

### Needs Assessment and Determination of the Priorities of Accountable Education in Gonabad University of Medical Sciences

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**Background:** Identifying the needs and priorities of accountable education is an important issue for providing needs based training and empowering students in responding to the real needs of the community. The present study was conducted to identify and prioritize accountable educational needs in Gonabad University of Medical Sciences.

**Methods:** This is a qualitative research. The participants in this study were selected through purposive sampling. The participants consisted of faculty members (18 people) as well as experienced managers and experts in healthcare centers and hospitals (16 people). A four-stage framework was conducted for this study. The stages included the provision of the initial list of accountable education needs, evaluation of the initial list by the experts, provision of the final list of needs for prioritization, and identification of appropriate solutions to meet the priorities obtained.

**Results:** Results of the prioritization of accountable education areas indicated road accidents as first priority with the highest mean score. Medical ethics and stress management were respectively the second and third priorities.

**Conclusion:** Identifying the priorities of accountable education may result in optimal use of limited resources in order to functionalize the education provided to students and also to be used in research.

**Keywords:** Health Education, Medical Education, Health Priorities

### تعیین الیهتیاات و تعیین اولویات التعلیم القابل للمساءلة فی جامعة کناباد للعلوم الطیبة

**الأرضية والهدف:** إن معرفة الضروریات وأولویات التعلیم القابل للمساءلة فی مسئلة مرتبة من أجل تعلم الضروریات وتكین الطلاب قدر المستطاع للإجابة علی ضروریات المجتمع الواقیة وتقدیرهم الضمرات الطیبة والعلاجیة الجیرة. حیث أن هذا الأمر یؤدی بالنسبة إلی رضا أكثر وتحسن السلامة الصھیة والعقلیة للأفراد المجتمع. یعرف هذا التحقیق إلی معرفة وترتیب أولویات المتطلبات التعلیمیة البنیة علی إلتیاات المجتمع فی جامعة کناباد للعلوم الطیبة.

**الطریقة:** هذه الدراسة دراسة کیفیة وتمت فیها الإستفادة من طریقة تحلیل المحتوى. تم اختیار المشارکین فی هذه الدراسة بالطریقة البنیة علی الیهرف. تتألف مجموعة المتسارکین فی هذا التحقیق من أعضاء الریسة التدریسة وهنم ۱۸ شخص. و المرءاء و حائزى الإجازات ذوی التجربة العاملین فی المراكز الطیبة و المستشفیات وعددهم ۱۶ شخصاً. لإجراء هذه الدراسة تم تعیین إطار عمل يتألف من ۴ مراحل. وهذه المراحل فی إعداء فرس أولى من متطلبات التعلیم القابل للمساءلة. تعیین الفرس الأولى من قبل المتخصصین. إعداء قائمة المتطلبات النسائیة من أجل ترتیب الأولویات وتعیین الطرق المناسبة من أجل الإجابة علی الأولویات الناتجة.

**الهاصل:** حسب النتائج فإن حوادث الطرق من الأولویات الأولى وذلك بتوسط نقاط ۶/۴۵ وانحراف معیارى ۲/۸۷. أما الأخلاق الطیبة و إدارة الإجراء كانوا ضمن الأولویة الثانیة والثالثة وكانت نتائجهم بالترتیب متوسط نقاط وانحراف معیارى (۶/۳۶±۲/۹۰) و (۶/۱۸±۳/۴۴).

**التتیبة:** إن تعیین وعرض أولویات التعلیم القابل للمساءلة یستطیع أن یكون وسیلة للإستفادة الأمثل من السابغ المالیة المحدودة من أجل ممارسة التعلیم المعروض للطلاب والدراسات الأخرى.

**الكلمات الیهلیة:** التعلیم القابل للمساءلة. ترتیب الأولویات. تعیین الیهتیاات

### نیاز سنجی و تعیین اولویت های آموزش پاسخگو در دانشگاه علوم پزشکی کناباد

**زمینه و هدف:** شناخت نیازها و اولویت های آموزش پاسخگو یک مسئله مهم در فراگیری آموزش های لازم و توانمندسازی هر چه بیشتر دانشجویان در پاسخگویی به نیازهای واقعی جامعه و ارایه خدمات بهداشتی درمانی با کیفیت بوسیله آن ها می باشد. که این امر در نهایت می تواند باعث رضایتمندی بیشتر و ارتقاء سلامت جسمی و روانی آحاد جامعه گردد. در این راستا پژوهش حاضر با هدف شناسایی و اولویت بندی نیازهای آموزشی مبتنی بر نیازهای جامعه در دانشگاه علوم پزشکی گناباد انجام پذیرفت.

**روش:** این پژوهش در زمره پژوهش های کیفی است و در آن از روش تحلیل محتوا استفاده شده است. مشارکت کنندگان در این پژوهش به روش مبتنی بر هدف انتخاب شدند. جامعه آماری پژوهش مرکب از اعضاء هیات علمی دانشگاه (۱۸ نفر) و مدیران و کارشناسان با تجربه مراکز بهداشتی درمانی و بیمارستان ها (۱۶ نفر) بودند. برای انجام این مطالعه چارچوبی شامل ۴ مرحله در نظر گرفته شد. که این مراحل شامل تهیه فهرست اولیه از نیازهای آموزش پاسخگو، ارزیابی فهرست اولیه توسط متخصصین، تهیه لیست نهایی نیازها برای اولویت بندی و تعیین راهکارهای مناسب برای پاسخگویی به اولویت های بدست آمده بود.

**یافته ها:** بر اساس نتایج بدست آمده در این پژوهش سوانج و حوادث جاده ای با میانگین امتیاز ۶/۴۵ و انحراف معیار ۲/۸۷ اولویت اول و اخلاق پزشکی و مدیریت استرس به ترتیب با میانگین و انحراف معیار امتیاز (۶/۳۶±۲/۹۰) و (۶/۱۸±۳/۴۴) اولویت های دوم و سوم بودند.

**نتیجه گیری:** تعیین و ارائه اولویت های آموزش پاسخگو می تواند به عنوان ابزاری جهت استفاده بهینه از منابع مالی محدود در راستای کاربردی کردن آموزش های ارایه شده به دانشجویان و همچنین پژوهش ها مورد استفاده قرار گیرد.

**واژه های کلیدی:** آموزش پاسخگو، اولویت بندی، نیازسنجی

### کناباد کی میڈیکل یونیورسٹی میں تعلیمی امور کے تقاضوں اور ترجیحات پر تحقیق

**بیک گراؤنڈ:** تعلیمی حلقوں میں تعلیمی تقاضوں اور ترجیحات کا سمجھنا نہایت اہمیت کا حامل ہے کیونکہ اس سے طلباء کی ضرورتوں کو پورا کیا جاسکتا ہے اور اس کے نتیجے میں معاشرے کو بہترین میڈیکل سروسز فراہم کی جاسکتی ہیں۔ جب ہم معاشرے کو اچھی میڈیکل سروسز فراہم کریں گے تو معاشرہ جسمانی اور نفسیاتی لحاظ سے صحت مند رہے گا۔ ان اہداف کے پیش نظر یہ تحقیق انجام دی گئی ہے تا کہ معاشرے میں میڈیکل ترجیحات کو دیکھتے ہوئے گناباد میڈیکل یونیورسٹی کی ضرورتوں کو پورا کیا جاسکے۔

**روش:** اس تحقیق میں ہدف کے تحت شرکت کرنے والوں معین کیا گیا تھا۔ ان میں فیکلٹی کے اہلکارہ اراکین، اور میڈیکل مراکز نیز اسپتالوں کے مینیجر اور ماہرین نے شرکت کی تھی۔ یہ تحقیق چار مرحلوں میں انجام دی گئی تھی۔ یہ مراحل موثر تعلیمی ضروریات کی ابتدائی لسٹ تیار کرنا، ماہرین کی جانب سے ضرورتوں کی فہرست کی تیاری، ترجیحات کو تعین کرنا، نیز ان ضرورتوں کو پورا کرنے کی راہوں کا تعین ہے۔ اس تحقیق سے یہ ساری باتیں معلوم ہوئی ہیں۔

**نتیجے:** اس تحقیق کے نتیجوں سے معلوم ہوتا ہے کہ سڑک کے حادثات پہلی ترجیح میں آتے ہیں اور اس کے بعد میڈیکل عملے کے طور طریقوں کو دوسرا مقام حاصل ہوا۔

**سفارشات:** تعلیمی ترجیحات کو معین کرنے سے محدود مالی ذرائع سے بہترین استفادہ کیا جاسکتا ہے۔

**کلیدی الفاظ:** میڈیکل تعلیم، ترجیحات، فیکلٹی ارکان، ماہرین۔

## INTRODUCTION

Universities were developed with the philosophy of meeting the needs and expectations of communities. In other words, accountability has been an integral part of the philosophy of educational centers since the formation of them, and this can never be neglected (1). Medical science universities are no exception and are committed to directing education and research, and providing services to meet the needs and expectations of societies (2). Over the past few decades, factors such as lifestyle changes, epidemiological transition of diseases (increased prevalence of non-communicable diseases and reduced contagious diseases), appearance of new diseases, changes in the health concept (from therapy-centered to health-centered), and increased costs of diagnostic and therapeutic procedures have caused the health system not to respond adequately to the people's health priorities, and sometimes not to function as properly as it should, even in emergency situations (3).

Therefore, the need for a serious review of medical education programs has been widely focused throughout the world so that these programs may be adapted to the above-mentioned changes. In these revisions, which are being investigated and implemented in both developed and developing societies, a new concept has been introduced, namely Socially Accountable Medical Schools (4).

The concept of social accountability, as defined by the World Health Organization, is the obligation to direct the education, research and medical services towards addressing the priorities of health needs of communities, regions and the world, based on the values of quality, equity and cost effectiveness. Schools of medical sciences play a major role in fulfilling this commitment by educating human resources, and this quality has to be observed in all various aspects of education (5). Since a great deal of authority in terms of revising and modifying curricula has been delegated to universities, it seems necessary to seize the opportunity to create more interactions between universities and communities. In line with the social role of higher education, appropriate strategies for improving the design and implementation of desirable curricula should be adopted through the cooperation of all beneficiaries (3). In other words, medical education has to respond to the needs of communities (5).

Currently, medical education system has been designed to carry out three missions: education, research and health services. Hence, universities must educate students who can use their knowledge, skills and preparedness to provide social services and fulfil the expectations of local and national communities (6). In this regard, identifying the needs and priorities of accountable education will increase the quality and quantity of medical education, enable the students to respond to real needs of the community and provide effective health services (7). This will ultimately lead to satisfaction and improved physical and mental health of different community groups. Thus, the Iranian Ministry of Health and Medical Education has considered the current status of the country in terms of the burden of diseases, population pyramid changes, and cultural and social issues,

and has emphasized the need for evolution in medical education. It has provided the universities and related institutions with a clear path by developing packages of evolution and innovation in medical education, one of the main policies and goals of which is the institutionalization of accountable education approach in the health system. Hence, the Education Deputy of Gonabad University of Medical Sciences, in cooperation with the Education Development Center (EDC), committed to assess the needs and priorities of accountable education, and considered the development of programs aimed at fill possible educational gaps in this area by cooperating with other university deputies, managers and instructors in educational departments, experienced managers and experts in health centers and hospitals. Therefore, the present study was conducted in Gonabad University of Medical Sciences with the aim of identifying and prioritizing accountable educational.

## METHODS

This is a qualitative study. After receiving the code of ethics for conducting this research, (IR.GMU.REC.1395.100), issued by the Ethics Committee of Gonabad University of Medical Sciences, the participants were selected through purposive sampling. Purposive sampling, which is also known as non-probability, targeted or qualitative sampling, means purposive selection of the research units for gaining knowledge or information. This type of sampling involves the selection of the units under study based on the research objective and not only on a random basis (8).

The participants consisted of faculty members (18 people) and experienced managers and experts in health centers and hospitals (16 people) who had a bachelor's or higher degree and had at least one year of work experience and were also interested in participating in the research. The participants were explained that the information would be confidential and the results would be announced generally and without mentioning their names.

The first stage included the provision of the initial list of accountable education needs. This stage was carried out as follows: 1) a review of past studies as well as an investigation of high-level documents and guidelines of the Ministry of Health; 2) interviews with managers and experts in healthcare centers and hospitals (16 people) as semi-structured interviews. The interviews started with the general question of "What do you think of accountable education and the education based on community needs?" and continued with more specific questions such as "What are the examples of accountable education?" Wherever needed, probing questions were used to clarify and ensure that the interviewees properly understood every question during the interviews. At the end of the interviews, qualitative content analysis was used with a summarization approach. This kind of content analysis could also go beyond counting, which is the analysis of the content concealed in the words. In this type of analysis, the focus is on the discovery of fundamental meanings of a term or its contents (9); and 3) using a survey form for the faculty members (18 people), consisting of two sections: demographic characteristics and

occupational records, and the opinions of the faculty members about accountable education needs they meant. The activities done in the second stage included the formation of expert groups. At this stage, the initial list of the accountable education needs prepared in the previous stage was reviewed and coded in two sessions by the research team in the focus groups of experts, according to non-iteration and applicability criteria. The coding was done through the open coding method; i.e. all the educational titles were listed without prioritization.

In the third stage, the list obtained from the previous stage was provided to the educational departments of the universities to be scored. For this purpose, the scoring criteria were first determined. The criteria included compliance with the needs of the region, the chance of success for implementation, and the effectiveness in improving the quantity and quality of accountable education. At this stage, the ranking system was used for prioritization. It means that, 36 needs of the accountable education were inserted in each survey form, and the educational departments were asked to give a score of 1 to 9 on each item in accordance to the three criteria listed. The priorities were then determined based on the mean scores obtained from all the educational departments. The highest and lowest priorities were respectively given to the items with the

highest and lowest scores. In the fourth and last stage, the educational departments were asked to state their proposed strategies for achieving the educational goals associated with each of the priorities. The strategies proposed by the educational departments were investigated at the EDC through the formation of specialized groups in order to achieve the established priorities based on the existing facilities and status of Gonabad University of Medical Sciences. This way, the priorities of accountable education and their operational strategies were determined by the faculty members of the educational departments as well as the experienced managers and experts in the health centers and hospitals of Gonabad University of Medical Sciences.

## RESULTS

In the first stage including the review of literature as well as a review of high-level documents and guidelines of the Ministry of Health, and the interviews with the experts and faculty members, and also completing the survey forms, 60 areas were identified as Accountable Education Needs. In the second stage, the initial list of accountable education needs was investigated in two sessions through the formation of focus expert groups for eliminating repetitive items and examining their applicability. After eliminating repetitive items and those that the experts believed were not

**Table 1. List of accountable education needs**

Row	Accountable Education Need	Row	Accountable Education Need
1	Medical Ethics	19	Infertility
2	blood transfusion	20	Abortion
3	Aging, diseases and care provision	21	AIDS and sexually transmitted diseases
4	Addiction and its treatment	22	Oral hygiene (with emphasis on children at pre-school age)
5	Air pollution and diseases caused by it	23	Healthy nutrition of the middle aged
6	Burns	24	Healthy Nutrition and Physical Activities of the Elderly
7	Correct and reasonable prescription	25	Considering education in the field with an emphasis on PHC
8	Distance medical education	26	Road traffic accidents
9	Medical errors and drug interactions	27	Life skills, parenting and marriage (treating a spouse)
10	Natural childbirth	28	Common psychiatric disorders (anxiety and depression)
11	How to treat and behave the patients with special diseases (cancers, etc.)	29	population Proportion
12	Preventing and screening diseases and teaching related concepts to the community	30	Iron deficiency anemia
13	Self-care and educating it to the community	31	Mental health of students
14	Establishing appropriate relationships and providing services to the patients with different cultures and religions	32	Professional Behavior
15	stress management	33	Updating toxins and disinfectants
16	Complementary and Alternative Medicine (advantages, disadvantages, misconceptions and non-scientific beliefs)	34	Ergonomics
17	non-communicable diseases	35	Chemical and physical hazards at the work environment (measurement and control)
18	Common diseases and disasters in the region (brucellosis, tuberculosis, poisoning, bites)	36	Teaching students on application indicators in the field of healthcare

applicable, and also by integrating similar items, accountable education needs were summarized into a shorter list of 36 items (Table 1).

The process of the third and fourth stages included the submission of the list of 36 accountable education needs to the managers of the educational departments to evaluate and prioritize the items, identify appropriate strategies to meet these priorities. Then with conducting two focused group in EDC the comments and suggestions of the educational departments summarized and finally 10 priorities of accountable education as well as the appropriate strategies for addressing them extracted. The results indicated that road traffic accidents accounted for the first priority with the mean score of 6.45 and the standard deviation of 2.87, and medical ethics and stress management were respectively the second and third priorities with the mean scores and standard deviations of  $6.36 \pm 2.90$  and  $6.18 \pm 2.44$ . The ten priorities of accountable education as well as the proposed strategies are presented in Table 2.

### DISCUSSION

In this research, a four-stage framework including the provision of an initial list of accountable education needs, evaluation of the initial list by the experts, provision of a final list of the needs for prioritization, and determination of appropriate solutions to meet the priorities was used to identify the accountable education needs and the appropriate strategies for addressing them in Gonabad University of Medical Sciences.

Education based on community needs will improve the performance of health workforces for providing healthcare services. It may also shift the focus of medical education from patient-centered toward community-centered approaches along with designing educational programs for improving health and understanding health needs of the communities (10). Studies have shown that meeting community needs and expectations requires a revision of the goals, content,

teaching methods and planning in higher education, so that they would be based on the needs of communities, and this indicates the need for fundamental and multi-aspect transformation in educational programs and promoting their processes in such a way that the needs of communities and meeting those needs would be more prominent (5). Achieving this goal depends mainly on the exact determination of the priorities and efficient allocation of available resources (11). Therefore, needs assessment, prioritization, and identifying appropriate solutions to the needs, followed by providing national and regional priorities to managers, planners and especially faculty members of medical universities can have a significant influence on designing accountable curriculum (3).

Traffic road accidents as a first priority in this study are considered a social phenomenon in our country that requires the identification of its underlying dimensions including cultural, psychological, sociological, advertising, judicial, and medical issues as well as the role and position of the police and also the technological failures such as the quality of roads and streets and the quality of automobiles manufactured (12).

Regarding the number of victims, road traffic accidents are the second cause of death in Iran, and more than one third of hospital beds in the country are devoted to road accident victims, while road traffic accidents are, on average, the eighth cause of death in the world (13).

According to the Iranian Forensic Medicine Organization, the incidence of fatal traffic accidents in Khorasan Razavi province was 28 per 100,000 people in 2011, which indicates a high rate of deaths caused by traffic accidents in this province (14). Hence, addressing the educational needs related to road traffic accidents, not only throughout Gonabad city but also at the provincial and national levels, is one of the most important educational and even research priorities. In this regard, the results of a study by Malek Afzali et al. on needs assessment and prioritization of the Iranian

**Table 2. Ten priorities of accountable education**

priority	Accountable Education Need	Obtained Score	Proposed Strategy
1	Road traffic accidents	6.45±2.87	Holding related workshops
2	Medical ethics	6.36±2.90	Holding workshops, short-term courses at the beginning of each semester, tutoring for students
3	Stress management	6.18±2.44	Holding related workshops
4	Natural childbirth	5.36±3.58	Holding workshops, short-term courses
5	Addiction and its treatment	5.00±3.63	Inclusion in lesson plans for students - Holding workshops for various target groups
6	Medical errors and drug interactions	5.00±3.89	Holding related workshops
7	Self-care and educating it to the community	4.91±2.94	Holding related workshops
8	Non-communicable diseases	4.91±3.67	Holding related workshops
9	Preventing and screening diseases and teaching related concepts to the community	4.82±3.28	Inclusion in lesson plans for students - Holding workshops for various target groups
10	Life skills, parenting and marriage (treating a spouse)	4.82±3.76	Inclusion in lesson plans for students - Holding workshops for various target groups

\*mean ± standard deviation

health system showed that accidents were the first priority of the health system in most provinces (15).

Medical ethics is a branch of professional ethics that deals with the ethical and specialized standards for medical practitioners. It has attracted the attention of many scholars and authorities of the world in recent years, and has also become a modern science in the world taken into consideration by scientific and medical communities (3). Medical ethics has special importance as a complement to medical education, and it is now taught at various levels of medical education in many countries. Due to the increased number of ethical problems in recent years, teaching professional ethics and promoting it among medical students have become additionally important (16).

The results of some studies carried out on ethical values in the Iranian hospitals, showed that the status of ethical values in hospitals was moderate to low (17). Therefore, it seems that teaching ethical values, especially professional ethics, to the students and staff is not only an educational priority in Gonabad University of Medical Sciences, but also a principle in medical education system of the country (18).

In the present study, a comprehensive approach included the document analysis of high-level documents and the

guidelines of the Ministry of Health, analysis the comments of the specialists, managers and experts from other deputies, were applied.

Determining the accountable education priorities and development of relating program may improve essential competencies in students and shift limited resources to cost-effectiveness interventions. It is recommended that the educational department in medical universities coordinate the education programs and financial support with the declared priorities, and update these priorities with an interval of two or three years.

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