mağdurun bitkisel hayata girmesine veya ölümüne neden olması durumunda, ağırlaştırılmış müebbet hapis cezasına hükmolunur.

Reşit olmayanla cinsel ilişki

MADDE 104. - (1) Cebir, tehdit ve hile olmaksızın, onbeş yaşını bitirmiş olan çocukla cinsel ilişkide bulunan kişi, şikâyet üzerine, altı aydan iki yıla kadar hapis cezası ile cezalandırılır.

(2) Fail mağdurdan beş yaştan daha büyük ise, şikâyet koşulu aranmaksızın, cezası iki kat artırılır.

Kişiyi hürriyetinden yoksun kılma

MADDE 109. - (1) Bir kimseyi hukuka aykırı olarak bir yere gitmek veya bir yerde kalmak hürriyetinden yoksun bırakan kişiye, bir yıldan beş yıla kadar hapis cezası verilir.

(2) Kişi, fiili işlemek için veya işlediği sırada cebir, tehdit veya hile kullanırsa, iki yıldan yedi yıla kadar hapis cezasına hükmolunur.

(3) Bu suçun;

a) Silâhla,

b) Birden fazla kişi tarafından birlikte,

c) Kişinin yerine getirdiği kamu görevi nedeniyle,

d) Kamu görevinin sağladığı nüfuz kötüye kullanılmak suretiyle,

e) Üstsoy, altsoy veya eşe karşı,

f) Çocuğa ya da beden veya ruh bakımından kendini savunamayacak durumda bulunan kişiye karşı,

İşlenmesi hâlinde, yukarıdaki fıkralara göre verilecek ceza bir kat artırılır.

(4) Bu suçun mağdurun ekonomik bakımdan önemli bir kaybına neden olması hâlinde, ayrıca bin güne kadar adlî para cezasına hükmolunur.

(5) Suçun cinsel amaçla işlenmesi hâlinde, yukarıdaki fıkralara göre verilecek cezalar yarı oranında artırılır.

(6) Bu suçun işlenmesi amacıyla veya sırasında kasten yaralama suçunun neticesi sebebiyle ağırlaşmış hâllerinin gerçekleşmesi durumunda, ayrıca kasten yaralama suçuna ilişkin hükümler uygulanır.

Müstehcenlik

MADDE 226. - (1) a) Bir çocuğa müstehcen görüntü, yazı veya sözleri içeren ürünleri veren ya da bunların içeriğini gösteren, okuyan, okutan veya dinleten,

b) Bunların içeriklerini çocukların girebileceği veya görebileceği yerlerde ya da alenen gösteren, görülebilecek şekilde sergileyen, okuyan, okutan, söyleyen, söyleten,

c) Bu ürünleri, içeriğine vakıf olunabilecek şekilde satışa veya kiraya arz eden,

d) Bu ürünleri, bunların satışına mahsus alışveriş yerleri dışında, satışa arz eden, satan veya kiraya veren,

e) Bu ürünleri, sair mal veya hizmet satışları yanında veya dolayısıyla bedelsiz olarak veren veya dağıtan,

f) Bu ürünlerin reklamını yapan,

Kişi, altı aydan iki yıla kadar hapis ve adlî para cezası ile cezalandırılır.

(2) Müstehcen görüntü, yazı veya sözleri basın ve yayın yolu ile yayınlayan veya yayınlanmasına aracılık eden kişi altı aydan üç yıla kadar hapis ve beşbin güne kadar adlî para cezası ile cezalandırılır.

(3) Müstehcen görüntü, yazı veya sözleri içeren ürünlerin üretiminde çocukları kullanan kişi, beş yıldan on yıla kadar hapis ve beşbin güne kadar adlî para cezası ile cezalandırılır. Bu ürünleri ülkeye sokan, çoğaltan, satışa arz eden, satan, nakleden, depolayan, ihraç eden, bulunduran ya da başkalarının kullanımına sunan kişi, iki yıldan beş yıla kadar hapis ve beşbin güne kadar adlî para cezası ile cezalandırılır.

(4) Şiddet kullanılarak, hayvanlarla, ölmüş insan bedeni üzerinde veya doğal olmayan yoldan yapılan cinsel davranışlara ilişkin yazı, ses veya görüntüleri içeren ürünleri üreten, ülkeye sokan, satışa arz eden, satan, nakleden, depolayan, başkalarının kullanımına sunan veya bulunduran kişi, bir yıldan dört yıla kadar hapis ve beşbin güne kadar adlî para cezası ile cezalandırılır.

(5) Üç ve dördüncü fıkralardaki ürünlerin içeriğini basın ve yayın yolu ile yayınlayan veya yayınlanmasına aracılık eden ya da çocukların görmesini, dinlemesini veya okumasını sağlayan kişi, altı yıldan on yıla kadar hapis ve beşbin güne kadar adlî para cezası ile cezalandırılır.

(6) Bu suçlardan dolayı, tüzel kişiler hakkında bunlara özgü güvenlik tedbirlerine hükmolunur.

(7) Bu madde hükümleri, bilimsel eserlerle; üçüncü fıkra hariç olmak ve çocuklara ulaşması engellenmek koşuluyla, sanatsal ve edebi değeri olan eserler hakkında uygulanmaz.

Fuhuş

MADDE 227. - (1) Çocuğu fuhşa teşvik eden, bunun yolunu kolaylaştıran, bu maksatla tedarik eden veya barındıran ya da çocuğun fuhşuna aracılık eden kişi, dört yıldan on yıla kadar hapis ve beşbin güne kadar adlî para cezası ile cezalandırılır. Bu suçun işlenişine yönelik hazırlık hareketleri de tamamlanmış suç gibi cezalandırılır.

(2) Bir kimseyi fuhşa teşvik eden, bunun yolunu kolaylaştıran ya da fuhuş için aracılık eden veya yer temin eden kişi, iki yıldan dört yıla kadar hapis ve üçbin güne kadar adlî para cezası ile cezalandırılır. Fuhşa sürüklenen kişinin kazancından yararlanılarak kısmen veya tamamen geçimin sağlanması, fuhşa teşvik sayılır.

(3) Fuhuş amacıyla ülkeye insan sokan veya insanların ülke dışına çıkmasını sağlayan kişi hakkında yukarıdaki fıkralara göre cezaya hükmolunur.

(4) Cebir veya tehdit kullanarak, hile ile ya da çaresizliğinden yararlanarak bir kimseyi fuhşa sevk eden veya fuhuş yapmasını sağlayan kişi hakkında yukarıdaki fıkralara göre verilecek ceza yarısından iki katına kadar artırılır.

(5) Yukarıdaki fıkralarda tanımlanan suçların eş, üstsoy, kayın üstsoy, kardeş, evlât edinen, vasi, eğitici, öğretici, bakıcı, koruma ve gözetim yükümlülüğü bulunan diğer kişiler tarafından ya da kamu görevi veya hizmet ilişkisinin sağladığı nüfuz kötüye kullanılmak suretiyle işlenmesi hâlinde, verilecek ceza yarı oranında artırılır.

(6) Bu suçların, suç işlemek amacıyla teşkil edilmiş örgüt faaliyeti çerçevesinde işlenmesi hâlinde, yukarıdaki fıkralara göre verilecek ceza yarı oranında artırılır.

(7) Bu suçlardan dolayı, tüzel kişiler hakkında bunlara özgü güvenlik tedbirlerine hükmolunur.

(8) Fuhşa sürüklenen kişi, tedavi veya terapiye tabi tutulur.

Kumar oynanması için yer ve imkân sağlama

MADDE 228. - (1) Kumar oynanması için yer ve imkân sağlayan kişi, bir yıla kadar hapis ve adlî para cezası ile cezalandırılır.

(2) Çocukların kumar oynaması için yer ve imkân sağlanması hâlinde, verilecek ceza bir katı oranında artırılır.

(3) Bu suçtan dolayı, tüzel kişiler hakkında bunlara özgü güvenlik tedbirlerine hükmolunur.

(4) Ceza Kanununun uygulanmasında kumar, kazanç amacıyla icra edilen ve kâr ve zararın talihe bağlı olduğu oyunlardır.

Dilencilik

MADDE 229. - (1) Çocukları, beden veya ruh bakımından kendini idare edemeyecek durumda bulunan kimseleri dilencilikte araç olarak kullanan kişi, bir yıldan üç yıla kadar hapis cezası ile cezalandırılır.

(2) Bu suçun üçüncü derece dahil kan veya kayın hısımları ya da eş tarafından işlenmesi hâlinde verilecek ceza yarı oranında artırılır.

(3) Bu suçun örgüt faaliyeti çerçevesinde işlenmiş olması hâlinde, verilecek ceza bir kat artırılır.

Çocuğun kaçırılması ve alıkonulması

MADDE 234. - (1) Velayet yetkisi elinden alınmış olan ana veya babanın ya da üçüncü derece dahil kan hısmının, onaltı yaşını bitirmemiş bir çocuğu veli, vasi veya bakım ve gözetimi altında bulunan kimsenin yanından cebir veya tehdit kullanmaksızın kaçırması veya alıkoyması hâlinde, üç aydan bir yıla kadar hapis cezasına hükmolunur.

(2) Fiil cebir veya tehdit kullanılarak işlenmiş ya da çocuk henüz oniki yaşını bitirmemiş ise ceza bir katı oranında artırılır.

Suçu bildirmeme

MADDE 278. - (1) İşlenmekte olan bir suçu yetkili makamlara bildirmeyen kişi, bir yıla kadar hapis cezası ile cezalandırılır.

(2) İşlenmiş olmakla birlikte, sebebiyet verdiği neticelerin sınırlandırılması hâlen mümkün bulunan bir suçu yetkili makamlara bildirmeyen kişi, yukarıdaki fıkra hükmüne göre cezalandırılır.

(3) Mağdurun onbeş yaşını bitirmemiş bir çocuk, bedensel veya ruhsal bakımdan özürlü olan ya da hamileliği nedeniyle kendisini savunamayacak durumda bulunan kimse olması hâlinde, yukarıdaki fıkralara göre verilecek ceza, yarı oranında artırılır.

APPENDIX B

ASKERLİK ÇAĞINA GİRENLERİN

İLK YOKLAMA İŞLEMLERİ HAKKINDA YÖNETMELİK

Bakanlar Kurulu Karar Tarihi - No : 06/11/1996 - 96/8792

Dayandığı Kanun Tarihi - No : 21/06/1927 - 1111

Yayımlandığı Resmi Gazete Tarihi - No : 08/01/1997 - 22871

BİRİNCİ BÖLÜM : AMAÇ, KAPSAM, TANIMLAR

AMAÇ

Madde 1 - Bu Yönetmeliğin amacı; askerlik çağına giren yükümlülerin ilk yoklama işlemlerine ilişkin esas, usul ve sorumlulukları belirlemektir.

KAPSAM

Madde 2 - Bu Yönetmelik; askerlik çağına giren yükümlüler ile nüfus idarelerini, mülki makamları ve Milli Savunma Bakanlığı Askeralma Teşkilatını kapsar.

TANIMLAR

Madde 3 - Bu Yönetmelikte geçen;

a) Askerlik çağı; her erkeğin nüfus kütüğünde yazılı olan yaşına göre 20 yaşına girdiği yılın Ocak ayının birinci gününden başlayarak, erbaş ve erler için 41 yaşına girdiği yılın Ocak ayının birinci gününe kadar olan süreyi,

b) İlk yoklama; her yıl askerlik çağına giren yükümlülerin sayısını, kimliklerini ve adreslerini tespit etmek amacıyla yapılan işlemleri,

c) ilk yoklama zamanı; her yıl 1 Ocak ile 30 Haziran tarihleri arasındaki zamanı,

d) İlk yoklama kaçağı; askerlik çağına girdiği yılın Temmuz ayının birinci gününe kadar kimliklerini ya da kimliklerine ilişkin eksiklik veya yanlışlıkları nüfus idarelerine kayıt ettirmeyen yükümlüleri,

e) Göçmen; fert olarak veya toplu halde yerleşmek maksadıyla ve geri dönmemek üzere bulunduğu ülkeden ayrılarak Türkiye'ye gelen, Türk kültürüne bağlı ve Türk soyundan kişileri,

f) Mülteci; yerleşmek maksadıyla olmayıp, bir zaruret nedeniyle geçici olarak oturmak üzere Türkiye'ye sığınan kişileri,

g) Yabancı; Türkiye Cumhuriyeti uyruğunda olmayan kişileri, ifade eder.

İKİNCİ BÖLÜM : İLK YOKLAMA İŞLEMLERİ

İLK YOKLAMANIN DUYURULMASI

Madde 4 - O yıl askerlik çağına giren yükümlülerin, kimlik çizelgelerinin nerelerde ve hangi tarihler arasında askıya çıkarılacağı, ne kadar süre ile askıda kalacağı ve yükümlülerin yapması gereken işlemler, Mart ayı içerisinde, Milli Savunma Bakanlığınca Türkiye Radyo-Televizyon Kurumu aracılığı ile duyurulur.

APPENDIX C

TÜRK MEDENİ KANUNU

Kanun No. 4721 Kabul Tarihi : 22.11.2001

A. Genel olarak

I. Hak ehliyeti

MADDE 8.- Her insanın hak ehliyeti vardır.

Buna göre bütün insanlar, hukuk düzeninin sınırları içinde, haklara ve borçlara ehil olmada eşittirler.

II. Fiil ehliyeti

1. Kapsamı

MADDE 9.- Fiil ehliyetine sahip olan kimse, kendi fiilleriyle hak edinebilir ve borç altına girebilir.

2. Koşulları

a. Genel olarak

MADDE 10.- Ayırt etme gücüne sahip ve kısıtlı olmayan her ergin kişinin fiil ehliyeti vardır.

b. Erginlik

MADDE 11.- Erginlik onsekiz yaşın doldurulmasıyla başlar.

Evlenme kişiyi ergin kılar.

c. Ergin kılınma

MADDE 12.- Onbeş yaşını dolduran küçük, kendi isteği ve velisinin rızasıyla mahkemece ergin kılınabilir.

d. Ayırt etme gücü

MADDE 13.- Yaşının küçüklüğü yüzünden veya akıl hastalığı, akıl zayıflığı, sarhoşluk ya da bunlara benzer sebeplerden biriyle akla uygun biçimde davranma yeteneğinden yoksun olmayan herkes, bu Kanuna göre ayırt etme gücüne sahiptir.

III. Fiil ehliyetsizliği

1. Genel olarak

MADDE 14.- Ayırt etme gücü bulunmayanların, küçüklerin ve kısıtlıların fiil ehliyeti yoktur.

2. Ayırt etme gücünün bulunmaması

MADDE 15.- Kanunda gösterilen ayrık durumlar saklı kalmak üzere, ayırt etme gücü bulunmayan kimsenin fiilleri hukukî sonuç doğurmaz.

3. Ayırt etme gücüne sahip küçükler ve kısıtlılar

MADDE 16.- Ayırt etme gücüne sahip küçükler ve kısıtlılar, yasal temsilcilerinin rızası olmadıkça, kendi işlemleriyle borç altına giremezler. Karşılıksız kazanmada ve kişiye sıkı sıkıya bağlı hakları kullanmada bu rıza gerekli değildir.

Ayırt etme gücüne sahip küçükler ve kısıtlılar haksız fiillerinden sorumludurlar.

2. Cinsiyet değişikliğinde

MADDE 40.- Cinsiyetini değiştirmek isteyen kimse, şahsen başvuruda bulunarak mahkemece cinsiyet değişikliğine izin verilmesini isteyebilir. Ancak, iznin verilebilmesi için, istem sahibinin onsekiz yaşını doldurmuş bulunması ve evli olmaması; ayrıca transseksüel yapıda olup, cinsiyet değişikliğinin ruh sağlığı açısından zorunluluğunu ve üreme yeteneğinden sürekli biçimde yoksun bulunduğunu bir eğitim ve araştırma hastanesinden alınacak resmî sağlık kurulu raporuyla belgelemesi şarttır.

Verilen izne bağlı olarak amaç ve tıbbî yöntemlere uygun bir cinsiyet değiştirme ameliyatı gerçekleştirildiğinin resmî sağlık kurulu raporuyla doğrulanması hâlinde, mahkemece nüfus sicilinde gerekli düzeltmenin yapılmasına karar verilir.

EVLENME EHLİYETİ VE ENGELLERİ

A. Ehliyetin koşulları

I. Yaş

MADDE 124.- Erkek veya kadın onyedi yaşını doldurmadıkça evlenemez.

Ancak, hâkim olağanüstü durumlarda ve pek önemli bir sebeple onaltı yaşını doldurmuş olan erkek veya kadının evlenmesine izin verebilir. Olanak bulundukça karardan önce ana ve baba veya vasi dinlenir.

II. Ayırt etme gücü

MADDE 125.- Ayırt etme gücüne sahip olmayanlar evlenemez.

III. Yasal temsilcinin izni

1. Küçükler hakkında

MADDE 126.- Küçük, yasal temsilcisinin izni olmadıkça evlenemez.

2. Kısıtlılar hakkında

MADDE 127.- Kısıtlı, yasal temsilcisinin izni olmadıkça evlenemez.

3. Mahkemeye başvurma

MADDE 128.- Hâkim, haklı sebep olmaksızın evlenmeye izin vermeyen yasal temsilciyi dinledikten sonra, bu konuda başvuran küçük veya kısıtlının evlenmesine izin verebilir.

BATIL OLAN EVLENMELER

MADDE 153.- Küçük veya kısıtlı, yasal temsilcisinin izni olmadan evlenirse, izni alınmayan yasal temsilci evlenmenin iptalini dava edebilir.

Bu suretle evlenen kimse sonradan onsekiz yaşını doldurmak suretiyle ergin olur, kısıtlı olmaktan çıkar veya karı gebe kalırsa evlenmenin iptaline karar verilemez.

EVLÂT EDİNME

A. Küçüklerin evlât edinilmesi

I. Genel koşulları

MADDE 305.- Bir küçüğün evlât edinilmesi, evlât edinen tarafından bir yıl süreyle bakılmış ve eğitilmiş olması koşuluna bağlıdır.

Evlât edinmenin her hâlde küçüğün yararına bulunması ve evlât edinenin diğer çocuklarının yararlarının hakkaniyete aykırı bir biçimde zedelenmemesi de gerekir.

II. Birlikte evlât edinme

MADDE 306.- Eşler, ancak birlikte evlât edinebilirler; evli olmayanlar birlikte evlât edinemezler.

Eşlerin en az beş yıldan beri evli olmaları veya otuz yaşını doldurmuş bulunmaları gerekir.

Eşlerden biri, en az iki yıldan beri evli olmaları veya kendisinin otuz yaşını doldurmuş bulunması koşuluyla diğerinin çocuğunu evlât edinebilir.

III. Tek başına evlât edinme

MADDE 307.- Evli olmayan kişi otuz yaşını doldurmuş ise tek başına evlât edinebilir.

Otuz yaşını doldurmuş olan eş, diğer eşin ayırt etme gücünden sürekli olarak yoksunluğu veya iki yılı aşkın süreden beri nerede olduğunun bilinmemesi ya da mahkeme kararıyla iki yılı aşkın süreden beri eşinden ayrı yaşamakta olması yüzünden birlikte evlât edinmesinin mümkün olmadığını ispat etmesi hâlinde, tek başına evlât edinebilir.

IV. Küçüğün rızası ve yaşı

MADDE 308.- Evlât edinilenin, evlât edinenden en az onsekiz yaş küçük olması şarttır.

Ayırt etme gücüne sahip olan küçük, rızası olmadıkça evlât edinilemez.

Vesayet altındaki küçük, ayırt etme gücüne sahip olup olmadığına bakılmaksızın vesayet dairelerinin izniyle evlât edinilebilir.

APPENDIX D

CEZA MUHAKEMESİNDE BEDEN MUAYENESİ, GENETİK İNCELEMELER VE FİZİK KİMLİĞİN TESPİTİ HAKKINDA YÖNETMELİK

Yayımlandığı Resmî Gazete'nin Tarihi: 1 Haziran 2005 Sayı: 25832

BİRİNCİ BÖLÜM

Amaç, Kapsam, Dayanak ve Tanımlar

Amaç ve kapsam

Madde 1 - Bu Yönetmelik; bir suça ilişkin iz, eser, emare ve delillerin elde edilmesi; ayrıca, maddî gerçeğin ortaya çıkartılması bakımından şüpheli, sanık, mağdur ve diğer kişilerin beden muayenelerinin yapılması, tıbbî incelemelerde bulunmak üzere vücuttan, kan veya benzeri biyolojik örneklerle, saç, tükürük, tırnak gibi örneklerin alınması, moleküler genetik incelemeler ile şüpheli ve sanığın kimliğinin teşhisi için gerekli fizikî özelliklerin tespitine ilişkin usul ve esasları düzenlemektir.

Dayanak

Madde 2 - Bu Yönetmelik, 04/12/2004 tarihli ve 5271 sayılı Ceza Muhakemesi Kanununun 82 nci maddesine dayanılarak hazırlanmıştır.

Tanımlar

Madde 3 - Bu Yönetmelikte geçen;

Şüpheli: Soruşturma evresinde suç şüphesi altında bulunan kişiyi,

Sanık: Kovuşturmanın başlamasından itibaren hükmün kesinleşmesine kadar suç şüphesi altında bulunan kişiyi,

Mağdur: Suçtan veya haksız eylemden zarar gören kişiyi,

Soruşturma: Ceza Muhakemesi Kanununa göre yetkili mercilerce suç şüphesinin öğrenilmesinden iddianamenin kabulüne kadar geçen evreyi,

Kovuşturma: İddianamenin kabulü ile başlayıp hükmün kesinleşmesine kadar geçen evreyi,

Gecikmesinde sakınca bulunan hâl: Derhâl işlem yapılmadığı takdirde suçun iz, eser, emare ve delillerinin kaybolması veya şüphelinin kaçması veya kimliğinin saptanamaması ihtimalinin ortaya çıkması hâlini,

Sağlık mesleği mensubu: Tabip, diş tabibi, eczacı, ebe, hemşire ve sağlık hizmeti veren diğer kişileri,

Bedenin tıbbî muayenesi: Tabip tarafından tıbbî yöntemler kullanılarak yapılan değerlendirmeleri,

Dış beden muayenesi: Vücudun dış yüzeyi ile kulak, burun ve ağız bölgelerinin gözle ve elle yapılan yüzeysel tıbbî incelemesini,

İç beden muayenesi: Kafa, göğüs ve karın boşlukları ile cilt altı dokularının incelenmesini,

Beden parçası: Bir bedenin tamamlayıcı unsuru olan baş, gövde, kol, el, bacak, ayak gibi uzuv ve iç organları,

Müdahale: Tabip veya diğer sağlık personeli tarafından tanı, tedavi, rehabilitasyon veya önlem amacıyla yapılan muayene, tedavi veya diğer tıbbî işlemleri,

Cerrahî müdahale: Tıbbî aletler yardımıyla vücutta yapılan tanı ya da tedaviye yönelik operasyonları,

Örnek: Bir suça ilişkin delil elde etmek amacıyla, inceleme yapmak üzere ilgililerden alınan biyolojik ve diğer materyali,

Moleküler genetik inceleme: Gereken tür ve miktardaki biyolojik materyali kullanarak, kişiyi diğer kişilerden ayıran ve kalıtım kurallarına uygun olarak aktarılan hastalık dışındaki özelliklerinin moleküler düzeyde araştırılmasını

ifade eder.

İKİNCİ BÖLÜM

Beden Muayenesi ve Vücuttan Örnek Alınması

Şüpheli veya sanığın iç beden muayenesi

Madde 4 - Bir suça ilişkin delil elde etmek için, şüpheli veya sanık üzerinde iç beden muayenesi yapılabilmesine Cumhuriyet savcısı veya mağdurun istemiyle ya da re'sen hâkim veya mahkeme, gecikmesinde sakınca bulunan hâllerde Cumhuriyet savcısı tarafından karar verilebilir. Cumhuriyet savcısının kararı, yirmidört saat içinde hâkim veya mahkeme onayına sunulur. Hâkim veya mahkeme, yirmidört saat içinde kararını verir. Onaylanmayan kararlar hükümsüz kalır ve elde edilen deliller kullanılamaz.

Şüpheli veya sanığın iç beden muayenesi ancak tabip tarafından yapılır.

Muayenenin yapılabilmesi için; müdahalenin, kişinin sağlığına açıkça ve öngörülebilir zarar verme tehlikesinin bulunmaması gerekir.

Cinsel organlar veya anüs bölgesinde yapılan muayene de iç beden muayenesi sayılır.

Üst sınırı iki yıldan daha az hapis cezasını gerektiren suçlarda kişi üzerinde iç beden muayenesi yapılamaz.

Şüpheli veya sanığın dış beden muayenesi

Madde 5 - Bir suça ilişkin delil elde etmek için, şüpheli veya sanık üzerinde dış beden muayenesi Cumhuriyet savcısı ile emrindeki adlî kolluk görevlileri veya kovuşturma makamlarının talebiyle yapılabilir.

Şüpheli veya sanığın dış beden muayenesi ancak tabip tarafından yapılır.

Muayenenin yapılabilmesi için; müdahalenin, kişinin sağlığına açıkça ve öngörülebilir zarar verme tehlikesinin bulunmaması gerekir.

Girişimsel olmayan tıbbî görüntüleme yöntemleri de bedenin dış muayenesi sayılır. Bu tür incelemeler tabip tarafından veya tabip gözetiminde sağlık mesleği mensubu diğer bir kişi tarafından yapılabilir.

Şüpheli veya sanığın vücudundan örnek alınması

Madde 6 - Bir suça ilişkin delil elde etmek için, şüpheli veya sanığın vücudundan kan veya benzeri biyolojik örneklerle saç, tükürük, tırnak, gibi örnekler alınabilmesine, Cumhuriyet savcısı veya mağdurun istemiyle ya da re'sen hâkim veya mahkeme, gecikmesinde sakınca bulunan hâllerde Cumhuriyet savcısı tarafından karar verilebilir. Cumhuriyet savcısının kararı, yirmidört saat içinde hâkim veya mahkeme onayına sunulur. Hâkim veya mahkeme, yirmidört saat içinde kararını verir. Onaylanmayan kararlar hükümsüz kalır ve elde edilen deliller kullanılamaz. Bu örnekler Cumhuriyet savcısının huzurunda ve uygun göreceği usullerle derhâl yok edilerek bu husus tutanağa geçirilir.

Bu müdahaleler ancak tabip tarafından veya tabip gözetiminde sağlık mesleği mensubu diğer bir kişi tarafından yapılabilir.

Vücuttan örnekler alınabilmesi için; müdahalenin, kişinin sağlığına açıkça ve öngörülebilir zarar verme tehlikesinin bulunmaması gerekir.

Tıbbî müdahaleler, hekimlik sanatının ve tıp biliminin kabul ettiği yöntem ve araçlarla yapılır.

Üst sınırı iki yıldan daha az hapis cezasını gerektiren suçlarda; kişiden kan, saç, tükürük, tırnak gibi örnekler alınamaz.

Özel kanunlardaki alkol muayenesine ve kan örneği alınmasına ilişkin hükümler saklıdır.

Diğer kişilerin beden muayenesi

Madde 7 - Bir suça ilişkin delil elde etmek amacıyla, mağdurun ve diğer kişilerin vücudu üzerinde dış veya iç beden muayenesi yapılabilmesine sağlığını açıkça ve öngörülebilir şekilde tehlikeye düşürmemek ve cerrahî bir müdahalede bulunmamak koşuluyla; Cumhuriyet savcısının istemiyle ya da re'sen hâkim veya mahkemece, gecikmesinde sakınca bulunan hâllerde Cumhuriyet savcısı tarafından karar verilebilir. Cumhuriyet savcısının kararı, yirmidört saat içinde hâkim veya mahkemenin onayına sunulur. Hâkim veya mahkeme, yirmidört saat içinde kararını verir. Onaylanmayan kararlar hükümsüz kalır ve elde edilen deliller kullanılamaz.

Mağdurun ve diğer kişilerin beden muayenesi ancak tabip tarafından yapılır.

Diğer kişilerin vücudundan örnek alınması

Madde 8 - Bir suça ilişkin delil elde etmek amacıyla, mağdurun ve diğer kişilerin vücudundan kan, veya benzeri biyolojik örneklerle saç, tükürük, tırnak gibi örnekler alınabilmesine, sağlığını açıkça ve öngörülebilir şekilde tehlikeye düşürmemek ve cerrahî bir müdahalede bulunmamak koşuluyla; Cumhuriyet

savcısının istemiyle ya da re'sen hâkim veya mahkeme, gecikmesinde sakınca bulunan hâllerde Cumhuriyet savcısı tarafından karar verilebilir. Cumhuriyet savcısının kararı yirmidört saat içinde hâkim veya mahkemenin onayına sunulur. Hâkim veya mahkeme yirmidört saat içinde kararını verir. Onaylanmayan kararlar hükümsüz kalır ve elde edilen deliller kullanılamaz.

Bu müdahaleler ancak tabip tarafından veya tabip gözetiminde sağlık mesleği mensubu diğer bir kişi tarafından yapılabilir.

Tıbbî müdahaleler, hekimlik sanatının ve tıp biliminin kabul ettiği yöntem ve araçlarla yapılır.

Soy bağının araştırılması

Madde 9 - Çocuğun soy bağının araştırılmasına gerek duyulması hâlinde, bu araştırmanın yapılabilmesi için, bu Yönetmeliğin 7 ve 8 nci maddeleri hükümlerine göre karar alınması gereklidir.

Tanıklıktan çekinme sebeplerinin varlığı

Madde 10 - Tanıklıktan çekinme sebepleri ile muayeneden veya vücuttan örnek alınmasından kaçınılabilir.

Tanıklıktan çekinme sebeplerinin belirlenmesi hususunda Ceza Muhakemesi Kanununun ilgili hükümleri uygulanır.

Çocuk ve akıl hastasının çekinmesi konusunda kanunî temsilcisi karar verir. Çocuk veya akıl hastasının, tanıklığın hukukî anlam ve sonuçlarını algılayabilecek durumda olması hâlinde, görüşü de alınır.

Kanunî temsilci de şüpheli veya sanık ise bu konuda hâkim tarafından karar verilir. Ancak, bu hâlde elde edilen deliller davanın ileri aşamalarında şüpheli veya sanık olmayan kanunî temsilcinin izni olmadıkça kullanılamaz.

Kadının muayenesi

Madde 11 - Kadının muayenesi, istemi hâlinde ve olanaklar elverdiğinde bir kadın tabip tarafından yapılır.

Muayene edilecek kadının talebine rağmen bir kadın tabibin bulunmasına olanakların elvermediği durumlarda; muayene sırasında tabip ile birlikte bir başka kadın sağlık mesleği personelinin bulundurulmasına özen gösterilir.

ÜÇÜNCÜ BÖLÜM

Moleküler Genetik İncelemelerin Yapılması

Moleküler genetik incelemeler

Madde 12 - Bu Yönetmelikte öngörülen işlemlerle elde edilen örnekler üzerinde, soy bağının veya elde edilen bulgunun şüpheli veya sanığa ya da mağdura

ait olup olmadığının tespiti için zorunlu olması hâlinde moleküler genetik incelemeler yapılabilir. Alınan örnekler üzerinde bu amaçlar dışında tespitler yapılmasına yönelik incelemeler yasaktır.

Birinci fıkra uyarınca yapılabilen incelemeler, bulunan ve kime ait olduğu belli olmayan beden parçaları üzerinde de yapılabilir. Birinci fıkranın ikinci cümlesi, bu hâlde de uygulanır.

Bilirkişi incelemesi

Madde 13 - Bu Yönetmeliğin 12 inci maddesi hükümleri uyarınca moleküler genetik incelemeler yapılmasına sadece hâkim karar verebilir. Kararda inceleme ile görevlendirilen bilirkişi de gösterilir.

Bilirkişi gerçek ya da tüzel kişi olabilir.

Yapılacak incelemeler için resmen atanan veya bilirkişilikle yükümlü olan ya da soruşturma veya kovuşturmayı yürüten makama mensup olmayan veya bu makamın soruşturma veya kovuşturmayı yürüten dairesinden teşkilât yapısı itibarıyla ve objektif olarak ayrı bir birimine mensup olan görevliler, bilirkişi olarak görevlendirilebilirler. Bu kişiler, teknik ve teşkilât bakımından uygun tedbirlerle yasak moleküler genetik incelemelerin yapılmasını ve yetkisiz üçüncü kişilerin bilgi edinmesini önlemekle yükümlüdürler. İncelenecek bulgu, bilirkişiye ilgilinin adı ve soyadı, adresi, doğum tarihi bildirilmeksizin verilir.

Bilirkişiye gönderilen örneklerle ilgili olarak; hâkimlikler, mahkemeler ve Cumhuriyet başsavcılıkları gizliliği sağlamak ve karışıklığa yer vermemek için gerekli her türlü tedbiri alırlar. Bu amaçla güvenli ve gizli bir kayıt sistemi belirlenir. Bu kayıt sisteminde bedeninden örnek alınan kişinin adı, soyadı, adresi ve doğum tarihine karşılık gelmek üzere bir kod sistemi uygulanır.

Üçüncü fıkranın uygulanması açısından, teşkilât yapısı itibarıyla üniversiteler, Emniyet Genel Müdürlüğü, Jandarma Genel Komutanlığı ve Adlî Tıp Kurumu objektif olarak ayrı birimler sayılırlar.

Moleküler genetik inceleme sonuçlarının gizliliği

Madde 14 - Bu Yönetmelik hükümlerine göre alınan örnekler üzerinde yapılan inceleme sonuçları, kişisel veri niteliğinde olup, başka bir amaçla kullanılamaz; dosya içeriğini öğrenme yetkisine sahip bulunan kişiler tarafından bir başkasına verilemez.

Bu bilgiler, kovuşturmaya yer olmadığı kararına itiraz süresinin dolması, itirazın reddi, beraat veya ceza verilmesine yer olmadığı kararı verilip kesinleşmesi hâllerinde Cumhuriyet savcısının huzurunda ve uygun göreceği usullerle yok edilir ve bu husus dosyasında muhafaza edilmek üzere tutanağa geçirilir. Olay yerinden elde edilen diğer delillere ilişkin hükümler saklıdır.

Bilirkişi tarafından yapılan analizler sonucu elde edilen bulgular ilgili makama gönderilir; bulgular üzerinden moleküler genetik analizler için izole edilen DNA örnekleri bilirkişi tarafından rapor hazırlandıktan sonra imha edilir ve bu husus raporda açıkça belirtilir.

Moleküler genetik incelemelerin özel kalıtsal karakterler hakkındaki açıklamayı içermediği bilinen kromozom bölgesi ile sınırlı kalmasına özen gösterilir.

DÖRDÜNCÜ BÖLÜM

Fizik Kimliğin Tespitinde Uyulacak Esaslar

Fizik kimliğin tespiti

Madde 15 - Üst sınırı iki yıl veya daha fazla hapis cezasını gerektiren bir suçtan dolayı şüpheli veya sanığın, kimliğinin teşhisi için gerekli olması hâlinde, Cumhuriyet savcısının emriyle, fotoğrafı, iris görüntüsü, beden ölçüleri, diş izi, parmak ve avuç içi izi, bedeninde yer almış olup teşhisini kolaylaştıracak eşkâl bilgileri, kulak, dudak gibi organların bıraktığı kimlik tespitine yarayabilecek vücut izleri ile sesi ve görüntüleri, fizik kimliğin tespitinde kullanılan diğer teknik yöntemler ile kayda alınarak, soruşturma ve kovuşturma işlemlerine ilişkin dosyaya konulur.

Fizik kimliğin tespitinde, öncelikli olarak elin iç yüzeyindeki derinin özel kıvrımlı şekilleri olan parmak ve avuç içi izleri, fotoğrafı ve eşkâl bilgileri kullanılır. Bu işlemler olay yeri inceleme ve kimlik tespit konusunda özel eğitim almış uzman kolluk mensubu tarafından yapılır.

Fizik kimliğin tespiti açısından, kişinin ağzındaki dişlerin incelenmesi ve diş izlerinin alınması diş tabibi tarafından yapılır.

Soruşturma veya kovuşturma aşamasında da hâkim veya mahkeme kararıyla fizik kimliğinin tespitine ilişkin işlemler yaptırılabilir.

Verilerin imhası

Madde 16 - Kovuşturmaya yer olmadığı kararına itiraz süresinin dolması, itirazın reddi, beraat veya ceza verilmesine yer olmadığı kararı verilip kesinleşmesi hâllerinde bu Yönetmeliğin 15 inci maddesi hükümleri uyarınca elde edilen veriler, Cumhuriyet savcısının huzurunda ve uygun göreceği usullerle derhâl yok edilir ve bu husus tutanağa geçirilir.

Verilerin korunması

Madde 17 - Mahkûmiyet kararı verilmesi hâlinde bu Yönetmeliğin 15 inci maddesinin birinci ve ikinci fıkraları uyarınca elde edilen veriler kolluk tarafından, üçüncü fıkrasında belirtilen diş izleri ise bu işlemi yapan sağlık kuruluşu tarafından arşivlenir.

BEŞİNCİ BÖLÜM

Çeşitli ve Son Hükümler

İlgilinin rızası

Madde 18 - Mevzuatta aranan tüm koşulların gerçekleşmiş olmasına ve şüpheli sanık veya diğer kişilerin bu konuda aydınlatılmış olmalarına rağmen muayene yapılmasına ya da örnek alınmasına rıza vermemeleri hâlinde, kararın infazı için ilgilinin muayenesini veya vücudundan örnek alınmasını sağlamak üzere ilgili Cumhuriyet başsavcılığınca gerekli önlemler alınır.

Mağdurun rızasının varlığı hâlinde bu işlemlerin yapılabilmesi için Yönetmeliğin 7 nci ve 8 inci maddeleri uyarınca karar alınmasına gerek yoktur.

Bir suçun aydınlatılmasını sağlamak amacıyla, şüpheli, sanık ve diğer kişilerin kendiliğinden başvurarak rıza göstermeleri hâlinde, soruşturma evresinde Cumhuriyet savcısının istemi, kovuşturma aşamasında ise hâkim veya mahkeme kararıyla tıbbî muayeneleri yapılabilir ya da vücutlarından örnek alınabilir.

Tedavi amaçlı müdahaleler

Madde 19 - Sağlık mevzuatı ve taraf olunan uluslararası sözleşmeler uyarınca tabip tarafından yapılması gereken tedavi amaçlı tıbbî muayene ve müdahaleler için Cumhuriyet savcısı ya da hâkim kararı aranmaz.

Raporların düzenlenmesi

Madde 20 - Tabip raporları üç nüsha hâlinde düzenlenir. Raporu düzenleyen sağlık kuruluşunca iki nüshası kapalı ve mühürlü zarf içerisinde ilgili Cumhuriyet başsavcılığına, hâkimliğe veya mahkemeye en seri şekilde iletilir. Raporun bir nüshası raporu düzenleyen sağlık kuruluşunda kalır.

Güvenlik önlemleri

Madde 21 - Muayene edilmesi veya vücudundan örnek alınması amacıyla sevk edilen kişi dışında başka bir kişinin muayene edilmemesi ya da vücudundan örnek alınmaması için Cumhuriyet başsavcılıklarınca gerekli önlemler alınır.

Tabip veya diğer sağlık mesleği mensuplarınca, sevk edilen kişinin kimliği konusunda şüpheye düşülmesi hâlinde durum derhâl Cumhuriyet başsavcılığına bildirilir.

Alınan, muhafaza edilen, nakledilen ve incelenen örneklerin değiştirilmemesi ve dış koşullardan etkilenip bozulmaması için Cumhuriyet başsavcılığı, kolluk, sağlık kuruluşu ve bilirkişi tarafından gerekli tedbirlere başvurulur.

Verilerle ilgili işlemler

Madde 22 - Cumhuriyet başsavcılıklarınca yapılan iş bölümlerinde, bu Yönetmelik kapsamında elde edilen verilerin imha edilmesi ve diğer işlemlerin yürütülmesi amacıyla yeterli sayıda Cumhuriyet savcısı görevlendirilir.

Kovuşturma sonunda verilen beraat ve mahkûmiyet kararları, bu Yönetmelik hükümlerince öngörülen işlemlerin yerine getirilmesi için mahkemece ilgili Cumhuriyet başsavcılığına gönderilir.

Diğer İşlemler

Madde 23 - Kişinin vücut yüzeyinde bulunan atış artığı gibi biyolojik olmayan örnekler, elbiseleri ve diğer eşyaları üzerinde bulunan örnekler ile vücut yüzeyinden başkasına ait olduğu açıkça belli olan kıl, tüy, lif gibi örnekler olay yeri inceleme uzmanları tarafından alınabilir.

İtiraz

Madde 24 - Bu Yönetmeliğin 4, 5, 6, 7, 8, 9 ve 10 uncu maddeleri gereğince alınacak hâkim veya mahkeme kararlarına itiraz edilebilir. İtiraz hâlinde Ceza Muhakemesi Kanununun ilgili hükümleri uygulanır.

Yürürlük

Madde 25 - Bu Yönetmelik yayımı tarihinde yürürlüğe girer.

Yürütme

Madde 26 - Bu Yönetmelik hükümlerini Adalet Bakanı yürütür.

APPENDIX E

NÜFUS HİZMETLERİ KANUNU

Kanun Numarası : 5490
Kabul Tarihi : 25/4/2006
Yayımlandığı Resmi Gazete : 29/ 04/2006 - Sayı : 26153

Bildirim yükümlülüğü ve süresi
MADDE 15- (1) Sağ olarak dünyaya gelen her çocuğun, doğumdan itibaren Türkiye'de otuz gün içinde nüfus müdürlüğüne, yurt dışında ise altmış gün içinde dış temsilciliğe bildirilmesi zorunludur.
(2) Bildirim; veli, vasi, kayyım, bunların bulunmaması halinde, çocuğun büyük ana, büyük baba veya ergin kardeşleri ya da çocuğu yanında bulunduranlar tarafından, doğumu gösteren resmî belgeye dayanarak yapılabileceği gibi sözlü beyana dayalı olarak da yapılabilir.
(3) Yurt dışındaki doğum bildirimleri, yabancı makamlardan alınmış resmî belge veya raporun dış temsilciliğe verilmesi veya çocuğa konulan adın belirtildiği dilekçe ve ana ile babanın tam kimlik bilgileri ile nüfusta kayıtlı oldukları yeri gösteren belgelerle birlikte dış temsilciliğe gönderilmesi suretiyle de yapılabilir. Dış temsilcilik bildirim tarihi olarak evrakın postaya verildiği tarihi esas alarak düzenleyeceği doğum tutanağını nüfus müdürlüklerine göndermekle yükümlüdür.
(4) Doğumla ilgili yapılan bildirimler nüfus müdürlüklerince doğum tutanağına geçirilir.
(5) İlgilinin herhangi bir belge ibraz edememesi halinde sözlü beyanı esas alınarak bildirim tutanaklara geçirilir ve doğum tutanakları bildirimi yapan ile görevliler tarafından imzalanır.
(6) Ölü doğan çocuklar aile kütüğüne yazılmaz. Bir doğumda birden ziyade doğan çocuklar doğuş sırasıyla yazılırlar.

Süresi içinde bildirilmeyen doğumlar
MADDE 16- (1) Bu Kanunun 15 inci maddesinde belirtilen süreyi geçirdikten sonra bildirilen altı yaşını bitirmemiş olan çocukların doğum tarihinin tespitinde beyan esas alınır. Çocuk altı yaşını doldurmuş ise nüfus müdürlüğüne getirilerek resmî sağlık kuruluşunca yaşının tespit edilmesi sağlanır. Doğuma ait resmî belge ibraz edilmesi halinde, yaş tespitine gerek kalmaz.

APPENDIX F

CEZA MUHAKEMESİ KANUNU

Kanun Numarası : 5271

Kanun Kabul Tarihi : 04/12/2004

Yayımlandığı Resmi Gazete Tarihi :17/12/2004

Yayımlandığı Resmi Gazete Sayısı : 25673

TANIKLIKTAN ÇEKİNME

Madde 45 - (1) Aşağıdaki kimseler tanıklıktan çekinebilir:

a) Şüpheli veya sanığın nişanlısı.

b) Evlilik bağı kalmasa bile şüpheli veya sanığın eşi.

c) Şüpheli veya sanığın kan hısımlığından veya kayın hısımlığından üstsoy veya altsoyu.

d) Şüpheli veya sanığın üçüncü derece dahil kan veya ikinci derece dahil kayın hısımları.

e) Şüpheli veya sanıkla aralarında evlâtlık bağı bulunanlar.

(2) Yaş küçüklüğü, akıl hastalığı veya akıl zayıflığı nedeniyle tanıklıktan çekinmenin önemini anlayabilecek durumda olmayanlar, kanunî temsilcilerinin rızalarıyla tanık olarak dinlenebilirler. Kanunî temsilci şüpheli veya sanık ise, bu kişilerin çekinmeleri konusunda karar veremez.

(3) Tanıklıktan çekinebilecek olan kimselere, dinlenmeden önce tanıklıktan çekinebilecekleri bildirilir. Bu kimseler, dinlenirken de her zaman tanıklıktan çekinebilirler.

MESLEK VE SÜREKLİ UĞRAŞILARI SEBEBİYLE TANIKLIKTAN ÇEKİNME

Madde 46 - (1) Meslekleri ve sürekli uğraşıları sebebiyle tanıklıktan çekinebilecekler ile çekinme konu ve koşulları şunlardır:

a) Avukatlar veya stajyerleri veya yardımcılarının, bu sıfatları dolayısıyla veya yüklendikleri yargı görevi sebebiyle öğrendikleri bilgiler.

b) Hekimler, diş hekimleri, eczacılar, ebeler ve bunların yardımcıları ve diğer bütün tıp meslek veya sanatları mensuplarının, bu sıfatları dolayısıyla hastaları ve bunların yakınları hakkında öğrendikleri bilgiler.

c) Malî işlerde görevlendirilmiş müşavirler ve noterlerin bu sıfatları dolayısıyla hizmet verdikleri kişiler hakkında öğrendikleri bilgiler.

(2) Yukarıdaki fıkranın (a) bendinde belirtilenler dışında kalan kişiler, ilgilinin rızasının varlığı halinde, tanıklıktan çekinemez.

DEVLET SIRRI NİTELİĞİNDEKİ BİLGİLERLE İLGİLİ TANIKLIK

Madde 47 - (1) Bir suç olgusuna ilişkin bilgiler, Devlet sırrı olarak mahkemeye karşı gizli tutulamaz. Açıklanması, Devletin dış ilişkilerine, milli savunmasına ve milli güvenliğine zarar verebilecek; anayasal düzeni ve dış ilişkilerinde tehlike yaratabilecek nitelikteki bilgiler, Devlet sırrı sayılır.

(2) Tanıklık konusu bilgilerin Devlet sırrı niteliğini taşıması halinde; tanık, sadece mahkeme hâkimi veya heyeti tarafından zâbıt kâtibi dahi olmaksızın dinlenir. Hâkim veya mahkeme başkanı, daha sonra, bu tanık açıklamalarından, sadece yüklenen suçu açıklığa kavuşturabilecek nitelikte olan bilgileri tutanağa kaydettirir.

(3) Bu Madde hükmü, hapis cezasının alt sınırı beş yıl veya daha fazla olan suçlarla ilgili olarak uygulanır.

(4) Cumhurbaşkanının tanıklığı söz konusu olduğunda sırrın niteliğini ve mahkemeye bildirilmesi hususunu kendisi takdir eder.

KENDİSİ VEYA YAKINLARI ALEYHİNE TANIKLIKTAN ÇEKİNME

Madde 48 - (1) Tanık, kendisini veya 45 inci Maddenin birinci fıkrasında gösterilen kişileri ceza kovuşturmasına uğratabilecek nitelikte olan sorulara cevap vermekten çekinebilir. Tanığa cevap vermekten çekinebileceği önceden bildirilir.

BIBLIOGRAPHY

Akçiçek, F., G. Atabay, A. Başçı, J. Evert, M. Dorhout. "Organ Nakli ve Tıbbi Ahlak [Organ Transplantation and Medical Ethics]". *Türk Nefroloji ve Transplantasyon Dergisi: Official Journal of the Turkish Nephrology Association* 3 (1994): 33-35.

Akduman, İsmail. "Üvey Kızına Tecavüz Eden Babanın Cezası 5 Yıl İndi". *Milliyet*. September 10, 2007. http://www.milliyet.com.tr/2007/09/10/son/sontur40.asp (accessed June 30, 2009).

Aksoy, Şahin. "Kürtaj Sadece Tıbbi Bir Karar Olabilir mi? [Can Abortion Be a Medical Decision Only?]". *Türkiye Klinikleri Tıbbi Etik Dergisi* 4 (1996): 12-15.

_____. "Prenatal Tanı Yöntemlerini Çevreleyen Etik Sorunlar [Ethical Issues Surrounding Prenatal Testing Techniques]". *Türkiye Klinikleri Tıbbi Etik Dergisi* 6 (1998): 69-72.

Allen, Anita L. "Genetic Privacy: Emerging Concepts and Values". In *Genetic Secrets: Protecting Privacy and Confidentiality in the Genetic Era*, ed. Mark A. Rothstein. New Haven, CT: Yale University Press, 1997.

American Medical Association. *Current Opinions of the Judicial Council of the American Medical Association*. Chicago: American Medical Association, 1981.

Anderson, Debra Gay and Diane C. Hatton. "Accessing Vulnerable Populations for Research". *Western Journal of Nursing Research* 22(2) (2000): 244-251.

Andrieu, Nadine, Douglas F. Easton, Jenny Chang-Claude, Matti A. Rookus, Richard Brohet, Elisabeth Cardis, Antonis C. Antoniou, Teresa Wagner, Jacques Simard, Gareth Evans, Susan Peock, Jean-Pierre Fricker, Catherine Nogues, Laura Van't Veer, Flora E. Van Leeuwen, David E. Goldgar. "Effect of Chest X-Rays on the Risk of Breast Cancer Among *BRCA1/2* Mutation Carriers in the International *BRCA1/2* Carrier Cohort Study: A Report from the EMBRACE, GENEPSO, GEO-HEBON, and IBCCS Collaborators' Group". *Journal of Clinical Oncology* 24(21) (July 2006): 3361-3366.

Applebaum, Paul S. "Ethics in Evolution: The Incompatibility of Clinical and Ethical Functions". *The American Journal of Psychiatry* 154(4) (April 1997): 445-446.

Aras, Şahbal, Semih Şemin, Türkan Günay, Esmahan Orçın, Sema Özan. "Lise Öğrencilerinin Cinsel Tutum ve Davranış Özellikleri [Sexual Attitudes and Behaviors of High School Students]". *Türk Pediatri Arşivi* 40 (2005): 72-82.

Askerlik Çağına Girenlerin İlk Yoklama İşlemleri Hakkında Yönetmelik. http://www.mevzuat.adalet.gov.tr/html/20137.html (accessed June 10, 2009).

Atıcı, Elif. "Situation of Research Ethics Committees in Turkey". *Journal of the International Society for the History of Islamic Medicine* 5(9) (2006): 43-46.

Aydın, Erdem. "Kök Hücre Çalışmalarında Etik". *Hacettepe Tıp Dergisi* 36 (2005): 198-202.

Baron, Jonathan. *Against Bioethics*. Cambridge, Massachusetts and London, England: The MIT Press, 2006.

Beauchamp, Tom L. and James F. Childress. *Principles of Biomedical Ethics*, 5th ed. New York: Oxford University Press, 2001.

Beyaztaş, Fatma Yücel. "Adli Rapor Konusunda Hekim Sorumluluğu." *Anadolu Psikiyatri Dergisi* 1(4) (2000): 231-234.

Bogin, Barry and Robert B. MacVean. "The Relationship of Socioeconomic Status and Sex to Body Size, Skeletal Maturation, and Cognitive Status of Guatamala City Schoolchildren". *Child Development* 54 (1983): 115-128.

Branthwaite, M.A. and D. Jeffrey. "Should Patients Be Able to Choose Physician Assisted Suicide at the End of Their Lives?" *The Lancet Oncology* 7(7) (2006): 602-604.

Braude, S.C., L. M. Henning, M. I. Lambert. "Accuracy of Bone Assessments for Verifying Age in Adolescents – Application in Sport." *South African Journal of Radiology* 11(2) (June 2007): 4-7.

Büken, Bora, Alp Alper Şafak, Burhan Yazıcı, Erhan Büken, Atilla Senih Mayda. "Is the Assessment of Bone Age by the Greulich-Pyle Method Reliable at Forensic Age Estimation for Turkish Children?" *Forensic Science International* 173(2–3) (2007): 146-153.

"Cesedine Sperm Nasıl Bulaştı?" *Hürriyet*. July 11, 2009. http://cep.hurriyet.com.tr/NewsDetail.aspx?ArticleID=13012&CategoryID=38 (accessed June 12, 2009)

Ceza Muhakemesinde Beden Muayenesi, Genetik İncelemeler ve Fizik Kimliğin Tespiti Hakkında Yönetmelik. http://www.adlitabiplik.saglik.gov.tr/include/dosyalar/13_mev_cmbmyonetmelik.pdf (accessed August 1, 2009)

Corrigan, Oonagh. "Empty Ethics: the Problem with Informed Consent". *Sociology of Health and Illness* 25(3) (November 2003): 768-792.

Çalışkan, Deniz, Oya Özdemir, Recep Akdur. "Abidinpaşa Sağlık Grup Başkanlığı Bölgesinde Çalışan Hekimlerin Ötenazi Konusunda Bilgi Tutum Davranışları ile İlgili Bir Çalışma [Knowledge Attitude and Behaviours of Doctors on Euthanasia in the Abidinpasa Primary Heath Care Area]". *Türkiye Klinikleri Tıp Etiği-Hukuku-Tarihi Dergisi* 11 (2003): 91-101.

Darlin, D. B. *Radiography of Infants and Children*, 1st ed. Springfield, IL: Charles C. Thomas, 1979.

Donutlu, A.Ç. "Organ Bağışı ve Naklinde Etik, Dinsel ve Yasal Yaklaşımlar". *Diyaliz, Transplantasyon ve Yanık* 15 (2004): 69-76.

Edward Etchells, Gilbert Sharpe, Mary Jane Dykeman, Eric M. Meslin, and Peter A. Singer. "Bioethics for Clinicians: 4. Voluntariness". *Canadian Medical Association Journal* 155 (1996): 657-661.

Elçioğlu, Ömür Şaylıgil. "Kürtaj ve Rıza ile İlgili Sorunlar". *Jinekoloji ve Obstetrik Dergisi* 7(3) (1993): 135-137.

Elçioğlu, Ömür Şaylıgil, Tarık Gündüz, Nedim Köşgeroğlu. "Tıp, Hukuk ve Etik Açıdan Euthanasia [Euthanasia: Point of View of Medicine, Law and Ethics]". *Türkiye Klinikleri Tıbbi Etik Dergisi* 2 (1994): 64-70.

Elçioğlu, Ömür Şaylıgil, İlhami Ünlüoğlu, and Atilla Yıldırım. "Fetal Hücre ve Dokuların Transplantasyonu: Karşılaşılan Etik Sorunlar ve Türkiye Uygulaması". *Jinekoloji ve Obstetrik Dergisi* 7 (1997): 1-5.

"Eski Hakim: Erdal Eren Haksız Yere Asıldı." *Hürriyet*. September 12, 2007. http://www.hurriyet.com.tr/gundem/7272006.asp?gid=180&a=570915 (accessed June 12, 2009).

Etchells, Edward, Gilbert Sharpe, Mary Jane Dykeman, Eric M. Meslin, and Peter A. Singer. "Bioethics for Clinicians: 3. Capacity". *Canadian Medical Association Journal* 155(6) (1996): 1083-1086.

Eveleth, Phyllis B. and James Mourilyan Tanner. *Worldwide Variation in Human Growth*, 2nd ed. London: Cambridge University Press, 1976.

Eyce, Ali. "15'lik Kızla Evlenen Babaya 8 Yıl Hapis." *Sabah*. August 24, 2007. http://arsiv.sabah.com.tr/2007/09/24/haber,24157B5201B948339EF593219E4D0983.html (accessed July 12, 2009).

Fleshman, K. "Bone Age Determination in a Paediatric Population as an Indicator of Nutritional Status". *Tropical Doctor* 30(11) (2000): 16-18.

Flory, James and Ezekiel Emanuel. "Interventions to Improve Research Participants' Understanding in Informed Consent for Research: A Systematic Review". *Journal of American Medical Association* 292(13) (2004): 1593-1601.

Frankena, William. *Ethics*, 2nd ed. Englewood Cliffs, NJ: Prentice-Hall, 1973.

Gamble, Vanessa Northington. "Under the Shadow of Tuskegee: African Americans and Heath Care". *American Journal of Public Health* 87(11) 1997: 1773-1778.

Genç, Zehra and Ayşegül Adıan Erdemir. "Genetik Danışmanlığın Tıbbi Etik Açısından Önemi ve Bazı Sonuçları [The Importance of Genetic Counselling from the Point of View of Medical Ethics and Some Results]." *Türkiye Klinikleri Tıbbi Etik Dergisi* 5 (1997): 72-79.

Giordano, D., R. Leonardi, F. Maiorana, G. Scarciofalo, C. Spampinato. "Epiphysis and Metaphysis Extraction and Classification by Adaptive Thresholding and DoG Filtering for Automated Skeletal Bone Age Analysis." Conference Proceeding. 29th Annual Conference of the IEEE, Engineering in Medicine and Biology Society, August 22–26, 2007: 6551-6556.

Gonzalez, AB de, S Darby. "Risk of Cancer From Diagnostic X-rays: Estimates for the UK and 14 Other Countries". *The Lancet*, 363(9406) (2004): 345-351.

"Governor: Media Irresponsibility Damaging Murder Case". *Today's Zaman*. July 26, 2009. http://www.todayszaman.com/tz-web/news-181114-governor-media-irresponsibility-damaging-murder-case.html (accessed June 12, 2009).

Gölge, Zeynep Belma. "Cinsel Travma Sonrası Oluşan Ruhsal Sorunlar". *Nöropsikiyatri Arşivi Dergisi*. 42(1–4) (2005): 19-28. http://www.turknoropsikiyatri.org/default.aspx?pfn=dergiOkur&iid=12&cl=en-US&modulePage=article&dt=tft&aid=10&cl=tr-TR (accessed July 12, 2009)

Gutmann, T. and W. Land. "Ethics Regarding Living-Donor Organ Transplantation". *Langenbeck's Archives of Surgery* 384 (1999): 515-522.

Haktan, Mahmut. "Computer Assisted Bone Age Assessment". Unpublished M.S. thesis. Boğaziçi University, Institute of Biomedical Engineering, 2005.

Halvorsen, Kate. *Report of a Workshop on Age Assessment and Identification* held by the Separated Children in Europe Programme, Bucharest March 20–22, 2003. www.separated-children-europe-programme.org/separated_children/publications/reports/report_workshop_age_assessment.pdf (accessed June 12, 2009)

Hanson, R. "Making Sense of Medical Paternalism". *Medical Hypotheses* 70(5): 910-913.

Hedgecoe, Adam M. "Critical Bioethics: Beyond the Social Science Critique of Applied Ethics". *Bioethics* 18(2) (April 2004): 120-143.

Introna, Francesco, and Carlo P. Campobasso. "Biological vs Legal Age of Living Individuals". In *Forensic Anthropology and Medicine*, eds. Aurore Schmitt, Eugénia Cunha, Joao Pinheirp. Totowa, NJ: Humana Press, 2006.

Jain, Rahul, P. N. Mathur, N. S. Kothari, Phulvanti Mathur. "Medicolegal Evaluation

of Sex Assault Cases Admitted at Sardar Patel Medical College & P. B. M. Hospital, Bikaner, India". *Medico-Legal Update – An International Journal* 8(1) (2008). http://www.indmedica.com/journals.php?journalid=9&issueid=119&articleid=1591&action=article (accessed July 28, 2009)

Jefford, Michael, Julian Savulescu, Jacqui Thomson, Penelope Schofield, Linda Mileshkin, Emilia Agalianos, John Zalcberg. "Medical Paternalism and Expensive Unsubsidized Drugs". *British Medical Journal* 331 (2005): 1075-1077.

Jones, James H. *Bad Blood*. New York: Free Press, 1993.

Jonsen, Albert R. "A History of Bioethics as Discipline and Discourse". In *Bioethics: An Introduction to the History, Methods, and Practice*, eds. Nancy Ann Silbergeld Jecker, Albert R. Jonsen and Robert A. Pearlman. Sudbury, MA: Jones and Bartlett Publishers, 1997: pp. 3-16.

Kahraman, Nail. "Mağdur B. Ç., Muayene İçin Yarın Üçüncü Kez Adli Tıpta". *Milliyet*. June 3, 2009. http://www.milliyet.com.tr/Yasam/SonDakika.aspx?aType=SonDakika&ArticleID=1102406&Date=26.07.2009&Kategori=turkiye&b=Magdur%20B.C.,%20muayene%20icin%20yarin%203uncu%20kez%20Adli%20Tipta&ver=65 (accessed July 20, 2009)

_____. "İşte Hüseyin Üzmez'i Tahliye Ettiren Rapor". *Hürriyet*. June 3, 2009. http://arama.hurriyet.com.tr/arsivnews.aspx?id=10247703 (accessed July 20, 2009)

Kavlak, Oya, Gül Ertem, Ümran Sevil. "Kanserli Hastalara Bakım Veren Hemşirelerin Kanserli Hastalara Doğruyu Söyleme Konusundaki Tutumları". *Türkiye Klinikleri Tıbbi Etik Dergisi* 16 (2008): 1-7.

Kaya, Hülya and Emine Akçin. "Hemşirelik Öğrencilerinin Ötenaziye İlişkin Görüşleri [The Views of Nursing Students about Euthanasia]". *Türkiye Klinikleri Tıbbi Etik Dergisi* 13 (2005): 115-119.

Keçecioğlu, Nilgün, Levent Yücetin, Gülşen Yakupoğlu, Fevzi Ersoy, "Böbrek Transplantasyonunun Yasal, Etik, Psikososyal ve Finansal Yönleri", *Türkiye Klinikleri Nefroloji Dergisi* 1(1) (2003). http://www.turkiyeklinikleri.com/makale.php?id=5436 (accessed June 21, 2009)

King D.G., Steventon D.M., O'Sullivan M.P., et al. "Reproducibility of Bone Ages When Performed by Radiology Registrars: An Audit of Tanner and Whitehouse II Versus Greulich and Pyle Methods". *British Journal of Radiology* 67 (1994): 848-851.

Kleinerman, Ruth A. "Cancer Risks Following Diagnostic and Therapeutic Radiation Exposure in Children". *Pediatric Radiology* 36(2) (September 2006): 121-

125.

Koç, Ahmet, Mustafa Karaoğlanoğlu, Murat Erdoğan, Mustafa Kösecik, and Yaşar Cesur. "Assessment of Bone Ages: Is the Greulich-Pyle Method Sufficient for Turkish Boys?" *Pediatrics International* 43(6) (2001): 662-665.

Li, S., J.L. Chou. "Communication with the Cancer Patient in China". *Annals of the New York Academy of Sciences* 809 (February 1997): 243-248.

Marmara Üniversitesi Sağlık Hukuku ve Etiği Araştırma ve Uygulama Merkezi Yönetmeliği. *Official Gazette* 26827. March 25, 2008. http://www.resmi-gazete.org/sayi/1197/marmara-universitesi-saglik-hukuku-ve-etigi-arastirma-ve-uygulama-merkezi-yonetmeligi.html (accessed June 10, 2009).

Meisel, Alan and Mark Kuczewski. "Legal and Ethical Myths about Informed Consent". *Archives of Internal Medicine* 156 (1996): 2520-2526.

Meiser-Stedman, Richard, William Yule, Patrick Smith, Ed Glucksman, Tim Dalgleish. "Acute Stress Disorder and Posttraumatic Stress Disorder in Children and Adolescents Involved in Assaults or Motor Vehicle Accidents. *American Journal of Psychiatry* 162 (July 2005): 1381-1383.

Memiş, Atilla. "Üzmez'i Kurtaran Heyetten Yine Tartışmalı Bir Rapor". *Milliyet*. November 14, 2008. http://www.milliyet.com.tr/Guncel/HaberDetay.aspx?aType=HaberDetay&Kategori=guncel&KategoriID=24&ArticleID=1015911&Date=14.11.2008&b=Uzmezi%20kurtaran%20heyetten%20yine%20tartismali%20bir%20rapor (accessed July 30, 2009)

Mitchell, J.L. "Cross-cultural Issues in the Disclosure of Cancer". *Cancer Practice* 6 (1998): 153-160.

Naçar, M., F. Çetinkaya, D. Kanyılmaz, B. Tokgöz, C. Utaş. "Hekim Adaylarının Organ Nakline Bakış Açıları". *Türk Nefroloji Diyaliz ve Transplantasyon Dergisi* 10(2) (2001): 123-128.

Nüfus Hizmetleri Kanunu. Kanun No. 5490. Date of acceptance: April 29, 2006. http://www.tuik.gov.tr/jsp/duyuru/adnks/dosya/kanun/nufus_kanunu.pdf (accessed June 10, 2009).

Ocaktan, Esin, Ayşe Yıldız, Oya Özdemir. "Abidinpaşa Sağlık Grup Başkanlığı Bölgesinde Çalışan Sağlık Personelinin Hasta Hakları Konusunda Bilgi ve Tutumları". *Ankara Üniversitesi Tıp Fakültesi Mecmuası* 57(3) (2004): 129-137.

Olze, Andreas, Andreas Schmeling, Mari Taniguchi, Hitoshi Maeda, Piet van Niekerk, Klaus-Dieter Wernecke and Gunther Geserick. "Forensic Age Estimation in Living Subjects: the Ethnic Factor in Wisdom Tooth Mineralization". *International Journal of Legal Medicine* 118(3) (June 2004): 170-173.

Olze, Andreas, Piet van Niekerk, T. Ishikawa, B. L. Zhu, R. Schulz, Hitoshi Maeda and Andreas Schmeling. "Comparative Study on the Effect of Ethnicity on Wisdom Tooth Eruption". *International Journal of Legal Medicine* 121(6) (November 2007): 445-448.

Öz, Fatma. "Hemşire ve Hekimlerin Ötenazi ile İlgili Tutum ve Görüşleri". *Medical Network Klinik Bilimler ve Doktor* 5(4) (1999): 450-459.

Özaltın, Gülten and Özlem Işıl. "Önlisans Hemşire Öğrencilerinin Ölüme İlişkin Yaklaşımlarının İncelenmesi [An Investigation of Nursing Students' Approaches to Death]". *Türkiye Klinikleri Tıbbi Etik Dergisi* 5 (1997): 10-15.

Özdemir, Kerim, and Fehim Göze. "Bandırma'da Hemşirelerin Sağlık Etiği Algılamaları". Paper presented at Sakarya Üniversitesi İktisadi ve İdari Bilimler Fakültesi 2. Siyasette ve Yönetimde Etik Sempozyumu, 2005. http://www.etiksempozyumu.sakarya.edu.tr/etik/1.2/ozdemir.pdf (accessed May 12, 2009)

Özkara, E., B. İnceer, İ.H. Hancı, G. Ozan, G. Oral. "Psikologların Ötenaziye Yaklaşımı". *Adli Psikiyatri Dergisi* 1(1) (2004): 35-42.

Paasche-Orlow, Michael K., Holly A. Taylor, Frederick L. Brancati. "Readability Standards for Informed-Consent Forms as Compared with Actual Readability". *The New England Journal of Medicine* 348(8) (2003): 721-726.

Pang, S.M.C. "Protective Truthfulness: the Chinese Way of Safeguarding Patients in Informed Treatment Decision". *Journal of Medical Ethics* 25(3) (1999): 247-253.

Pasillioğlu, Ege E. "Doğum ve Kadın Sağlığı Hemşirelerinde Etik". *Atatürk Üniversitesi Hemşirelik Yüksek Okulu Dergisi* 3(1) (2000): 44-50.

Pellegrino, Edmund D. "Professionalism, Profession and the Virtues of the Good Physician". In *Yaman Örs Armağanı*, eds. İlter Uzel, Nükhet Örnek Büken, Selim Kadıoğlu, Serap Şahinoğlu, Şahin Aksoy. Adana: Türkiye Biyoetik Derneği Yayınları, 2005: 382-390.

Pence, Gregory E. *Classic Cases in Medical Ethics: Accounts of Cases that Have Shaped Medical Ethics with Philosophical, Legal, and Historical Backgrounds*, 4th ed. New York, McGraw Hill, 2004.

Rothstein, Mark A. "Genetic Secrets: A Policy Framework" in *Genetic Secrets: Protecting Privacy and Confidentiality in the Genetic Era*, ed. Mark A. Rothstein. London and New Haven, CT: Yale University Press, 1997.

Salaçin, S., M.K. Gülmen, Z. Erkol, L. Dönbak. "Beyin Ölümü Kavramına Sosyal Yaklaşım: İki Ayrı Bölge Anket Çalışmasının Değerlendirilmesi". *Türkiye Klinikleri Tıbbi Etik Dergisi* 4(2) (1996): 85-87.

"Samast'ı Azmettirenler Kim?" *Samanyoluhaber*. 24 January 2007. http://www.samanyoluhaber.com/haber-35786.html (accessed August 3, 2009).

Schmeling, Andreas, W. Reisinger, D. Loreck, K. Vendura, W. Markus, G. Geserick. "Effects of Ethnicity on Skeletal Maturation: Consequences for Forensic Age Estimations". *International Journal of Legal Medicine* 113(5) (August 2000): 253-258.

Schmidt, Sven, Beate Koch, Ronald Schulz, Walter Reisinger, Andreas Schmeling. "Comparative Analysis of the Applicability of the Skeletal Age Determination Methods of Greulich-Pyle and Thiemann-Nitz for Forensic Age Estimation in Living Subjects". *International Journal of Legal Medicine* 121(4) (July 2007): 293-296.

Shuster, Evelyne. "Fifty Years Later: the Significance of the Nuremberg Code". *The New England Journal of Medicine* 337(20) (November 1997): 1436-1440.

Spampinato, Concetto. "Skeletal Bone Age Assessment." http://homepages.inf.ed.ac.uk/rbf/CVonline/LOCAL_COPIES/SPAMPINATO/SKELETALBONEAGEASSESSMENT.pdf (accessed May 20, 2009)

Tahiroğlu, Ayşegül Yolga, Ayşe Avcı, and Necmi Çekin. "Çocuk İstismarı, Ruh Sağlığı ve Adli Bildirim Zorunluluğu". *Anadolu Psikiyatri Dergisi* 9 (2008): 1-7.

Tahircioğlu, Gökçer and Türker Karapınar. "Bolu'daki Eşkiyanın "Kemik Yaşı" Oyunu". *Milliyet*. 12 December, 2007. http://www.milliyet.com.tr/2003/12/12/yasam/ayas.html (accessed August 2, 2009)

Teke, Abdulkadir, Muharrem Uçar, Cesim Demir, Özay Çelen, Turgut Karaalp. "Bir Eğitim Hastanesinde Görev Yapan Hemşirelerin Hasta Hakları Konusundaki Bilgi ve Tutumlarının Değerlendirilmesi". *TSK Koruyucu Hekimlik Bülteni* 6(4) (2007): 259-266.

Terzioğlu, Arslan. "Organ Transplantasyonu ve Getirdiği Etik Sorunlar." *Türkiye Klinikleri Tıbbi Etik Dergisi* 1(1) (1993): 35-52.

_____. "Euthanasia (Ötenazi) ve Getirdiği Etik Sorunlar". *Türkiye Klinikleri Tıbbi Etik Dergisi* 2 (1994): 16-21.

Tse, C.Y., Alice Chong and S.Y. Fok. "Breaking Bad News: A Chinese Perspective". *Palliative Medicine* 17(4) (2003): 339-343.

Türk Ceza Kanunu. Kanun No. 5237. Date of acceptance: 26 September 2004. http://www.tbmm.gov.tr/kanunlar/k5237.html (accessed August 1, 2009)

Türk Medeni Kanunu. Kanun No. 4721. Date of acceptance: 22 November 2001. http://www.tbmm.gov.tr/kanunlar/k4721.html (accessed August 1, 2009)

United Nations Higher Commissioner for Refugees. “Çocuk Mültecilere İlişkin Türkiye’deki Yasal Çerçeve”. http://www.unhcr.org.tr/MEP/index.aspx?pageId=152 (accessed July 30, 2009)

Uzel, İlter. “Türk Diş Hekimliği Eğitimindeki Bazı Etik İhlalleriyle İlgili Tespitler”. In *Yaman Örs Armağanı*, eds. İlter Uzel, Nükhet Örnek Büken, Selim Kadıoğlu, Serap Şahinoğlu, Şahin Aksoy. Adana: Türkiye Biyoetik Derneği Yayınları, 2005: 382-390.

Vincent, J-L, J. Berré, and J. Creteur. “Withholding and Withdrawing Life Prolonging Treatment in the Intensive Care Unit: a Current European Perspective”. *Chronic Respiratory Disease* 1(2) (2004): 115-120.

Wall, B.F., G.M. Kendall, A.A. Edwards, S. Bouffler, C. R. Muirhead, J. R. Meara. “What are the Risks from Medical X-rays and Other Low Dose Radiation?” *British Journal of Radiology* 79 (2006): 285-294.

Weindling, Paul. “The Origins of Informed Consent: the International Scientific Commission on Medical War Crimes, and the Nuremberg Code”. *Bulletin of the History of Medicine* 75(1) (2001): 37-71.

Yüzügüllü, Sıdıka, S. Zeki Ziylan, M. Arif Akşit. “Bölgemizde 2-24 Ay Arasındaki Sağlıklı Çocuklarin Sol El-El Bileği Grafilerinde Kemiklerin Olgunlaşma Derecelerinin Greulich-Pyle İskelet Gelişme Atlasına Göre Uyumluluğunun Karşılaştırılması”. *Uludağ Üniversitesi Tıp Fakültesi Dergisi* 30(2) (2004): 75-79.