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Prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate the experience and perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centers for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship. During the study period 2009 – 2010

Method: A cross-sectional survey of all 69 first year residents

Results: Of 58 residents (response rate 84%) around 96.6% believed that mistreatment exists. Among different types of mistreatment, verbal and academic abuses were the most commonly reported (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To understand factors influencing mistreatment and draw guidelines to limit such problems

Report the experiences of mistreatment among medical trainees in Oman, Arab/Islamic country.

KEY MESSAGES

The data suggest bullying behaviors are rampant among medical trainees in Oman.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviors have been reported in different occupational settings include medical profession. There is dearth of study from Arab/Islamic countries.

To our knowledge, this is the first study on this endeavor from this part of the world.

This study is limited with small sample size and its methodology, cross-sectional study

INTRODUCTION:

Different forms of abuse and other bullying behaviors have been reported in different occupational settings.[1-4] Studies carried out in different parts of the world suggest that medical professionals are no exception to maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, like interns, are the most vulnerable. According to Coverdale, Balon & Roberts the most common degrading experiences among interns include "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice"(p.269) [5]

There are studies that have quantified mistreatment among medical trainees or those who are on the lower ladder of a medical career. Steven et al.[6] reported in a national survey in the USA that about 93% of medical trainees endorsed the view that they have had at least one experience of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees have been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe and North American, have also found evidence of maltreatment including Australia[4,8] New Zealand[9] Ireland[10], Argentina[11] and Japan.[12,13]

Maltreatment of medical trainees is not limited to Western countries.[14-16] Ahmer et al. [17] have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing from available literature, Coverdale, Balon & Roberts [5] have

categorized common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment or gender prejudice, sexual orientation or ethnicity.

There are a myriad of adverse impacts of mistreatment that can emerge as a result of trainees being subjected to maltreatment. Schubert et al.[18] has shown a significant relationship between verbal abuse during medical training and lower levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied mental health consequences among trainees who were subjected to maltreatment and their findings were worrisome. There appeared to be tendencies for maltreated trainees to have 'psychopathological outcomes' in the form of unrelenting affective emotions, resorting to 'self-medication' and even dependency on mind altering substances. This is consonant with well known observations that there are high levels of stress and psychological distress among medical trainees.[19,20] Most disheartening is that such prevailing situations may play a role in the higher rate of suicide among physicians compared to the general population.[21,22] The picture is even bleaker with the findings that medical trainees, who were most distressed at the beginning of training, were likely to report more stress and distress in the subsequent course of their lives.[23] According to Miedema et al. [24], there are inbuilt mechanisms that perpetuate abusive behavior in the medical culture including working in what is perceived as a stressful environment. In the Arab world, evidence abounds that much emotional distress is present among medical trainees [25-27] including Oman.[28] Although these Arabian studies should be enlightening, most of them are rife with conceptual limitations. Many of them have utilized assessment measures without local validity and therefore these studies fall into the 'category of

fallacy'.[29] These studies could also be criticized on the ground that their target population was pre-clinical students. Therefore generalizations cannot be applied to interns. Internship, in parlance of the medical profession, is the period in which new medical graduates learn medical practice in a hospital under supervision, prior to beginning his or her specialization. In Oman, internship consists of three to four month rotations, in which each intern (resident) is rotated through general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman, further medical training is under the auspices of Oman Medical Specialty Board (http://www.omsb.org), a governmental body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the wellbeing of trainees, through services that include a specialized office and designated person to which trainees can submit any grievance.

With evidence of adverse experiences among medical trainees in other parts of the world and the fact that no data has been forthcoming from Oman, the present study aimed to quantify mistreatment or abuse among Omani medical interns. Interrelated aims were to explore experiences of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as gauge the reasons for not reporting maltreatment, to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010 a total of 69 medical residents were enrolled. The residents were approached to participate in this study during a research workshop conducted in May 2010. Each participant was asked to fill in a

questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship.

ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al. Baldwin et al. and Uhari et al. [20] and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment'. In addition, various socio-demographic information (e.g. age, sex, year of residency, marital status and current specialty) were included. The participants were also given the option to use free text to describe reasons for reporting or not reporting maltreatment.

The questionnaire was delivered to each participant in a closed envelope, which also contained a description of the study, so that informed consent could be obtained, and statement of confidentiality. To assure anonymity, participants were explicitly informed not to make any reference to their identity on the questionnaire. Return of a filled out questionnaire was taken as consent to be a participant.

ANALYSIS

Data was entered on EPI-data software and transferred to SPSS version 17.0 for analysis. Both descriptive and inferential statistics were used as appropriate. Free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69 residents) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of mistreatment according to gender

Table 1 shows perceived maltreatment according to gender. Out of total 12 items eliciting maltreatment, males dominated in 6 of them however, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into 'verbal abuse', 'physical abuse or threats', 'academic abuse', and 'sexual harassment', the only category of statistical significance at the 95% confidence level was 'academic abuse' where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to perpetrator

As shown in Table 2, Consultants outshone others in perpetuating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward the male residents ($p = 0.03$). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than other groups that the residents encountered.

Experience of Mistreatment according to specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in dispensing maltreatment to the residents. As shown in Table 3, the data can be extrapolated in three ways. Firstly, notoriety of all indices of maltreatment were significantly higher during medical rotation than pediatrics or surgery ($p = 0.005$).

Secondly, overall pediatrics was second highest, although verbal abuse, academic abuse and sexual harassment was second to medicine during surgical rotation. Thirdly, verbal abuse was the highest type of maltreatment reported (36.8%) closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was to avoid further trouble and thus maltreatment was concealed. "Reporting could adversely affect my evaluation and professional career…" Such behavior, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves. "I did not know to whom I should report or how to complain." "I dealt with the problem directly myself." Seven respondents did not report the maltreatment because the perpetrator "apologized to me." It was also not uncommon to not recognize "the experience as abuse at the time it happened."

DISCUSSION

To our knowledge the present research is the first to describe four interrelated patterns in relation to maltreatment from the experience of first year medical residents: gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment, in the Arab countries. Although the intended population was small, the rate of response to the survey was high and the gender distribution of participants fairly balanced. Most were undertaking a medical specialty and were in their late twenties. On the whole, the present findings substantiate the view that maltreatment is prevalent during medical training.[6, 7,18,30,31] and it appears that

maltreatment and abuse is the rule rather than the exception. The first principle in medicine is 'primum non nocere' (first do no harm) – Hippocrates may have also been referring to the well-being of the young medical trainees.

One of the aims of this study was to examine whether there is a gender difference in perceived maltreatment. The result suggests there was no significant difference although young female doctors were more likely to experience threats and sexual harassment. In past decades, Oman has made rapid progress in eroding a traditional gender gap. Both universal free education for women and the resultant female empowerment have been catalysts for such change.[32] As a result, the country has witnessed that women's enrollment to higher education appears to be outstripping those of their male counterparts [33], a feat that is globally supported with emerging evidence that females generally perform better across the border in indices of education. With education being the engine of social emancipation, women have made a desirable entrance into Oman's workforce. Maltreatment and sexual abuse (that is abuse of a personal nature) echoes the global situation where such patterns are common among working women[34] and nonetheless, female doctors.[35,36] In academic performance, however women are less likely to be maltreated than males. This interesting finding could be attributed to malingering among males or more studious females. These assumptions could be further tested. Regardless of assumptions there is a strong rationale for instituting teaching about healthy workplace ethics.[37]

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in perpetrating academic abuse and

sexual harassment. Studies from elsewhere suggest that maltreatment often comes from nonmedical staff, but according to Hinze[38] and Ahmer et al. [17,] senior medical staff ('a sensible older clinician') were not innocent either. However, this preliminary study suggests that hierarchy is strongly associated with propensity to dispense abuse. It is possible that such occurrences may stem from socialization and child-rearing practices. Society in Oman is characterized by an authoritarian and authoritative 'parenting style'. It is possible that senior members, the traditional teacher, or father-figure, demand filial obedience from the students, in this case junior doctors. This tradition is not denigrating Omanis because the authoritarian style has also been witnessed emanating from expatriates, particularly from the Indian sub-continent, and maybe a result of 'maintaining control' in a profession that deals with acute life and death situations. It is possible that such relationships may play a part in the presently perceived maltreatment among residents. However, notwithstanding such a view, it appears that maltreatment of novices in the medical profession exists in many societies including those that do not prescribe to authoritarian and authoritative parenting styles.[4,39] Therefore, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate senior members abusing the junior ones.

The majority of residents admitted to receiving most maltreatment from rotation in internal medicine. However maltreatment was experienced in all three specialties with verbal and academic abuse ranking the most common types. It is not clear why a medical rotation ranked first and may be an anomaly of the setting of the research being confined to one hospital.

Knowing which type of abuse comes from which source enable educators to focus their resources to prevent maltreatment. Cook, Liutkus and Risdon[40] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. One possible venue is to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical school faculty should also raise awareness in tomorrow's doctors on how to inoculate themselves against abuse and maltreatment. The long-term solution is to screen and eliminate the entrance of personality subtypes that are likely to be prone to abusing others. There is a vast literature suggesting that certain psychosocial histories are likely to be strongly associated with explosive and psychopathic personality. There is evidence to suggest that a substantial number of those who enroll in medical school have temperaments that are akin to the narcissistic personality and tendency for Machiavellianism.[29] It would be an insurmountable mission for young doctors to win a battle against senior doctors who have amassed international experience and command high reputation in the community. Medical schools and health care systems should have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

In Oman, culturally sanctioned mechanisms are needed to prevent the occurrence of abuse as well as support systems for the victims. In an ideal world, it has been stated that "medical school and residency training programs are intended to provide positive educational and mentorship experiences and to inculcate a culture of professionalism and collegiality" (p. 269) [5]. Such an aspiration has yet to be realized. In most occupational settings, provision to deal with deviant behavior does exist. Indeed, there are clauses in

many judicial systems and professional bodies about how to handle unethical standards. However, such provisions are yet to make entrance into medical training in Oman, despite their essential importance. For one thing, the perpetrator of maltreatment during medical training may not be limited to the obvious victims. It is likely that others would fall prey to abuse including patients when seeking consultations. It is worthwhile realizing that abuse is known to 'beget' abuse. If this is true, then the abused trainee is likely to emerge one day as the abuser, setting up a cycle.

These data present residents' self-responses not controlled observations of behavior, which limit the findings. Self-serving biases are well known in such studies. It is also possible that recall bias could have contaminated their responses.[41] An integral part of recall bias, is that when individuals find certain events as emotional debilitating, the obvious recourse is to repress the memory of those events. Therefore, future studies should have an in- built mechanism to reduce the likelihood of recall bias.

In addition, Omani culture is known to be culture of 'shame', which means that many of life's maltreatments are likely to be 'concealed'.[42] Indeed eleven residents chose not to participate. Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were likely to be 'denied' resulting in spurious data. Despite the above-mentioned caveats, interesting issues have emerged from the present study that needs to be followed up in a wider context.

CONCLUSION

Mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores maltreatment and abuse in a medical setting. Fifty eight residents consented to participate in this present

anonymous survey which consisted of approximately 84% of the interns. In terms of experience of mistreatment according to gender, males admitted to have experienced higher levels of mistreatment. In terms of perpetrator of harassment and abuse, it appears that hierarchy counts. Those who were commanding higher position were more prone to fall foul to committing maltreatment and abuse. It also appeared the problems were more rampant in the subspecialists of medicine. Further research is needed to understand factors influencing mistreatment and draw up guidelines to limit such problems. However the findings should lead to the identification of factors perpetuating maltreatment and abuse among medical trainee interns. Thus, evidence-based interventions can be contemplated.

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Conflicts of interest: none

Contributors
M-AS is responsible for study supervision, T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW and S-AA were responsible for drafting, literature review and scientific approach of the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂ (N=28)	♀ (N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centers for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship. During the study period 2009 – 2010

Method: A cross-sectional survey of69 first year Medical residents

Results: Of 58 residents (response rate 84%) around 96.6% believed that mistreatment exists. Among different types of mistreatment, verbal and academic abuse was the most commonly reported (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To understand factors influencing mistreatment and to draw guidelines to limit such problems

Report the experiences of mistreatment among medical trainees in Oman, Arab/Islamic country.

KEY MESSAGES

The data suggests bullying behavior is rampant among medical trainees in Oman.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviors have been reported in different occupational settings include medical profession. There is dearth of study from Arab/Islamic countries.

To our knowledge, this is the first study on this endeavor from this part of the world.

This study is limited with small sample size and its methodology, cross-sectional study

INTRODUCTION:

Forms of abuse and other bullying behaviors have been reported in various occupational settings.[1-4] Studies carried out in different parts of the world suggest that medical professionals are no exception to maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, like interns, are the most vulnerable. According to Coverdale, Balon & Roberts the most common degrading experiences among interns include "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice" (p.269).[5]

Studies have quantified mistreatment among medical trainees or those who are on the lower ladder of a medical career. Steven et al.[6] reported in a national survey in the USA that about 93% of medical trainees endorsed the view that they have had at least one experience of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees have been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe, North American and Asia Pacific regions have also found evidence of maltreatment including Australia[4,8] New Zealand[9] Ireland[10], Argentina[11] and Japan. [12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-16] Ahmer et al.[17] have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing from available literature, Coverdale, Balon & Roberts[5] have categorized common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment and forms of prejudice against sexual orientation and ethnicity.

There is a myriad of adverse impacts of mistreatment that can emerge as a result of trainees being subjected to maltreatment[18]. Schubert et al.[19] have shown a significant relationship between verbal abuse during medical training and lower levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied mental health consequences among trainees who were subjected to maltreatment with

disconcerting findings. There appeared to be tendencies for maltreated trainees to have 'psychopathological outcomes' in the form of unrelenting affective emotions, resorting to 'self-medication' and even dependency on mind altering substances.[20,21] This is consonant with well known observations that there are high levels of stress and psychological distress among medical trainees.[22,23] Such prevailing situations have been suggested to play a role in the observed higher rate of suicide among physicians compared to the general population.[24,25] There is indication that medical trainees who were most distressed at the beginning of their training, and were likely to report more stress and distress in the subsequent course of their lives.[26] According to Miedema et al.[27], there are inbuilt mechanisms that perpetuate abusive behavior in the medical culture, including working in what is perceived as a stressful environment. This is suggestion that 'abuse begets abuse'[28], a view that might implication for fostering a cycle of bullying in medical profession.

In the Arab world, evidence abounds that much emotional distress is present among medical trainees[29-31] including Oman.[32] Although these Arabian studies should be enlightening, most of them are rife with conceptual limitations. Many of them have utilized assessment measures without local validity and therefore these studies fall into the 'category of fallacy'.[33] These studies could also be criticized on the ground that their target population was pre-clinical students. Therefore generalizations cannot be applied to interns. Internship, in parlance of the medical profession, is the period in which new medical graduates learn medical practices in a hospital under supervision, prior to beginning his or her specialization. In Oman, internship consists of three to four month rotations, in which each intern (resident) is rotated through general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman, further medical training is conducted under the auspices of Oman Medical Specialty Board (http://www.omsb.org), a governmental body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the wellbeing of trainees, through services that include a specialized office and designated person to which trainees can submit any grievance.

With evidence of adverse experiences among medical trainees in other parts of the world and the fact that no data has been forthcoming from Oman, the present study

aimed to quantify mistreatment or abuse among Omani medical interns. Interrelated aims were to explore the level of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as gauge to the reasons for not reporting maltreatment, to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010 a total of 69 medical residents were enrolled. The residents were approached to participate in this study during a research workshop conducted in May 2010. Each participant was asked to fill in a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship.

ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al.[23] Baldwin et al.[34] and Uhari et al.[35] and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' (Table 1). *Physical Abuse* is defined as threat that, if executed, would likely cause physical harm. Other forms of physical abuse, such as, slapping, pushing, hitting, kicking or having objects thrown at the interns are an integral part of the present definition of physical abuse. Physical abuse also entails being placed at unnecessary medical risk. *Academic Abuse* is defined as coercion to carry out some personal services unrelated to the expected role of interns. The concept of academic abuse also encapsulates instances in which interns being excluded from otherwise reasonable learning opportunities offered to others, or are threatened with failure or poor evaluations for reasons unrelated to one's academic performance. *Sexual Harassment* is defined in the following terms: being subjected to jokes or comments against one's gender or body figure. Sexual harassment entails being subjected to repeated leering or offered unwanted gifts. Being offered private sessions or better grades in exchange for an extra-marital affair as well as inappropriate touching of a sexual nature constitute examples of sexual harassment.

Various socio-demographic information (e.g. age, sex, year of residency, marital status and current specialty) was also sought from the consenting participants. The participants were also given the option to use free text to describe reasons for reporting or not reporting maltreatment.

The questionnaire was delivered to each participant in a closed envelope, which also contained a description of the study, along with a statement of confidentiality so that informed consent could be obtained. To assure anonymity, participants were explicitly informed not to make any reference to their identity on the questionnaire. Return of a filled out questionnaire was taken as consent to be a participant.

ANALYSIS

Both descriptive statistics as raw counts and percentage are presented. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69 residents) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows perceived maltreatment according to gender. Out of total 12 items eliciting maltreatment, males dominated in 6 of them. However, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into ‘verbal abuse’, ‘physical abuse or threats’, ‘academic abuse’, and 'sexual harassment’, the only category of statistical significance at the 95% confidence level was ‘academic abuse’ where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in perpetuating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward the male residents ($p = 0.03$). Consultants and Specialists together were implicated in

academic abuse and sexual harassment more than other groups that the residents encountered.

Experience of Mistreatment according to Specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in dispensing maltreatment to the residents. As shown in Table 3, the data can be extrapolated in three ways. Firstly, all indices of maltreatment were significantly higher during medical rotation than pediatrics or surgery ($p = 0.005$). Secondly, pediatrics was second highest in dispensing maltreatment. Thirdly, verbal abuse was the highest type of maltreatment reported (36.8%) closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was to avoid further trouble, as the Residents believed that. "Reporting could adversely affect evaluation and professional career." Such behavior, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves as they "did not know whom to report to or how to make the complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to them. It was also not uncommon to not recognize "the experience as abuse at the time it happened."

DISCUSSION

To our knowledge the present research is the first to describe four interrelated patterns in relation to maltreatment from the experience of first year medical residents: gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment among Arab countries. Although the intended population was small, the rate of response to the survey was high and the gender distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late twenties. Pending further scrutiny as this should be viewed as a pilot study or sentinel. This survey indicates the rates of maltreatment to be alarming in the present observed cohort. On the whole, the present findings substantiate the view that maltreatment is prevalent during medical training even in this particular population.[6,7,19,36-37]

One of the aims of this study was to examine whether there is a gender difference in perceived maltreatment. Maltreatment and sexual abuse (that is abuse of a personal nature) echo the global situation where such patterns are common among working women[37] and nonetheless, female doctors.[39,40] The result of the present study suggests there was no significant as per gender although young female doctors were more likely to experience threats and sexual harassment.

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in perpetrating academic abuse and sexual harassment. Studies elsewhere suggest that maltreatment often comes from nonmedical staff, but according to Hinze[41] and Ahmer et al.[17] senior medical staff were not innocent either. However, this preliminary study suggests that hierarchy is strongly associated with propensity to dispense abuse. It is possible that such occurrences may stem from cultural patterning. While social institution in Western Europe and North American countries have explicitly made corporal punishment as retribution for an academic misbehavior as unacceptable (a view is enshrined in legal and judicial system), some reports have noted occurrence of aggressive act toward junior doctors.[42] It is possible that senior members, the traditional teacher, or father-figure, demand filial obedience from the students, in this case junior doctors. However, notwithstanding such a view, it appears that maltreatment of novices in the medical profession exists in many societies including those that do not prescribe to cultural patterning common in Oman.[4, 43] Therefore, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate senior members abusing the junior ones.

Knowing which type of abuse comes from which source enable educators to focus their resources to prevent maltreatment. Cook, Liutkus and Risdon[44] have suggested that there is no ‘magic-bullet’ to mitigate the prevailing maltreatment of medical trainees. One possible venue is to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical schools and health care systems should have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

Some obvious caveats are imperative to mention. This data presents residents' self-responses. Such method of eliciting information is likely to be rife with methodological deficit. Self-serving biases are well known in such studies.[45] It is also possible that recall bias could have contaminated their responses.[46] An integral part of recall bias, is that when individuals find certain events as emotional debilitating, the obvious recourse is to repress the memory of those events. Therefore, future studies should have an in- built mechanism to reduce the likelihood of recall bias. Secondly, some insidious cultural factors are likely to play factor in the present observation. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are likely to be 'concealed'.[47] In fact, eleven residents chose not to participate. Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were likely to be 'denied' resulting in spurious data. Despite the above-mentioned caveats, interesting issues have emerged from the present study that needs to be followed up in a wider context. Finally, the lack of qualitative data in a phenomenological study of perceived experience is likely to represent a major limitation of this study in particular in a population where such studies have not yet been forthcoming. Therefore, in studies eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews are likely to yield more fruitful results.[48] Such undertaking would have laid the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have included some interviews or focus groups so that the participants' interpretations could be explored in depth.

CONCLUSION

Mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores maltreatment and abuse in a medical setting. Fifty eight residents consented to participate in this present anonymous survey which consisted of approximately 84% of the interns. In terms of experience of mistreatment according to gender, males admitted to have experienced higher levels of mistreatment. In terms of the perpetrator of harassment and abuse, it appears that hierarchy counts. Those who were commanding higher positions were more

prone to fall foul to committing maltreatment and abuse. It also appeared that the problems were more rampant in the subspecialists of medicine. Further research is needed to understand factors influencing mistreatment and draw up guidelines to limit such problems. However the findings should lead to the identification of factors perpetuating maltreatment and abuse among medical trainee interns. Thus, evidence-based interventions can be contemplated.

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Participant consent: Obtained.

Ethics approval: Ethics approval was provided by the local institutional review board (IRB), Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

Conflicts of interest: none

Contributors
M-AS is responsible for study supervision, T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW, H- AS and S-AA were responsible for drafting, literature review and scientific approach of the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂ (N=28)	♀ (N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

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~~Prevalence~~Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate ~~the experience and~~ perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centers for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship. During the study period 2009 – 2010

Method: A cross-sectional survey of 69 first year Medical residents

Results: Of 58 residents (response rate 84%) around 96.6% believed that mistreatment exists. Among different types of mistreatment, verbal and academic abuse was the most commonly reported (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To understand factors influencing mistreatment and to draw guidelines to limit such problems

Report the experiences of mistreatment among medical trainees in Oman, Arab/Islamic country.

KEY MESSAGES

The data suggests bullying behavior is rampant among medical trainees in Oman.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviors have been reported in different occupational settings include medical profession. There is dearth of study from Arab/Islamic countries.

To our knowledge, this is the first study on this endeavor from this part of the world.

This study is limited with small sample size and its methodology, cross-sectional study

INTRODUCTION:

~~Different forms~~Forms of abuse and other bullying behaviors have been reported in ~~different~~various occupational settings.[1-4] Studies carried out in different parts of the world suggest that medical professionals are no exception to maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, like interns, are the most vulnerable. According to Coverdale, Balon & Roberts the most common degrading experiences among interns include "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice~~"(" (~~p.269~~)~~).[5]

~~There are studies that~~ Studies have quantified mistreatment among medical trainees or those who are on the lower ladder of a medical career. Steven et al.[6] reported in a national survey in the USA that about 93% of medical trainees endorsed the view that they have had at least one experience of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees have been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe ~~and~~, North American~~,~~ and Asia Pacific regions have also found evidence of maltreatment including Australia[4,8] New Zealand[9] Ireland[10], Argentina[11] and Japan.[12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-16] Ahmer et al.[17] have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing from available literature, Coverdale, Balon & Roberts[5] have categorized common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment and forms of prejudice against sexual orientation and ethnicity.

There is a myriad of adverse impacts of mistreatment that can emerge as a result of trainees being subjected to maltreatment[18]. Schubert et al.[19] have shown a significant relationship between verbal abuse during medical training and lower levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied

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mental health consequences among trainees who were subjected to maltreatment with disconcerting findings. There appeared to be tendencies for maltreated trainees to have 'psychopathological outcomes' in the form of unrelenting affective emotions, resorting to 'self-medication' and even dependency on mind altering substances.[20,21] This is consonant with well known observations that there are high levels of stress and psychological distress among medical trainees.[22,23] Such prevailing situations have been suggested to play a role in the observed higher rate of suicide among physicians compared to the general population.~~The picture is even bleaker with the findings~~[24,25] There is indication that medical trainees~~,~~ who were most distressed at the beginning of their training, and were likely to report more stress and distress in the subsequent course of their lives.[26] According to Miedema et al.[27], there are inbuilt mechanisms that perpetuate abusive behavior in the medical culture, including working in what is perceived as a stressful environment. This is suggestion that 'abuse begets abuse'[28], a view that might implication for fostering a cycle of bullying in medical profession.

In the Arab world, evidence abounds that much emotional distress is present among medical ~~trainees~~ ~~[25-27]~~trainees[29-31] including Oman.~~[28]~~[32] Although these Arabian studies should be enlightening, most of them are rife with conceptual limitations. Many of them have utilized assessment measures without local validity and therefore these studies fall into the 'category of fallacy'.~~[29]~~[33] These studies could also be criticized on the ground that their target population was pre-clinical students. Therefore generalizations cannot be applied to interns. Internship, in parlance of the medical profession, is the period in which new medical graduates learn medical ~~p~~practices in a hospital under supervision, prior to beginning his or her specialization. In Oman, internship consists of three to four month rotations, in which each intern (resident) is rotated through general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman, further medical training is conducted under the auspices of Oman Medical Specialty Board (http://www.omsb.org), a governmental body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the wellbeing of trainees, through services that include a specialized office and designated person to which trainees can submit any grievance.

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With evidence of adverse experiences among medical trainees in other parts of the world and the fact that no data has been forthcoming from Oman, the present study aimed to quantify mistreatment or abuse among Omani medical interns. Interrelated aims were to explore ~~experiences~~the level of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as gauge to the reasons for not reporting maltreatment, to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010 a total of 69 medical residents were enrolled. The residents were approached to participate in this study during a research workshop conducted in May 2010. Each participant was asked to fill in a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship.

ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al.[23] Baldwin et al.[34] and Uhari et al.[35] and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment'. ~~In addition, various~~ (Table 1). *Physical Abuse* is defined as threat that, if executed, would likely cause physical harm. Other forms of physical abuse, such as, slapping, pushing, hitting, kicking or having objects thrown at the interns are an integral part of the present definition of physical abuse. Physical abuse also entails being placed at unnecessary medical risk. *Academic Abuse* is defined as coercion to carry out some personal services unrelated to the expected role of interns. The concept of academic abuse also encapsulates instances in which interns being excluded from otherwise reasonable learning opportunities offered to others, or are threatened with failure or poor evaluations for reasons unrelated to one's academic performance. *Sexual Harassment* is defined in the following terms: being subjected to jokes or comments against one's gender or body figure. Sexual harassment entails being subjected to repeated leering or offered unwanted gifts. Being offered

private sessions or better grades in exchange for an extra-marital affair as well as inappropriate touching of a sexual nature constitute examples of sexual harassment.

Various socio-demographic information (e.g. age, sex, year of residency, marital status and current specialty) ~~were included.~~was also sought from the consenting participants. The participants were also given the option to use free text to describe reasons for reporting or not reporting maltreatment.

The questionnaire was delivered to each participant in a closed envelope, which also contained a description of the study, along with a statement of confidentiality so that informed consent could be obtained~~, and statement of confidentiality~~. To assure anonymity, participants were explicitly informed not to make any reference to their identity on the questionnaire. Return of a filled out questionnaire was taken as consent to be a participant.

ANALYSIS

~~Data was entered on EPI data software and transferred to SPSS version 17.0 for analysis.~~ Both descriptive ~~and inferential~~ statistics ~~were used~~ as ~~appropriate. Free~~raw counts and percentage are presented. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69 residents) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows perceived maltreatment according to gender. Out of total 12 items eliciting maltreatment, males dominated in 6 of them. However, no statistical differences

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were found between genders on any one item. When each form of maltreatment was collapsed into 'verbal abuse', 'physical abuse or threats', 'academic abuse', and 'sexual harassment', the only category of statistical significance at the 95% confidence level was 'academic abuse' where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in perpetuating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward the male residents ($p = 0.03$). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than other groups that the residents encountered.

Experience of Mistreatment according to Specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in dispensing maltreatment to the residents. As shown in Table 3, the data can be extrapolated in three ways. Firstly, ~~notoriety of~~ all indices of maltreatment were significantly higher during medical rotation than pediatrics or surgery ($p = 0.005$). Secondly, ~~overall~~ pediatrics was second highest~~, although verbal abuse, academic abuse and sexual harassment was second to medicine during surgical rotation~~ in dispensing maltreatment. Thirdly, verbal abuse was the highest type of maltreatment reported (36.8%) closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was to avoid further trouble~~ and thus maltreatment was concealed.~~, as the Residents believed that. "Reporting could adversely affect ~~my~~ evaluation and professional career~~…~~." Such behavior, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves~~. "I~~ as they "did not know ~~to~~ whom ~~I should~~to report to or how to ~~complain." "I dealt with~~make the ~~problem directly myself."~~complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to ~~me."~~them. It was also not uncommon to not recognize "the experience as abuse at the time it happened."

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DISCUSSION

To our knowledge the present research is the first to describe four interrelated patterns in relation to maltreatment from the experience of first year medical residents: gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment~~, in the~~ among Arab countries. Although the intended population was small, the rate of response to the survey was high and the gender distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late twenties. Pending further scrutiny as this should be viewed as a pilot study or sentinel. This survey indicates the rates of maltreatment to be alarming in the present observed cohort. On the whole, the present findings substantiate the view that maltreatment is prevalent during medical training~~.[6, 7,18,30,31] and it appears that maltreatment and abuse is the rule rather than the exception. The first principle in medicine is 'primum non nocere' (first do no harm) – Hippocrates may have also been referring to the well being of the young medical trainees.~~ even in this particular population.[6,7,19,36-37]

One of the aims of this study was to examine whether there is a gender difference in perceived maltreatment. ~~The result suggests there was no significant difference although young female doctors were more likely to experience threats and sexual harassment. In past decades, Oman has made rapid progress in eroding a traditional gender gap. Both universal free education for women and the resultant female empowerment have been catalysts for such change.[32] As a result, the country has witnessed that women's enrollment to higher education appears to be outstripping those of their male counterparts [33], a feat that is globally supported with emerging evidence that females generally perform better across the border in indices of education. With education being the engine of social emancipation, women have made a desirable entrance into Oman's workforce.~~ Maltreatment and sexual abuse (that is abuse of a personal nature) ~~echoes~~echo the global situation where such patterns are common among working ~~women[34]~~women[37] and nonetheless, female doctors.[35,36] ~~In academic performance, however women are less likely to be maltreated than males. This interesting finding could be attributed to malingering among males or more studious females. These assumptions could be further tested. Regardless of assumptions there is a strong rationale~~

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~~for instituting teaching about healthy workplace ethics.~~[~~37~~39,40] The result of the present study suggests there was no significant as per gender although young female doctors were more likely to experience threats and sexual harassment.

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in perpetrating academic abuse and sexual harassment. Studies ~~from~~ elsewhere suggest that maltreatment often comes from nonmedical staff, but according to ~~Hinze~~[38]Hinze[41] and Ahmer et al.[17,] senior medical staff ~~('a sensible older clinician')~~ were not innocent either. However, this preliminary study suggests that hierarchy is strongly associated with propensity to dispense abuse. It is possible that such occurrences may stem from ~~socialization and child rearing practices. Society in Oman is characterized by an authoritarian and authoritative 'parenting style'.~~ cultural patterning. While social institution in Western Europe and North American countries have explicitly made corporal punishment as retribution for an academic misbehavior as unacceptable (a view is enshrined in legal and judicial system), some reports have noted occurrence of aggressive act toward junior doctors.[42] It is possible that senior members, the traditional teacher, or father-figure, demand filial obedience from the students, in this case junior doctors. ~~This tradition is not denigrating Omanis because the authoritarian style has also been witnessed emanating from expatriates, particularly from the Indian sub-continent, and maybe a result of 'maintaining control' in a profession that deals with acute life and death situations. It is possible that such relationships may play a part in the presently perceived maltreatment among residents.~~ However, notwithstanding such a view, it appears that maltreatment of novices in the medical profession exists in many societies including those that do not prescribe to ~~authoritarian and authoritative parenting styles.~~[~~4,39~~]cultural patterning common in Oman.[4, 43] Therefore, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate senior members abusing the junior ones.

~~The majority of residents admitted to receiving most maltreatment from rotation in internal medicine. However maltreatment was experienced in all three specialties with verbal and academic abuse ranking the most common types. It is not clear why a medical~~

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~~rotation ranked first and may be an anomaly of the setting of the research being confined to one hospital.~~

Knowing which type of abuse comes from which source enable educators to focus their resources to prevent maltreatment. Cook, Liutkus and ~~Risdon[40]~~ Risdon[44] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. One possible venue is to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. ~~Medical school faculty should also raise awareness in tomorrow's doctors on how to inoculate themselves against abuse and maltreatment. The long-term solution is to screen and eliminate the entrance of personality subtypes that are likely to be prone to abusing others. There is a vast literature suggesting that certain psychosocial histories are likely to be strongly associated with explosive and psychopathic personality. There is evidence to suggest that a substantial number of those who enroll in medical school have temperaments that are akin to the narcissistic personality and tendency for Machiavellianism.[29] It would be an insurmountable mission for young doctors to win a battle against senior doctors who have amassed international experience and command high reputation in the community.~~ Medical schools and health care systems should have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

~~In Oman, culturally sanctioned mechanisms are needed to prevent the occurrence of abuse as well as support systems for the victims. In an ideal world, it has been stated that "medical school and residency training programs are intended to provide positive educational and mentorship experiences and to inculcate a culture of professionalism and collegiality" (p. 269) [5]. Such an aspiration has yet to be realized. In most occupational settings, provision to deal with deviant behavior does exist. Indeed, there are clauses in many judicial systems and professional bodies about how to handle unethical standards. However, such provisions are yet to make entrance into medical training in Oman, despite their essential importance. For one thing, the perpetrator of maltreatment during~~

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~~medical training may not be limited to the~~Some obvious ~~victims. It is likely that others would fall prey to abuse including patients when seeking consultations. It is worthwhile realizing that abuse is known to 'beget' abuse. If this is true, then the abused trainee is likely to emerge one day as the abuser, setting up a cycle.~~

~~These~~caveats are imperative to mention. This data ~~present~~presents residents' self-responses~~ not controlled observations of behavior, which limit the findings.~~ Such method of eliciting information is likely to be rife with methodological deficit. Self-serving biases are well known in such studies.[45] It is also possible that recall bias could have contaminated their responses.[41]46] An integral part of recall bias, is that when individuals find certain events as emotional debilitating, the obvious recourse is to repress the memory of those events. Therefore, future studies should have an in- built mechanism to reduce the likelihood of recall bias.

~~In addition,~~ Secondly, some insidious cultural factors are likely to play factor in the present observation. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are likely to be 'concealed'.[42] ~~Indeed~~[47] In fact, eleven residents chose not to participate. Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were likely to be 'denied' resulting in spurious data. Despite the above-mentioned caveats, interesting issues have emerged from the present study that needs to be followed up in a wider context. Finally, the lack of qualitative data in a phenomenological study of perceived experience is likely to represent a major limitation of this study in particular in a population where such studies have not yet been forthcoming. Therefore, in studies eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews are likely to yield more fruitful results.[48] Such undertaking would have laid the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have

included some interviews or focus groups so that the participants' interpretations could be explored in depth.

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CONCLUSION

Mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores maltreatment and abuse in a medical setting. Fifty eight residents consented to participate in this present anonymous survey which consisted of approximately 84% of the interns. In terms of experience of mistreatment according to gender, males admitted to have experienced higher levels of mistreatment. In terms of the perpetrator of harassment and abuse, it appears that hierarchy counts. Those who were commanding higher ~~position~~positions were more prone to fall foul to committing maltreatment and abuse. It also appeared that the problems were more rampant in the subspecialists of medicine. Further research is needed to understand factors influencing mistreatment and draw up guidelines to limit such problems. However the findings should lead to the identification of factors perpetuating maltreatment and abuse among medical trainee interns. Thus, evidence-based interventions can be contemplated.

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Conflicts of interest: none

Contributors
M-AS is responsible for study supervision, T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and

the accuracy of the data analysis and GW, H- AS and S-AA were responsible for drafting, literature review and scientific approach of the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂ (N=28)	♀ (N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

Reviewer	Reviewer' comments	Authors' response
Kal Winston	The term 'explore experiences' is mentioned in the research question. From the tables, it appears participants simply responded to very few pre-defined categories. Individuals typically interpret these types of statements differently. Nowhere is it explained what these categories consist of.	The statement 'explore experiences' has been revised. Also, now it is mentioned in the text that the study employed quantitative approach via The Likert-type questionnaire
	It would have been really good to have included some interviews or focus groups so that the participants' interpretations really could be explored. The lack of qualitative data in a phenomenological study of perceived experience should be cited as a major limitation. If you choose not to include any qualitative data from interviews or focus groups, then you should state this as a major limitation of a study which is designed to explore participants experiences.	We thank Prof Winston for raising this important omission. This issue has now being recapitulated as one of major limitation of this study.
	Use of SPSS for statistics is mentioned, but the tables only include simple counts and percentages. I think this is fine, but the methods section should be clearer about this.	The text has been revised.
	There are very minor errors of English, mostly of prepositions and pronouns, sprinkled throughout.	Attempt was made by a native speaker to polish the English expression and grammar.

	The terms 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' all appear to be undefined.	We are grateful to Prof. Winston for raising this issue. These terms have now been operationalized in the text, plus Table 1. Please see description under the title **Assessment Measures**
David Power MB MPH	I consider this an important pilot study, especially if this truly is the first report of abuse amongst interns in Oman. That being said, while in many parts of the paper the English is very readable there are other parts of the paper - the abstract - where the English is not at a level yet for publication. For example the phrase 'across the border' is used when I believe the intent is to communicate 'across the board', There are other similar examples so I think the language does need to be re-worked before publication.	The suggested changes have been taken onboard. Also, as alluded above, attempts were made to improve the English expression and grammar.
	Again, I consider this a pilot study. I recommend re-working this paper to present it as a pilot study suggesting the need to explore this issue further. There are more sophisticated measures than those used by Sheehan (ref#20) in 1990. I am personally involved with several publications by Dyrbye et al where validated measures are	We are grateful of the Prof Power's suggestion that this paper should be considered as pilot. On this ground, the title has been duly changed as "Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional

	consistently used and referenced. Nonetheless, as a pilot study, the results of this survey are alarming and need to be presented in the literature. I do believe that a more comprehensive survey should be planned by the authors, including surveying about mental health attributes - such as depression and burnout - of the respondents.	study among first year residents in Oman". We will also consider conducting another study with more robust methodological sophistication. The idea to also to explore possible sequel mental health of maltreatment in future studies have been noted with deep appreciation.
	The discussion is much too lengthy and includes too much conjecture. In my opinion, the main conclusion is that there is a serious problem that needs further investigation and attention. The discussion will need to be limited because these are preliminary findings - so this should be much shorter.	We thank the esteemed Professor for this recommendation. We fully agree with his suggestion and therefore the text has been drastically reduced.
	I believe this is important, sentinel pilot research that should be published. I've mentioned some concerns above that need to be addressed. I am fascinated that some interns reported physical abuse or threats of physical abuse. Given that this is a rare observation in the Western literature, I would love more information on this - did anyone actually experience physical abuse such as slapping or pushing? Clearly unacceptable and grounds for legal action in many countries.	This issue has been made more explicit in the text.
	I do believe this needs to be published - and wonder indeed if the authors risk any	We thank Prof Power for this enthusiasm and encouragement.

	negative consequences by proceeding to publication. I applaud them indeed for casting light on these staggering figures for abuse in this Arab country.	

Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centers for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship. During the study period 2009 – 2010

Method: A cross-sectional survey of 69 first year Medical residents

Results: Of 58 residents (response rate 84%) around 96.6% believed that mistreatment exists. Among different types of mistreatment, verbal and academic abuse was the most commonly reported (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To understand factors influencing mistreatment and to draw guidelines to limit such problems

Report the experiences of mistreatment among medical trainees in Oman, an Arab/Islamic country.

KEY MESSAGES

The data suggests bullying behavior is rampant among medical trainees in Oman.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviors have been reported in different occupational settings including the medical profession. There is dearth of study from Arab/Islamic countries.

To our knowledge, this is the first study on this endeavor from this part of the world.

This study is limited with small sample size and its cross-sectional study methodology.

INTRODUCTION:

Forms of abuse and other bullying behaviors have been reported in various occupational settings.[1-4] Studies carried out in different parts of the world suggest that medical professionals are no exception to maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, like interns, are the most vulnerable. According to Coverdale, Balon & Roberts the most common degrading experiences among interns include "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice" (p.269).[5]

Studies have quantified mistreatment among medical trainees or those who are on the lower ladder of a medical career. Steven et al.[6] reported in a national survey in the USA that about 93% of medical trainees endorsed the view that they have had at least one experience of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees have been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe, North American and Asia Pacific regions have also found evidence of maltreatment including Australia[4,8] New Zealand[9] Ireland[10], Argentina[11] and Japan. [12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-16] Ahmer et al.[17] have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing from available literature, Coverdale, Balon & Roberts[5] have categorized common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment and forms of prejudice against sexual orientation and ethnicity.

There is a myriad of adverse impacts of mistreatment that can emerge as a result of trainees being subjected to maltreatment.[18, 19] Schubert et al.[20] have shown a significant relationship between verbal abuse during medical training and lower levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied mental health consequences among trainees who were subjected to maltreatment with

disconcerting findings. There appeared to be tendencies for maltreated trainees to have 'psychopathological outcomes' in the form of unrelenting affective emotions, resorting to 'self-medication' and even dependency on mind altering substances.[21,22] This is consonant with well known observations that there are high levels of stress and psychological distress among medical trainees.[23,24] Such prevailing situations have been suggested to play a role in the observed higher rate of suicide among physicians compared to the general population.[25,26] There is indication that medical trainees who were most distressed at the beginning of their training, and were likely to report more stress and distress in the subsequent course of their lives.[27] According to Miedema et al.[28], there are inbuilt mechanisms that perpetuate abusive behavior in the medical culture, including working in what is perceived as a stressful environment. This is suggestion that 'abuse begets abuse'[29], a view that might imply the presence of a cycle of bullying in medical profession.

In the Arab world, evidence abounds that much emotional distress is present among medical trainees[30-32] including Oman.[33] Although these Arabian studies should be enlightening, most of them are rife with conceptual limitations. Many of them have utilized assessment measures without local validity and therefore these studies fall into the 'category of fallacy'.[34] These studies could also be criticized on the ground that their target population was pre-clinical students. Therefore generalizations cannot be applied to interns. Internship, in parlance of the medical profession, is the period in which new medical graduates learn medical practices in a hospital under supervision, prior to beginning his or her specialization. In Oman, internship consists of three to four month rotations, in which each intern (resident) is rotated through general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman, further medical training is conducted under the auspices of Oman Medical Specialty Board (http://www.omsb.org), a governmental body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the wellbeing of trainees, through services that include a specialized office and designated person to which trainees can submit any grievance.

With evidence of adverse experiences among medical trainees in other parts of the world and the fact that no data has been forthcoming from Oman, the present study

aimed to quantify mistreatment or abuse among Omani medical interns. Interrelated aims were to explore the level of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as gauge to the reasons for not reporting maltreatment, to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010 a total of 69 medical residents were invited to participate in this study. The residents were approached to participate in this study during a research workshop conducted in May 2010. Each participant was asked to fill in a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship. In the cover letter with the survey, it was indicated to the participants that this was anonymous survey and their participation was entirely voluntary and data gathered would be kept confidential and they may withdraw any from the study, without prejudice at any time. In case the participants incur any undue distress while contemplating on the items of the questionnaire, mental health support will be duly provided. The participants were asked not to discuss the questionnaire among themselves in order to avoid peer influence.

ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al.[24] Baldwin et al.[35] and Uhari et al.[36] and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' (Table 1). *Physical Abuse* is defined as threat that, if executed, would likely cause physical harm. Other forms of physical abuse, such as, slapping, pushing, hitting, kicking or having objects thrown at the interns are an integral part of the present definition of physical abuse. Physical abuse also entails being placed at unnecessary medical risk. *Academic Abuse* is defined as coercion to carry out some personal services unrelated to the expected role of interns. The concept of academic abuse also encapsulates instances in which interns being excluded from otherwise reasonable learning opportunities offered to others, or are

threatened with failure or poor evaluations for reasons unrelated to one's academic performance. *Sexual Harassment* is defined in the following terms: being subjected to jokes or comments against one's gender or body figure. Sexual harassment entails being subjected to repeated leering or offered unwanted gifts. Being offered private sessions or better grades in exchange for an extra-marital affair as well as inappropriate touching of a sexual nature constitute examples of sexual harassment.

Various socio-demographic information (e.g. age, sex, year of residency, marital status and current specialty) was also sought from the consenting participants. The participants were also given the option to use free text to describe reasons for reporting or not reporting maltreatment.

The questionnaire was delivered to each participant in a closed envelope, which also contained a description of the study, along with a statement of confidentiality so that informed consent could be obtained. To assure anonymity, participants were explicitly informed not to make any reference to their identity on the questionnaire.

ANALYSIS

Both descriptive statistics as raw counts and percentage are presented. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69 residents) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows perceived maltreatment according to gender. Out of total 12 items eliciting maltreatment, males dominated in 6 of them. However, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into 'verbal abuse', 'physical abuse or threats', 'academic abuse', and 'sexual

harassment', the only category of statistical significance at the 95% confidence level was 'academic abuse' where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in perpetuating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward the male residents ($p = 0.03$). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than other groups that the residents encountered.

Experience of Mistreatment according to Specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in dispensing maltreatment to the residents. As shown in Table 3, the data can be extrapolated in three ways. Firstly, all indices of maltreatment were significantly higher during medical rotation than pediatrics or surgery ($p = 0.005$). Secondly, pediatrics was second highest in dispensing maltreatment. Thirdly, verbal abuse was the highest type of maltreatment reported (36.8%) closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was to avoid further trouble, as the Residents believed that. "Reporting could adversely affect evaluation and professional career." Such behavior, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves as they "did not know whom to report to or how to make the complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to them. It was also not uncommon to not recognize "the experience as abuse at the time it happened."

DISCUSSION

To our knowledge the present research is the first to describe four interrelated patterns in relation to maltreatment from the experience of first year medical residents in Arab countries: gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment. Although the intended population was small, the rate of response to the survey was high and the gender

distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late twenties. Pending further scrutiny as this should be viewed as a pilot study or sentinel. This survey indicates the rates of maltreatment to be alarming in the presently observed cohort. On the whole, the present findings substantiate the view that maltreatment is prevalent during medical training even in this particular population.[6, 7, 20, 37-38]

One of the aims of this study was to examine whether there is a gender difference in perceived maltreatment. Maltreatment and sexual abuse (that is abuse of a personal nature) echo the global situation where such patterns are common among working women[39] and nonetheless, female doctors.[40, 41] The result of the present study suggests there was no significant difference as per gender although young female doctors were more likely to experience threats and sexual harassment. It is not clear why the present cohort appears to ostensibly differ from trend commonly observed elsewhere. Some speculations are therefore warranted. It is possible that gender segregation, a common social prescription in the region, may have insidiously shielded female from being subjected to maltreatment. In traditional Omani society, gender segregation has been suggested to have been socio-culturally sanctioned in order to enhance female safety.[42] It is also possible that trajectory of modernity and empowerment may have also played present observation. There is indication that recent affluence in Oman has narrowed traditional the gender gap common in such patrilineal society. Drawing from data from the Ministry of Health in Oman, Alshishtawy [43] has indicated that approximately 60% of the workforce in Oman are females. Accordingly, “women outnumbered men in all medical and health categories” and "feminisation" of the medical/health sciences professions in Oman has reversed the male dominance of past years” [p.273]. Therefore, preponderance of female in healthcare sectors in Oman might have played instrumental role in moderating a stereotypical picture of senior male abusing junior female.

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in perpetrating academic abuse and sexual harassment. Studies elsewhere suggest that maltreatment often comes from nonmedical staff, but according to Hinze[44] and Ahmer et al.[17] senior medical staff were

not innocent either. However, this preliminary study suggests that hierarchy is strongly associated with propensity to dispense abuse. It is possible that such occurrences may stem from cultural patterning. While social institution in Western Europe and North American countries have explicitly made corporal punishment as retribution for an academic misbehavior as unacceptable (a view is enshrined in legal and judicial system), some reports have noted occurrence of aggressive act toward junior doctors.[45] It is possible that senior members, the traditional teacher, or father-figure, demand filial obedience from the students, in this case junior doctors. However, notwithstanding such a view, it appears that maltreatment of novices in the medical profession exists in many societies including those that do not prescribe to cultural patterning common in Oman.[4, 46] Therefore, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate senior members abusing the junior ones.

Knowing which type of abuse comes from which source enable educators to focus their resources to prevent maltreatment. Cook, Liutkus and Risdon[47] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. One possible venue is to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical schools and health care systems should have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

Some obvious caveats are imperative to mention. This data presents residents' self-responses. Such method of eliciting information is likely to be rife with methodological deficit. Self-serving biases are well known in such studies.[48] It is also possible that recall bias could have contaminated their responses.[49] An integral part of recall bias, is that when individuals find certain events as emotional debilitating, the obvious recourse is to repress the memory of those events. Therefore, future studies should have an in-built mechanism to reduce the likelihood of recall bias. Secondly, some insidious cultural factors are likely to play factor in the present observation. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are likely to be 'concealed'.[50] Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were likely to be 'denied' resulting in spurious data. Despite the above-mentioned caveats, interesting

issues have emerged from the present study that needs to be followed up in a wider context. Finally, the lack of qualitative data in a phenomenological study of perceived experience is likely to represent a major limitation of this study in particular in a population where such studies have not yet been forthcoming. Therefore, in studies eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews are likely to yield more fruitful results.[50] Such undertaking would have laid the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have included some interviews or focus groups so that the participants' interpretations could be explored in depth.

CONCLUSION

Mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores maltreatment and abuse in a medical setting. Fifty eight residents consented to participate in this present anonymous survey which consisted of approximately 84% of the interns. In terms of experience of mistreatment according to gender, males admitted to have experienced higher levels of mistreatment. In terms of the perpetrator of harassment and abuse, it appears that hierarchy counts. Those who were commanding higher positions were more prone to fall foul to committing maltreatment and abuse. It also appeared that the problems were more rampant in the subspecialists of medicine. Further research is needed to understand factors influencing mistreatment and draw up guidelines to limit such problems. However the findings should lead to the identification of factors perpetuating maltreatment and abuse among medical trainee interns. Thus, evidence-based interventions can be contemplated.

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Conflicts of interest: none

Contributors

M-AS is responsible for study supervision, T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW, H- AS and S-AA were responsible for drafting, literature review and scientific approach of the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂ (N=28)	♀ (N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centers for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship. During the study period 2009 – 2010

Method: A cross-sectional survey of 69 first year Medical residents

Results: Of 58 residents (response rate 84%) around 96.6% believed that mistreatment exists. Among different types of mistreatment, verbal and academic abuse was the most commonly reported (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To understand factors influencing mistreatment and to draw guidelines to limit such problems

Report the experiences of mistreatment among medical trainees in Oman, an Arab/Islamic country.

KEY MESSAGES

The data suggests bullying behavior is rampant among medical trainees in Oman.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviors have been reported in different occupational settings including the medical profession. There is dearth of study from Arab/Islamic countries.

To our knowledge, this is the first study on this endeavor from this part of the world.

This study is limited with small sample size and its cross-sectional study methodology.

INTRODUCTION:

Forms of abuse and other bullying behaviors have been reported in various occupational settings.[1-4] Studies carried out in different parts of the world suggest that medical professionals are no exception to maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, like interns, are the most vulnerable. According to Coverdale, Balon & Roberts the most common degrading experiences among interns include "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice" (p.269).[5]

Studies have quantified mistreatment among medical trainees or those who are on the lower ladder of a medical career. Steven et al.[6] reported in a national survey in the USA that about 93% of medical trainees endorsed the view that they have had at least one experience of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees have been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe, North American and Asia Pacific regions have also found evidence of maltreatment including Australia[4,8] New Zealand[9] Ireland[10], Argentina[11] and Japan. [12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-16] Ahmer et al.[17] have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing from available literature, Coverdale, Balon & Roberts[5] have categorized common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment and forms of prejudice against sexual orientation and ethnicity.

There is a myriad of adverse impacts of mistreatment that can emerge as a result of trainees being subjected to maltreatment.[18, 19] Schubert et al.[19~~20~~] have shown a significant relationship between verbal abuse during medical training and lower levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied mental health consequences among trainees who were subjected to

maltreatment with disconcerting findings. There appeared to be tendencies for maltreated trainees to have 'psychopathological outcomes' in the form of unrelenting affective emotions, resorting to 'self-medication' and even dependency on mind altering substances.[20,21,22] This is consonant with well known observations that there are high levels of stress and psychological distress among medical trainees.[22,23,24] Such prevailing situations have been suggested to play a role in the observed higher rate of suicide among physicians compared to the general population.[24,25,26] There is indication that medical trainees who were most distressed at the beginning of their training, and were likely to report more stress and distress in the subsequent course of their lives.[26,27] According to Miedema et al.[27,28], there are inbuilt mechanisms that perpetuate abusive behavior in the medical culture, including working in what is perceived as a stressful environment. This is suggestion that 'abuse begets [28]abuse'[29], a view that might ~~implication for fostering~~imply the presence of a cycle of bullying in medical profession.

In the Arab world, evidence abounds that much emotional distress is present among medical trainees[30-32] including Oman.[32,33] Although these Arabian studies should be enlightening, most of them are rife with conceptual limitations. Many of them have utilized assessment measures without local validity and therefore these studies fall into the 'category of fallacy'.[33,34] These studies could also be criticized on the ground that their target population was pre-clinical students. Therefore generalizations cannot be applied to interns. Internship, in parlance of the medical profession, is the period in which new medical graduates learn medical practices in a hospital under supervision, prior to beginning his or her specialization. In Oman, internship consists of three to four month rotations, in which each intern (resident) is rotated through general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman, further medical training is conducted under the auspices of Oman Medical Specialty Board (http://www.omsb.org), a governmental body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the wellbeing of trainees, through services that include a specialized office and designated person to which trainees can submit any grievance.

With evidence of adverse experiences among medical trainees in other parts of the world and the fact that no data has been forthcoming from Oman, the present study

aimed to quantify mistreatment or abuse among Omani medical interns. Interrelated aims were to explore the level of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as gauge to the reasons for not reporting maltreatment, to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010 a total of 69 medical residents were ~~enrolled.~~invited to participate in this study. The residents were approached to participate in this study during a research workshop conducted in May 2010. Each participant was asked to fill in a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship. In the cover letter with the survey, it was indicated to the participants that this was anonymous survey and their participation was entirely voluntary and data gathered would be kept confidential and they may withdraw any from the study, without prejudice at any time. In case the participants incur any undue distress while contemplating on the items of the questionnaire, mental health support will be duly provided. The participants were asked not to discuss the questionnaire among themselves in order to avoid peer influence.

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ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al.[~~23~~24] Baldwin et al.[~~34~~35] and Uhari et al.[~~35~~36] and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' (Table 1). *Physical Abuse* is defined as threat that, if executed, would likely cause physical harm. Other forms of physical abuse, such as, slapping, pushing, hitting, kicking or having objects thrown at the interns are an integral part of the present definition of physical abuse. Physical abuse also entails being placed at unnecessary medical risk. *Academic Abuse* is defined as coercion to carry out some personal services unrelated to the expected role of interns. The concept of academic abuse also encapsulates instances in which interns being excluded from otherwise reasonable learning opportunities offered to others, or are

threatened with failure or poor evaluations for reasons unrelated to one's academic performance. *Sexual Harassment* is defined in the following terms: being subjected to jokes or comments against one's gender or body figure. Sexual harassment entails being subjected to repeated leering or offered unwanted gifts. Being offered private sessions or better grades in exchange for an extra-marital affair as well as inappropriate touching of a sexual nature constitute examples of sexual harassment.

Various socio-demographic information (e.g. age, sex, year of residency, marital status and current specialty) was also sought from the consenting participants. The participants were also given the option to use free text to describe reasons for reporting or not reporting maltreatment.

The questionnaire was delivered to each participant in a closed envelope, which also contained a description of the study, along with a statement of confidentiality so that informed consent could be obtained. To assure anonymity, participants were explicitly informed not to make any reference to their identity on the questionnaire. ~~Return of a filled out questionnaire was taken as consent to be a participant.~~

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ANALYSIS

Both descriptive statistics as raw counts and percentage are presented. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69 residents) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows perceived maltreatment according to gender. Out of total 12 items eliciting maltreatment, males dominated in 6 of them. However, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into 'verbal abuse', 'physical abuse or threats', 'academic abuse', and 'sexual

harassment', the only category of statistical significance at the 95% confidence level was 'academic abuse' where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in perpetuating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward the male residents ($p = 0.03$). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than other groups that the residents encountered.

Experience of Mistreatment according to Specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in dispensing maltreatment to the residents. As shown in Table 3, the data can be extrapolated in three ways. Firstly, all indices of maltreatment were significantly higher during medical rotation than pediatrics or surgery ($p = 0.005$). Secondly, pediatrics was second highest in dispensing maltreatment. Thirdly, verbal abuse was the highest type of maltreatment reported (36.8%) closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was to avoid further trouble, as the Residents believed that. "Reporting could adversely affect evaluation and professional career." Such behavior, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves as they "did not know whom to report to or how to make the complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to them. It was also not uncommon to not recognize "the experience as abuse at the time it happened."

DISCUSSION

To our knowledge the present research is the first to describe four interrelated patterns in relation to maltreatment from the experience of first year medical residents in Arab countries: gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment ~~among Arab countries.~~ Although the intended population was small, the rate of response to the survey

was high and the gender distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late twenties. Pending further scrutiny as this should be viewed as a pilot study or sentinel. This survey indicates the rates of maltreatment to be alarming in the presently observed cohort. On the whole, the present findings substantiate the view that maltreatment is prevalent during medical training even in this particular population.[6, 7, 20, 37-38]

One of the aims of this study was to examine whether there is a gender difference in perceived maltreatment. Maltreatment and sexual abuse (that is abuse of a personal nature) echo the global situation where such patterns are common among working women[39] and nonetheless, female doctors.[40, 41] The result of the present study suggests there was no significant difference as per gender although young female doctors were more likely to experience threats and sexual harassment. It is not clear why the present cohort appears to ostensibly differ from trend commonly observed elsewhere. Some speculations are therefore warranted. It is possible that gender segregation, a common social prescription in the region, may have insidiously shielded female from being subjected to maltreatment. In traditional Omani society, gender segregation has been suggested to have been socio-culturally sanctioned in order to enhance female safety.[42] It is also possible that trajectory of modernity and empowerment may have also played present observation. There is indication that recent affluence in Oman has narrowed traditional the gender gap common in such patrilineal society. Drawing from data from the Ministry of Health in Oman, Alshishtawy [43] has indicated that approximately 60% of the workforce in Oman are females. Accordingly, “women outnumbered men in all medical and health categories” and "feminisation" of the medical/health sciences professions in Oman has reversed the male dominance of past years” [p.273]. Therefore, preponderance of female in healthcare sectors in Oman might have played instrumental role in moderating a stereotypical picture of senior male abusing junior female.

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The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in perpetrating academic abuse and sexual harassment. Studies elsewhere suggest that maltreatment often comes from nonmedical staff, but according to Hinze[44] and Ahmer et al.[17] senior medical staff were

not innocent either. However, this preliminary study suggests that hierarchy is strongly associated with propensity to dispense abuse. It is possible that such occurrences may stem from cultural patterning. While social institution in Western Europe and North American countries have explicitly made corporal punishment as retribution for an academic misbehavior as unacceptable (a view is enshrined in legal and judicial system), some reports have noted occurrence of aggressive act toward junior doctors.[42,45] It is possible that senior members, the traditional teacher, or father-figure, demand filial obedience from the students, in this case junior doctors. However, notwithstanding such a view, it appears that maltreatment of novices in the medical profession exists in many societies including those that do not prescribe to cultural patterning common in Oman.[4, 43,46] Therefore, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate senior members abusing the junior ones.

Knowing which type of abuse comes from which source enable educators to focus their resources to prevent maltreatment. Cook, Liutkus and Risdon[47] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. One possible venue is to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical schools and health care systems should have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

Some obvious caveats are imperative to mention. This data presents residents' self-responses. Such method of eliciting information is likely to be rife with methodological deficit. Self-serving biases are well known in such studies.[45,48] It is also possible that recall bias could have contaminated their responses.[46,49] An integral part of recall bias, is that when individuals find certain events as emotional debilitating, the obvious recourse is to repress the memory of those events. Therefore, future studies should have an in-built mechanism to reduce the likelihood of recall bias. Secondly, some insidious cultural factors are likely to play factor in the present observation. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are likely to be 'concealed'.[47] ~~In fact, eleven residents chose not to participate.~~[50] Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were likely to be 'denied' resulting in

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spurious data. Despite the above-mentioned caveats, interesting issues have emerged from the present study that needs to be followed up in a wider context. Finally, the lack of qualitative data in a phenomenological study of perceived experience is likely to represent a major limitation of this study in particular in a population where such studies have not yet been forthcoming. Therefore, in studies eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews are likely to yield more fruitful results.[48,50] Such undertaking would have laid the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have included some interviews or focus groups so that the participants' interpretations could be explored in depth.

CONCLUSION

Mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores maltreatment and abuse in a medical setting. Fifty eight residents consented to participate in this present anonymous survey which consisted of approximately 84% of the interns. In terms of experience of mistreatment according to gender, males admitted to have experienced higher levels of mistreatment. In terms of the perpetrator of harassment and abuse, it appears that hierarchy counts. Those who were commanding higher positions were more prone to fall foul to committing maltreatment and abuse. It also appeared that the problems were more rampant in the subspecialists of medicine. Further research is needed to understand factors influencing mistreatment and draw up guidelines to limit such problems. However the findings should lead to the identification of factors perpetuating maltreatment and abuse among medical trainee interns. Thus, evidence-based interventions can be contemplated.

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Participant consent: Obtained.

Ethics approval: Ethics approval was provided by the local institutional review board (IRB), Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

Conflicts of interest: none

Contributors
M-AS is responsible for study supervision, T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW, H- AS and S-AA were responsible for drafting, literature review and scientific approach of the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂ (N=28)	♀ (N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

REVIEWER	REVIEWERS' COMMENTS	**AUTHORS' RESPONSES**
David Power		
	This is definitely improved over previous draft. I like that this is framed more as a pilot study and would recommend that language continue through the discussion. Some of the English still needs slight tweaking - I recommend a non-medical editor review it for grammar.	Another attempt was made to improve the language
	On re-read, I am concerned about how participants were enrolled in the study - especially since, for a survey, this is a very high response rate. The reader needs to be clear that participants knew participation was voluntary - if this was so, I would recommend stating that. I would remove the sentence 'return of a completed survey was interpreted as a sign of informed consent'. Instead, the cover letter with the survey should have clearly indicated to the participant that this was a research study and that participation was entirely voluntary. If this was the case, I would state this more clearly. I would also remove the comment in discussion about the 11 who did not respond - since a 100% response rate is completely unrealistic - this is a very high response rate as it is - but, again, we need reassurance that participants voluntarily response and knew it was a research study. I believe the informed consent process as outlined in first textbox needs to be re-written. I hope authors did make it clear to respondents about their voluntary participation in a research study - and expect this was so given that it was reviewed by an IRB.	We thank the esteemed reviewer for raising this important issue. The text has been revised in order to take onboard on this issue.
	I would suggest that this reference was a more impactful study than the one quoted for Dyrbye et al (I acknowledge I was also a co-author on this one): Dyrbye LN, Massie FS Jr, Eacker A, Harper W, Power DV, Durning S, Thomas MR, Moutier C, Satele D, Sloan JA, Shanafelt TD. 'Relationship	Done as suggested.

	between Burnout and Professional Conduct and Attitudes among US Medical Students'. Journal of the American Medical Association (JAMA), 2010, 304(11):1173-80.	
	In the discussion I would focus more on the fact that female students did not experience more abuse than males - I think this is very surprising. One of the results not shared was the gender of the perpetrator - is that information known? I assume most consultants are male. If there is any data on this, I would share it in the gender section. Since a more senior male attending abusing a junior female intern seems such a stereotypical picture, I would address this topic more.	Additional paragraph has been added to touch base on this important issue. Again, we are grateful to our esteemed reviewers for brining this issue.
	I fully support this being published as a preliminary pilot survey which is unique from Oman.	Thank you
	Would you be willing to share your data? Cast your vote in our <a href="http://80911.polldaddy.com/s/would-you-be-willing-to-share-your-data-in-an-open-repository"> Online Poll	Yes and we casted my vote

Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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Primary Subject Heading:	Medical education and training
Secondary Subject Heading:	Medical education and training
Keywords:	EDUCATION & TRAINING (see Medical Education & Training), OCCUPATIONAL & INDUSTRIAL MEDICINE, MENTAL HEALTH

You refer to 'anonymous' reviewers in your cover letter - I hope you saw that at no point were the reviewers anonymous. Their names were included in the letters next to their reviews.	That was an error so it would be clarified in all other communications.
The language in the paper still needs to be checked, probably by a native English speaker. For example you state: 'It is possible that gender segregation, a common social prescription in the region, may have insidiously shielded female from being subjected to maltreatment.' I'm not sure that insidious is the best way here, as it's generally thought of in the first sense here: http://www.merriam-webster.com/dictionary/insidious	A help from native speaker was sought.
In the abstract the results say 'Of 58 residents (response rate 84%) around 96.6%' but 96.6% is sufficiently precise that you don't need to say 'around'.	Done as suggested
The key message states 'The data suggests bullying behavior is rampant among medical trainees in Oman' - but you were measuring perceptions, not actual behaviour, so this message needs to be more subtle. A less emotive term than 'rampant' would also be more appropriate. There are other examples, so I suggest that a native English speaker should be involved in editing the paper to an appropriate standard. The help that you receive should be acknowledged in the acknowledgements section.	The sentence has been revised as suggested
Also, is this the only medical school in Oman?	The participants were part of "Oman Medical Specialty Board" (OMSB). This is a residents program. In Oman, OMSB is a separate entity and not part of medical schools.

Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centers for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship during the study period 2009 – 2010

Method: A cross-sectional survey of first year medical residents

Results: Of 58 residents (response rate 84%) 96.6% believe that mistreatment exists. Among different types of mistreatment, verbal and academic abuse were the most commonly reported (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship, mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To understand factors influencing mistreatment and to draw guidelines to limit such problems

Report the experiences of mistreatment among medical trainees in Oman, an Arab/Islamic country.

KEY MESSAGES

The data suggests medical trainees in Oman perceived bullying behavior as common.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviors have been reported in different occupational settings including the medical profession. There is a dearth of study from Arab/Islamic countries.

To our knowledge, this is the first study on the subject from this part of the world.

This study is limited by small sample size and cross-sectional study method.

INTRODUCTION:

Forms of abuse and other bullying behaviors have been reported in various occupational settings.[1-4]Studies carried out in different parts of the world suggest that the medical profession is no exception to the experience of maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, like interns, are the most vulnerable. According to Coverdale, Balon & Roberts the most common degrading experiences for interns were "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice"(p.269).[5]

Several studies have quantified mistreatment among medical trainees or those on the lower ladder of a medical career. Steven et al.[6]reported, in a national survey in the USA, that about 93% of medical trainees had experienced at least one episode of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees had been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe, North American, and Asia Pacific regions, have also found evidence of maltreatment such as Australia[4],[8] New Zealand[9] Ireland[10], Argentina[11] and Japan.[12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-16]Ahmer et al.[17]have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing on available literature, Coverdale, Balon & Roberts[5] categorized the common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment, and forms of prejudice against sexual orientation or ethnicity.

There is a myriad of adverse impacts emerging as a result of trainees being subjected to maltreatment.[18, 19] Schubert et al.[20]have shown a significant relationship between verbal abuse during medical training and lower levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied the mental health impacts for trainees who were subjected to maltreatment. There appeared to be

disconcerting tendencies for trainees suffering maltreatment to have 'psychopathological outcomes' in the forms of unrelenting affective emotions, resorting to 'self-medication' and dependency on mind altering substances.[21,22] This is consistent with well well-known observations that there are high levels of stress and psychological distress among medical trainees[23,]which has also been suggested as playing a role in the high rate of suicide among physicians.[25,26] There is also an indication that medical trainees who were most distressed at the beginning of their training were likely to report continuing stress and distress in the subsequent course of their lives.[27]According to Miedema et al.[28], there are inbuilt mechanisms that perpetuate abusive behavior in the medical culture, including working in what is perceived as a stressful environment. This allusion to a view that 'abuse begets abuse'[29], might imply the presence of a cycle of bullying within the medical profession.

In the Arab world, including Oman, evidence abounds that much emotional distress is present among medical trainees[30-32].[33] however most of the studies are rife with conceptual limitations. Many of them have utilized assessment measures without local validity and therefore these studies fall into the 'category of fallacy'.[34] Also the target population was pre-clinical students therefore generalizations cannot be applied to interns. Internship, in medical parlance, is the period in which new medical graduates practice in a hospital setting under supervision, prior to beginning a specialization. In Oman, internship consists of three to four month rotations in which each intern (resident) is rotated through the fields of general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman further medical training is conducted under the auspices of Oman Medical Specialty Board (http://www.omsb.org), a government body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the wellbeing of trainees through services that include a specialized office and designated person to which trainees can submit any grievance.

With evidence of adverse experiences among medical trainees or interns in other parts of the world and the fact that no data has been produced in Oman, the present study aimed to quantify mistreatment or abuse of Omani medical interns. Interrelated aims were to explore the level of mistreatment among medical trainees according to gender,

perpetrator, and specialty, as well as determine the reasons for not reporting maltreatment to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010 a total of 69 medical residents were invited to participate. The residents were approached during a research workshop conducted in May 2010. Each participant was asked to fill out a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship. The participants were assured in writing that the survey would be anonymous, data gathered would be aggregated, their participation was voluntary, and they could withdraw from the study at any time, without prejudice. In the event that undue distress was experienced by the participants while responding to sensitive questions, counseling support would be freely provided. The participants were asked not to discuss the questions among themselves in order to avoid peer influence.

ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al.[24]Baldwin et al.[35]and Uhariet al.[36] and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' (Table 1). *Physical Abuse* was defined as a threat that, if executed, would likely cause physical harm. Forms of physical abuse included slapping, pushing, hitting, kicking or having objects thrown at them. In addition, physical abuse also entailed being placed at unnecessary medical risk. *Academic Abuse* was defined as being coerced into carrying out personal services unrelated to the expected role of interns. The concept of academic abuse also encapsulated instances in which interns were excluded from reasonable learning opportunities offered to others, or threatened with failure or poor evaluations for reasons unrelated to academic performance. *Sexual Harassment* was defined as being subjected to jokes or comments against gender or body figure or being subjected to repeated leering or offered unwanted gifts with sexual underpinnings. The offer of private tutorial sessions

or better grades in exchange for an illicit affair as well as inappropriate touching of a sexual nature also constituted examples of sexual harassment.

A variety of socio-demographic data were sought from the participants e.g. age, sex, year of residency, marital status and current specialty. They were also given the opportunity to describe reasons for reporting or not reporting maltreatment using free text

The questionnaire was delivered to each participant in a closed envelope which also contained a description of the study along with written assurance of anonymity and confidentiality so that informed consent could be obtained. Participants were explicitly informed not to make any reference to their identity on the questionnaire. Written consent was not required as the participants were informed that return of a completed questionnaire constituted consent to participate. The right not to answer a question(s) was also explained.

ANALYSIS

Descriptive statistics (raw counts and percentages) were calculated. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows experience of maltreatment according to gender. In 6 out of 12 items eliciting maltreatment, males dominated. However, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into ‘verbal abuse’, ‘physical abuse or threats’, ‘academic abuse’, and 'sexual harassment’, the only category of statistical significance at the 95% confidence level was ‘academic abuse’ where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in perpetrating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward males, when interns (p = 0.03). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than the other groups encountered by the participants.

Experience of Mistreatment according to Specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in maltreatment to residents when they were interns. As shown in Table 3, the data can be extrapolated in three ways. Firstly, all indices of maltreatment were significantly higher during medical rotation than in pediatric or surgical rotations (p = 0.005).Maltreatment experienced in the pediatric rotation was second highest. Thirdly, the highest type of maltreatment reported was verbal abuse (36.8%), closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was 'to avoid further trouble', as the residents believed that "reporting could adversely affect evaluation and professional career." Such behavior, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves as they "did not know whom to report to or how to make the complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to them. It was not uncommon deny the experience as abuse "at the time it happened."

DISCUSSION

To our knowledge the present research is the first, in Arab countries, to describe four interrelated patterns in relation to maltreatment, from the experience of first year medical residents concerning their internship i.e. gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment. Although the intended population was small, the rate of response to the survey was high and the gender distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late

twenties. Pending further scrutiny this study could be viewed as a pilot. However, the survey indicates alarming rates of maltreatment in the observed cohort. On the whole, the findings substantiate the view of other researchers that maltreatment is prevalent during medical training.[6, 7, 20, 37-38]

One of the aims of this study was to examine whether there was a gender difference in perceived maltreatment. Maltreatment and sexual abuse (that is abuse of a personal nature) is a global pattern seen among working women,[39] including female doctors.[40,41] In the present study the results suggest there was no statistically significant differences per gender although young female doctors were more likely to experience threats and sexual harassment. It is not clear why the present cohort appears to ostensibly differ from trends commonly observed elsewhere. It is possible that gender segregation, a common social prescription in the region, may have shielded females from being subjected to maltreatment. In traditional Omani society gender segregation has been suggested to have been socio-culturally sanctioned in order to enhance female safety.[42] It is also possible that, due to the trajectory of modernity and female empowerment, trends may be shifting. There is an indication that growing affluence in Oman is narrowing the traditional gender gap commonly found in patriarchal societies. Drawing on data from the Oman Ministry of Health, Alshishtawy[43] indicated that approximately 60% of the health workforce in Oman were female. Accordingly, “women outnumbered men in all medical and health categories” and "feminisation" of the medical/health sciences professions in Oman has reversed the male dominance of past years” [p.273]. Therefore, the preponderance of females in the healthcare sectors in Oman might play an instrumental role in moderating the stereotypical picture of senior males abusing junior females.

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in perpetrating academic abuse and sexual harassment. Studies elsewhere suggest that maltreatment often comes from nonmedical staff, but according to Hinze[44]and Ahmeret al.[17] senior medical staff were not innocent. This current preliminary study suggests that hierarchy is strongly associated with the propensity to dispense abuse. It is possible that such occurrences stem from cultural patterning. While social institutions in Western Europe and North American

countries have explicitly made corporal punishment, as retribution for academic misbehavior, unacceptable (a view enshrined in legal and judicial systems), some reports have noted that occurrences of aggressive acts toward junior doctors still happen.[45] It is possible that senior members, traditional teachers, or father-figures, demand filial obedience from students (in this case junior doctors). However, notwithstanding such a view, it does appear that maltreatment of novices in the medical profession remains in many societies including those that do not prescribe to the cultural patterning common in Oman.[4,46] Therefore, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate senior members abusing the junior ones.

Knowing which type of abuse comes from which source enables educators to focus their resources on preventing maltreatment although Cook, Liutkusand Risdon[47] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. A possible strategy, however, would be to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical schools and health care systems should also have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

There are some obvious caveats to mention regarding this study. The data present residents' self-responses. Such a method of eliciting information has methodological deficits. Self-serving biases are well known in self report studies.[48] It is also possible that recall bias could have contaminated responses.[49] An integral part of recall bias is that when individuals find certain events as emotional debilitating, the recourse is often to repress the memory of those events. Future studies should have an in-built mechanism to reduce the likelihood of recall bias. Secondly, some insidious cultural factors are likely to factor in the present study. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are 'concealed'.[50] Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were 'denied' resulting in spurious data. Regardless of the above-mentioned caveats, interesting issues have emerged from the present study that need to be followed up in a wider context. Finally, the lack of qualitative data in a

phenomenological study of perceived experience is likely to represent a major limitation of this study in particular in a population where such studies have not yet been forthcoming. Therefore, in studies eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews are likely to yield more fruitful results.[50] Such undertaking would have laid the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have included some interviews or focus groups so that the participants' interpretations could be explored in depth.

Finally, the lack of qualitative data may represent a major limitation in particular where such studies have not been undertaken before. Studies eliciting perceived experiences on cross-cultural samples, benefit from the inclusion of qualitative research methods such as interviews or focus groups which yield more in-depth findings[50] and can lay the groundwork for developing more meaningful quantitative research instruments. If the present study had included some interviews or focus groups, so that the participants' interpretations could be explored in depth, a greater understanding of the phenomenon could have been explicated and compared with other studies of a similar nature.

CONCLUSION

Mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores maltreatment and abuse in a medical setting. Fifty eight residents (84%) consented to participate in this survey concerning their experiences as interns. Males experienced higher levels of mistreatment than females. In terms of the perpetrator, hierarchy appeared to dominate, as those who were commanding higher positions were more likely to commit maltreatment and abuse. Problems also appeared more widespread in the sub-specialty of medicine. The findings from this pilot study should encourage further identification of factors that perpetuate maltreatment and abuse among medical interns. More extensive research is needed, however, to understand those factors in order to draw up guidelines that will limit such problems and provide evidence based interventions appropriate for the context of Oman.

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Competing interests: None

Participant consent: Obtained.

Ethics approval: Ethics approval was provided by the local institutional review board (IRB), Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

Conflict of interest: none

Contributors
M-AS is responsible for study supervision, T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW, H-AS and S-AA were responsible for drafting the literature review and scientific approach to the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂(N=28)	♀(N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

You refer to 'anonymous' reviewers in your cover letter - I hope you saw that at no point were the reviewers anonymous. Their names were included in the letters next to their reviews.	That was an error so it would be clarified in all other communications.
The language in the paper still needs to be checked, probably by a native English speaker. For example you state: 'It is possible that gender segregation, a common social prescription in the region, may have insidiously shielded female from being subjected to maltreatment.' I'm not sure that insidious is the best way here, as it's generally thought of in the first sense here: http://www.merriam-webster.com/dictionary/insidious	A help from native speaker was sought.
In the abstract the results say 'Of 58 residents (response rate 84%) around 96.6%' but 96.6% is sufficiently precise that you don't need to say 'around'.	Done as suggested
The key message states 'The data suggests bullying behavior is rampant among medical trainees in Oman' - but you were measuring perceptions, not actual behaviour, so this message needs to be more subtle. A less emotive term than 'rampant' would also be more appropriate. There are other examples, so I suggest that a native English speaker should be involved in editing the paper to an appropriate standard. The help that you receive should be acknowledged in the acknowledgements section.	The sentence has been revised as suggested
Also, is this the only medical school in Oman?	The participants were part of "Oman Medical Specialty Board" (OMSB). This is a residents program. In Oman, OMSB is a separate entity and not part of medical schools.

Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centers for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship~~. During~~ during the study period 2009 – 2010

Method: A cross-sectional survey of ~~69~~ first year ~~Medical~~medical residents

Results: Of 58 residents (response rate 84%) ~~around~~ 96.6% ~~believed~~believe that mistreatment exists. Among different types of mistreatment, verbal and academic abuse ~~was~~were the most commonly reported (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship, mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To understand factors influencing mistreatment and to draw guidelines to limit such problems

Report the experiences of mistreatment among medical trainees in Oman, an Arab/Islamic country.

KEY MESSAGES

The data suggests medical trainees in Oman perceived bullying behavior as commonis rampant among medical trainees in Oman.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviors have been reported in different occupational settings including the medical profession. There is a dearth of study from Arab/Islamic countries.

To our knowledge, this is the first study on this endeavorthe subject from this part of the world.

This study is limited withby small sample size and its cross-sectional study methodologymethod.

INTRODUCTION:

Forms of abuse and other bullying behaviors have been reported in various occupational settings.[1-4] ~~Studies~~[4]Studies carried out in different parts of the world suggest that the medical ~~professionals are~~profession is no exception to the experience of maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, like interns, are the most vulnerable. According to Coverdale, Balon & Roberts the most common degrading experiences ~~among~~for interns ~~include~~were "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice~~" ("~~(p.269).[5]

~~Studies~~Several studies have quantified mistreatment among medical trainees or those ~~who are~~ on the lower ladder of a medical career. Steven et al.[6] ~~reported~~[6]reported, in a national survey in the USA, that about 93% of medical trainees ~~endorsed the view that they have~~ had experienced at least one ~~experience~~episode of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees ~~have~~had been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe, North American, and Asia Pacific regions, have also found evidence of maltreatment ~~including~~such as Australia[4,8] New Zealand[9] Ireland[10], Argentina[11] and Japan.[12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-~~16~~ ~~Ahmer~~[16]Ahmer et al.[17] ~~have~~[17]have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing ~~from~~on available literature, Coverdale, Balon & Roberts[5] ~~have~~ categorized the common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment, and forms of prejudice against sexual orientation ~~and~~ or ethnicity.

There is a myriad of adverse impacts ~~of mistreatment that can emerge~~emerging as a result of trainees being subjected to maltreatment.[18, 19] Schubert et al.[20] ~~have~~[20]have shown a significant relationship between verbal abuse during medical training and lower

levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied the mental health ~~consequences among~~ impacts for trainees who were subjected to maltreatment ~~with disconcerting findings.~~. There appeared to be disconcerting tendencies for ~~maltreated~~ trainees suffering maltreatment to have 'psychopathological outcomes' in the ~~form~~forms of unrelenting affective emotions, resorting to 'self-medication' and ~~even~~ dependency on mind altering substances.[21,22] This is ~~consonant~~consistent with well well-known observations that there are high levels of stress and psychological distress among medical ~~trainees.~~[23,24] ~~Such prevailing situations have~~trainees[23], which has also been suggested ~~to play~~as playing a role in the ~~observed higher~~high rate of suicide among physicians ~~compared to the general population~~.[25,26] There is also an indication that medical trainees who were most distressed at the beginning of their training~~, and~~ were likely to report ~~more~~continuing stress and distress in the subsequent course of their lives.[27] ~~According~~[27]According to Miedema et al.[28], there are inbuilt mechanisms that perpetuate abusive behavior in the medical culture, including working in what is perceived as a stressful environment. This ~~is suggestion~~ allusion to a view that 'abuse begets abuse'[29], ~~a view that~~ might imply the presence of a cycle of bullying ~~in~~within the medical profession.

In the Arab world, including Oman, evidence abounds that much emotional distress is present among medical trainees[30-32] ~~including Oman~~.[33] ~~Although these Arabian studies should be enlightening,~~however most of ~~them~~the studies are rife with conceptual limitations. Many of them have utilized assessment measures without local validity and therefore these studies fall into the 'category of fallacy'.[34] ~~These studies could also be criticized on~~Also the ~~ground that their~~ target population was pre-clinical students~~.~~ ~~Therefore~~ therefore generalizations cannot be applied to interns. Internship, in medical parlance ~~of the medical profession~~, is the period in which new medical graduates ~~learn medical practices~~practice in a hospital setting under supervision, prior to beginning ~~his or her~~a specialization. In Oman, internship consists of three to four month rotations~~,~~ in which each intern (resident) is rotated through the fields of general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman~~,~~ further medical training is conducted under the auspices of Oman Medical Specialty Board (http://www.omsb.org), a ~~governmental~~government body that is responsible for

postgraduate clinical training. An integral part of its function is to oversee the wellbeing of trainees~~,~~ through services that include a specialized office and designated person to which trainees can submit any grievance.

With evidence ~~-~~of adverse experiences among medical trainees or interns in other parts of the world and the fact that no data has been ~~forthcoming from~~produced in Oman, the present study aimed to quantify mistreatment or abuse ~~among~~of Omani medical interns. Interrelated aims were to explore the level of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as ~~gauge to~~determine the reasons for not reporting maltreatment~~,~~ to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010 a total of 69 medical residents were invited to participate ~~in this study.~~. The residents were approached ~~to participate in this study~~ during a research workshop conducted in May 2010. Each participant was asked to fill ~~in~~out a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship. ~~In the cover letter with~~ The participants were assured in writing that the survey~~, it was indicated to the participants that this was~~ would be anonymous ~~survey and~~, data gathered would be aggregated, their participation was ~~entirely~~ voluntary ~~and data gathered would be kept confidential~~, and they ~~may~~could withdraw ~~any~~ from the study at any time, without prejudice ~~at any time. In case~~. In the event that undue distress was experienced by the participants ~~incur any undue distress~~ while ~~contemplating on the items of the questionnaire, mental health~~responding to sensitive questions, counseling support ~~will~~would be ~~duly~~freely provided. The participants were asked not to discuss the ~~questionnaire~~questions among themselves in order to avoid peer influence.

ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al.[24] ~~Baldwin~~[24]Baldwin et al.[35] ~~and Uhari et~~[35]and Uhariet al.[36] and focused on indexing

'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' (Table 1). *Physical Abuse* ~~is~~was defined as a threat that, if executed, would likely cause physical harm. ~~Other forms~~Forms of physical abuse~~, such as,~~ included slapping, pushing, hitting, kicking or having objects thrown at ~~the interns are an integral part of the present definition of~~them. In addition, physical abuse~~. Physical abuse~~ also ~~entails~~entailed being placed at unnecessary medical risk. *Academic Abuse* ~~is~~was defined as ~~coercion to carry~~being coerced into carrying out ~~some~~ personal services unrelated to the expected role of interns. The concept of academic abuse also ~~encapsulates~~encapsulated instances in which interns ~~being~~were excluded from ~~otherwise~~ reasonable learning opportunities offered to others, or ~~are~~ threatened with failure or poor evaluations for reasons unrelated to ~~one's~~ academic performance. *Sexual Harassment* ~~is~~was defined ~~in the following terms:~~as being subjected to jokes or comments against ~~one's~~ gender or body figure~~. Sexual harassment entails~~ or being subjected to repeated leering or offered unwanted gifts~~. Being offered~~ with sexual underpinnings. The offer of private tutorial sessions or better grades in exchange for an ~~extra-marital~~illicit affair as well as inappropriate touching of a sexual nature ~~constitute~~also constituted examples of sexual harassment.

~~Various~~A variety of socio-demographic ~~information (e.g.~~data were sought from the participants e.g. age, sex, year of residency, marital status and current specialty~~) was also sought from the consenting participants. The participants~~. They were also given the ~~option to use free text~~ opportunity to describe reasons for reporting or not reporting maltreatment~~.~~ using free text

The questionnaire was delivered to each participant in a closed envelope~~,~~ which also contained a description of the study~~,~~ along with ~~a statement of~~written assurance of anonymity and confidentiality so that informed consent could be obtained. ~~To assure anonymity, participants~~Participants were explicitly informed not to make any reference to their identity on the questionnaire. Written consent was not required as the participants were informed that return of a completed questionnaire constituted consent to participate. The right not to answer a question(s) was also explained.

ANALYSIS

~~Both descriptive~~Descriptive statistics ~~as~~ (raw counts and ~~percentage are presented~~percentages) were calculated. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69 ~~residents~~) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows ~~perceived~~ experience of maltreatment according to gender. ~~Out~~In 6 out of ~~total~~ 12 items eliciting maltreatment, males dominated ~~in 6 of them~~. However, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into 'verbal abuse', 'physical abuse or threats', 'academic abuse', and 'sexual harassment', the only category of statistical significance at the 95% confidence level was 'academic abuse' where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in ~~perpetuating~~perpetrating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward ~~the male residents~~males, when interns ($p = 0.03$). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than the other groups ~~that the residents~~ encountered by the participants.

Experience of Mistreatment according to Specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in ~~dispensing~~ maltreatment to ~~the~~ residents when they were interns. As shown in Table 3, the data can be extrapolated in three ways. Firstly, all indices of maltreatment were significantly higher during medical rotation than ~~pediatrics~~in pediatric or ~~surgery~~surgical rotations ($p = 0.005$). ~~Secondly, pediatrics~~Maltreatment experienced in the pediatric

rotation was second highest ~~in dispensing maltreatment.~~ Thirdly, ~~verbal abuse was~~ the highest type of maltreatment reported was verbal abuse (36.8~~%)~~%), closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was 'to avoid further ~~trouble~~trouble', as the ~~Residents~~residents believed that ~~"Reporting~~ "reporting could adversely affect evaluation and professional career." Such behavior, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves as they "did not know whom to report to or how to make the complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to them. It was ~~also~~ not uncommon ~~to not recognize~~ "deny the experience as abuse "at the time it happened."

DISCUSSION

To our knowledge the present research is the first, in Arab countries, to describe four interrelated patterns in relation to maltreatment, from the experience of first year medical residents ~~in Arab countries:~~ concerning their internship i.e. gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment. Although the intended population was small, the rate of response to the survey was high and the gender distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late twenties. Pending further scrutiny ~~as~~ this ~~should~~study could be viewed as a pilot ~~study or sentinel. This~~. However, the survey indicates ~~the~~alarming rates of maltreatment ~~to be alarming~~ in the ~~presently~~ observed cohort. On the whole, the ~~present~~ findings substantiate the view of other researchers that maltreatment is prevalent during medical training ~~even in this particular population~~.[6, 7, 20, 37-38]

One of the aims of this study was to examine whether there ~~is~~was a gender difference in perceived maltreatment. Maltreatment and sexual abuse (that is abuse of a personal nature) ~~echo the~~is a global ~~situation where such patterns are common~~pattern seen among working ~~women~~[39] ~~and nonetheless,~~women,[39] including female doctors.[40,41]

~~The result of~~In the present study ~~suggests~~the results suggest there was no statistically significant ~~difference as~~differences per gender although young female doctors were more likely to experience threats and sexual harassment. It is not clear why the present cohort appears to ostensibly differ from ~~trend~~trends commonly observed elsewhere. ~~Some speculations are therefore warranted.~~ It is possible that gender segregation, a common social prescription in the region, may have ~~insidiously~~ shielded ~~female~~females from being subjected to maltreatment. In traditional Omani society~~,~~ gender segregation has been suggested to have been socio-culturally sanctioned in order to enhance female safety.[42] It is also possible that, due to the trajectory of modernity and female empowerment, trends may ~~have also played present observation.~~be shifting. There is an indication that ~~recent~~growing affluence in Oman ~~has narrowed~~ is narrowing the traditional ~~the~~ gender gap ~~common~~commonly found in ~~such patrilineal society.~~patriarchal societies. Drawing ~~from~~on data from the Oman Ministry of Health ~~in Oman, Alshishtawy[43] has,~~ Alshishtawy[43] indicated that approximately 60% of the health workforce in Oman ~~are females~~were female. Accordingly, “women outnumbered men in all medical and health categories” and "feminisation" of the medical/health sciences professions in Oman has reversed the male dominance of past years” [p.273]. Therefore, the preponderance of ~~female~~females in the healthcare sectors in Oman might ~~have played~~play an instrumental role in moderating ~~a~~the stereotypical picture of senior ~~male~~males abusing junior ~~female~~females.

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in perpetrating academic abuse and sexual harassment. Studies elsewhere suggest that maltreatment often comes from nonmedical staff, but according to ~~Hinze[44] and Ahmer et~~Hinze[44] and Ahmeret al.[17] senior medical staff were not innocent ~~either. However, this~~. This current preliminary study suggests that hierarchy is strongly associated with the propensity to dispense abuse. It is possible that such occurrences ~~may~~ stem from cultural patterning. While social ~~institution~~institutions in Western Europe and North American countries have explicitly made corporal punishment, as retribution for ~~an~~ academic misbehavior ~~as~~, unacceptable (a view ~~is~~ enshrined in legal and judicial ~~systems~~systems), some reports have noted

occurrencethat occurrences of aggressive actacts toward junior doctors still happen.[45] It is possible that senior members, the traditional teacherteachers, or father-figurefigures, demand filial obedience from the students, (in this case junior doctors). However, notwithstanding such a view, it appearsdoes appear that maltreatment of novices in the medical profession existsremains in many societies including those that do not prescribe to the cultural patterning common in Oman.[4,46] Therefore, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate senior members abusing the junior ones.

Knowing which type of abuse comes from which source enableenables educators to focus their resources to preventon preventing maltreatment. although Cook, Liutkus andLiutkusand Risdon[47] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. OneA possible venue isstrategy, however, would be to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical schools and health care systems should also have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

SomeThere are some obvious caveats are imperative to mention. This regarding this study. The data presentspresent residents' self-responses. Such a method of eliciting information is likely to be rife withhas methodological deficitdeficits. Self-serving biases are well known in suchself report studies.[48] It is also possible that recall bias could have contaminated their responses.[49] An integral part of recall bias, is that when individuals find certain events as emotional debilitating, the obvious recourse is often to repress the memory of those events. Therefore, futureFuture studies should have an in-built mechanism to reduce the likelihood of recall bias. Secondly, some insidious cultural factors are likely to play factor in the present observationstudy. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are likely to be 'concealed'.[50] Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were likely to be 'denied' resulting in spurious data. DespiteRegardless of the above-mentioned caveats, interesting issues have emerged from the present study that needsneed to be followed up in a wider context. Finally, the lack of qualitative data in a phenomenological study of

perceived experience is likely to represent a major limitation of this study in particular in a population where such studies have not yet been forthcoming. Therefore, in studies eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews are likely to yield more fruitful results.[50] Such undertaking would have laid the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have included some interviews or focus groups so that the participants' interpretations could be explored in depth.

Finally, the lack of qualitative data may represent a major limitation in particular where such studies have not been undertaken before. Studies eliciting perceived experiences on cross-cultural samples, benefit from the inclusion of qualitative research methods such as interviews or focus groups which yield more in-depth findings[50] and can lay the groundwork for developing more meaningful quantitative research instruments. If the present study had included some interviews or focus groups, so that the participants' interpretations could be explored in depth, a greater understanding of the phenomenon could have been explicated and compared with other studies of a similar nature.

CONCLUSION

Mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores maltreatment and abuse in a medical setting. Fifty eight residents (84%) consented to participate in this ~~present anonymous~~ survey ~~which consisted of approximately 84% of the~~concerning their experiences as interns. ~~In terms of experience of mistreatment according to gender, males admitted to have~~Males experienced higher levels of mistreatment~~.~~ than females. In terms of the perpetrator ~~of harassment and abuse, it appears that~~ , hierarchy ~~counts. Those~~appeared to dominate, as those who were commanding higher positions were more ~~prone~~likely to ~~fall foul to committing~~commit maltreatment and abuse. ~~It~~Problems also appeared ~~that the problems were~~ more ~~rampant~~widespread in the ~~subspecialists~~sub-specialty of medicine. ~~Further research is needed to understand factors influencing mistreatment and draw up guidelines to limit such problems. However the~~The findings from this pilot study should ~~lead to the~~encourage further identification of factors

perpetuatingthat perpetuate maltreatment and abuse among medical trainee interns. Thus, More extensive research is needed, however, to understand those factors in order to draw up guidelines that will limit such problems and provide evidence- based interventions can be contemplated. appropriate for the context of Oman.

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ConflictsConflict **of interest:** none

Contributors
M-AS is responsible for study supervision,- T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW, -H--AS and S-AA were responsible for drafting, the literature review and scientific approach ofto the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂(N=28)	♀(N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

REVIEWER	REVIEWERS' COMMENTS	**AUTHORS' RESPONSES**
David Power		
	This is definitely improved over previous draft. I like that this is framed more as a pilot study and would recommend that language continue through the discussion. Some of the English still needs slight tweaking - I recommend a non-medical editor review it for grammar.	Another attempt was made to improve the language
	On re-read, I am concerned about how participants were enrolled in the study - especially since, for a survey, this is a very high response rate. The reader needs to be clear that participants knew participation was voluntary - if this was so, I would recommend stating that. I would remove the sentence 'return of a completed survey was interpreted as a sign of informed consent'. Instead, the cover letter with the survey should have clearly indicated to the participant that this was a research study and that participation was entirely voluntary. If this was the case, I would state this more clearly. I would also remove the comment in discussion about the 11 who did not respond - since a 100% response rate is completely unrealistic - this is a very high response rate as it is - but, again, we need reassurance that participants voluntarily response and knew it was a research study. I believe the informed consent process as outlined in first textbox needs to be re-written. I hope authors did make it clear to respondents about their voluntary participation in a research study - and expect this was so given that it was reviewed by an IRB.	We thank the esteemed reviewer for raising this important issue. The text has been revised in order to take onboard on this issue.
	I would suggest that this reference was a more impactful study than the one quoted for Dyrbye et al (I acknowledge I was also a co-author on this one): Dyrbye LN, Massie FS Jr, Eacker A, Harper W, Power DV, Durning S, Thomas MR, Moutier C, Satele D, Sloan JA, Shanafelt TD. 'Relationship	Done as suggested.

	between Burnout and Professional Conduct and Attitudes among US Medical Students'. Journal of the American Medical Association (JAMA), 2010, 304(11):1173-80.	
	In the discussion I would focus more on the fact that female students did not experience more abuse than males - I think this is very surprising. One of the results not shared was the gender of the perpetrator - is that information known? I assume most consultants are male. If there is any data on this, I would share it in the gender section. Since a more senior male attending abusing a junior female intern seems such a stereotypical picture, I would address this topic more.	Additional paragraph has been added to touch base on this important issue. Again, we are grateful to our esteemed reviewers for brining this issue.
	I fully support this being published as a preliminary pilot survey which is unique from Oman.	Thank you
	Would you be willing to share your data? Cast your vote in our <a href="http://80911.polldaddy.com/s/would-you-be-willing-to-share-your-data-in-an-open-repository"> Online Poll	Yes and we casted my vote

Pilot study on the prevalence of perceived abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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Pilot study on the prevalence of perceived abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training centres for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship during the study period 2009 – 2010

Method: A cross-sectional survey of first year medical residents

Results: Of 58 residents (response rate 84%). 96.6% perceived that mistreatment exists. Among different types of mistreatment reported, verbal and academic abuses were the most common (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship, mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

ARTICLE FOCUS

To report the perceived experiences of mistreatment among medical trainees in Oman, an Arab/Islamic country.

KEY MESSAGES

The data suggests medical trainees in Oman perceived bullying behaviour as common.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying behaviours have been reported in different occupational settings including the medical profession. There is a dearth of study from Arab/Islamic countries.
To our knowledge, this is the first study on the subject from this part of the world.
This study is limited by the small sample size and cross-sectional study method.

INTRODUCTION:

Forms of abuse and other bullying behaviours have been reported in various occupational settings.[1-4] Studies carried out in different parts of the world suggest that the medical profession is no exception to the experience of maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, such as interns, are the most vulnerable. According to Coverdale, Balon & Roberts, the most common degrading experiences for interns were "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice"(p.269).[5]

Several studies have quantified mistreatment among medical trainees or those on the lower ladder of a medical career. Steven et al.[6] reported in a national survey in the USA that about 93% of medical trainees had experienced at least one episode of mistreatment. Another survey undertaken in the UK[7] reported that around 84% of medical trainees had been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe, North American, and Asia Pacific regions have also found evidence of maltreatment such as Australia[4,8] New Zealand[9] Ireland[10], Argentina[11] and Japan.[12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-16] Ahmer et al.[17] have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing on available literature, Coverdale, Balon & Roberts[5] categorized the common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment, and forms of prejudice against sexual orientation or ethnicity.

There is a myriad of adverse impacts emerging as a result of trainees being subjected to maltreatment.[18, 19] Schubert et al.[20] have shown a significant relationship between verbal abuse during medical training and lower levels of confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied the mental health impacts for trainees who were subjected to maltreatment. There appeared to be disconcerting tendencies for trainees suffering maltreatment to have 'psychopathological

outcomes' in the forms of unrelenting affective emotions, resorting to 'self-medication' and dependency on mind altering substances.[21,22] This is consistent with well-known observations that there are high levels of stress and psychological distress among medical trainees[23] which have also been suggested as playing a role in the high rate of suicide among physicians.[25,26] There is also an indication that medical trainees who were most distressed at the beginning of their training were likely to report continuing stress and distress in the subsequent course of their lives.[27] According to Miedema et al.[28], there are inherent mechanisms that perpetuate abusive behaviour in the medical culture, including working in what is perceived as a stressful environment. This allusion to a view that 'abuse begets abuse'[29] might imply the presence of a cycle of bullying within the medical profession.

In the Arab world, including Oman, evidence abounds that much emotional distress is present among medical trainees[30-33]. However, most of the studies are rife with conceptual limitations. Many of them have utilized assessment measures without local validity.[34] Also, the target population was pre-clinical students. Consequently, these generalizations cannot be applied to interns. Internship, in medical parlance, is the period in which new medical graduates practice in a hospital setting under supervision, prior to beginning a specialization. In Oman, internship consists of three- to four-month rotations during which each intern (resident) is rotated through the fields of general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman further medical training is conducted under the auspices of the Oman Medical Specialty Board (http://www.omsb.org), a government body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the well-being of trainees through services that include a specialized office and designated person to whom trainees can submit any grievance.

With evidence of adverse experiences among medical trainees or interns in other parts of the world and the fact that no data has been produced in Oman, the present study aimed to quantify mistreatment or abuse of Omani medical interns by seeking responses to their perceptions of abuse. Interrelated aims were to explore the level of perceived mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as determining the reasons for not reporting maltreatment to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010, a total of 69 medical residents were invited to participate. The residents were approached during a research workshop conducted in May 2010. Each participant was asked to fill out a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship. The participants were assured in writing that the survey would be anonymous, data gathered would be aggregated, their participation was voluntary, and they could withdraw from the study at any time, without prejudice. In the event that undue distress was experienced by the participants while responding to sensitive questions, counseling support would be freely provided. The participants were asked not to discuss the questions among themselves in order to avoid peer influence.

ASSESSMENT MEASURES

The Likert-type questionnaire was adapted from those developed by Sheehan et al.[24], Baldwin et al.[35] and Uhariet al.[36], and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' (Table 1). *Physical Abuse* was defined as a threat that, if executed, would likely cause physical harm. Forms of physical abuse included slapping, pushing, hitting, kicking or having objects thrown at them. In addition, physical abuse also entailed being placed at unnecessary medical risk. *Academic Abuse* was defined as being coerced into carrying out personal services unrelated to the expected role of interns. The concept of academic abuse also encapsulated instances in which interns were excluded from reasonable learning opportunities offered to others, or threatened with failure or poor evaluations for reasons unrelated to academic performance. *Sexual Harassment* was defined as being subjected to jokes or comments against gender or body figure or being subjected to repeated leering or offered unwanted gifts with sexual underpinnings. The offer of private tutorial sessions or better grades in exchange for an illicit affair as well as inappropriate touching of a sexual nature also constituted examples of sexual harassment.

A variety of socio-demographic data was sought from the participants, e.g. age, sex, year of residency, marital status and current specialty. They were also given the opportunity to describe reasons for reporting or not reporting maltreatment using free text.

The questionnaire was delivered to each participant in a closed envelope which also contained a description of the study along with a written assurance of anonymity and confidentiality so that informed consent could be obtained. Participants were explicitly informed not to make any reference to their identity on the questionnaire. Written consent was not required, as the participants were informed that return of a completed questionnaire constituted consent to participate. The right not to answer some questions was also explained.

ANALYSIS

Descriptive statistics (raw counts and percentages) were calculated. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows experience of maltreatment according to gender. In 6 out of 12 items eliciting maltreatment, males dominated. However, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into ‘verbal abuse’, ‘physical abuse or threats’, ‘academic abuse’, and 'sexual

harassment', the only category of statistical significance at the 95% confidence level was 'academic abuse' where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in perpetrating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward males, when interns ($p = 0.03$). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than the other groups encountered by the participants.

Experience of Mistreatment according to Specialty

Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in maltreatment to residents when they were interns. As shown in Table 3, the data can be extrapolated in three ways. Firstly, all indices of maltreatment were significantly higher during medical rotation than in pediatric or surgical rotations ($p = 0.005$). Maltreatment experienced in the pediatric rotation was second highest. Thirdly, the highest type of maltreatment reported was verbal abuse (36.8%), closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was 'to avoid further trouble', as the residents believed that "reporting could adversely affect evaluation and professional career." Such behaviour, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves as they "did not know whom to report to or how to make the complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to them. It was not uncommon to deny the experience as abuse "at the time it happened."

DISCUSSION

To our knowledge, the present research is the first in Arab countries to describe four interrelated patterns in relation to maltreatment, from the experience of first year medical residents concerning their internship. These patterns included the gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment. Although the intended population was small, the rate of response to the survey was high and the gender distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late twenties. Pending further scrutiny, this study could be viewed as a pilot. However, the survey indicates alarming rates of maltreatment in the observed cohort. On the whole, the findings substantiate the view of other researchers that maltreatment is prevalent during medical training.[6, 7, 20, 37-38]

One of the aims of this study was to examine whether there was a gender difference in perceived maltreatment. Maltreatment and sexual abuse (that is, abuse of a personal nature) is a global pattern seen among working women[39] including female doctors.[40,41] In the present study, the results suggest there were no statistically significant differences per gender, although young female doctors were more likely to experience threats and sexual harassment. It is not clear why the present cohort appears to ostensibly differ from trends commonly observed elsewhere. It is possible that gender segregation, a common social prescription in the region, may have shielded females from being subjected to maltreatment. In traditional Omani society, gender segregation has been suggested to have been socio-culturally sanctioned in order to enhance female safety.[42] It is also possible that, due to the trajectory of modernity and female empowerment, trends may be shifting. There is an indication that the growing affluence of Oman is narrowing the traditional gender gap commonly found in patriarchal societies. Drawing on data from the Oman Ministry of Health, Alshishtawy[43] indicated that approximately 60% of the health workforce in Oman was female. Accordingly, "women outnumbered men in all medical and health categories" and "*feminisation* of the medical/health sciences professions in Oman has reversed the male dominance of past years" [p.273]. Therefore, the preponderance of females in the healthcare sectors in Oman may play an instrumental role in moderating the stereotypical picture of senior males abusing junior females.

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in committing academic abuse and sexual harassment. Studies elsewhere suggest that maltreatment often comes from nonmedical staff, but according to Hinze[44] and Ahmeret al.[17], senior medical staff were not innocent. This current preliminary study suggests that hierarchy is strongly associated with the propensity to dispense abuse. It is possible that such occurrences stem from cultural patterning. While social institutions in Western Europe and North American countries have explicitly made corporal punishment, as retribution for academic misbehaviour, unacceptable (a view enshrined in legal and judicial systems), some reports have noted that occurrences of aggressive acts toward junior doctors still occur.[45] It is possible that senior members, traditional teachers, or father-figures demand filial obedience from students (in this case junior doctors). However, notwithstanding such a view, it does appear that maltreatment of novices in the medical profession remains in many societies, including those that do not prescribe to the cultural patterning common in Oman.[4,46] In consequence, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate the abuse of junior members by their seniors.

Knowing which types of abuse come from which sources enables educators to focus their resources on preventing maltreatment, although Cook, Liutkusand Risdon[47] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. A possible strategy, however, would be to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical schools and health care systems should also have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

There are some obvious caveats to mention regarding this study. The data present residents' self-responses. Such a method of eliciting information has methodological deficits. Self-serving biases are well known in self-report studies.[48] It is also possible that recall bias could have contaminated responses.[49] An integral part of recall bias is that when individuals perceive certain events as emotionally debilitating, the recourse is often

to repress the memory of those events. Future investigations should have a built-in mechanism to reduce the likelihood of recall bias. Secondly, some insidious cultural factors are likely to factor in the present study. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are 'concealed'.[50] Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were 'denied', resulting in spurious data. Notwithstanding the above-mentioned caveats, interesting issues have emerged from the present study that need to be followed up in a wider context. Finally, the lack of qualitative data in a phenomenological examination of perceived experience is likely to represent a major limitation of this study in particular in a population where such investigations have not yet been forthcoming. Therefore, in research eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews is likely to yield more fruitful results.[50] Such undertakings would lay the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have included some interviews or focus groups so that the participants' interpretations could be explored in depth.

Finally, the lack of qualitative data may represent a major limitation, particularly where such studies have not been undertaken before. Studies eliciting perceived experiences on cross-cultural samples benefit from the inclusion of qualitative research methods such as interviews or focus groups which yield more in-depth findings[50], and can lay the groundwork for developing more meaningful quantitative research instruments. If the present study had included some interviews or focus groups, so that the participants' interpretations could be explored in depth, a greater understanding of the phenomenon could have been explicated and compared with other studies of a similar nature.

CONCLUSION

According to the literature, mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores the perception of maltreatment and abuse in a medical setting. Fifty eight residents (84%) consented to participate in this survey concerning their experiences as

interns. The ratio of males to females in this group, who were in their late twenties, was representative of the target population. Males responded that they had experienced higher levels of perceived mistreatment than females, particularly regarding academic abuse. In terms of the perpetrator, hierarchy appeared to dominate, as those who were commanding higher positions were more likely to commit maltreatment (such as academic abuse) and abuse (such as sexual harassment). Problems also appeared more widespread in the sub-specialty of medicine. Reporting maltreatment was uncommon thus documented data does not exist to support evidence of abuse. In this study, therefore, only perceptions of maltreatment could be elicited, reasons for not reporting being focused on fear of further trouble.

The findings from this pilot study should encourage further identification of factors that perpetuate maltreatment and abuse among medical interns. More extensive research is needed, however, to understand those factors in order to draw up guidelines that will limit such problems and provide evidence-based interventions appropriate for the context of Oman.

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Conflict of interest: None

Contributors
M-AS is responsible for study supervision, T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW, H-AS and S-AA were responsible for drafting the literature review and scientific approach to the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂(N=28)	♀(N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

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FROM THE MANAGING EDITOR:	Authors
I greatly appreciate the effort that has been put in to the language editing of the paper. Unfortunately I think one further round of revision is required. The biggest problem is the purpose of the paper is not very clear. The abstract states that the objective is 'To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.' So the abstract is clear that what is being measured is the perception of mistreatment - which is not mistreatment itself.	The word 'perceived' has been added as an adjective in various appropriate parts of the article
However the conclusion to the abstract is all about the prevalence of mistreatment (in this respect, matching the title). The conclusion is also very general - it should relate more specifically to the conclusions of the study.	A few more specific details have been added to the conclusion. The conclusion moves from specific to general – as most maltreatment is not documented it has been made clear that we can only go on perceptions.
The article focus goes much broader - it says that the focus is 'To understand factors influencing mistreatment and to draw guidelines to limit such problems'. These are two completely different research questions that don't match the abstract.	The text has been revised to accommodate such request.
In the introduction you then say 'the present study aimed to quantify mistreatment or abuse of Omani medical interns. Interrelated aims were to explore the level of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as determine the reasons for not reporting maltreatment to the concerned authority'; the first of these aims has been covered before but quantifying mistreatment is not the same as surveying perceptions of having been mistreated.	The word 'perceived' has been placed before 'mistreatment. This addition should satisfy the concern about 'quantifying' mistreatment
So - you need to make the title, abstract, key messages and introduction consistent	Done
The results, discussion and tables then need to be clear about whether you are reporting actual cases of mistreatment or perceptions of mistreatment.	Done
Please also check the English one more time; for example it is not clear what you mean by 'the category of fallacy'.	We have sought help from a native English speaker. As it causes confusion, reference to 'category of fallacy' has been deleted

Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman

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ABSTRACT

Objective: To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.

Design: A cross-sectional study

Setting: Training ~~centers~~centres for Oman Medical Specialty Board

Participants: First year medical residents following completion of internship~~. During~~ during the study period 2009 – 2010

Method: A cross-sectional survey of ~~69~~ first year ~~Medical~~medical residents

Results: Of 58 residents (response rate 84~~%) around~~%). 96.6% ~~believed~~perceived that mistreatment exists. Among different types of mistreatment reported, verbal and academic ~~abuse was~~abuses were the most ~~commonly reported~~common (87.9%), followed by sexual harassment (24.1%), then physical abuse (22.4%). Forty-four (75.9%) residents had advised at least one of their relatives not to join medical school.

Conclusion: Mistreatment of medical interns is an ethical issue challenging the quality of clinical training. Further research is needed to understand factors influencing mistreatment and draw guidelines to limit such problems.

Key Words: Intern, internship, mistreatment, verbal abuse, physical abuse, academic abuse, sexual harassment, Oman.

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ARTICLE FOCUS

To understand factors influencing mistreatment and to draw guidelines to limit such problems

~~Report~~

To report the perceived experiences of mistreatment among medical trainees in Oman, an Arab/Islamic country.

KEY MESSAGES

The data suggests ~~bullying behavior is rampant among~~ medical trainees in Oman perceived bullying behaviour as common.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Bullying ~~behaviors~~behaviours have been reported in different occupational settings including the medical profession. There is a dearth of study from Arab/Islamic countries. To our knowledge, this is the first study on ~~this endeavor~~the subject from this part of the world.

This study is limited ~~with~~by the small sample size and ~~its~~ cross-sectional study ~~methodology~~method.

INTRODUCTION:

Forms of abuse and other bullying ~~behaviors~~behaviours have been reported in various occupational settings.[1-4] Studies carried out in different parts of the world suggest that the medical ~~professionals are~~profession is no exception to the experience of maltreatment within institutional settings. Among various medical professionals who have reported abuse, those who are in the early phase of their careers, ~~like~~such as interns, are the most vulnerable. According to Coverdale, Balon & Roberts, the most common degrading experiences ~~among~~for interns ~~include~~were "threats, intimidation, humiliation, excessive criticism, covert innuendo, exclusion or denial of access to opportunity, undue additions to work requirements, and shifting of responsibilities without appropriate notice~~" (~~"(p.269).[5]

~~Studies~~Several studies have quantified mistreatment among medical trainees or those ~~who are~~ on the lower ladder of a medical career. Steven et al.[6] reported in a national survey in the USA that about 93% of medical trainees ~~endorsed the view that they have~~ had experienced at least one ~~experience~~episode of mistreatment. Another survey undertaken in the UK[7], reported that around 84% of medical trainees ~~have~~had been bullied and about 69% had witnessed bullying and harassment during their clinical placements. Other studies from societies that are similar to Western Europe, North American, and Asia Pacific regions have also found evidence of maltreatment ~~including~~such as Australia[4, 8] New Zealand[9] Ireland[10], Argentina[11] and Japan.[12-13]

Maltreatment of medical trainees is not limited to Western countries.[14-16] Ahmer et al.[17] have reported pervasive and persistent tendencies for medical trainees in Pakistan to be subjected to 'disrespectful interactions', 'belittlement, 'undermining' and 'humiliation'. Drawing ~~from~~on available literature, Coverdale, Balon & Roberts[5] ~~have~~ categorized the common forms of maltreatment directed towards medical trainees as verbal abuse or humiliation, nonsexual harassment, sexual harassment, and forms of prejudice against sexual orientation ~~and~~ or ethnicity.

There is a myriad of adverse impacts ~~of mistreatment that can emerge~~emerging as a result of trainees being subjected to maltreatment.[18, 19] Schubert et al.[20] have shown a significant relationship between verbal abuse during medical training and lower levels of

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confidence, regardless of sex, race, age or levels of ability and temperament. Richman et al.[2] studied the mental health ~~consequences among~~ impacts for trainees who were subjected to maltreatment ~~with disconcerting findings.~~. There appeared to be disconcerting tendencies for ~~maltreated~~ trainees suffering maltreatment to have 'psychopathological outcomes' in the ~~form~~forms of unrelenting affective emotions, resorting to 'self-medication' and ~~even~~ dependency on mind altering substances.[21,22] This is ~~consonant~~consistent with well-known observations that there are high levels of stress and psychological distress among medical ~~trainees.[23,24] Such prevailing situations~~trainees[23] which have also been suggested ~~to play~~as playing a role in the ~~observed higher~~high rate of suicide among physicians ~~compared to the general population~~.[25,26] There is also an indication that medical trainees who were most distressed at the beginning of their training~~, and~~ were likely to report ~~more~~continuing stress and distress in the subsequent course of their lives.[27] According to Miedema et al.[28], there are ~~inbuilt~~inherent mechanisms that perpetuate abusive ~~behavior~~behaviour in the medical culture, including working in what is perceived as a stressful environment. This ~~is suggestion~~allusion to a view that 'abuse begets abuse'[29]~~, a view that~~ might imply the presence of a cycle of bullying ~~in~~within the medical profession.

In the Arab world, including Oman, evidence abounds that much emotional distress is present among medical trainees[30-32] ~~including Oman.[33] Although these Arabian studies should be enlightening~~. However, most of ~~them~~the studies are rife with conceptual limitations. Many of them have utilized assessment measures without local validity ~~and therefore these studies fall into~~.[34] Also, the ~~'category of fallacy'.[34] These studies could also be criticized on the ground that their~~ target population was pre-clinical students. ~~Therefore~~ Consequently, these generalizations cannot be applied to interns. Internship, in medical parlance ~~of the medical profession~~, is the period in which new medical graduates ~~learn medical practices~~practice in a hospital setting under supervision, prior to beginning ~~his or her~~a specialization. In Oman, internship consists of three- to four-month rotations~~, in~~ during which each intern (resident) is rotated through the fields of general medicine, general surgery and either pediatrics or obstetrics and gynecology. Following internship in Oman~~,~~ further medical training is conducted under the auspices of the Oman Medical Specialty Board (http://www.omsb.org), a

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governmentalgovernment body that is responsible for postgraduate clinical training. An integral part of its function is to oversee the wellbeingwell-being of trainees, through services that include a specialized office and designated person to whichwhom trainees can submit any grievance.

With evidence of adverse experiences among medical trainees or interns in other parts of the world and the fact that no data has been forthcoming fromproduced in Oman, the present study aimed to quantify mistreatment or abuse amongof Omani medical interns. by seeking responses to their perceptions of abuse. Interrelated aims were to explore the level of perceived mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as gauge todetermining the reasons for not reporting maltreatment, to the concerned authority.

METHODS AND MATERIALS:

Study Population

The study was carried out among first year medical residents following completion of internship. During the study period 2009 – 2010, a total of 69 medical residents were invited to participate in this study. The residents were approached to participate in this study during a research workshop conducted in May 2010. Each participant was asked to fill inout a questionnaire about their experience and perceptions of mistreatment and abuse with reference to their internship. In the cover letter with The participants were assured in writing that the survey, it was indicated to the participants that this was would be anonymous survey and, data gathered would be aggregated, their participation was entirely voluntary and data gathered would be kept confidential, and they maycould withdraw any from the study at any time, without prejudice at any time. In case. In the event that undue distress was experienced by the participants incur any undue distress while contemplating on the items of the questionnaire, mental healthresponding to sensitive questions, counseling support willwould be dulyfreely provided. The participants were asked not to discuss the questionnairequestions among themselves in order to avoid peer influence.

ASSESSMENT MEASURES

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The Likert-type questionnaire was adapted from those developed by Sheehan et al.[24], Baldwin et al.[35] and ~~Uhari et~~Uhariet al.[36], and focused on indexing 'verbal abuse', 'physical abuse or threats', 'academic abuse' and 'sexual harassment' (Table 1). *Physical Abuse* ~~is~~was defined as a threat that, if executed, would likely cause physical harm. ~~Other forms~~Forms of physical abuse~~, such as,~~ included slapping, pushing, hitting, kicking or having objects thrown at ~~the interns are an integral part of the present definition of~~them. In addition, physical abuse~~. Physical abuse~~ also ~~entails~~entailed being placed at unnecessary medical risk. *Academic Abuse* ~~is~~was defined as ~~coercion to carry~~being coerced into carrying out ~~some~~ personal services unrelated to the expected role of interns. The concept of academic abuse also ~~encapsulates~~encapsulated instances in which interns ~~being~~were excluded from ~~otherwise~~ reasonable learning opportunities offered to others, or ~~are~~ threatened with failure or poor evaluations for reasons unrelated to ~~one's~~ academic performance. *Sexual Harassment* ~~is~~was defined ~~in the following terms:~~as being subjected to jokes or comments against ~~one's~~ gender or body figure~~. Sexual harassment entails~~ or being subjected to repeated leering or offered unwanted gifts~~. Being offered~~ with sexual underpinnings. The offer of private tutorial sessions or better grades in exchange for an ~~extra marital~~illicit affair as well as inappropriate touching of a sexual nature ~~constitute~~also constituted examples of sexual harassment.

~~Various~~A variety of socio-demographic ~~information (e.g.~~data was sought from the participants, e.g. age, sex, year of residency, marital status and current specialty~~) was also sought from the consenting participants. The participants~~. They were also given the ~~option to use free text~~opportunity to describe reasons for reporting or not reporting maltreatment~~.~~ using free text.

The questionnaire was delivered to each participant in a closed envelope~~,~~ which also contained a description of the study~~,~~ along with a ~~statement of~~written assurance of anonymity and confidentiality so that informed consent could be obtained. ~~To assure anonymity, participants~~Participants were explicitly informed not to make any reference to their identity on the questionnaire. Written consent was not required, as the participants were informed that return of a completed questionnaire constituted consent to participate. The right not to answer some questions was also explained.

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ANALYSIS

~~Both descriptive~~Descriptive statistics ~~as~~ (raw counts and ~~percentage are presented~~percentages) were calculated. The free narrative was assessed using thematic analysis.

The study was approved by the local institutional review board (IRB), and the Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

RESULTS

The results are presented first as simple demographics of the sample and then in relation to the aims of the study. The response rate was 84.2% (58/69 ~~residents~~) of which 30 (51.7%) were female and 28 (48.3%) were male. Their ages ranged from 25 to 35 years (mean of 27.83 yrs and standard deviation of 1.63 yrs).

Experience of Mistreatment according to Gender

Table 1 shows ~~perceived~~ experience of maltreatment according to gender. ~~Out~~In 6 out of ~~total~~ 12 items eliciting maltreatment, males dominated ~~in 6 of them~~. However, no statistical differences were found between genders on any one item. When each form of maltreatment was collapsed into 'verbal abuse', 'physical abuse or threats', 'academic abuse', and 'sexual harassment', the only category of statistical significance at the 95% confidence level was 'academic abuse' where the males reported higher levels of mistreatment ($p \leq 0.004$).

Experience of Mistreatment according to Perpetrator

As shown in Table 2, Consultants outshone others in ~~perpetuating~~perpetrating verbal abuse and physical abuse. They were also more likely to be guilty of academic abuse toward ~~the male residents~~males, when interns ($p = 0.03$). Consultants and Specialists together were implicated in academic abuse and sexual harassment more than the other groups ~~that the residents~~ encountered~~.~~ by the participants.

Experience of Mistreatment according to Specialty

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Three specialties (medicine, surgery, pediatrics) were scrutinized for variations in ~~dispensing~~ maltreatment to ~~the~~ residents when they were interns. As shown in Table 3, the data can be extrapolated in three ways. Firstly, all indices of maltreatment were significantly higher during medical rotation than ~~pediatrics~~in pediatric or ~~surgery~~surgical rotations ($p = 0.005$). ~~Secondly, pediatrics~~Maltreatment experienced in the pediatric rotation was second highest ~~in dispensing maltreatment.~~. Thirdly, ~~verbal abuse was~~ the highest type of maltreatment reported was verbal abuse (36.8~~%)~~%), closely followed by academic abuse (35%).

Reasons for not reporting Maltreatment

The major reason for not reporting maltreatment elicited from the free text responses was 'to avoid further ~~trouble~~trouble', as the ~~Residents~~residents believed that ~~"Reporting~~ "reporting could adversely affect evaluation and professional career." Such ~~behavior~~behaviour, out of fear, could be seen as secondary abuse. Some respondents did not know how to deal with the problem or preferred to deal with the maltreatment themselves as they "did not know whom to report to or how to make the complaint." Seven respondents did not report the maltreatment because the perpetrator had "apologized" to them. It was ~~also~~ not uncommon to ~~not recognize~~ "deny the experience as abuse "at the time it happened."

DISCUSSION

To our knowledge, the present research is the first in Arab countries to describe four interrelated patterns in relation to maltreatment, from the experience of first year medical residents ~~in Arab countries:~~ concerning their internship. These patterns included the gender of the victim, types of maltreatment, specialty rotation where maltreatment occurred, and reasons for not reporting maltreatment. Although the intended population was small, the rate of response to the survey was high and the gender distribution of participants was fairly balanced. Most of the participants were undertaking a medical specialty and were in their late twenties. Pending further scrutiny ~~as~~, this ~~should~~study could be viewed as a pilot ~~study or sentinel. This~~. However, the survey indicates

thealarming rates of maltreatment ~~to be alarming~~ in the ~~presently~~ observed cohort. On the whole, the ~~present~~ findings substantiate the view of other researchers that maltreatment is prevalent during medical training ~~even in this particular population~~.[6, 7, 20, 37-38]

One of the aims of this study was to examine whether there ~~is~~was a gender difference in perceived maltreatment. Maltreatment and sexual abuse (that is, abuse of a personal nature) ~~echo the~~is a global ~~situation where such patterns are common~~pattern seen among working women[39] ~~and nonetheless,~~including female doctors.[40,-41] ~~The result of~~In the present study ~~suggests~~, the results suggest there ~~was~~were no statistically significant ~~difference as~~differences per gender, although young female doctors were more likely to experience threats and sexual harassment. It is not clear why the present cohort appears to ostensibly differ from ~~trend~~trends commonly observed elsewhere. ~~Some speculations are therefore warranted.~~ It is possible that gender segregation, a common social prescription in the region, may have ~~insidiously~~ shielded ~~female~~females from being subjected to maltreatment. In traditional Omani society, gender segregation has been suggested to have been socio-culturally sanctioned in order to enhance female safety.[42] It is also possible that, due to the trajectory of modernity and female empowerment, trends may ~~have also played present observation~~ be shifting. There is an indication that ~~recent~~the growing affluence ~~in~~of Oman ~~has narrowed~~ is narrowing the traditional ~~the~~ gender gap ~~common in such patrilineal society.~~commonly found in patriarchal societies. Drawing ~~from~~on data from the Oman Ministry of Health ~~in Oman, Alshishtawy[43] has~~, Alshishtawy[43] indicated that approximately ~~-~~60% of the health workforce in Oman ~~are females~~was female. Accordingly, "women outnumbered men in all medical and health categories" and ~~"~~"*feminisation*~~"~~ of the medical/health sciences professions in Oman has reversed the male dominance of past years" [p.273]. Therefore, the preponderance of ~~female~~females in the healthcare sectors in Oman ~~might have played~~may play an instrumental role in moderating ~~a~~the stereotypical picture of senior ~~male~~males abusing junior ~~female~~females.

The second interrelated aim of the present quest was to shed light on the perpetrators of maltreatment. The present descriptive data unequivocally implicated those in the top echelon, such as consultants and specialists, in ~~perpetrating~~committing academic abuse and sexual harassment. Studies elsewhere suggest that maltreatment

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often comes from nonmedical staff, but according to Hinze[44] and ~~Ahmer et~~Ahmeret al.[17], senior medical staff were not innocent~~ either. However, this~~. This current preliminary study suggests that hierarchy is strongly associated with the propensity to dispense abuse. It is possible that such occurrences ~~may~~ stem from cultural patterning. While social ~~institution~~institutions in Western Europe and North American countries have explicitly made corporal punishment, as retribution for ~~an~~ academic ~~misbehavior as~~misbehaviour, unacceptable (a view ~~is~~ enshrined in legal and judicial ~~system~~systems), some reports have noted ~~occurrence~~that occurrences of aggressive ~~act~~acts toward junior doctors still occur.[45] It is possible that senior members, ~~the~~ traditional ~~teacher~~teachers, or father-~~figure,~~figures demand filial obedience from ~~the~~ students~~,~~ (in this case junior doctors~~.~~). However, notwithstanding such a view, it ~~appears~~does appear that maltreatment of novices in the medical profession ~~exists~~remains in many societies, including those that do not prescribe to the cultural patterning common in Oman.[4,46] ~~Therefore~~ In consequence, factors within the medical culture itself need to be explored in order to devise evidence-based interventions to mitigate ~~senior members abusing~~ the abuse of junior ~~ones~~members by their seniors.

Knowing which ~~type~~types of abuse ~~comes~~come from which ~~source enable~~sources enables educators to focus their resources ~~to prevent~~on preventing maltreatment~~.~~ although Cook, ~~Liutkus and~~Liutkusand Risdon[47] have suggested that there is no 'magic-bullet' to mitigate the prevailing maltreatment of medical trainees. ~~One~~A possible ~~venue is~~strategy, however, would be to institute mandatory courses for medical staff on awareness about the consequences of abuse and maltreatment. Medical schools and health care systems should also have inbuilt mechanisms where victims of abuse can air their grievances confidentially without consequently jeopardizing their careers.

~~Some~~There are some obvious caveats ~~are imperative~~ to mention~~. This~~ regarding this study. The data ~~presents~~present residents' self-responses. Such a method of eliciting information ~~is likely to be rife with~~has methodological ~~deficit~~deficits. Self-serving biases are well known in ~~such~~self-report studies.[48] It is also possible that recall bias could have contaminated ~~their~~ responses.[49] An integral part of recall bias~~,~~ is that when individuals ~~find~~perceive certain events as ~~emotional~~emotionally debilitating, the ~~obvious~~ recourse is often to repress the memory of those events. ~~Therefore, future studies~~Future

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investigations should have ~~an in~~ a built-in mechanism to reduce the likelihood of recall bias. Secondly, some insidious cultural factors are likely to ~~play~~ factor in the present ~~observation~~study. The Omani culture is known to be a culture of honor and 'shame', which means that many of life's maltreatments are ~~likely to be~~ 'concealed'.[50] Despite the anonymous nature of the present study, it is possible that incidences of sexual harassment or maltreatment were ~~likely to be~~ 'denied', resulting in spurious data. ~~Despite~~Notwithstanding the above-mentioned caveats, interesting issues have emerged from the present study that ~~needs~~need to be followed up in a wider context. Finally, the lack of qualitative data in a phenomenological ~~study~~examination of perceived experience is likely to represent a major limitation of this study in particular in a population where such ~~studies~~investigations have not yet been forthcoming. Therefore, in ~~studies~~research eliciting perceived experiences on cross-cultural samples, inclusion of qualitative research methodology such as interviews ~~are~~ is likely to yield more fruitful results.[50] Such ~~undertaking~~undertakings would ~~have laid~~lay the groundwork for more meaningful quantitative research instruments. Thereby, the present finding could be scrutinized with studies that have included some interviews or focus groups so that the participants' interpretations could be explored in depth.

Finally, the lack of qualitative data may represent a major limitation, particularly where such studies have not been undertaken before. Studies eliciting perceived experiences on cross-cultural samples benefit from the inclusion of qualitative research methods such as interviews or focus groups which yield more in-depth findings[50], and can lay the groundwork for developing more meaningful quantitative research instruments. If the present study had included some interviews or focus groups, so that the participants' interpretations could be explored in depth, a greater understanding of the phenomenon could have been explicated and compared with other studies of a similar nature.

CONCLUSION

~~Mistreatment~~ According to the literature, mistreatment of medical interns is emerging as a global challenge. To our knowledge, this is the first study from the Arabian Gulf that explores the perception of maltreatment and abuse in a medical setting. Fifty

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eight residents (84%) consented to participate in this ~~present anonymous~~ survey ~~which consisted of approximately 84% of the~~concerning their experiences as interns. ~~In terms of experience of mistreatment according to gender,~~ The ratio of males ~~admitted~~ to ~~have~~females in this group, who were in their late twenties, was representative of the target population. Males responded that they had experienced higher levels of perceived mistreatment~~.~~ than females, particularly regarding academic abuse. In terms of the perpetrator ~~of harassment and abuse, it appears that~~ , hierarchy ~~counts. Those~~appeared to dominate, as those who were commanding higher positions were more ~~prone to fall foul~~likely to ~~committing~~commit maltreatment ~~and~~(such as academic abuse~~. It~~) and abuse (such as sexual harassment). Problems also appeared ~~that the problems were~~ more ~~rampant~~widespread in the ~~subspecialists~~sub-specialty of medicine. ~~Further research is needed to understand factors influencing mistreatment and draw up guidelines to limit such problems. However the~~ Reporting maltreatment was uncommon thus documented data does not exist to support evidence of abuse. In this study, therefore, only perceptions of maltreatment could be elicited, reasons for not reporting being focused on fear of further trouble.

The findings from this pilot study should ~~lead to the~~ encourage further identification of factors ~~perpetuating~~that perpetuate maltreatment and abuse among medical ~~trainee~~ interns. ~~Thus,~~ More extensive research is needed, however, to understand those factors in order to draw up guidelines that will limit such problems and provide evidence-based interventions ~~can be contemplated.~~ appropriate for the context of Oman.

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Competing interests: None

Participant consent: Obtained.

Ethics approval: Ethics approval was provided by the local institutional review board (IRB), Research and Ethics Committee of College of Medicine and Health Sciences, Sultan Qaboos University (MREC#382)

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~~Conflicts~~Conflict of interest: ~~none~~None

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Contributors

M-AS is responsible for study supervision,- T-AK and Y-AF are responsible for study concept and design and data collection, A-AM is responsible for integrity of the data and the accuracy of the data analysis and GW, -H--AS and S-AA were responsible for drafting, the literature review and scientific approach ~~of~~to the write-up.

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Table 1: Medical trainee reporting different types of mistreatment according to sex

	♂+♀ (N=58)	♂ (N=28)	♀ (N=30)
VERBAL ABUSE			
Shouted at you	29 (50%)	14 (50%)	15 (50%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	17 (60.7%)	15 (50%)
Spoken to you un-respectfully	27 (46.6%)	13 (46.4%)	14 (46.7%)
PHYSICAL ABUSE OR THREATS			
Threatened you with physical harms	7 (12.1%)	3 (10.7%)	4 (13.3%)
ACADEMIC ABUSE			
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	10 (35.7%)	7 (23.3%)
Your questions/queries were intentionally not answered	17 (29.3%)	11 (39.3%)	6 (20.0%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	15 (53.6%)	15 (50%)
You were ask to take consent from very complicated cases	27(46.6%)	16 (57.1%)	11 (36.7%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	11 (39.3%)	4 (13.3%)
SEXUAL HARASSMENT			
Received jokes or comments against your gender (M/F)	9 (15.5%)	5 (17.9%)	4 (13.3%)
Received compliments or comments about your body or figure	7 (12.1%)	2 (7.1%)	5 (16.7%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	1 (3.6%)	6 (20.0%)

♂= Male
♀= Female

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Table 2: Medical trainees reporting different types of mistreatments according to sources/perpetrators

	Verbal Abuse			Physical Abuse			Academic Abuse			Sexual harassment		
	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
Consultants	21 (75%)	17 (56.7%)	38 (65.5%)	4 (14.3%)	3 (10%)	7 (12.1%)	18 (64.3%)	11 (36.7%)	29 (50%)	4 (14.3%)	5 (16.7%)	9 (15.5%)
Specialists	9 (32.1%)	10 (33.3%)	19 (32.8%)	1 (3.6%)	2 (6.7%)	3 (5.2%)	16 (57.1%)	14(46.7%)	30 (51.7%)	4 (14.3%)	6 (20%)	10 (17.2%)
Resident	4 (14.3%)	1 (3.3%)	5 (8.6%)	0	0	0	3 (10.7%)	4 (13.3%)	7 (12.1%)	2 (7.1%)	1(3.3%)	3 (5.2%)
Nurses	6 (21.4%)	12(40%)	18 (31%)	1 (3.6%)	4(13.3%)	5 (8.6%)	7 (25%)	7 (23.3%)	14 (24.1%)	2 (7.1%)	0	2 (3.4%)
Patients/ Relative	5 (17.9%)	7(23.3%)	12 (20.7%)	1 (3.6%)	2(6.7%)	3 (5.2%)	2 (7.1%)	2 (6.7%)	4 (6.9%)	1 (3.6%)	1 (3.3%)	2 (3.4%)
Others	1 (3.6%)	2(6.7%)	3 (5.2%)	0	0	0	1 (3.6%)	0	1 (1.7%)	0	0	0

♂= Male
♀= Female

Table 3: Medical Trainee Reporting Mistreatment according to Specialty

	ALL (n=58)	MEDICINE	SURGERY	PEDIATRICS
VERBAL ABUSE		32(55.2%)	17(29.3%)	15(25.9%)
Shouted at you	29 (50%)	20(62.5%)	11(64.7%)	9(60%)
Belittled or humiliated you during meetings or rounds	32 (55.2%)	21(65.6%)	10(58.8%)	13(86.7%)
Spoke to you un-respectfully	27 (46.6%)	18(56.2%)	8(47.1%)	11(73.3%)
PHYSICAL ABUSE OR THREATS		11(19%)	1(1.7%)	3(5.2%)
Threatened you with physical harms	7 (12.1%)	11(100%)	1 (100%)	3 (100%)
ACADEMIC ABUSE		35(60.3%)	17(29%)	9(15.5%)
You were asked to carry out some personal services unrelated to patient care or educational activities	17 (29.3%)	13(37.1%)	7(41.2%)	5(55.6%)
Your questions/queries were intentionally not answered	17 (29.3%)	10(28.6%)	9(52.9%)	3(33.3%)
You were forced to refer patient without providing reasonable cause for referral	30 (51.7%)	21(60%)	11(64.7%)	5(55.6%)
You were ask to take consent from very complicated cases	27(46.6%)	20(57.1%)	10(58.8%)	4(44.4%)
You were threatened with failure or giving poor evaluations for reasons unrelated to your academic performance	15(25.9%)	10(28.6%)	4(23.5%)	5(55.6%)
SEXUAL HARASSMENT		10(17.2%)	7(12.1%)	4(6.9%)
Received jokes or comments against your gender (M/F)	9 (15.5%)	5(50%)	5(71.4%)	2(50%)
Received compliments or comments about your body or figure	7 (12.1%)	4(40%)	3(42.9%)	1(25%)
Faced with an offensive body language (e.g. repeated leering, standing too close)	7 (12.1%)	6(60%)	1(14.3%)	2(50%)

Table 4: Medical trainees' narrative for either reporting reason or not reporting maltreatment

Reason/s for not reporting such abuse	%
1. I did not recognize the experience as an abuse at the time that it happened	N=19/58 (32.8%)
2. It was not significant to be reported to those in authority	N=19/58 (32.8%)
3. Reporting such abuse or mistreatment would not accomplish anything	N=24/58 (41.4%)
4. Reporting such mistreatment or abuse would become more troublesome than it was worth	N=25/58 (43.1%)
5. I dealt with the problem directly myself	N=13/58 (22.4%)
6. I did not know to whom I should report or how to complain	N=10/58 (17.2%)
7. I was afraid that reporting such abuse would adversely affect my evaluation or my professional career in future	N=24/58 (41.4%)
8. The abuser apologized to me	N=7/58 (12.1%)
9. I was afraid of not being believed or the problem would not be dealt fairly	N=8/58 (13.8%)
10. I was afraid that the reporting would not be kept confidential	N=17/58 (29.3%)

FROM THE MANAGING EDITOR:	Authors
I greatly appreciate the effort that has been put in to the language editing of the paper. Unfortunately I think one further round of revision is required. The biggest problem is the purpose of the paper is not very clear. The abstract states that the objective is 'To evaluate perceptions of being mistreated during internship among first year Oman Medical Specialty Board residents.' So the abstract is clear that what is being measured is the perception of mistreatment - which is not mistreatment itself.	The word 'perceived' has been added as an adjective in various appropriate parts of the article
However the conclusion to the abstract is all about the prevalence of mistreatment (in this respect, matching the title). The conclusion is also very general - it should relate more specifically to the conclusions of the study.	A few more specific details have been added to the conclusion. The conclusion moves from specific to general – as most maltreatment is not documented it has been made clear that we can only go on perceptions.
The article focus goes much broader - it says that the focus is 'To understand factors influencing mistreatment and to draw guidelines to limit such problems'. These are two completely different research questions that don't match the abstract.	The text has been revised to accommodate such request.
In the introduction you then say 'the present study aimed to quantify mistreatment or abuse of Omani medical interns. Interrelated aims were to explore the level of mistreatment among medical trainees according to gender, perpetrator, and specialty, as well as determine the reasons for not reporting maltreatment to the concerned authority'; the first of these aims has been covered before but quantifying mistreatment is not the same as surveying perceptions of having been mistreated.	The word 'perceived' has been placed before 'mistreatment. This addition should satisfy the concern about 'quantifying' mistreatment
So - you need to make the title, abstract, key messages and introduction consistent	Done
The results, discussion and tables then need to be clear about whether you are reporting actual cases of mistreatment or perceptions of mistreatment.	Done
Please also check the English one more time; for example it is not clear what you mean by 'the category of fallacy'.	We have sought help from a native English speaker. As it causes confusion, reference to 'category of fallacy' has been deleted