Is there a clear boundary between therapy and human enhancement in medical practice?

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Abstract

Article 76 of the new version of the Italian code of medical ethics on the use of medicine to improve the normal mental and physical functioning refers to the broader issue of human enhancement. The term “enhancement” is generally used for treatments “beyond therapy”; nevertheless, in the enhancement debate, the distinction between therapy and enhancement is highly discussed because it is unclear whether enhancement could be considered a permissible medical practice. According to the premise that physicians must pursue the individual’s health, the articulated issue can be summarized in two key questions: what type of relationship there is between health and enhancement and should enhancement be included among the obligations of the physician? It is therefore necessary to analyze the relationship between medical practice and its aim: health. However, health is not reducible to any of the dimensions that compose it, neither the objective of physical normalcy nor the subjective of the well-being. After analyzing health as something complex, it is necessary to understand the suitability of enhancement for physicians evaluating the appropriateness of the means that medicine can offer compared to the goals achieved from time to time.

Keywords: human enhancement, therapy-enhancement distinction, health, well-being, aims of medicine

THE THERAPY-ENHANCEMENT DISTINCTION

The topic of Article 76 of the new version of the Italian code of medical ethics is the use of medicine to improve normal mental and physical functioning; it refers to the broader issue of human enhancement. Two Opinions about enhancement of the Italian bioethics committee came before in 2013 [1, 2]: both seemed very cautious toward non therapeutic use of medical technologies. By contrast, the last version of the ethical code is really open to enhancement treatments. This news in the context of Italian medical regulation requires us to reflect again about the problems involved in enhancement debate. For example the code allows “enhancement” treatments only if they comply with the principles of proportionality and precaution: normally, the main criterion for evaluate proportionality and possible damages is
the normal health condition. However, in the case of enhancement, treatments go beyond normal health condition, so that it is not clear in what way to evaluate proportionality in enhancement treatments. In general in the enhancement international debate are still controversial concepts as health, normality, therapy etc., so that the lack of clear criteria in Italian regulation of enhancement replicates the broader theoretical discussion. Therefore let us go through some very general questions, in order to draw the criteria useful for the evaluation of medical treatments aimed to enhancement.

The term enhancement generally refers to treatments beyond therapy; nevertheless, in the enhancement debate, the distinction between therapy and enhancement is highly discussed. "Therapy", in common understanding, is the use of biotechnical power to treat individuals with known diseases, disabilities, or impairments, in an attempt to restore them to a normal state of health and fitness - *restitutio ad integrum*. "Enhancement", by contrast, is the directed use of biotechnical power to alter, by direct intervention, not disease processes but the ‘normal’ workings of the human body and psyche, to augment or improve their native capacities and performances” [3, p. 13] - *tranformatio ad optimum*. At first glance, this distinction appears quite intuitive, and it is useful for discerning the proper tasks of medical practice from what is outside the traditional medical activities. “Because medicine has, at least traditionally, pursued therapy rather than enhancement, the distinction helps to delimit the proper activities of physicians, understood as healers. And because physicians have been given a more-or-less complete monopoly over the prescription and administration of biotechnology to human beings, the distinction, by seeking to circumscribe the proper goals of medicine, indirectly tries to circumscribe also the legitimate uses of biomedical technology” [3, p. 14]. Therefore, this distinction corresponds to a separation between “good” and “bad” treatments. However, it is still controversial: many believe that cures in themselves are an improvement compared to the pathological condition, not recognizing the notion of health as a natural state of "normalcy." Furthermore, several therapeutic interventions have effects "potentiating" the "normal" condition of the subject before the disease. Finally, preventive medicine could be considered as an enhancement: vaccines boost the immune system against infectious diseases. The case of vaccines is often used to argue that the concept of “therapy” is wider than the simple goal of *restitutio ad integrum* because vaccines are considered “therapeutic” despite not restoring any conditions of integrity. Thus, what makes us say that prevention is a normal task of medicine and that other treatments are improper or extraneous to the aim of medical practice?

In this debate, it is common to use the following example [4, 5, 6]:

Johnny is a short 11-year-old boy with a documented GH [growth hormone] deficiency resulting from a brain tumor. His parents are of average height. His predicted adult height without GH treatment is approximately 160 cm (5 feet 3 inches). Billy is a short 11-year-old boy with normal GH secretion according to current testing methods. However, his parents are extremely short, and he has a predicted adult height of 160 cm (5 feet 3 inches).

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1 Actually, the addition of the new art. 76 on medical enhancement did not raise in Italy the intense debate that was to be expected: for a deeper analysis of medical enhancement in the Italian code of medical ethics see Giglio F. L’introduzione della medicina potenziativa nel nuovo codice di deontologia medica. *Medicina e Morale*. 2015; 1: 61-80.

2 It would be enough to answer by pointing out that prophylaxis has as its purpose the maintenance of health and is not a functional enhancement for its own sake, but many authors make this objection. Therefore, it is necessary to take it into consideration.
This example is often quoted in discussions about health justice and specifically about the question of which treatments are to be provided by the health care system. Furthermore, the comparison between Johnny and Billy calls into question concepts of "normality" which is often used as a criterion for judging a treatment as ameliorative of a given condition - "health" and "disability". On the one hand, Johnny’s heath is compromised because of a well-defined disease, whereas Billy could not be considered properly sick; on the other hand, Billy most likely lives in a condition that could compromise his psychological “health”.

In Johnny’s case, the administration of GH falls consistently within the therapeutic program because of his condition, whereas in Billy's case, it is difficult to understand whether it is technically a therapy. Another example is represented by aesthetic medicine, as in the two different cases of breast implants as cosmetic surgery and breast implants as a part of treatment after breast cancer surgery: in the first case the treatments meet a general need of wellbeing and are not necessarily connected with a context of disease - despite the lack of well-being could also lead to a pathological mental condition. Because of the double use of aesthetic medicine, the Italian code of medical ethics collected it and enhancement treatments in the same article 76.

Other cases help to show how the issue is particularly complex if we investigate the relationships among therapy, enhancement, handicap and disability. There is a famous case of the pianist and composer Sergei Vasilievich Rachmaninoff who was affected by Marfan syndrome [7], which is a pathology that causes myopia, heart problems, arachnodactyly, etc. This pathology allowed the composer to achieve performances at the piano that made him famous. In this example, the disease helped to decisively shape the identity and success of the composer. Additionally, in other cases, such as deafness or dwarfism [8], pathologies are often the identity elements of a community of individuals with such disabilities who refuse to think of themselves as disabled but rather as individuals with different characteristics.

These cases bring to light many difficulties as a result of the disappearing criteria for defining “normalcy” and “health” as objective conditions that often do not correspond to perceived health or subjective well-being. As a consequence, the distinction between therapeutic treatments and enhancement treatments also disappears. Therefore, a short examination of the concepts of health and illness is required to compare enhancement with the goals of medical practice to understand whether enhancement should be considered a permissible use of medicine.

**ENHANCEMENT, HEALTH, WELLBEING: THE GOALS OF MEDICINE**

The articulated issue can be summarized in two key questions: what type of relationship there is between health and enhancement? And should enhancement be included among the obligations of the physician?

We should first start from the epistemological and ethical premises regarding the nature of medicine. What is medicine? That is to say, which are the proper ends of medicine? [9, 10]. This issue arises from the new possibilities of intervention offered by biomedical technologies and the high expectations that contemporary society places in the power of medicine [11, 9].

In 2001, the Italian National Bioethics Committee (INBC) stated that: “The aims of scientific medicine have also undergone, in the past few years, an expansion that is related to the increased availability of means produced mainly by technology, resulting in a broadening of the boundaries to include services that have raised serious questions about their intrinsic legitimacy, the opportunity to overcome them and the dangers that can arise in today's and future society, and for medicine itself and the medical profession” [12, p. 11]. INBC wondered whether medicine must also care for the anxieties of daily life, the existential, psychological
and spiritual problems that affect individuals in the course of their lives and whether sickness and disease should never be accepted. This widening of the medical field - hyper-medicalization - is caused by a gradual extension of the concept of “therapy” including medical acts whose “therapeutic” justification arose from the desires of the subjects and from the psychological discomforts that could result after not contenting that request [13].

From the perspective of the philosophy of medicine, it is controversial to understand whether enhancement treatments are consistent with the specific aim of medical practice and with the goods that this practice pursues. According to common sense and deeper reflection, health is the good that is be pursued by medical practice.

Considering health as the essential aim of medical practice, we can mention “false goals” that are currently very widespread. L. Kass defined social adjustment: “on the one hand, the physician’s power and prerogatives have grown as a result of new technologies”; on the other hand, “his responsibilities have grown as well, partly due to rising patient and public demands for medical assistance in addressing behavioral and social problems” [9, p. 157]. These types of requests are expected to increase with the acquisition of new knowledge regarding biological aspects that influence human behavior: neurotechnologies, pharmacology, genetic engineering, etc., could constitute easy solutions to various problems that are not strictly medical problems. According to Edmund Pellegrino, the use of medicine to satisfy the desires of patients and non-patients to enhance some bodily or mental traits - or some state of affairs they wish to perfect - and the use of biotechnology to redesign human nature and to enhance the species in the future, are elements that will cause a new necessity for physicians to reflect on the ethical implications of their involvement in the uses of biotechnology. This reflection necessarily concerns the distinction of the aims in therapeutic and enhancement treatments because of its moral weight: this distinction in medical practice should not be eluded because of the central role of the physician both in restoring health or going beyond it [14]. In addition, although the line between therapy and enhancement is disappearing, “just because we cannot always make finely tuned distinctions does not mean distinctions are impossible. Just because a bright line may not be drawn does not mean no line can be drawn” [15].

The distinction between therapy and enhancement can be understood by remarking on the purposes of the two categories. The first purpose of medicine is to restore health by curing a physical or physiological disease. It is true that curing disease will lead secondarily to an improvement in the patient’s life; any type of “improvement” following therapy is part of the therapy itself and is not something that goes “beyond therapy” but rather is a result of it. In the enhancement case, the improvement represents the primary intention of the medical act. Founding the distinction on the aims of actions, therapy is what pursues the health of the subject, whereas enhancement goes beyond restoring health as the first goal and is distinguished from treatments that obtain results “beyond therapy”.

It remains necessary, however, to clarify the meaning of the criterion fundamental to defining therapeutic or curative acts: the concept of “health”. From the enlargement of the sphere of health comes the request of interventions that lie on the unclear boundary line between therapy and enhancement. However, many doubts remain from the different approaches to the concept of health, leading to conclusions that are often divergent.

Currently, a reductive perspective of health and an enlargement of this perspective to individual well-being are coexisting. The first perspective could be represented by Boorse’s bio-statistical theory [16]: in this deterministic view, health is defined as a statistical normality; therefore, medical treatments must restore the typical efficiency. Statistical normality from descriptive criterion becomes normative, but what appears objective is really relative because statistical parameters change according to time and space; therefore, Billy

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3 This is the Aristotelic approach to health used by some authors such as L. R. Kass and E. D. Pellegrino.
could be considered sick at a given time because he is below the statistical parameters of normal height, and he could be considered healthy at another time.

The bioethicist Norman Daniels argues that Billy is "non-sick" according to common sense, which tends to identify health with the absence of disease. Nevertheless, he could experience the same problems as Johnny and the same lack of opportunities, thereby gaining the right to receive medical treatments. Thus, Daniels includes subjective elements such as discomfort and suffering in the sphere of "health".

The connection between health and well-being – the subjective dimension of health – is characterized in different ways. Medical anthropologist Lain Entralgo defines “health” as a psychic-organic equilibrium: health correspond to the physical capacity to accomplish the vital projects of the person with the least stress, minimal damage and, if possible, a true well-being or pleasure [17]. Julian Savulescu, a staunch supporter of the moral obligation of enhancement, derives from a proper functioning of the body the direct result of a good life. In this way, he introduces an equation between full physical efficiency and happiness [18].

A third approach is offered by the World Health Organization that defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity [19]. This definition, which is already largely supported, states that it is not possible to ignore that the concept of health is strictly connected with social and culture elements conditioned by time and space. However, if health becomes synonymous with well-being, then all temporary situations of discomfort, stress, and sadness should be treated as a lack of health. As a result, medicine must treat as diseases such situations that are usually attributable to a different category of discomfort rather than to disease. Thus, what falls under the concept of health and what falls outside this concept? Is it possible to provide an objective definition of health or must we consider it a subjective state that is impossible to comply with the parameters universally sharable?

It would be better to consider health as a concept with different meanings that we must refer to as a plurality of dimensions: health is, therefore, an equilibrium among organic, relational and existential dimensions that are connected to each other as a result of belonging to the psychophysical complexity of the person. Therefore, it is possible to understand the notion of health by only combining objective, subjective and socio-cultural criteria and not reducing it to one of those criteria. We purposely used the term “reducing” because defining health only as a subjective well-being is a form of reduction to a single aspect.

THE RELATIONSHIP BETWEEN MEANS AND ENDS IN MEDICAL PRACTICE

As we have now defined health, it necessary to reconnect this discussion to the issue of medicine. Our premises are that the specific aim of medical practice is to provide health and that health is a complex notion. Accordingly, we must understand the consistency of the used means in relation to the desired objectives: the physician will be required to supply any treatment aimed at health but must follow the principle of using means appropriate to the aims to achieve this goal.

If health must be considered an equilibrium between the physical condition, the objective element, and the psychological condition, the subjective element, medicine can provide means that, by their very nature, intervene by only modifying the organic and functional conditions of the subject, and secondarily - but not necessarily - may result in the individual feeling better. The full achievements of psychological and emotional health must be considered the result of a number of additional elements such as the subject's relationship with his physical condition, family and social relationships, and the relationship with the same physician. These elements, as part of the whole health of the subject, must certainly be worth consideration by
the doctor who cares for the subject, but they are not direct objects of medical science, which must be associated, when necessary, with other competences, such as psychology, to achieve the results through other resources such as relational, cultural or educational resources and not merely technical means. This appears obvious but is aimed instead to bring out the worst misunderstanding generated by enhancement, namely the inadequacy of this type of means compared with the intended purposes.

Let us return to Johnny and Billy’s example: while both were experiencing a state of psychological and existential distress, there is no doubt that in the first case there is a clear disease whose proper solution is represented by the means of biomedical science. In contrast, in Billy’s case, discomfort very likely arises from of a set of factors such as non-acceptance of his condition or the fear of not meeting social or esthetic standards. Thus, we consider it worthwhile to raise some doubts about the appropriateness of medical enhancement as the answer to problems depending only incidentally on the child’s shortness; potentially, shortness could be a trigger factor of a deeper relational and psychological distress. Growth hormone can be an efficient instrument for improving the child’s physical condition, but at the same time, it has the risk of being an inappropriate and hasty answer to problems of a different nature, particularly if it is the only one.

Referring to the definitions of therapy and enhancement, differentiating between improvement as an unintended consequence of a treatment aimed at therapy and improvement as the intended aim of a medical treatment, we believe that the only criterion necessary to understand which medical procedures are required is restitutio ad integrum, which is defined on the basis of clinical criteria and parameters established by medical science. When considering health as a complex concept that refers to different dimensions of the subject, the appropriateness of the means in relation to the needs of the individual and the expected goals should be considered. This correlation has a moral weight and suggests the necessity of ethical criteria for medical practice. In pathological situations, moral obligations arise to administer medical treatments aimed at restoring physical health. However, in clinical conditions of good health but with a psychological discomfort, existential or relational, we retain there is not a moral obligation for medical treatment. In the latter case, it would instead be appropriate to assess other types of support, namely psychological, cultural, social or educational. Medical treatments could be considered part of the solution but only secondarily and with the necessary evaluation of proportionality.

CONCLUDING REMARKS

It should be noted that what was stated above does not establish a direct non-moral legitimacy of enhancement and tells us little about its intrinsic morality. E. T. Juengst [20] noted that the therapy-enhancement distinction reveals an epistemological limit because this issue concerns the epistemological field of the philosophy of medicine, which may indicate which medical acts are morally obligatory and which do not meet the goals of medicine. Precisely because enhancement does not comply with these criteria, the criteria for evaluating its moral legitimacy do not find their place within medical ethics. Or rather, there is a difficult problem to solve: it would be necessary to understand whether "false goals of medicine" may be forbidden in medical practice. If the obligation of medicine is health promotion and physicians are forbidden to cause harm to the subject, how are we to judge using biomedical means that do not promote health but do not cause damage either?

We believe that human enhancement and the phenomenon of medicalization currently constitute two crucial issues for the philosophy of medicine debate, and the medical practice itself. It is necessary that physicians guarantee their own professional integrity to avoid a
market of performances and the growing trend of a “contractualist” doctor-patient relationship. We fear, for example, that in Italy the introduction of art. 76 that legitimate medical practice widely beyond the usual limits of therapy and caring will lead to a broader market of medical services as is already happened with the aesthetic medicine also in the international context. The crucial point is upstream in the enlargement of the concept of health to that of a generic well-being. Currently, medicine is no longer aimed only at alleviating suffering but also at optimization. The promise of indefinitely optimizing the quality of life and the lifespan, however, pushes medicine to transform desires into needs and to set targets that are inevitably utopic, thus producing additional induced suffering as a result of the pain of being normal.

REFERENCES
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