Exploring the glass ceiling phenomenon among the recent female medical graduate of Bangladesh

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Abstract

This was a descriptive type of cross sectional study conducted with an objective to find out the unacknowledged barrier to the advancement in medical profession of the recent female medical graduates of Bangladesh. The "glass ceiling" is a metaphor to convey the undefined obstacles that women and minorities face in the workplace.

In this study, a self-administered, semi-structured questionnaire was used for data collection and also In-depth interviews were conducted to gain insight about the cause of drop out and to identify the barrier in academic progression and employment opportunities; along with the possible solution to overcome those obstacles.

In this study, it was revealed that among the (817)recent female medical graduates only 12% were satisfied with their overall employment status while, majority (33.4%) were dissatisfied with their overall employment status. Of which extended work hour happens to main cause (68.8%) of their dissatisfaction. Regarding the Adequacy on the opportunity to enroll for post-graduation majority (47.9%) consider it to be inadequate. And also majorities (36.7%) are dissatisfied with their overall academic progression.

Study has revealed many ways by which employment status can be improvised and can be made more female friendly, by starting 'Day-care' services in every working institute. Also by improving work environment and living environment at peripheral areas, ensuring more safety and security. Academic engagement can be improved by making exam center more accessible and by providing wide range of training scope.

Keywords: Current employment, Academic status, Female medical graduates

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Introduction

Despite the fact that young women are pushed to strive against all odds to attain both professional and personal ambitions, these goals are sometimes at variance with one another. It's challenging to juggle the usual household and family responsibilities that women are expected to perform with a medical professional's rigorous schedule. [1] Working women have a difficult time balancing their family and their careers. It's difficult to strike a balance between these two

Original Article

most of the time. Women's family life suffers when they grow more passionate and enthusiastic about their careers, and they are forced to compromise their careers to meet family expectations [2].

Even if more women are entering the medical field, socio-cultural norms associated to gender roles and expectations in a male-dominated society imply that they are largely responsible for managing home and family life, according to studies. As a result, combining work and personal life, as well as career growth, is a significant issue for women in the medical profession, especially if family support is lacking [3] [4].

Furthermore, the long time required to develop expertise and a career in medicine while also caring for a family becomes untenable for female physicians, who frequently fail to reach leadership positions [4] A combination of these reasons can cause a significant number of female physicians to "drop out" of the system and become "inactive." On overviewing the statistics, people often assume that women are simply choosing family over their careers, but often there isn't a choice, however, when it comes to balancing a medical career and a family it is the women physicians cutting their work hours at substantially higher rates than men to reduce work-family conflict [5]. Achieving a sound work life balance becomes challenging as an individual has to balance both work and personal life

simultaneously. Female doctors working in the healthcare sector have to go through tremendous work pressure. They also need to interact with patients frequently and have to work in an inflexible working environment. Besides that, female doctors also need to care about the responsibilities towards their home and family which creates an imbalance between their work and family since making balance is difficult [6]

Methodology

This was a descriptive type of cross sectional study. The study was conducted for one year from January 2021 to December 2021. A total of 832 recent female medical graduates were the respondents of the study. A self-administered, semi-structured questionnaire was used for data collection. In-depth interviews were conducted among the unemployed recent female medical graduates to gain insight about their cause of drop out and to identify the barrier in academic progression and employment opportunities; along with the possible solution to overcome those obstacles. Convenience sampling technique was applied to obtain the quantitative data, while workplaces were selected purposively; and to locate the unemployed female medical graduate snowballing technique was applied.

Data were computed and processed using SPSS software program. (IBM SPSS statistics)

Original Article

Results

Table 1: Distribution of medical teachers by their opinion about the abilities of recent medical graduates in carrying out consultations with their patients (n=171)

Statements on carrying out consultations with patients	Number (%) of the level of agreement with corresponding scores					Mean (±SD)
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	
Able to take the necessary history of illness	3(1.8)	10(5.8)	21(12.3)	115(67.3)	22(12.9)	3.84± 0.787
Can perform the necessary physical examination	2 (1.2)	18 (10.5)	27 (15.8)	110(64.3)	14 (8.2)	3.68 ± 0.816
Can select investigations appropriately	0	29 (17)	57 (33.3)	73 (42.7)	12 (7)	3.40 ± 0.850
Able to interpret the results of the investigations	1 (0.6)	17 (9.9)	52 (30.4)	92 (53.8)	9 (5.3)	3.53 ± 0.769
Able to diagnose common health problems	1 (0.6)	10 (5.8)	32 (18.7)	116 (67.8)	12 (7)	3.75 ± 0.695
Can manage the common health problems	0	10 (5.8)	32 (18.7)	117 (68.4)	12 (7)	3.77 ± 0.663
Able to write prescriptions considering patient safety	0	27 (15.8)	57 (33.3)	76 (44.4)	11 (6.4)	3.42 ± 0.831
Communicate with patients and relatives in the medical context	2 (1.2)	26 (15.2)	53 (31)	82 (48)	8 (4.7)	3.40 ± 0.844
Break bad news	3 (1.8)	45 (26.3)	56 (32.7)	62 (36.3)	5 (2.9)	3.12 ± 0.896

Table 1 shows the distribution of 171 medical teachers by their opinions about the abilities of recent medical graduates in carrying out consultations with their patients. It was found that out of 5-point Likert scales the means of their opinions about the abilities of the recent medical graduates in carrying out consultations with patients were within 3.12 to 3.84.

Table 2: Distribution of medical graduates by their opinions about the abilities of recent medical graduates in carrying out consultations with their patients (n=215)

Statements on carrying out consultations with patients	Number (%) of the level of agreement with corresponding scores					Mean (±SD)
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	
Able to take the necessary history of illness	1 (0.5)	9 (4.2)	19 (8.8)	128 (59.5)	58 (27)	4.08 ± 0.750

Original Article

Statements on carrying out consultations with patients	Number (%) of the level of agreement with corresponding scores					Mean (±SD)
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
Can perform the necessary physical examination	2 (0.9)	11 (5.1)	34 (15.8)	125 (58.1)	43 (20)	3.91 ± 0.801
Can select investigations appropriately	1 (0.5)	25 (11.6)	51 (23.7)	108 (50.2)	30 (14)	3.66 ± 0.877
Able to interpret the results of the investigations	1 (0.5)	15 (7)	43 (20)	131 (60.9)	25 (11.6)	3.76 ± 0.764
Able to diagnose common health problems	2 (0.9)	5 (2.3)	33 (15.3)	147 (68.4)	28 (13)	3.90 ± 0.673
Can manage the common health problems	1 (0.5)	8 (3.7)	39 (15.1)	133 (61.9)	34 (15.8)	3.89 ± 0.721
Able to write prescriptions considering patient safety	4 (1.9)	20 (9.3)	59 (27.4)	103 (47.9)	29 (13.5)	3.62 ± 0.898
Communicate with patients and relatives in the medical context	6 (2.8)	19 (8.8)	50 (23.3)	107 (49.8)	33 (15.3)	3.66 ± 0.938
Break bad news	11 (5.1)	40 (18.6)	50 (23.3)	91 (42.3)	23 (10.7)	3.35 ± 1.061

Table 2 shows the distribution of 215 medical graduates by their opinions about the abilities of recent medical graduates in carrying out consultations with their patients. It was found that out of 5-point Likert scales the means of their opinions about the abilities of the recent medical graduates in carrying out consultations with patients were within 3.35 to 4.08.

Table 3: Distribution of interns by their opinions about the abilities of recent medical graduates in carrying out consultations with their patients (n=250)

Statements on carrying out consultations with patients	Number (%) of the level of agreement with corresponding scores					Mean (±SD)
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
Able to take the necessary history of illness	0	3(1.2)	91(36.4)	79(31.6)	77(30.8)	3.92 ± 0.846
Can perform the necessary physical examination	2(0.8)	20(8)	93(37.2)	86(34.4)	49(19.6)	3.64 ± 0.913
Can select investigations appropriately	4(1.6)	24(9.6)	91(36.4)	86(34.4)	45(18.0)	3.58 ± 0.946
Able to interpret the results of the investigations	6(2.4)	31(12.4)	86(34.4)	80(32)	47(18.8)	3.52 ± 1.011
Able to diagnose common health problems	4(1.6)	31(12.4)	79(31.6)	79(31.6)	57(28.8)	3.62 ± 0.020
Can manage the common health problems	4(1.6)	24(9.6)	98(39.2)	83(33.2)	41(16.4)	3.53 ± 0.932

Original Article

Statements on carrying out consultations with patients	Number (%) of the level of agreement with corresponding scores					Mean (±SD)
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
Able to write prescriptions considering patient safety	5(2)	36(14.4)	97(38.8)	77(30.8)	35(14)	3.40±0.966
Communicate with patients and relatives in the medical context	2(0.8)	14(5.6)	71(28.4)	91(36.4)	72(28.8)	3.87±0.924
Break bad news	17(6.8)	26(10.4)	95(38)	69(27.6)	43(17.2)	3.38±1.096

Table 3 shows the distribution of 250 interns by their opinions about the abilities of recent medical graduates in carrying out consultations with their patients. It was found that out of 5-point Likert scales the means of their opinions about the abilities of the recent medical graduates in carrying out consultations with patients were within 3.38 to 3.92.

Table 4: Comparing means of the opinions of the stakeholders about the abilities of recent medical graduates in carrying out consultations with their patients

Statements on carrying out consultations with patients	Mean(±SD) of the opinions			P value
	Medical teachers (n=171)	Medical graduates (n=215)	Interns (n=250)	
Able to take the necessary history of illness	3.84± 0.787	4.08 ± 0.750	3.92±0.846	.000 [Y (b)]
Can perform the necessary physical examination	3.68 ± 0.816	3.91 ± 0.801	3.64±0.913	.000 [Y(b,c)]
Can select investigations appropriately	3.40 ± 0.850	3.66 ± 0.877	3.58±0.946	.018 [X (b)]
Able to interpret the results of the investigations	3.53 ± 0.769	3.76 ± 0.764	3.52±1.011	.141 [Y (b,c)]
Able to diagnose common health problems	3.75 ± 0.695	3.90 ± 0.673	3.62±0.020	.000 [Y (c)]
Can manage the common health problems	3.77 ± 0.663	3.89 ± 0.721	3.53±0.932	.000 [Y (a,c)]
Able to write prescriptions considering patient safety	3.42 ± 0.831	3.62 ± 0.898	3.40±0.966	.023 [X (c)]
Communicate with patients and relatives in the medical context	3.40 ± 0.844	3.66 ± 0.938	3.87±0.924	.000 [X (b,c)]
Break bad news	3.12 ± 0.896	3.35 ± 1.061	3.38±1.096	.009 [Y (b)]

Vol.-14, Issue-01, January, 2023

Original Article

X= One way ANOVA had done to compare means, Y= Welch ANOVA had done to compare means due to violation of homogeneity of variances among the groups. Post HOC Tukey HSD tests had done to recheck the differences in the means of the opinions between the two groups: a= Difference is significant between medical teachers and interns,
b=Difference is significant between medical teachers and medical graduates, and c=Difference is significant between intern and medical graduates.

Table 4 shows comparisons of the means of the opinions of the medical teachers, medical graduates, and interns about the abilities of recent medical graduates in carrying out consultations with their patients. It was observed that there were significant differences in their opinions regarding most of the listed abilities of recent medical graduates in carrying out consultations with their patients.

Discussion
The study revealed that among 636 participants, 354 (55.6%) were males and 282 (44.4%) were females. Among them, the majorities were intern doctors (39.3%) followed by 33.8% were medical graduates and teachers (26.8%). 51.8% participants were from government medical colleges followed by private medical colleges (30.1%) and army medical colleges (18.2%). It was found that the duration of passing MBBS of maximum respondents (50.6%) was less than 5 years.

In our study all respondents (Medical teachers, medical graduates and intern doctors) agreed that for consultation with patients, recent medical graduates are more prepared in taking history and physical examination; but least prepared in breaking bad news.

A study by Matheson C et al, is broadly similar to ours that evaluated the extent to which first year doctors (foundation year 1 doctors) prepared for practice. Matheson C et al also found that medical graduates were best prepared in history taking and in clinical examination, and least prepared in breaking bad news[9].

Another study similar to ours, by Muthaura PN et al. to determine whether recent Kenyan medical graduates are prepared for their roles upon graduation from medical school[10]. Muthaura PN et al found respondents felt confident about their history taking and physical examination skills, confident about requesting appropriate investigations and interpreting test results, confident about recognizing common health problems but were not confident about managing them, acknowledged their deficiency in prescribing skills and also felt unprepared to communicate with patients. In contrast to this study, our study found only half of intern doctors (52.4% & 50.8%) opined their agreement in selecting appropriate investigation and interpret the investigation result. Our study revealed that only less than half of intern doctors (44.8%) respondents express their agreement on ability in writing prescriptions considering patient safety. In our study, intern doctors (65.2%) and medical graduates (65.1%) respondents are more in agreement about recent medical graduates' ability to communicate with patients and relatives in a medical context than teachers (52.7%).

Broadly similar to ours', Tobaiqy M et al in his study also found that only 8% of foundation year (FY) 1 doctors rate their

Original Article

knowledge of clinical pharmacology as good and 30% as poor or worse[11].

Mild positive agreement was found among all three participants (interns, medical graduates and teachers) of this study regarding the domain of consultation skills of the recent medical graduates which includes skills of history taking, physical examination, appropriate suggestion and interpretation of investigation, diagnosing and managing common health problems, writing prescription considering patient safety, communicating with patients and their relatives on medical context and breaking bad news. Mean value of all the statements of all three stakeholders was in between 3 to 4. In a similar study in Australia, Scicluna H.A. *et al.* found that the mean score for consultation skills of the recent graduates, who were working for the last 3 months, was 4.1 on a Likert scale ranging from 1-5[12].

From the medical teachers' opinions, it was found that out of 5-point Likert scales the means of their opinions about the abilities of the recent medical graduates in carrying out consultations with patients were within 3.12 to 3.84. It indicates the medical teachers are 62.4% to 76.8% in favour of the recent medical graduates who are able to carry out consultations with patients.

Similarly, from the medical graduates' opinions, it was found that out of 5-point Likert scales the means of their opinions about the abilities of the recent medical graduates in carrying out consultations with patients were within 3.35 to 4.08. It indicates the medical teachers are 67% to 81.6% in favour of the recent medical graduates being able to carry out consultations with patients.

Lastly, from the interns' opinions, it was found that out of 5-point Likert scales the means of their opinions about the abilities of the recent medical graduates in carrying out consultations with patients were within 3.12 to 3.84. It indicates the medical teachers are 67.6% to 78.4% in favour of the recent medical graduates who are able to carry out consultations with patients. The result of this study revealed that none of the respondents has given strong positive and moderate positive agreement about any of the statements regarding the ability of recent medical graduates to consult with patients.

Comparing the means, it was further found that there were significant differences in their opinions regarding most of the listed abilities. Similar statistically significant difference was also found among the intern doctors' and their supervisors' opinion about adequacy of undergraduates' clinical skills training conducted by Chan S.C. in Malaysia[13]. But these differences may be due to the effect of large sample sizes. This difference in opinion may be also due to self reported questionnaires. There are a number of factors about self-report data that renders them problematic[14]. For example, on what basis do individuals make their decisions: do they assess themselves against absolute measurements (am I good enough? am I minimally competent?) or against relative measures (am I average? Below average? and Compared with whom? My seniors? My peers?). When relative measures are used, these might be subject to social cognitive processes such as the 'better-than-average' effect whereby the majority of people believe themselves a better driver, a more competent parent etc., than the average person due to the inherent heuristics and biases we use when forming decisions. It is important to understand more about whether the difference is related to the medical colleges or to the quality of supervision received.

Original Article

In Australia, Scicluna H.A. *et al.* found shift from a discipline or content-based curriculum to an outcomes-based integrated program resulted in significantly higher perceptions of clinical competence among medical graduates with excellent self-rated and supervisor-evaluated capabilities in a range of clinically-relevant outcomes[12]. However further study needed to confirm and generalize our study findings.

Conclusion

Majority of the all three participants' teachers, medical graduates and intern doctors do not agree that recent medical graduates are able to break bad news on patient consultation. Majority of the all three participants' teachers, medical graduated and intern doctors had provided a mild positive agreement about the recent medical graduates' patient consultation skill, none of them had given strongly positive agreement about consultation skill of recent medical graduate. In Australia, shift from a discipline or content-based curriculum to an outcomes-based integrated program A shift to an outcomes-based integrated program resulted

in significantly higher perceptions of clinical competence among medical graduates.

Further research is needed to find ways to improve ability of consultation with patients by recent medical graduates in our country.

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Original Article

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