

## Perceived abuse in undergraduate medical students of Lahore, Pakistan: a cross-sectional study

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### ABSTRACT

**Background:** Abuse is any unwanted act which causes distress to someone either physically or mentally. Studies have shown that medical students from all over the world experience abuse on daily basis but such studies are lacking in Pakistan.

**Methodology:** A cross-sectional study design was employed to conduct this study. 385 students took part in the study from all the undergraduate years at CMH Lahore Medical College, Lahore Cantonment. Questionnaire containing questions about perceived abuse and demographics were given to the students after their verbal consent.

**Results:** 358 students formed the final sample. Male and female students equally participated in the study. 2<sup>nd</sup> and 3<sup>rd</sup> year medical students largely contributed to the study. More than 90% of the students identified themselves to have been abused at least once during their medical school. 9.7% students stated that they have never experienced any form of abuse. 11% of students experienced sexual harassment with males leading females. Pre-clinical faculty were the largest source of mistreatment. Linear regression revealed male gender and being a student from 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year to be a positive predictor of medical student abuse.

**Conclusion:** Medical student abuse is rampant in Pakistan. Abuse has serious impact on the view of medical students and make them cynical. It is something which requires active interventions of the institutions to weed out to make a comfortable environment for the doctors of tomorrow.

**Keywords:** Abuse, Harassment, Verbal, Physical, Academic, Medicine, Students

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### INTRODUCTION

Abuse can be defined as any act which is unwanted and causes harm or offence to someone. The act could be physical, psychological or verbal.<sup>1</sup> Medical students are one of the most stressful group of individuals who suffer from sleep disturbances, poor mental health and are burnt-out due to the demands of modern medicine.<sup>2,3</sup> One of the things which could be contributing to the stress of already distressed medical students is "medical student abuse", coined by Henry K. Silver in 1982, refers to the phenomenon as a result of which students become frustrated, cynical and depressed.<sup>4</sup> In the past abuse was considered to be an inherent part of medical education<sup>5,6</sup> while some medical teachers have iterated that these tactics could help them teach effectively<sup>7</sup> but recent research work has showed that this is not so. According to silver, this is something which is totally avoidable and could help medical students perform well while if un-checked could seriously impact their performance and add to their anxiety, learning difficulties, the substance abuse (alcohol) problem<sup>8</sup>. In recent times students have raised their concerns that this continuous abuse could transform them into those personalities who they think have abused them.<sup>9</sup> After Henry K. Silver, a significant number of papers have been published across the globe which have highlighted the presence of abuse in medical schools. A few studies in America have found that up to 90%<sup>9</sup> of the students think that they have been abused at least once while some report this number to be 72%<sup>8</sup> and 11%<sup>10</sup>. Most of them

report that psychological and verbal abuses are rampant as opposed to physical abuses (e.g. physical harm or sexual abuse) but nevertheless they exist<sup>9</sup>. Similar studies in UK have yielded the same results with perceived abuse as high as 10% in medical students<sup>11</sup> while another study in UK has stated this number to be at 43%.<sup>12</sup> Meanwhile in Japan one study puts this number to be at 68%.

Pakistan is one of the biggest producers of doctors in the world with its doctors present in every part of the world. Student abuse is prohibited in all the medical colleges of Pakistan and has penalty for any offender under Higher Education Commission Rules and Regulations but despite all this; it has not been researched at all which is eminent by the point that only two such studies have been conducted in Pakistan; both in Karachi with one study reporting 62.5%<sup>13</sup> and the other stating 47%<sup>14</sup> of the students believe that they have received abuse. Empathy is one of the most important qualities of a good doctor and refers to the ability of a person to understand other person's concern. So far we have not found any study which examines the relationship between empathy and abuse which we hypothesize could lead to poor empathy in medical students and resultantly would lead to doctors who can't empathize with their patients.

#### Objectives:

1. To ascertain the prevalence of perceived abuse.
2. To ascertain any association between abuse and demographics to find out the causes and predictors of medical student abuse.
3. To ascertain any association between abuse and empathy.

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## MATERIALS & METHODS

Descriptive, cross-sectional study design and convenience (non-probability) sampling technique was employed. In Pakistan undergraduate medical education lasts 5 years. This includes pre-clinical years (Year 1 and 2) and clinical years (Year 3-5). Students from 1st and 2nd academic year (pre-clinical years) do not have a clinical rotation in their curriculum. The study was conducted in CMH Lahore Medical College and Institute of Dentistry, Lahore Cantonment in the month of May, 2018. A questionnaire containing Interpersonal Reactivity Index, Medical School Graduation Questionnaire and a series of demographic questions was used. Questionnaires were distributed to 455 students out of which 385 responded with a response rate of 84.61%. Out of the 385 who responded, 27 participants were eliminated due to missing more than 03 responses other than demographics.

**Instruments:** Two instruments were employed in this study which are as follow:

**The Interpersonal Reactivity Index (IRI)** is a 28-item questionnaire to assess 4 components of empathy.<sup>15</sup> It is a Likert scale with responses ranging from A= Does not describe me very well to E= Describes me very well.<sup>16</sup> Each component consists of 07 questions which contain both positive and negative worded questions. Only 02 components were used in this study; perspective-taking scale and empathic concern scale. Perspective taking scale refers to the person's ability to assume the point of view of others while empathic concern scale refers to the ability of a person to feel compassion for others.

**Medical School Graduation Questionnaire** is a questionnaire developed by American Association of Medical Colleges which consists of 40 questions. The aim of the questionnaire is to get a feedback from graduating medical students at the time of their graduation.<sup>17</sup> Only the mistreatment component of the questionnaire was utilized which yielded 08 types of mistreatment (table-1) and 07 sources of those mistreatments (table-1). The responses consisted of a Likert scale ranging from never, once, occasionally, frequently. The scores were calculated by giving 1 score to once, 2 score to occasionally and 3 score to frequently.

**Statistical Analysis:** SPSS Vr 20 was used for analysis. Descriptive statistics and frequencies were calculated for subscale scores on mistreatment questionnaire, IRI and demographic variables respectively. Linear regression analysis (enter method) was run to predict any co-relation between mistreatment/abuse and different variables e.g. age, gender, having doctor parents, prospective taking and empathic concern scale etc. The assumptions of linearity, independence of errors and normality of residuals were assessed. Dummy variables were made to include categorical variables.

**Ethics Statement:** CMH Lahore Medical and Dental College Ethical Review Committee approved the study questionnaire. (Reference No: 96/ERC/CMHLMC)

## RESULTS

The final sample consisted of 358 participants. Mean age of the participants was 21.2 years. The proportion of male participants was almost equal to female participants. The demographic details of the sample are given in table-1. Most of the students who participated were local students. 2<sup>nd</sup> and 3<sup>rd</sup> academic year formed the largest proportion of the final study sample.

Out of the entire sample, 90.3% student reported that they received mistreatment at least once with males reporting more incidences of abuse as compared to females. Only 9.7% stated that they never encountered any form of mistreatment. The most frequently encountered mistreatment included 'shouted or yelled at', 'being assigned tasks for punishment rather than for educational value?' and 'having someone take credit for the respondent's work' among others, as shown in table-2. 'Sexual harassment and physically harmed' were the least encountered forms of mistreatment, 11% in both cases. Sexual harassment was reported more frequently in male students as opposed to female students (56.8%>43.2%).

Table-1 Demographic Details

Variables	N
Age	21.21
Gender	Male 176(42.2%)
	Female 182(50.8%)
Country of Origin	Pakistani 341(95.3%)
	Foreigners 17(4.7%)
Doctor Parents	Yes 108(30.2%)
	No 250(69.8%)
Living Status	Boarder 150(41.9%)
	Day Scholar 208(58.1%)
Academic year	1st 55(15.4%)
	2nd 98(27.4%)
	3rd 95(26.5%)
	4th 51(14.2%)
	5th 59(16.5%)
Relationship Status	Single 328(91.6%)
	In a relationship/married 30(9.4%)

The biggest source of mistreatment were pre-clinical faculty, classmates and clinical faculty; in that order (table - 2) Linear regression model revealed that mistreatment score had no bearing on either form of empathy ( $p>0.05$ ) while gender, and being in clinical or preclinical years were strong predictors of mistreatment potential. Males had higher mistreatment scores than females ( $6.05\pm4.4 >4.71\pm3.69$ ,  $p=0.002$ ) while students from pre-clinical years scored less than students from clinical years ( $4.41\pm3.97 <6.08\pm4.09$ ,  $p=0.001$ ) (table-3).

Table 2: Type of Mistreatment Encountered and Source

	Never	Once	Occasionally	Frequently
Shouted or yelled at	117 (32.7%)	79(22.1%)	131 (36.6%)	31 (8.7%)
Been publicly humiliated	195 (54.5%)	79 (22.1%)	67 (18.7%)	17 (4.7%)
Being assigned tasks for punishment rather than for educational value	163 (45.5%)	50 (14%)	106 (29.6%)	39 (10.9%)
Having someone take credit for the respondent's work;	168 (46.9%)	61 (17%)	106 (29.6%)	23 (6.4%)
Being threatened with an unfair grade;	188 (52.5%)	58 (16.2%)	82 (22.9%)	30 (8.4%)
Been threatened with physical harm	319 (89.1%)	18 (5%)	17 (4.7%)	4 (1.1%)
Been physically harmed	321 (89.7%)	27 (7.5%)	6 (1.7%)	4 (1.1%)
Sexual harassment	321 (89.7%)	9 (2.5%)	15 (4.2%)	13 (3.6%)
Pre-Clinical Faculty	192 (53.6%)	53 (14.8%)	89 (24.9%)	24 (6.7%)
Class Mates	216 (60.3%)	54 (15.1%)	64 (17.9%)	24 (6.7%)
House Officers	328 (91.6%)	17 (4.7%)	9 (2.5%)	4 (1.1%)
Senior Doctors	269 (75.1%)	41 (11.5%)	43 (12%)	5 (1.4%)
Nurses	317 (88.5%)	15 (4.2%)	18 (5%)	8 (2.2%)
Patients	308 (86.0%)	22 (6.1%)	22 (6.1%)	6 (1.7%)
Clinical Faculty	275 (76.8%)	32 (8.9%)	37 (10.3%)	14 (3.9%)

Table 3: Linear Regression Model (Dependent Variable: Mistreatment Score)

Model	Unstandardized Coefficients		Standardized Coefficients beta	t	Sig
	B	Std. Error			
(Constant)	12.984	4.345	---	2.988	.003
Age	-.381	.207	-.143	-1.838	.067
Gender (0=Male,1= Female)	<b>-1.413</b>	.446	-.172	-3.169	<b>.002</b>
Province of origin	.864	1.047	.045	.825	.410
Are your parent's Doctor?	.192	.467	.021	.411	.681
Are you a Boarder or a Day scholar?	.060	.444	.007	.135	.892
College Year (0=Pe-clinical,1=Clinical Years)	<b>2.683</b>	.654	.322	4.102	<b>.000</b>
Relationship Status	-.182	.776	-.012	-.235	.815
Empathy: Prospective Taking	-.144	.383	-.020	-.377	.707
Empathy: Empathic Concern	-.064	.388	-.009	-.165	.869

Model Summary: R= 0.285, R<sup>2</sup>=0.081, Adjusted R<sup>2</sup>= 0.057, Durbin-Watson= 1.997.

## DISCUSSION

The study reveals that a large proportion of medical students (90%) experience abuse at least once which is consistent with the findings from USA where the proportion is 90.4%<sup>9</sup> but is less as compared to students from UK and Japan where the maximum proportion is 68%. Our data also suggests that students in Lahore, Pakistan have experienced more abuse as opposed to their counterparts in Karachi, Pakistan. These percentages, however big or small they are, prove the assertion by Baldwin et.al. that student abuse is present in every medical school<sup>9</sup>.

Our study demonstrates that out of 90% of the students who have received abuse, most of them have received verbal or psychological abuse. Being shouted at was the most common type of abuse (68%) which is consistent with the entire literature review we have done so far. It is fair to assume that verbal abuse is common because it is easy to do and student might think this to be a part of his training. The biggest source of mistreatment also appears to be faculty and classmates. This finding is interesting because previous research has shown the most probable perpetrator of medical student abuse to be faculty staff and senior doctors however our study highlights that class mates could also contribute to this torrent of verbal abuse. Peer pressure could come in the form of abuse and may lead to burnout, feeling belittled and negatively impact their performance.<sup>18</sup>

Faculty members, clinical or pre-clinical alike hold a lot of authority over medical students in Pakistani mode of

teaching where their word is considered final over the word of students which is why they are the leading source of abuse in our study. Only 11% of the students reported being sexually abused at least once and surprisingly the male students form the largest proportion (56.8%). This finding is counter-intuitive and contrary to most of the research worldwide<sup>19,20</sup> but because it is considered a taboo in Pakistan and is a very sensitive topic it is possible that female students might have under-reported these incidents<sup>21</sup>.

Our study also points out that it is the males and not females who encounter the most incidences of abuse. This could be attributed to under-reporting by female participants as well. But despite all this, male students are perceived to be more resilient than their female counterparts in our society where there are huge cultural and social differences with the rest of the world. That is why benefit of doubt should be given to the male students and special attention should be given to them.

One of our goal was to establish any co-relation between medical student empathy and medical student abuse. We wanted to see if more abuse lead to low levels of empathy in medical students. Our results conclude that there is no significant co-relation between them which, for this study, points towards resilience of medical students to see past their own problems and retain the ability to understand other person's concern.

This study is unique and separate from the rest of the studies owing to the fact that we ran multiple regression

analysis to build a model of predictors to see which variables could positively or negatively predict the potential of abuse. Table-3 shows only 1 positive and 1 negative predictor in our model. Students who are male and students from clinical years are more prone to encounter abuse as compared to their counterparts which further strengthens our assertion that male students should be given special consideration when this topic is discussed. Students in later years (clinical years) perceive more abuse because they are more sensitive and due to their advanced knowledge are more able to detect abuse.<sup>13</sup> Another contributing factor is stress which is usually high in clinical years and a universal phenomenon in Asia<sup>22,23</sup>.

It is more pertinent to compare the incidences of abuse with other studies in Pakistan. Most of the results of the two studies conducted relate with this study which paints a broader picture of this problem which is same in the length and breadth of the country.<sup>13,14</sup> Notably the incidence of sexual harassment is higher in study by Warda et.al. as compared to our study (18%>11%).

We would like to conclude by stating that our study highlights the presence of medical student abuse and gives insight into the contributing factors which could help institutions and individuals to amend curriculum and teaching practices in such a way which doesn't unnecessarily add to the burden of medical students who come into medical colleges with enthusiasm, energy and will but become cynical over time due to constant exposure to abuse.<sup>4</sup>

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