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The Effect of the Semmelweiss Reflex on Nursing

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Abstract

Aim: The purpose of this study is to examine the negative effects of traditional perspectives on the development of nursing as a science, on its professionalization and on its professional correspondence.

Method: In order to explore the roots and main characteristics of these problems, the method of concept analysis was used, based on a qualitative literature review of the best known and accepted theories in the researched fields.

Results: Using the abstract concept of the health sciences as the main category of a scientific system, the nature of nursing science, as well as the relation between nursing and medicine as scientific fields within this category, can be determined using the criteria of Aristotelian logic.

The lack of a clear consensus regarding what constitutes professionalism appears in the different forms and levels of nursing training programs, where there is a conflict between self-interest and ideology. The general medical and public perception of nursing science in general, the profession itself and professionals who practice it does not differentiate among nurse's qualification levels.

The importance of effective teamwork, job satisfaction and assertive communication are underrepresented when considering psychic iatrogeneses. Special regard should be paid to the tertiary iatrogenetic impact on nurse's personalities caused by an insufficient information flow among nurses and physicians, or other team members.

Recommendation: Interprofessional teamwork, patient-centered care, patient safety, equity in treatment quality, patient satisfaction, job satisfactions and not least cost-effectiveness depend in great measure on human factors, and it is well-known that the population problem has no technical solution. The primary decision-makers have to take into account these facts and introduce new knowledge for patient conducting in nursing education, as the values of nursing science and their optimal benefits are the common concern and responsibility of all those who participate in and invest in the nursing profession.

Keywords: Semmelweiss Reflex; Professionalization; Professional correspondence; Iatrogeneses.

Introduction

"The Semmelweis reflex or 'Semmelweis effect' is a metaphor for the reflex-like tendency to reject new evidence or new knowledge because it contradicts established norms, beliefs or paradigms" [1].

The purpose of this study is to examine the negative effects of traditional perspectives on the development of nursing in two areas:

a) The classification of the place and role of nursing studies in the sciences and the effects of this on determining the connection between medicine and nursing;

b) The determination of the appropriate professional for patient conducting, using as a criterion the availability of and equal access to patient-centered, quality care in every field of treatment.

The timeliness of these goals is demonstrated by their role in helping to achieve the mission statement of the International Council of Nurses: "Operated by nurses and leading nurses internationally, ICN works to ensure quality nursing care for all, sound health policies globally, the advancement of nursing knowledge, and the presence worldwide of a respected nursing profession and a competent and satisfied nursing workforce" [2].

The particular need for focusing on this subject is as part of actualizing the requirements laid out in the organization's strategic plans for the 2020-2030 period, the lack of which would limit interprofessional cooperation, individual-focused care, safe medical attendance, patient satisfaction, nurse's job satisfaction, and last but not least the efficient functioning of the system [3].

Nursing Science

Classifying sciences into a system and to defining their structure is determined in part by the level of development of that scientific field, and in part by the prevailing perspectives and understanding about the employment of scientific developments in a given historical moment. Prioritizing according based only on importance, usefulness, or any other perspective is useless, as these together comprise the experience we have gained about the world and serve humanity with their results. It is based on these that our values, the competencies required for their communication, regulation, and training are all determined, the worth of which is reflected in everyday practice in society. However, the study of the place of nursing science within the larger field of the sciences remains unclear to this day [4,5], which is also expressed in the questions posed from many perspectives about it [6,7].

The medical science focused approach

Those wishing to understand nursing (science) can find it described in two different ways in sources, but in all cases it is connected in some way with medical science [8].

a) Nursing science is nowhere to be found among the main categories of medical science [9,10]. Never directly referenced, nursing science is difficult to identify even in a generalized form, as one of the areas of "other medical specialties." This invisibility is related to the perceived commonality in activities between medicine and nursing (Table 1).

Thinking further about the connection between the two disciplines, the common traits defined by the International Council of Nurses can be applied to professional medicine also, as the elements defined in it apply as well to it as they do to nursing. "Nursing (*and medicine*) encompass autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing (*and medicine*) include the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education are also key professional roles" [11].

Table 1. Commonalities between nursing and medicine.

The main activities of medicine and nursing are arranged around health service.
There is no procedure among nursing skills and the learning required for their somatic performance that falls outside the scope of medical practice.
There is no field of care in which there is medical treatment that does not also involve practices located within the area of nursing competencies.
Both professions use skills learned from other disciplines, incorporating relevant skills from pedagogy (ex. educating nurse's generations, patient education), psychology (ex. anxiety reduction, patient motivation, communication), sociology (ex. public health, community nursing), statistics (ex. data summary, analysis, and confirmation of hypotheses), etc.
The directions of nursing research can be summarized according to the main fields of medicine.

According to the teachings of Aristotelian logic, for terms to be identified with each other, they must be used to the same effect in any given instance and aspect (*principium identitatis*). A term has to be identical to itself (A=A), else A≠A, in which case we are talking about separate, different meanings [12].

Therefore, according to the above-mentioned commonalities, we should say that medicine=nursing (science), or the other way around. Another possible option is that nursing science does not exist as a discipline with its own independent areas, just as there is no nurse who is called a doctor. This relation could be summarized by the statement that nursing is an auxiliary branch of medicine that uses generalized and specialized activities assigned to its sphere to contribute to the realization of the stated goals of medicine and the development of medical science.

b) Nursing science in its visible form appears among the general health sciences concepts [13], or nurses are listed as one category of health professionals [14], but when contextualized as an activity its relation to physician care is emphasized as a basis: "Nurses practice in many specialties with differing levels of prescription authority. Many nurses provide care within the ordering scope of physicians, and this traditional role has shaped the public image of nurses as care providers. However, nurse practitioners are permitted by most jurisdictions to practice independently in a variety of settings" [15,16].

The named or 'visible' appearance of nursing science can be identified when it is used as a main category of health science. Although health science does not have a single definition, and therefore this does not solve the ambiguity surrounding the identification of nursing science, it provides a possible classification for the content of the disciplines.

Health sciences focused approach

Without a doubt, sciences can be grouped according to a number of perspectives, in order that they can, for example, serve as a system for organizing the manuscripts and doctoral

dissertations that present the findings of research in different fields [17], as well as providing a way to organize the training programs offered by the world's universities. In its purest form, nursing science appears in the category of health sciences in the systems of the world's universities' educational offerings, demonstrating that, sooner or later, life in its own way processes uncertainties, which are a serious impediment to progress [18].

Currently, the sciences are progressing at a very fast pace, so for example new sciences are being born at the meeting place of different scientific fields. Naturally, progress can occur from different directions, as a result of which a scientific area can reach the point that it leaves its cradle and takes its place as an independent branch. Psychology splitting off from philosophy or pharmacology being derived from medical sciences is good examples of fields with common goals but different focuses resulting in new fields of study.

In the classification of the sciences, the different scientific branches are usually denoted by abstract concepts (ex. life sciences, earth sciences, natural sciences, religious studies, etc.). "C*ategories* list substance (*ousia*) in the first place, while the *Topics* list what-it-is (*ti esti*). A substance, for Aristotle, is a type of entity, suggesting that the *Categories* list is a list of types of entity" [12] (Table 2).

Table 2. The connection between medical science and nursing science.

Health Sciences	
Medical Science	**Nursing Science**
Medical processes primarily focus on patients' physiological systems and the disease process.	Nursing processes primarily focus on patients' subjective responses to disease and illness.

Taking the abstract concept of the health sciences as the main category, the nature of nursing science, as well as the relation between nursing and medicine as scientific fields within this category, can be determined using the criteria of formal logic for creating definitions: "a definition defines an essence, only what has an essence can be defined.... In general, however, it is not individuals but rather species that have essences. A species is defined by giving its genus and its differentia: the genus is the kind under which the species falls, and the differentia tells what characterizes the species within that genus" [12].

As a result of the developments of the past decades, today we must take into account the differences in practices as well as their similarities when examining the relationship between nursing and medicine [19].

According to the rules by which concepts are divided, medical science ≠ nursing science, but their closest genus, health science, contains their common attributes. The chief activities of medicine and nursing are organized around healthcare. In this way, medicine and nursing science are on an equal level within health science, and they can be seen as closely complementary scientific branches.

In this sense, the *subject* of nursing science is the priority given to dedication to the health of individuals, families, and communities, as well as providing somatic and subjective responses to diseases and ailments. The *goal* of nursing science is the utilization of the results of the scientific field, derived from nursing diagnoses (somatic and subjective), through patient conducting within the framework of nursing care. Its *task* is to identify and support the particulars of people's responses in order to return as much autonomy as possible while protecting human dignity and identity in all circumstances; furthermore, to contribute to developing the potential of all fields of nursing science and practice.

Professionalism

The subjects of both nursing and medicine are human beings. Consequently, work performance partly is defined by effective collaboration with patients and other professional role partners.

Professional competence and behavior as well as the related patient's role and expected behavior are developed through socialization/vocational socialization and through interactions among the role partners and their environment.

Career identification

The medical and nursing career identification is a learning process during which a person acquires norms, values and behavioral rules belonging to the professional roles. The social learning process provides a basis for both directed and spontaneous career acquisition. The choice of career and professional development is an integrant part of personal life-span development [20].

The success of role acquirement is defined by the complexity of the behavior required by the profession, which strongly influences the possibility for learning. The clear definition of the professional requirement helps the individual acquire and elaborate their vocational role to a high degree. The choice period of the vocational training provides young people different possibilities to acquire suitable information about their wished careers. Their choice of schools is often influenced by less important features of the profession or is built on an unreal picture of their preferred choice [21].

The public image of nursing partly derives from the self-created self-concept, and the professional identity of nurses is defined by their public image, work environment, work values, education and traditional social and cultural values. Students have several heterogeneous role models from the media, from a strong and self-confident professional who is "a skilled knower and doer" to "a sexual plaything" to "a witless incompetent individual" [22].

In the context of sub-identification the 'sub' attribute refers to the uncertainty of the grounded basic information and preparation for career/school choice. The appropriateness of the previous orientation and choice becomes clear later, during the next periods. During the vocational training period the candidates acquire the objective and interpersonal knowledge and skills they need to practice their roles independently and professionally [23,24].

The site practices directed by tutors/mentors in hospitals/clinics/GPs or other places offer possibilities for getting personal experiences, through which the so-called "hidden curriculum" is learned [25].

Furthermore the atmosphere of the site units also has a major impact on career development. The characteristics of the nurse- and the Interprofessional teamwork has a definitive influence, which also feeds the belief that professional values are "caught" rather than "taught" [26] (Table 3).

Table 3. Process of role acquirement and career identification.

Process	Phases	Stages
The clarification of professional role expectations.	Sub-identification (choice of career period)	Anticipated career identification
Seeking compatibility of professional role expectation with personal characteristics.		
Acquiring professional role's skills and potential correspondence for independent practice.	Pre-identification (period of vocational training)	
Clarifying the expectation of role partners and seeking compatibility with the personality.		
Correlating the independent practice of professional roles and possible variation in professional personality.	Primary identification (period of adaptation to professional world)	Real career identification
Finding compatibility with role partners, establishing expectations and synergy with the changing demand and needs of role partners.		
Real correspondence for the expectation of role partners according to professional characteristics.	Secondary identification (period of continuous professional activity)	
Development of advanced professional individual characteristics.		

The different types of teaching institutions (e.g. clinics, hospitals) have a greater impact on later workplace choice and on the professional behavior of students than schools do. This fact highlights the responsibility of institutions in the career development of students as well as in acquiring and then retaining a future workforce. Therefore, there is a need to devote special attention to the qualifications and attitudes of institutions and mentors [27].

Reciprocity of roles

The relationships in the nursing process are basically regulated by the rights and duties of the vocational roles. Thus role partners have predetermined expectations of certain behavior patterns; practically, they anticipate the behavior of the other persons. Expectations obviously must correspond with each other, which is how normative behaviors are framed. It is generally true that, in the course of professional activity, duties and rights interact reciprocally. The rights of patients are the duties of nurses and vice versa. During these interactions, both the nurse and patient perform the already-developed and normatively-regulated roles according to their individual interpretations. Therefore each resulting behavior is influenced by the behavior of the role partners [28].

The interpersonal problem patterns of nursing mostly can be characterized by rapid changes in the interpersonal field (e.g. meeting with patients and/or their relatives, team members), the changing frequency of the interaction (e.g. nurses see patients several times, less occasions meet with physicians, physiotherapist per a day) and from the different tensions in each interaction (e.g. the themes of conversations vary, from providing for terminally ill patients and family members or discharging a patient from hospital with recovered health) [29].

The profession requires dynamic adaptation during the performance of duties. High-quality fulfillment of professional activity and suitable caring for patients are also expected, frequently under strong time pressure [30].

In cases of emotional tension derived from conflict situations, nurses frequently tend to mobilize a few "passe-partout" solutions, and their reactions become inflexible [31]. Often, they try to keep a distance, defined by their internal emotional tension, to defend themselves, and during this time they omit to look for an optimal alternative which would be better suited to solving a given situational problem [32,33]. The mutual relationship between nurses and clients and the decision-making process provided by nurses from this view are also very important, and it would be desirable in every situation if these interactions were realized without causing any injuries in role partners. In caring for patients, nurses have to use their objective and interpersonal knowledge, the quality of which reflects their professional competence in practice [34].

Professional Correspondence

Accepting health science as a mean category, in the frame of which medicine and nursing have the same importance at the same level of quality, and collaborate strongly to achieve their common aims, some defining factors for enhancing their potentials to fulfill their own missions have to be taken into consideration.

The realization of the importance of the patient-centered approach appears in Hippocrates' wise warning, stressing one of the principles to keep in mind for medicine, one that now is also applicable to nursing: "It is far more important to know what person the disease has than what disease the person has" [35].

The following consequences can be derived from these statements:

The first consequence: No professionals are able to recover from sickness in the place of patients themselves.

The second consequence: There is no professional power that could replace patient involvement in regaining or maintaining the health of the patient.

Third consequence: There are no professionals who could take the place of patients in following prescriptions.

Fourth consequence: Professionals alone cannot replace the role of collaboration between patients and professionals in ensuring a safe healing process.

Knowledge patterns

Counseling, based in psychological practices, focuses on a person's growth, on adjusting the counselee's problem-solving and decision-making. It ensures a mutually-beneficial relationship and a basis for communication, with the help of which the client can improve their own self-knowledge, become able to discover new possibilities and also initiate changes to reach their desired goals.

There are many different forms of assistance, so the stratification of the professional skills of counselors varies. Non-professional helpers (including laymen, friends and members of self-help groups) are capable of offering support beyond their own needs, communicating and using their listening skills.

Paraprofessional helpers, unlike non-professional helpers, receive formal training to help people with communication and audition (assistive conversation) tools in a specific area of concern (ex. telephone first-aid staff, psychiatric and other assistants).

Professional helpers have received higher-level counseling training and have direct experience in a field that allows them to manage and assist the problem-solving of human problems in different situations. Nursing and nurses have not been mentioned yet among professions/professional helpers (ex. social workers). If the necessity for patient-centered health care is urged by societal needs, and if nursing is accepted as a helping profession, a lack of professional knowledge and expertise in counseling come to light.

The expertise offered by the psychological discipline includes counseling and psychotherapy. Counseling is offered to people who are currently having difficulty moving past a point, taking into account the multicultural factors of an environment [36].

In features it is preventive and supportive, focusing on the present at a conscious level, aiming to facilitate the problem-solving of individuals in given nursing situations. The first level of counseling is the orientation: it aims to provide instruction, advice and information to individuals or groups. The second level is the (individual or group) consultation. It helps people in their continued decision-making beyond the orientation. The third one, psychological counseling, is provided to individuals. Next to the orientation and consultation, its aim is assisting individuals in focusing and using their own potentials and strengths.

Psychotherapy helps people who face long-term problems. It is also a supportive and preventive intervention, but it focuses more on the past and on the deeper unconscious, with the aim to reconstruct and restructure personality [37].

The skills borrowed from counseling are not enough for answering the needs of patient-centered nursing care required by society without knowledge and expertise in counseling in a specific type of setting, such as nursing [38].

Similarly, highly-trained counselors are not able to conduct patients during the nursing process without first receiving nursing qualifications [39].

Even when very complex skills derived from medicine are used in nursing, this does not make nursing overlap with medicine, as nursing's emphasis on paramedical counseling is unique [16].

Nurses who are monitoring patient's physical and subjective responses may initiate medical/psychological consultation for the safe care of their patients, based on their knowledge and expertise, directing them to treatment suitable to special signs and problems they recognize that are beyond their competencies [40].

Partnership

The patient conducting process can be considered a medium through which the values and interventions of nursing care are offered and transmitted by paramedical counseling to patients, who can then use those skills independently to maintain or regain their best possible health status at the highest quality of life [41].

The importance of patient's personalities and partnership must be rethought according to *the first consequence*, as there are no professionals able to recover from illness in the place of the patient, nor can they on their own discover a patient's attitude to a situation, especially as a patient's emotional status and coping strategy can change dynamically, according to the multivariate effects of the external and internal environment. Besides physiological responses, it is also necessary to take into account the patient's subjective responses. A single somatical diagnosis by the nurse will presumably not be a sufficient basis for a patient-centered conducting process [41].

Considering the *second consequence* reminds us that there is no professional power that could replace patient involvement in regaining or maintaining the health of the patient. If nurses use their expertise alone to set realistic goals for patients' recovery, this will presumably not be enough to establish an effective patient conducting process [42].

With the help of specific programs mutually designed with the participation of patients for each day (ex. importance of fluid replacement to maintain the functional balance of the body and prevent symptoms), patients can participate actively, consciously and with proper preparation in their own healing process. The program plan falls strictly under the patients' private data and serves as a guideline for the conducting process, helping people be accountable in the healing progress from the first day till the end of treatment.

The program package includes problems, selected by interview, physical assessment and also monitoring a patient's status, which all have a definite impact on developing a program plan most suitable for the patient. Programs based on nursing diagnoses (ex. background regarding present or other chronic sicknesses they have, possibilities for prevention of further negative consequences, preparation for examinations, medical interventions, medication, importance of control) help a patient through elaborating information and with learning different ways of self-care and new skills (ex. self-administering injections) to regain their autonomy at the highest possible level of a patient's actual health condition. Planning the program together with a patient and the new knowledge and skills acquired during the process of paramedical counseling enhance the patient's involvement and activities in the healing process, as evidenced by pedagogical experiences [43].

Working together with patients through the programs, taking into account their (somatic and subjective) reactions,

leads to the minimization of unwished effects that emerge from the *third consequence:* no professionals are able replace a patient's role in their own health in following prescriptions and guaranteeing the consistency of care [42]. Patients may think similarly and/or differently about the various recommendations suggested by professionals. The offered "best knowledge" does not consider what previous personal life experiences people have, or whether they are able to utilize them independently or need help to be able to accept the new knowledge and behavioral expectations in order to facilitate changes in their conditions [43,44]. Summarizing the effectiveness of the care program together with a patient is a promising method for ensuring the best patient outcomes.

People, who are provided information and skills feel important, accepted and acknowledged as valuable [45]. They become very well prepared and have the opportunity and inclination to ask questions relevant to their present and anticipated situations.

Regarding the performed tasks/skills, nurses gain beneficial and complex knowledge through this process. The patients' reports on their development (at the end of each programs, days and finally of the treatment period) reflect the values of the nursing process provided by patient conducting.

Although assertive communication [46] is a basic requirement in nursing, it is not enough to compensate for a lack of patient conducting. If patients do not know the plan and its implementation (ex. after a heart attack) they may demand more assistance in self-care. Assertive refusal is a conflict management strategy that should be prevented. Using the patient conducting process and its relevant program points step by step can help people with decreasing the level of their anxiety, elaborating their concerns and preventing frustrating situations [41].

People have in common their need for predictability and control of their environment. Prescriptions made according to the best knowledge of professionals without the understanding or agreement of the patient or the elaboration of the reasons for them often cause hidden or expressed frustration and irrational reactions (ex. impoliteness or demanding unnecessary assistance). Receiving threatening information often results in cognitive dissonance, causing a desire to reduce internal pressure (ex. taking the prescription of medication unseriously, because an acquaintance performs similar behavior with no perceived ill effects). A high level of anxiety influences the effectiveness of the cognitive function, and it may lead to an inability to self-actualize (ex. when a patient under stress who consults with a physician is not able to understand the information they are given or the questions they are asked) [47,48]. The patient conducting nursing plan creates a real basis for a patient-centered and safe caring process.

Let us revisit the *fourth consequence*, which states that professionals alone cannot replace the role of collaboration between patients and professionals in ensuring a safe healing process.

At the level of physicians-patients and patients-nurses the phenomenon of secondary psychic iatrogenesis has been well-documented for about one hundred years [49-52]. This effect derives from the healer's verbal and nonverbal behavior independently from the patient's sickness. This iatrogenic effect is caused by assertive communication practices between role partners [46]. Based on the dynamic interpersonal relationship and influenced by the principle of roles reciprocities, secondary psychic iatrogenesis affects all interacting partners, especially nurses who spend the most time with patients [49].

In general one of the duties of nurses is the preparation of patients for medical interventions. They supply them with relevant information about the events they undergo (what happens before, during and after). Nurses also help patients and significant people with elaborating and managing their physical and subjective responses in order to cope with their health problems and prevent possible complications.

In cases of insufficient information flow among nurses and physicians or other professionals, nurses have to get information from patients in order to interact appropriately. This may communicate to patients the weaknesses of collaborations among professionals, which can lead to feelings of uncertainty. Additionally it should be taken into account regarding this information that patients are mostly laymen and under stress during their consultations with physician, so they may miss or misunderstand important information related to their treatments, which leaves them vulnerable [48].

Furthermore, patients often ask relevant questions, ex. regarding their upcoming medical interventions. Although nurses are qualified and prepared to answer these, they have to suggest that patients ask physicians, because of the unclarified collaboration pattern between them. Weak or nonexistent collaboration generates frustration and indicates an intellectual stuttering (answering or not answering) which also easily leads to further, tertiary psychic iatrogenesis. This type of iatrogenic complication may not emerge if teamwork and continuous collaboration between nurses and physicians are effective, corresponding to criteria for safe patient care. Seeing role partnerships dynamically, this effect presumably also occurs among physicians in other contexts [49]. Objective and personal factors are equivalently core elements of safe patient care and can contribute to the cost-effectiveness of health care service.

Conclusions

Patients have the right to have their human dignity respected, which includes the right to decide regarding their help and treatments. Yet the profession has to face some inherited professional traditions whose negative effects appear in daily practice, hindering the validation of the client's independence and dignity.

At the scientific level

It can generally be said that the definition of terms depends on a multitude of factors, so the content associated with a given term can also vary. When it comes to nursing science, it is clear that the immanent concept of nursing science does not appear in this form in the systematic categorization of the sciences.

In systems that are divided by activity, nursing science cannot by its nature appear as a relatively independent discipline, as medical science is. The areas defined by the traditional framework create a contradictory situation, which serves as an impending factor rather than a facilitating one in the development of the science.

At the professional level

A lack of clear consensus regarding what constitutes professionalism appears in the different forms and levels of training programs, where there is a conflict between self-interest and ideology. The views held by institutions and educators reveal the absence of a fostering environment for nursing, which in many cases can be seen in senior staff's unprofessional attitude and in student's career identification as well [25,26]. The general medical and public perception of nursing science, the nursing profession and nursing professionals does not differentiate among nurse's qualification levels, as nursing can be found in the social and personal services, among bakery, beauty therapy, cooking, hairdressing, hotel reception, pâtisserie and confectionery and restaurant services [53]. According to the General System Theory one of the most important characteristics of the human hierarchical system is the probalistic feature, as human reactions cannot be algorithmized [54].

At the correspondence level

The importance of effective teamwork, job satisfaction and assertive communication has been evidenced for years in relation with medical errors and adverse events [55,56]. Yet, these topics are underrepresented when considering psychic iatrogenic effects with special regard to the impact of tertiary psychic iatrogeneses on nurse's personalities caused by insufficient information flow among nurses and physicians or other professionals.

Special types of skills/knowledge do not belong to only one profession (ex. certain skills to medicine or counseling to psychology), as given professional skills cannot fully delineate a profession, in this case nursing.

For patients, it is less important how many skills are delegated from medicine and applied by nurses during their treatment. It is far more important to them how they can preserve their own identities and human dignity.

Recommendations

In order to effect changes for the sake of improvement, first the background with which the undesirable stereotypes can be changed must be identified.

For science

The employment of the concept of health sciences places nursing and medical science, as well as professional nursing and medicine based on important values, into a new perspective. The new angle and the new culture of care that is made possible in the sphere of this concept is particularly important in light of the cultural requirements and economic expectations of our time. The incorporation of health, nursing and medical science into the branches of science must therefore be accomplished immediately.

For professionalism

Taking into account the importance of nursing competence as a core component of professionalism, first of all there is an urgent need for a clearly-defined description of nursing competency harmonizing with the educational structure [57-59]. Accepting the fact that nurses, as the primary providers of healthcare to all communities in all settings, are key to the achievement of the Sustainable Development Goals (SDGs) [60], it is also important to consider that which level of nursing qualifications answers the needs created by the uniqueness of nursing professionalism and answer the need for patient conducting provided by paramedical counseling. The structure of nursing education and the nursing profession is determined by several factors, ex. the shortage of physicians, the lack of compensation for nursing staff, cost-effectiveness of health care service and so on. When looking for solutions to these problems, it is advisable to remember the lesson of "the tragedy of the commons" to avoid its negative consequence. While the field of nursing is used to alleviate the above-mentioned problems instead of for positive progress, 'everybody becomes more and more poor' [61].

For correspondence

In the frame of patient conducting as part of the nursing process, nurses answering patients' somatic responses appropriately, communicating assertively and applying facilitation strategies alone are not enough. The decision-making has to extend to the patient's subjective responses as well. In general, possible alternatives are revealed during a searching process and the decision makers tend to take into account only a few from them. Instead of searching for an optimal solution, they mostly accept the first alternative which seems to be sufficient to solve a given problem and most suitable to the decision maker's preferences [32,33]. Nursing education has to take into account these facts and introduce new knowledge for patient conducting to widen the range of alternatives for minimizing the risk for or to escape the trap of "bounded rationality".

Special structures and combinations of professional knowledge can produce a new quality and uniqueness of a given professional category, in this case for nursing. In this sense nursing, based on its unique knowledge and expertise, can be woven together from the inclusion of patients, nurses, physicians and psychologists as well as among the related sciences of this field.

Interprofessional teamwork, patient-centered care, patient safety, equity in treatment quality, patient satisfaction, job satisfactions and not least cost-effectiveness depend in great measure on human factors as it is well-known that "the population problem has no technical solution" [61]. The values of nursing science and their optimal benefits are the common concern and responsibility of the primary decision makers about the investment in nursing profession and all of those who participate in it.

Conflict of Interest Statement:

The author declares that there is no conflict of interest.

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