

## ORIGINAL ARTICLE

## EFFECT OF COMMUNICATING TEST RECORD TO PARENTS ON STUDENTS' PERFORMANCE

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**Background:** Students' academic performance is affected by multiple factors but a major factor is teacher parent communication regarding students' progress in studies. **Methods:** The study objective was to assess the effect of intervention i.e. parental involvement, which might have improved the academic performance. This was a cross-sectional, interventional study. Simple random sampling technique was used. Students' internal assessment test record (pre-intervention) was communicated to their parents. Any change in their academic performance was noted and marks obtained in internal assessment tests were compared with the marks obtained in send up examination (post-intervention). Data were analysed on SPSS-18; Mean $\pm$ SD and *p*-values were calculated. **Results:** The pre-interventional marks obtained were 50.02 $\pm$ 9.82 and post-interventional marks obtained were 52.47 $\pm$ 8.99. The pre-interventional marks obtained by male students were 46.80 $\pm$ 10.56 and post-interventional marks obtained were 49.99 $\pm$ 10.01. Female students pre-interventional marks obtained were 53.25 $\pm$ 9.09 and post-interventional marks obtained were 58.94 $\pm$ 7.97. **Conclusion:** The designed intervention resulted in significant improvement in academic performance. Among girl students' improvement in academic performance was better than in boys. Parental involvement is significantly (*p*<0.05) and positively associated with academic performance.

**Keywords:** Academic Performance, Student Progress, Parental Involvement

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## INTRODUCTION

High failure rate at medical colleges result in increased cost of training at national level. Academic performance of students at university has recently come under spotlight due to high failure rate.<sup>1</sup> Many studies have been carried out worldwide to identify factors of poor academic performance. Most of them focused on three elements, i.e., parents, teachers and students.<sup>2,3</sup>

Students learning preferences are multimodal and have large variation. Class sizes, entry qualifications, age, gender and parental involvement are major factors which have impact upon academic performance.<sup>4</sup> Newman *et al*<sup>5</sup> reported that gender had only minor impact on academic achievements. Whether gender difference exists or not depend on subject matter.<sup>6</sup>

Parent involvements have been studied at three different areas, i.e., parent's involvement, parents programs and parents interventions. Reviewers focused on parent's involvement programs, in which parents has a direct interaction with child and teacher in either delivery or monitoring of intervention. The experimental condition was parent involvement or intervention.<sup>7</sup> Bempechat<sup>8</sup> reported Epstein's program of parent intervention which showed that clear communication from teacher to parents regarding student academic progress has positive and significant impact on student awards.

The parents' involvements intervention programs that are in longer duration, do not produce large effects. No linear relationship exists between

parent involvement and length of intervention programme.<sup>9</sup> The effect of parent involvements on academic performance is positive, stable and statistically significant. Hansen JB<sup>10</sup> focused on students' impatience that influence academic performance. Student academic performance is affected by learning abilities, age, race, gender, sex. Hijazi *et al*<sup>11</sup> emphasised different factors that affect student academic performance, i.e., nutrition, food supplements, Government support for education, roommates, effort, distance from learning place, age, and gender, mother education etc.

We considered that parent's involvements as interventional approach, by communicating test records and attendance to their parents. The parents provide strict supervision and some kind of incentive to their children. It is a pioneer study that was designed to study effects of parental involvement (intervention). Our study design was cross-sectional, interventional. Simple random sampling technique was applied. Our study objective was to evaluate the effect of parent's intervention on academic performance of medical students.

## SUBJECTS AND METHODS

This interventional study using simple random sampling technique was conducted in the Department of Physiology, Ghazi Khan Medical College, Dera Ghazi Khan. Students of 1<sup>st</sup> year and 2<sup>nd</sup> year MBBS sessions 2012-13 and 2013-14 were included in the study. The total numbers of participants were 391. There were 198

students from session 2012–13, 91 student of 1<sup>st</sup> year and 107 students of 2<sup>nd</sup> year MBBS respectively. The number of students from session 2013–14 were 193, 96 from 1<sup>st</sup> year and 97 from 2<sup>nd</sup> year MBBS respectively. The study period was from June to August 2014. The internal assessment test results and attendance record of participants were communicated to their parents on their residential addresses before their send-up examination. The receipt of this communication was confirmed telephonically from the parents to ensure the compliance. Intervention time was crucial for examination preparation and students were on summer vacation and directly under the parents' supervision.

Their percentage of marks obtained in send-up examination (post-intervention) were compared with percentage of marks obtained in internal assessment test results (pre-intervention). The results were analysed using SPSS-18. The student's *t*-test was applied to see the differences between pre- and post-interventional results, and  $p < 0.05$  was considered as significant.

## RESULTS

All 391 students showed significant ( $p < 0.05$ ) post-interventional improvement in their academic performance. Pre-interventional marks obtained were  $50.02 \pm 9.82$ , while post-interventional marks obtained were  $52.47 \pm 8.99$ . The differences between the pre-interventional and post-interventional marks were significant ( $p < 0.05$ ) statistically. Among male students ( $n=131$ ) pre-interventional marks obtained were  $46.80 \pm 10.56$  and post-interventional marks obtained were  $49.99 \pm 10.01$ , ( $p < 0.05$ ). Pre-interventional marks obtained by female students ( $n=260$ ) were  $53.25 \pm 9.09$  and post-interventional marks obtained were  $58.94 \pm 7.97$ , ( $p < 0.05$ ). Female students showed more post-interventional improvement in their academic performance compared to male students (5.69 vs 3.19 marks).

**Table-1: Effect of intervention on students' performance (Marks Obtained, Mean $\pm$ SD)**

	Pre-Interventional	Post-Interventional
Participants (n=391)	50.02 $\pm$ 9.82	52.47 $\pm$ 8.99*
Males (n=131)	46.80 $\pm$ 10.56	49.99 $\pm$ 10.01*
Females (n=260)	53.25 $\pm$ 9.09	58.94 $\pm$ 7.97*

\* $p < 0.05$

## DISCUSSION

Positive student attitude towards attendance and regularity shows effort and seriousness of students about studies. Regularity in college contributes towards academic performance. Student family income may have positive effect but inverse relationship exists between student performance and family income because students of affluent family do not give proper time to studies.<sup>12</sup>

Students' academic performance is dependent on multiple factors but parent involvement is one major factor that had been consistently related to improved academic performance. Huges *et al*<sup>13</sup> showed positive relationship between parents involvement and student academic performance.

No interventional study could be found regarding academic improvement among medical students by communicating their attendance and academic record to their parents. The intervention has shown statistically significant ( $p < 0.05$ ) improvement in student's performance. Parent involvement is defined as teacher's perception of 'the positive attitude parents have towards student education and teacher'. Two basic mechanisms involved are child's perception of cognitive competence as child progress report and student-teacher relationship. Both mediate relation between parental involvement and academic performance.<sup>14</sup> Policy makers should develop and promote programs that result in increased academic performance.

Most empirical studies reported that parent involvement leads to better student performance.<sup>15</sup> Some other studies also showed that financial incentive and parent involvement is predicative of student educational outcome.<sup>16,17</sup>

## CONCLUSION

Parental involvement resulted in improved academic performance of medical students. Female students showed a higher improvement in academic performance compared to male students.

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