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Research Article

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Social Accountability in a Faculty of Medicine: A Cross-Sectional Study in a Developing Country

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Abstract

Background and Objective: Social accountability in medical education emphasizes aligning training, research, and service with the health needs of society. Despite its importance, faculty members' awareness and perception of accountable education remain unclear in many contexts. Therefore, this study aims to assess faculty members' perceptions of social accountability across academic departments.

Methods: This cross-sectional study was conducted in 2022 among faculty members at the Faculty of Medicine, Mashhad University of Medical Sciences, Iran. Participants were recruited through stratified convenience sampling, resulting in a final sample of 240 faculty members. Data were collected using a validated social accountability questionnaire consisting of 25 items across 10 domains. Descriptive and inferential statistical analyses, including t-tests, ANOVA, and correlation analyses, were performed using SPSS version 19.

Findings: Among participants, 67.1% were male, and the mean age was 47.15 ± 8.76 years. No significant differences in accountability scores were found by gender (p=0.603), academic rank (p=0.964), years of experience (p=0.071), or educational qualification (p=0.217). However, faculty members from basic science departments reported significantly higher social accountability scores than those from clinical departments (p = 0.023). The highest accountability scores were reported in Obstetrics & Gynaecology, Radiation Oncology, English, and Bacteriology departments, while the lowest were in Public Health, Immunology, and Psychology departments.

Conclusion: The study highlights variability in social accountability across departments, with better performance in basic sciences compared to clinical departments. These findings emphasize the need for targeted strategies, policy support, and faculty development programs to enhance accountability in medical education and better address community health needs.

Keywords*:* Social accountability, Medical education, Developing country

Introduction

Since the 1980s, the World Health Organisation (WHO) has actively promoted the concept of socially accountable medical education and the development of socially accountable medical schools (1). Accountable education specifically indicates the plans that include human resources, who not only have technical and scientific qualifications, but are also capable of understanding the socio-cultural aspects of local communities. It obliges medical schools to align their education, research, and service activities with the prioritized health needs of the communities they serve, thereby promoting equity, quality, and effectiveness within healthcare systems (2, 3).

Global health and social accountability are two key approaches in 21st-century medical education (4). Unfortunately, the primary purpose of social accountability often remains overlooked by both students and faculty members within medical schools (5). Accountability in medical education influences all aspects of healthcare demands and operational areas within society. It involves training physicians who are competent in addressing health issues at the three levels of service provision (6, 7).

The principal challenge confronting medical schools in the twenty-first century lies in their responsibility to implement community-based medical education that aligns with the health needs of the community. This approach aims to cultivate competent graduates capable of delivering optimal healthcare outcomes. In response to the global shift toward anticipating both individual and societal health requirements, educational curricula have been tailored to address the priority health concerns of nations. Consequently, social accountability has been integrated into the educational programs of certain medical schools (8).

Due to the significance of this topic, numerous studies have been conducted in Iran. For example, a study by Taramsari et al. highlighted a growing concern regarding the insufficient skills and competencies of recent medical graduates (9). Similarly, a descriptive study conducted by Amini et al. assessed the extent of realization of social accountability education indicators in clinical departments of Tabriz University of Medical Sciences (10). Furthermore, Akbari-Farmad et al. explored faculty members' perceptions of challenges in responsive medical education through a qualitative study at Shahid Beheshti University of Medical Sciences, utilizing a traditional content analysis approach (11).

Given the growing emphasis on socially accountable medical education and the pivotal role of faculty members in its implementation, it is essential to understand faculty perceptions of social accountability across academic disciplines. Therefore, this study aimed to assess the status of social accountability education from the perspective of basic science and clinical faculty members at the Faculty of Medicine, Mashhad University of Medical Sciences, Iran, in 2022.

Methods

Study Design

This cross-sectional observational study was conducted between March and July 2022 at the Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran (MUMS). It was designed and reported in accordance with the STROBE guidelines for cross-sectional studies. The study population consisted of all faculty members of the Faculty of Medicine (N=628). The sample size of 240 participants was calculated using Morgan's table to ensure adequate representation of the faculty population and sufficient statistical power for group comparisons. Of the 628 eligible faculty members, 240 completed the questionnaires (response rate: 38.2%). Stratified convenience sampling was used due to practical constraints related to faculty availability and workload. This approach allowed proportional representation of basic science and clinical departments. Incomplete questionnaires were excluded. The study was approved by the Ethics Committee of Mashhad University of Medical Sciences (Code: IR.MUMS.REC.1401.348). All participants provided informed consent, and the principles of the Declaration of Helsinki were followed. To reduce response bias, participants were assured of anonymity and confidentiality. Nevertheless, self-reported data may be subject to social desirability bias.

Data Collection

The primary outcome variable was the total social accountability score. Explanatory variables included gender, age, academic rank, years of work experience, academic degree, and educational group (basic science vs. clinical).

Data were collected using two instruments:
1. A demographic checklist.
2. The standardized "Social Accountability in Medical Schools" questionnaire developed by Amini et al. (12). This questionnaire contains 25 items across ten domains: community needs assessment, collaboration with the health system, training efficient human resources, competency-based education, accountable management, standards, quality promotion, accreditation mechanisms, global principles/local considerations, and community participation. Responses are scored on a 5-point Likert scale from 1 (very poor) to 5 (excellent), yielding a total score between 25 and 125, with higher scores indicating greater accountable education. The questionnaire has high reliability, with

a Cronbach's alpha of 0.95 for the entire tool and 0.92 for the criteria. An electronic version of the questionnaire was created using Google Forms and distributed to faculty members via institutional email and messaging apps. Reminder messages were sent weekly for four months. To improve the response rate, printed questionnaires were also distributed personally after the first two months.

Data Analysis

Data were analysed using SPSS version 19. Quantitative variables were reported as mean± standard deviation (SD) for normally distributed data and median with interquartile range (IQR) for non-normally distributed data. Categorical variables were presented as frequencies and percentages. Data normality for quantitative variables was evaluated using the Shapiro-Wilk test alongside visual inspections of histograms. For comparisons between two independent groups, the independent t-test was employed for normally distributed data, while the Mann-Whitney U test was used for non-normal distributions. For comparisons involving more than two groups, One-Way ANOVA or the Kruskal-Wallis test was utilized, depending on the normality of the data distribution. Correlation analyses were conducted using Pearson's correlation coefficient for normally distributed variables and Spearman's rank correlation for non-normal variables. A p-value< 0.05 was considered statistically significant.

Results

Of the 628 eligible faculty members, 260 responded to the survey. After excluding 20 incomplete questionnaires, data from 240 participants were included in the final analysis (response rate: 38.2%). Among the 240 faculty members who participated in the study, the majority were male (67.1%). The most common range of work experience was 11-20 years (45%). More than half of the participants held the academic rank of assistant professor (57.1%), and the most common academic degree was PhD (47.7%). Additionally, clinical departments accounted for the highest proportion of participants (55.8%).

In our study, the score of accountable education was examined in relation to gender, work experience, educational group, academic degree, and educational qualification. Table 2 shows the results obtained for each group. According to the data, no statistically significant relationship was observed between accountable education scores and gender ($p = 0.603$), work experience ($p = 0.071$), academic degree ($p = 0.964$), or educational qualification ($p = 0.217$). However, a significant difference was found between the basic sciences and clinical educational departments ($p = 0.023$), with the basic sciences departments demonstrating a notably higher responsive education score.

Table 1: The demographic characteristics of the participants

Characteristic		Frequency	Percentage (%)
Gender	Female	79	32.9
	Male	161	67.1
Work experience	0 to 10 years	87	36.3
	11-20 years	108	45.0
	More than 20 years	45	18.8
Academic rank	Assistant professor	124	51.7
	Associate professor	92	38.3
	professor	24	10.0
Educational de-	Basic sciences	106	44.2
	Clinical	134	55.8
Educational qualification	PhD	92	47.7
	Specialist physician	69	35.8
	Fellowship and Subspecialty physician	32	16.5

Table 2: The score of accountable education in different groups

Accountable education score is reported based on the total questionnaire range 25-125.

Characteristic		Accountable education score mean ± SD or median (IQR)	P value
Gender	Male	(8.5) 90	0.603
	Female	(14) 88	
Work experience	0 to 10 years	(14) 87	0.071
	11 to 20 years	(11) 91	
	More than 20 years	(9) 91	
Educational department	Clinical	11.10±87.53	0.023*
	Basic science	11.15±90.96	
Academic degree	Assistant professor	(8.5) 89	0.964
	Associate professor	(18) 90	
	Professor	(8) 91.5	
Educational qualification	PhD	(12) 88	
	Specialist physician	(18) 90	
	Fellowship and Subspecialty physician	(20) 87	0.217

Furthermore, we examined the correlation between responsive education scores and both the age and work experience of the faculty members participating in the study. There was no significant correlation between accountable education scores and age ($p = 0.229$) or work experience ($p = 0.059$).

Figure 1 examines accountable education scores across different academic departments. As observed, according to the instructors, the highest accountable education was reported in the Departments of Obstetrics and Gynaecology, Radiology, Oncology, and English, while the lowest accountable education was noted in the Departments of Public Health, Immunology, and Psychology.

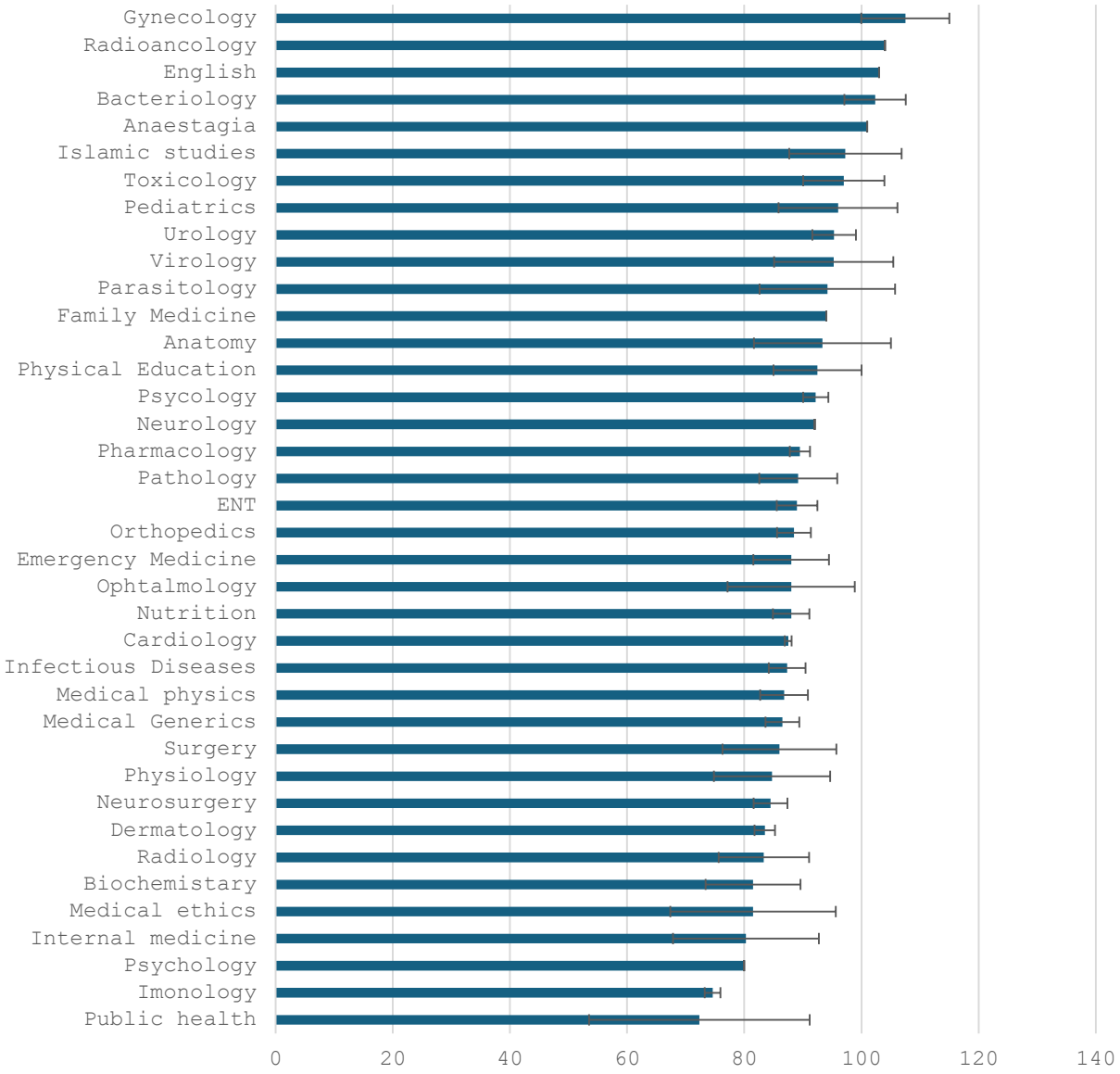

Figure 1: Evaluation of accountable education score among different academic department

Discussion

The present study examined faculty members' perceptions of social accountability education. Overall, no significant differences were found across demographic variables, while a meaningful gap between basic science and clinical departments emerged. These findings suggest structural and educational differences between departments, which may influence the integration of accountability principles.

An interesting and statistically significant finding was observed between basic sciences and clinical departments. This may reflect differences in educational curricula, the connection between teaching and practice, as well as variations in the interests and perspectives of faculty members regarding social accountability and medical education. This finding suggests that the nature and structure of educational content and faculty engagement differ between these groups, potentially influencing their perceptions and implementation of social accountability principles.

Overall, the results highlight the need for tailored interventions aimed at enhancing social accountability education, especially by addressing the disparities between different academic departments. Further research could explore the underlying factors contributing to these differences to inform effective policy and curriculum development (13).

In a cross-sectional study conducted at Jahrom University of Medical Sciences (JUMS), Sanie et al. (14) evaluated social accountability within clinical departments. Their findings indicated generally low scores, highlighting a critical need for improvements in teaching methodologies and faculty competencies. While their study revealed that participants' perceptions of their educational departments were low—indicating a need for resource allocation, faculty development, and the adoption of modern pedagogical methods (15)—our findings demonstrated significantly higher accountability scores. This discrepancy suggests that the institutional framework and educational support systems at MUMS may more effectively facilitate the implementation of social accountability principles.

Pourabbas et al. examined the status of social accountable education in the clinical departments of Tabriz University of Medical Sciences, addressing the criteria for including core values and indicators of accountability in the mission and strategic objectives of clinical educational departments (10). They found notable disparities in social accountability indicators across clinical departments in Tabriz, with some units not fully meeting expected standards. This aligns with our results, which also showed variability across departments—particularly between basic sciences and clinical departments—highlighting a broader, nationwide pattern of uneven accountability integration. Our study also examined the influence of variables such as gender, educational degree, work experience, and educational qualification. Both studies employed the validated Jalili et al. questionnaire to assess social accountability education scores(12).

Another research published by Koepke et al. (15) investigated the perspectives of faculty, staff, and students regarding the key drivers of social accountability in Canadian medical schools. Koepke et al. identified key drivers of social accountability in Canadian medical schools, including strong leadership, accreditation pressures, community engagement, and the presence of dedicated champions. These factors help explain the departmental differences observed in our findings; variations in institutional support and engagement may contribute to lower scores in certain groups, especially clinical departments.

However, in our study, the training of competent human resources within the health system and society was identified as a crucial factor in evaluating social accountability education. Human resource training itself encompasses an important criterion: the estimation of academic disciplines and training programs based on the needs of the country and society, which is not always under the control of educational groups. The next two criteria involved, respectively, attention to the competencies required by society and the continuous professional development of university faculty (16). Additionally, ensuring the dynamism of medical education programs, promoting social accountability education, and updating educational standards are among the most important concerns for every educational group, a point that our study also emphasized (10).

Several Iranian studies have emphasized the importance of developing competent human resources, aligning educational programs with societal needs, and regularly updating academic standards to strengthen social accountability. Our results similarly underscore the need for faculty development and curriculum alignment, particularly in departments with lower accountability scores, to improve responsiveness to community health priorities.

This study has several limitations that should be considered. First, the reliance on self-reported data may introduce response and social desirability

bias, as participants might overstate their commitment to accountability. Second, the use of convenience sampling within a single-institution setting limits the generalizability of the findings to other medical schools. Third, the study did not measure specific structural and organizational factors, such as workload disparities or levels of institutional support, which could significantly influence faculty perceptions. Furthermore, the scope was limited to faculty members; including students, residents, and community stakeholders would have offered a more multidimensional perspective on social accountability. Finally, the cross-sectional design prevents the assessment of changes over time and precludes the establishment of causal relationships. Future research is recommended to incorporate multiple sources of data (faculty, students, and communities), adjust for organizational variables, apply mixed methods approaches, and evaluate accountability indicators longitudinally.

The findings of this study provide several important implications for educational planning and policymaking. The observed differences between basic science and clinical departments highlight the need for targeted institutional strategies to strengthen social accountability across all academic units. University policymakers may consider integrating accountability principles more explicitly into curriculum design, faculty development programmes, and departmental evaluation systems.

Departments with lower accountability scores such as public health, Immunology and Psychology would benefit from structured support, including training workshops, community engaged educational activities, and clear institutional guidelines. Moreover, the results emphasize the importance of aligning educational policies with community health priorities, strengthening collaboration with the health system, and allocating resources toward programs that enhance responsiveness to social needs.

Conclusion

Based on the study results, the highest levels of accountable education were observed in the departments of Obstetrics and Gynecology, Radiation Oncology, English, and Bacteriology. Conversely, the departments of Public Health, Immunology, and Psychology exhibited the lowest scores in this domain. Interestingly, the overall status of accountable education was found to be more favorable in basic science departments than in clinical departments. The results can serve as a valuable evidence base for university administrators and policymakers to revise and enhance educational strategies aimed at improving social accountability. By using these findings to reform curricula, allocate resources more effectively, and implement faculty development initiatives, medical schools can better align their missions with the health needs of the community. Strengthening accountability oriented policies may ultimately improve the quality and equity of medical education at the national level.

Footnotes

Acknowledgments: Not applicable.

Authors' Contribution: A.M: Conception, design, manuscript writing, and final approval. S.N: Conception, design, data analysis, interpretation, supervision, manuscript writing, and final approval. K.B: manuscript writing. S.G: Data gathering. M.T: supervision, manuscript writing. N.S: supervision, manuscript writing. A.A: supervision, manuscript writing.

Conflict of Interests Statement: The authors declare that they have no conflict of interest.

Ethical Approval: The ethics committee of Mashhad University of Medical Sciences, Mashhad, Iran, approved the study protocol (Code: IR.MUMS.REC.1401.348). This study was conducted based on the Declaration of Helsinki and its later amendments. On the registration day, informed written consent was received from the study participants.

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Reference

1-Kelly D, Hyde S, Abdalla ME. Mapping health, social and health system issues and applying a social accountability inventory to a problem based learning medical curriculum. *Med Educ Online.* 2022;27(1):2016243.https://doi.org/10.1080/10872981.2021.2016243. [PMID]

2-Wood B, Bohonis H, Ross B, Cameron E. Comparing and using prominent social accountability frameworks in medical education: moving from theory to implementation in Northern Ontario, Canada. *Can Med Educ J.* 2022;13(5):45-68.https://doi.org/10.36834/cmej.73051. [PMID]

3-Boelen C, Heck JE. Defining and measuring the social accountability of medical schools. Geneva: World Health Organization; 1995.

4-Fitzgerald M, Shoemaker E, Ponka D, Walker M, Kendall C. Global health and social accountability: an essential synergy for the 21st century medical school. *J Glob Health*. 2021;11:03045.https://doi.org/10.7189/jogh.11.03045 . [PMID]

5-Sebbani M, Adarmouch L, Mansouri A, Amine M. Social accountability: attitudes and awareness among undergraduate medical students in Morocco. *J Adv Med Educ Prof*. 2021;9(1):1.https://doi.org/10.30476/jamp.2020.87197.1298. [PMID]

6-Dehghani MR, Azizi F, Haghdoost A, Nakhaee N, Khazaeli P, Ravangard Z. Situation analysis of social accountability medical education in universities of medical sciences using SWOT model. *Strides Dev Med Educ*. 2014;10(4):403-12.

7-Ghaffari R, Taghizadieh A, Behshid M, Somi MH, Mirzazadeh A, Baradaran HR, et al. Accountability in medical education from theory to practice: Tabriz 2018 statement. *Med J Islam Repub Iran*. 2020;34:93.https://doi.org/10.47176/mjiri.34.93. [PMID]

8-Masud N, Alenezi S, Alsayari O, Alghaith D, Alshehri R, Albarrak D, et al. Social accountability in medical education: students' perspective. In: *Front Educ*. 2022. Lausanne: Frontiers Media SA.https://doi.org/10.3389/feduc.2022.868245

9-Rahbar Taramsari M, Heidarzadeh A, Khoshrang H, Mohseni F, Dadgaran I, Taheri M, et al. Development of accountable education from comprehensive health service centers to socially accountable medical education centers. *Res Med Educ*. 2022;13(4):76-9.https://doi.org/10.52547/rme.13.4.76

10-Pourabbas A, Amini A, Asghari Jafarabadi M. Status of accountable education in clinical education departments of Tabriz University of Medical Sciences. *Res Med Educ*. 2020;12(2):71-82.https://doi.org/10.29252/rme.12.2.71

11-Akbari-Farmad S, Ahmady S, Hoseini MA. Faculty members' perceptions of challenges in socially accountable medical education: a qualitative study. *Strides Dev Med Educ*. 2016;13(1):1-9.

12-Amini A, Alizadeh M. Developing social accountability indicators at medical schools. *Res Dev Med Educ*. 2014;4(1):71-6.https://doi.org/10.15171/rdme.2015.011

13-Emami-Razavi SH, Heidarzadeh MH, Moshfegh A. Social responsibility and accountability: the outcome of integrating health, treatment, and medical education. *Strides Dev Med Educ*. 2024;21(Suppl):43-50.https://doi.org/10.22062/sdme.2024.200506.1469

14-Sanie MS, Taheri L, Haghbeen M, Chegin M, Fattahi N, Abiri S. Examining the state of responsive education in clinical education groups of Jahrom University of Medical Sciences. *Educ Ethics Nurs*. 2023;12(1-2):5-11.https://doi.org/10.22034/ethic.2023.704685

15-Koepke K, Walling E, Yeo L, Lachance E, Woollard R. Exploring social accountability in Canadian medical schools: broader perspectives. *MedEdPublish*. 2020;9:283.https://doi.org/10.15694/mep.2020.000283.1. [PMID]

16-Kazemi A, Ehsanpour S, Hassanzadeh A. Investigating academic achievement evaluation of specialized theoretical courses of midwifery BS. *Iran J Med Educ*. 2010;9(4).