ABSTRACT
Context (Background): Attitudes to psychiatry and mental illness among medical undergraduates are key factors in determining their choice of psychiatry as a career and willingness to deal with psychiatric disorders in general practice.

Aims: To measure impact of psychiatry teaching in terms of change in attitudes towards psychiatry and mental illness in medical students and nursing students.

Methods and Material: The sample consisted of 164 participants and consists of two groups, one of undergraduate medical students and nursing students with no exposure to psychiatry postings and second group of medical and nursing interns. Participants completed two questionnaires, Attitude towards Psychiatry (ATP 30) questionnaire and Attitudes towards Mental Illness questionnaire (AMI).

Results: Psychiatric education appeared to significantly positively influence the attitudes of medical and nursing students towards psychiatry; however, influence on change in attitude towards mental illness was not significant.

Conclusions: Psychiatric education appeared to positively influence the attitudes of medical and nursing students. However, we suggest radical changes in psychiatric education for undergraduate medical and nursing students so that it also leads to a positive change in outlook towards mental illnesses.

Declaration of interest: None

Key words: Attitude, medical students, nursing students, Psychiatry and mental illnesses

INTRODUCTION
This study is a result of an idea, which originated with trying to measure impact of current graduate psychiatry education and its effect on changing the students attitudes towards Psychiatry and mental illnesses. This was designed considering the current Global concern that the subject of psychiatry, psychiatrists, mental health professionals, and the mentally ill patients are affected by the negative prejudices and the cultural stereotypes of the public. Surprisingly, this problem is noted even among medical students who, despite receiving education on psychiatry, still harbor an unhealthy attitude about mentally ill patients and psychiatric practice. In spite of the magnitude of people suffering from mental illnesses worldwide, patients do not get the care they need, their disorders impose a range of social and economic costs on individuals, households, employers, and society, ranging from the cost of care to the cost of lost productivity. One major factor responsible for this is stigma, and such a negative attitude has devastating effects on the lives of people with stigmatizing conditions, such as mental illness. The Problem of stigma is universal. Amongst many, Attitudes of health care professionals are important because they are a determinant of the quality of care given to people with mental illness. Negative attitudes towards people with mental illness are also associated with stigma against the psychiatric profession which can affect morale and may adversely affect the quality of care, either directly through demoralized staff, or indirectly through structural discrimination, e.g. via low levels of financial investment in mental health care facilities. And Medical student’s attitudes towards people with mental illness are of primary importance for several reasons. First, they are the future doctors who will be supervising and guiding other health care professionals through referrals and multidisciplinary teams. Second, they are in training, therefore educational interventions targeted towards them may be more effective than doctors who have completed their training because research has shown that, as they carry on through their career, their attitudes harden and
become more resistant to change. In 1989, an Indian study reported that nearly 90% of the medical community acknowledged the scientific basis of psychiatry, indicating that at least psychiatry is increasingly being considered a valid medical discipline, which is reflected from the fact that mental illness is being accepted to be a disease like any other. Another study in 2001 found that only 5% of post graduation medical students disagreed with the opinion that psychiatry is a valid medical discipline. A more recent study showed that 80% of the 76 respondents consisting of interns, residents and medical officers, considered psychiatry to be a difficult discipline.

MATERIALS AND METHODS
This study was conducted at the department of psychiatry, SBKS Mi&RC, Dhiraj Hospital, Sumandeep Vidyapeeth, Piparia. The study was initiated after taking approval from the Sumandeep Vidyapeeth Institutional ethics committee. All the participants were included only on signing a written informed consent form after adequately understanding the nature of study.

The first year nursing and medical students (unexposed group) and the intern nursing and intern medical students (exposed group) form the subjects of our study.

Sumandeep Vidyapeeth (SV) is a health University with Medical and Nursing graduate and post graduate programmes. Medical students gain admission through a common entrance examination and consist of Indian origin students from all parts of India, making it a culturally diverse, ethnically different study sample.

The sample consists of total number of 164 participants and consists of two groups, one of undergraduate medical students and nursing students of first year who have no exposure to psychiatry postings and second group composed of undergraduate medical, nursing students and interns who have completed their psychiatry postings. Demographic data (Which includes age, gender, religion, domicile, schooling, socio-Economic status, marital status, and self-reported ethnicity) was collected from all the participants.

BACKGROUND
Structured teaching modules for the sample of medical and nursing students:
Medical students received a series of 12 lectures (fixed topics) and a 2-week structured clinical attachment of about 44 hours in their third year or final year. During this attachment, students work up and present cases to consultants, and are tutored by faculty from Department of Psychiatry. They also attend clinical discussions of cases worked up by postgraduates and present seminars on topics allotted to them. The content of the teaching programme is wide ranging. In addition, 12 structured weekly clinics (24 hours) are taken for final year students. During this period, the interns posted to the psychiatry department receive additional input in the form of lectures given by a senior faculty aimed at improving the detection and management of common mental disorders in primary care.

The nursing students from second year onwards will receive total seven lectures, which is discussed in brief and includes introduction to psychiatry, classification of mental disorders, management of mental disorders, management of substance use disorders, management of mentally challenged and preventive psychiatry. They also visit the psychiatry male and female wards, psychiatric OPD, present cases of patients and discuss specific management for patients.

Questionnaires used:
All the participants completed two questionnaires, Attitude towards Psychiatry (ATP 30) questionnaire and Attitudes towards Mental Illness questionnaire (AMI).

The ATP questionnaire (Appendix 1) consists of 30 items and has been standardized and validated. It has adequate face validity, constructs validity, split half reliability and high-test retest reliability, and has been widely used in attitudinal studies on medical students. It covers 8 related attitudinal areas pertaining to psychiatric patients, psychiatric illness, psychiatric knowledge, psychiatrists, psychiatric career choice, psychiatric institutions and psychiatric teaching. Respondents are expected to express their agreement or disagreement to each statement on a 5-point Likert scale ranging from 1 (agree strongly) to 5 (disagree strongly). Half the items are positively phrased and reverse scored. The total score for each respondent is the sum of the scores on all 30 statements. High scores indicate a positive ATP with a maximum score of 150. A score of 90 indicates a neutral ATP.

The AMI questionnaire (Appendix 2) consists of 20 statements with a similar scoring pattern on a 5-point Likert scale, reverse scoring on some items and a higher total score indicating a more favorable attitude. The maximum score is 90, and 60 represents an overall neutral attitude. The individual statements cover aspects of etiology, treatment and consequences of mental illness. These questionnaires have adequate face validity and construct validity.

Procedure of the study
The students were informed about the study and those who expressed their wish to sign the informed consent form were then asked to get together in their respective lecture theaters, were

Garg et al, EJPDCR 2013:2, 140-144
they were asked to fill up the Performa and both the questionnaires. These were distributed to each group of students i.e. first group of undergraduate medical and nursing students of first year with no exposure to psychiatry posting and the second group of medical and nursing students interns who have exposure to psychiatry postings. It was explicitly explained to the students that their responses would have no influence on their semester exams. It was strictly ensured that the students did not discuss their statements among themselves while in a group. It was also explained to the students that some items may not be appropriate for answering at their level and those were to be ignored.

**STATISTICAL ANALYSIS**

Data was processed in Excel sheet and analysis done using the SPSS (version-16). The mean of total score on each questionnaire is compared between the groups using one-way ANOVA (Analysis of Variance) test and unpaired student t-test. The probability (P) level of less than 0.05 was considered as significant.

**Results and Discussion**

**DEMOGRAPHICS**

181 respondents were given the pre and post-clinical placement Questionnaires out of which 164 students completed the questionnaires. This gave an overall response rate of 90%. In all, 99 (60.36%) were males while 65 (39.63%) were females.

The mean age of the students who was unexposed was 18 years and were from urban set up (85%) and the students who were exposed to psychiatry posting had mean age 22 years and were from urban setup (78%).

**Of the total student respondents of the two groups – their collective data was analyzed and is discussed here:**

<table>
<thead>
<tr>
<th>Total students addressed</th>
<th>n</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>=164</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students signed consent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As we can see above, 164 students that comprised our study sample, 67 had not been formally exposed to psychiatry (40 were first year medical students and 27 were first year nursing students). Of the remaining 97 respondents who had been exposed to psychiatric clinical attachment (69 were intern medical students and 28 were intern-nursing students). **Table 1 Scores on the attitude to mental illness (AMI) questionnaire**

<table>
<thead>
<tr>
<th>Batch</th>
<th>n</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year nursing (unexposed)</td>
<td>27</td>
<td>57.22 (4.47)</td>
</tr>
<tr>
<td>Intern nursing (exposed)</td>
<td>28</td>
<td>60.03 (4.31)</td>
</tr>
<tr>
<td>[ t=2.374, p=0.02, df=53 ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First year MBBS (unexposed)</td>
<td>40</td>
<td>58.80 (4.36)</td>
</tr>
<tr>
<td>Intern medical (exposed)</td>
<td>69</td>
<td>62.78 (5.65)</td>
</tr>
<tr>
<td>[ t=3.84, p&lt;0.0001, df=107 ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total exposed</td>
<td>97</td>
<td>61.98 (5.42)</td>
</tr>
<tr>
<td>Total non exposed</td>
<td>67</td>
<td>58.16 (4.44)</td>
</tr>
<tr>
<td>[ t=4.77, p&lt;0.0001, df=162 ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It was seen that students who were yet to be exposed to psychiatry, whether first year nursing/medical students, had less than neutral score on AMI (mean 58.16), meaning they expressed negative and unfavorable attitude towards mental illness.

However, amongst students exposed to psychiatric training (interns- medical and nursing) there was statistically significant increase in mean scores of AMI scale (mean 61.98) than those who had not had their psychiatry training (first year medical and nursing students). (Table 1)

Similarly, the total scores on ATP questionnaire showed improvement in the exposed group (mean 99.50) because of psychiatric training as shown in table 2.

**Table 2 Scores on the attitude to psychiatry (ATP) questionnaire**

<table>
<thead>
<tr>
<th>Batch</th>
<th>n</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year nursing</td>
<td>27</td>
<td>91.48 (7.32)</td>
</tr>
<tr>
<td>Intern nursing</td>
<td>28</td>
<td>96.5 (7.92)</td>
</tr>
<tr>
<td>[ t=2.45, p=0.01, df=53 ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First year MBBS</td>
<td>40</td>
<td>92.00 (9.54)</td>
</tr>
<tr>
<td>Intern medical</td>
<td>69</td>
<td>100.74 (11.19)</td>
</tr>
<tr>
<td>[ t=3.70, p&lt;0.0001, df=107 ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total exposed</td>
<td>97</td>
<td>99.50 (10.49)</td>
</tr>
<tr>
<td>Total non exposed</td>
<td>67</td>
<td>92.34 (8.69)</td>
</tr>
<tr>
<td>[ t=4.61, p&lt;0.0001, df=162 ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This unexposed group on the other hand had positive score on ATP (mean 92.34) even before their psychiatry posting, suggesting their already positive attitude towards psychiatry. So, exposure to psychiatric posting improved both AMI and ATP, though differences were greater for the latter than the former, (mean ATP score on exposure was 99.50 from 92.34 mean of non-exposed group and on AMI scale mean score was 61.98 on exposure and mean score of students who were not exposed, on AMI scale, mean score was 58.16).

A significant finding was though exposure to psychiatric postings improved AMI score in nursing intern students compared from their first year counterparts, it was not able to significantly influence their attitudes from negative towards positive significantly.

Lastly, it was also found that the improvement in AMI and ATP scores was more in the exposed medical intern group (AMI mean score 62.78, ATP mean score 100.74) compared from the exposed nursing intern group (AMI mean score 60.03, ATP mean score 96.5).

The possible reason for this difference could be that medical students received more and detailed lectures by faculty and had interactive sessions whereas the lectures given to the nursing students were brief and not followed by interactive sessions with the faculty with the same intensity as with medical students.

We applied t test between the 1st year nursing, intern nursing students on AMI scale (t=2.374) and found significant difference with (p value<.02). Further on application of t test, between 1st year and final year medical students showed the t value 3.84 on AMI scale which was highly significant (p value<.0001). Similarly, on ATP scale the t value in the 1st year nursing and intern nursing was 2.45 which was with p value<.01 and t value between the 1st year m.b.b.s and intern m.b.b.s the t value was 3.70 with p value<0.0001, both of which were significant. We also applied the ANNOVA test between the 1st year nursing, intern nursing, 1st year m.b.b.s and intern nursing on AMI scale and the F Value came out to be 10.4.

Our findings are similar to the studies done by Augoustinos M, Schrader G, Chynoweth and Wilkinson [18, 19] in terms of increase in positive attitude towards mental illness and psychiatry following the psychiatry posting. Another study from India reported that overall attitude towards psychiatry did not differ among students before and after psychiatry posting [20]. Some other studies have also failed to find an improvement in attitudes towards the mental health profession and patients [21].

It is not possible to comment on what aspect of the psychiatric training may have contributed to the positive change in attitudes. Although there was an increase in positive attitudes over the course of the psychiatric posting, this change may not persist. The positive change in attitude may be enduring or transient [22]. This necessitates further research in the form of a longitudinal study, which can monitor the medical student as they progress from fourth year to final year and after graduation. While the increase in positive attitudes was statistically significant, it was not possible to comment on the practical importance of the degree of change that was observed, either in terms of the ways in which students deal with patients with psychiatric illness or in terms of choice of specialization.

CONCLUSION
Our study found that the current Psychiatry postings greatly influenced the attitudes of nursing and medical students towards Psychiatry as well as towards Mental illnesses (ATP scores were 91.48 in nursing and 92.00 in medical students, after psychiatry postings the scores improved to 96.5 and 100.74 respectively, similarly AMI scores before psychiatry postings were 57.22 in nursing and 58.80 in medical students and afterwards the scores similarly improved to 60.03 and 62.78 respectively).

It is important to note that the changes in attitudes towards psychiatry were far more significant than the changes in their attitude towards mental illnesses and this is a matter of concern as this calls for introspection in the current content of psychiatry being taught and whether it can be modified to make the outcome better even for attitudes towards mental illnesses. In addition, whether these changes are stable over time needs to be studied. We are in the process of conducting follow-up studies to elucidate this. However, it is evident from the study that it is possible to inculcate healthy attitudes in our medical and nursing students through a well-structured clinical posting in psychiatry. These healthy attitudes will go a long way in instilling confidence among our future doctors in dealing with patients with mental health problems. KINDLY ENCOURAGE STUDENTS TO TAKE PSYCHIATRY POSINTG SERIOUSLY AND MAKE THEIR PRESENCE COUNT.

This will also serve the purpose of bringing a positive change in students of medical and nursing discipline towards psychiatry and mental illnesses.
Limitations of the study:
It would have been better to include subjects from different colleges to get a broader view from a bigger sample size and we recommend a follow up study measuring sustainability of the changes observed as this would further strengthen the findings of our study.

REFERENCES