Original article

Peer-assisted motivation: a novel practical action research to combat absenteeism

Muhammad Ishaque Khan[1], Syed Asghar Naqi[2]

[1]Associate Professor of Surgery, Quaid e Azam medical College, Bahawalpur, Professor of Surgery Shaikh Zayd Medical College, Rahim Yar Khan, Pakistan, [2]Professor of Surgery King Edward Medical University, Lahore, Pakistan

Correspondence to: Dr. Muhammad Ishaque Khan, Associate Professor of Surgery, Quaid e Azam Medical College, Bahawalpur Address: 10-B, Lane No.3, Medical colony, Bahawalpur, Pakistan. E-mail: ishaquedr69@yahoo.com

ABSTRACT

Background: Purpose of this study was to explore the causes of absenteeism in clinical lectures in 3rd year medical students and to find remedial measures for the same.

Subjects and Method: Study was conducted in two research cycles from January 2016 to May 2017. First was multiphase mixed method inquiry for cause identification of absenteeism. Second was practical action research (peer-assisted motivation), an intervention to combat absenteeism. Target population was 3rd year MBBS student of Quaid-e-Azam Medical College (QAMC), Bahawalpur, Pakistan. In first research cycle, two surveys for students, focus group discussions (FGDs) of fifteen students and five teachers, and interview of director Department of Medical Education (DME) were done. In next cycle, an intervention named peer assisted motivation (PAM) was employed to improve attendance.

Results: In the first survey, 114 students participated. Analysis concluded that students don't attend clinical lecture because they are busy in basic subjects and there is no examination for clinical subjects in 3rd year. The causes of truancy identified, in thematic analysis of FGDs and interview, were lack of motivation, administrative or technical issues, personal reasons and role of teachers. By triangulation and integration of data, a revise questionnaire was developed to be used in 2nd survey for 217 students, to retest old and quantify new themes. In PAM, thirty 4th year MBBS students motivated 3rd year students to attend clinical subject lectures. After intervention, attendance improved by 12.8%. The results were statistically significant ($p \leq 0.002$).

Conclusion: By using mixed method approach, absenteeism in clinical lectures in third year students is better understood. PAM was found to improve attendance and enhance interest in learning clinical subjects in third year students.

Keywords:

Absenteeism, Causes, Peer-assisted motivation, Attendance, Undergraduate MBBS, Third year

INTRODUCTION

Absenteeism is a hindrance in educational growth.[1] It shows lack of motivation, interest, and a threat of dropout.[2] Absenteeism in clinical lectures during 3rd year undergraduate classes is persistently emerging in various teaching institutions, including Quaid-e-Azam Medical College (QAMC) Bahawalpur. Identification of causes of absenteeism has prime importance. Students do not attend class if they dislike lectures or lecturing style.[2] Lack of interest and motivation is another important reason of truancy. Some students prefer available alternates.[3,4] Common reasons reported in medical institutes were students being busy only in the subjects in which summative assessments will be held.[3] The extent and severity of truancy, its impact on students' performance, scores and achievements are discussed in previous studies from medical institutes, including Pakistan.[5,6] However, the problem of student truancy remains multifaceted and more comprehensive studies need to be done in order to adopt appropriate remedial measures to combat the problem.

Check and Connect (C&C) model has previously been proposed having key features of relationship building, routine monitoring and timely intervention.[7] This student engagement model worked on individual students. The reported benefits were improvement in attendance, behavior and academic performance. Rewards and incentives have also been reported to improve attendance.[8] Cole tested a dual approach (C&C and incentives) in his study.[9] Punishments, penalties, and legislation have also been tested with variable results.[10,11] It has been observed that peers especially immediate senior students play an important role in the learning strategies of immediate junior medical

Competing interest: The authors have declared no competing interests exist.
Citation: Khan MI, Naqi SA. Peer-assisted motivation: a novel practical action research to combat absenteeism. J Fatima Jinnah Med Univ. 2018;12(3): 89-95.

students. Purpose of this study is to introduce an intervention, in which senior peers motivate their junior students to attend the lectures. Intervention was named peer-assisted motivation (PAM).

SUBJECTS AND METHODS

This study was done in two research cycles. In the 1st cycle the researchers introduce the techniques to identify the different cause of truancy while in the second phase researchers implement the intervention PAM to improve attendance. The research questions for first research cycle were:

1. What are students' and faculty perspective for students' truancy?
2. Does the qualitative data thus obtained support, improve & clarify quantitative data?[12]

In first research cycle, multiphase mixed-method study (concurrent mixed-method and exploratory sequential study) was conducted at Quaid-e-Azam Medical College (QAMC), Bahawalpur, from January 2016 to May 2017. For Surveys, the participants were 3rd year MBBS students. Participants for qualitative research were subgroups of fifteen 3rd year MBBS students, five faculty members of clinical subjects, and director DME. The purpose of this cycle was to evaluate reasons of absenteeism of 3rd year MBBS students in clinical subjects' lectures (Surgery, Medicine and ENT) by exploring (Phase 1) and converging (Phase 2) qualitative and quantitative data. For this purpose, a questionnaire was used to find out 3rd year MBBS students' perspective of absenteeism in clinical subject lectures. At the same time, the causes and remedies of truancy in clinical subject lectures were explored by focus group discussion (FGD) of small subgroups of students and five teachers of clinical subjects. An in-depth interview of Director of Department of Medical Education (DME) was conducted. Based on analysis of thus obtained data, a new questionnaire was designed and tested to quantify emerging themes. For quantitative survey, convenient sampling was done. All 3rd year MBBS students, present on the days of the surveys and willing to participate, were included in study. For qualitative part, purposeful maximal variation sampling was done. Students of different genders, achievement and socioeconomic status, were included to have sufficient diverse ideas. Five teachers who teach clinical subjects to this class & director DME were selected. Three instruments used for the study were predesigned questionnaire; focus group discussion and semi-structured interview. The questionnaire was tested and validated for quantitative research and developed by iteration employing the strategy used by Westrick.[2] A group of 25 final year MBBS students were requested to write down possible causes of absenteeism of 3rd year in clinical lectures. Rationale was that they had been through the same experience two years back. Based on these causes, questionnaire was designed in English. It was pretested by talk-through with small group of house officers. Study was piloted on a group of students with different sequence of questions. Individual factors were analyzed.[13] A Likert scale (1-5) was used to take responses of the students. FGDs with small groups of students (15 students) and faculty members (five) were used for qualitative research. An in-depth interview was further taken from Director DME.

The questionnaire was reviewed and revised after the analysis of qualitative and quantitative data. New themes were added and explored in FGD and interview, and less important variables used in first surveys were removed (Annexure I&II). Same sequence for validation of the new questionnaire, pre-testing and piloting, was followed. This questionnaire was then used for second survey on a new batch. The second research cycle was to test usefulness of PAM, an intervention (practical action research) for attendance improvement. Two surveys were conducted in lectures of Pharmacology (1st survey) and Forensic Medicine (2nd survey) as maximum attendance of 3rd year students is present in these lectures. After a descriptive briefing, questionnaires were served to the willing participants, and collected back after giving enough time to respond. FGDs and interview were then arranged, in an isolated uninterrupted venue. After explaining procedure in sufficient detail, consent forms were signed by participants. To keep the anonymity of participants, codes F1, F2 to girls and M1, M2 to boys were allocated. One of the researchers was the moderator. To minimize chances of data loss, two audio recorders were used. Discussion continued till the saturation level. The quantitative data was entered on the SPSS version 22. Absenteeism was categorized as dependent variable. Independent variables used are detailed in Annexure-I & II. Frequencies of causes of truancy were analyzed. FGDs and interview were audio recorded. Transcription was done on paper. Coding and color coding were done for each identified variables. These codes were grouped in themes and subthemes for further description. Any additional information in these themes, which was not identified in first survey were highlighted. Some themes unidentified previously or ambiguous were member checked. Important observational findings during interview were written as

notes. A convergent design for analysis was used for Phase-1.[12] Both qualitative & quantitative data were presented in same section with equal priority. Later, Methodological triangulation was done to develop a new questionnaire for the Phase-2 which was tested and verified employing the similar procedure as for Phase-1 questionnaire. Data was entered on SPSS version 22 and frequencies for variables analyzed. As no further inferential data was calculated, no test of significance was applied in this cycle.

Attendance Improvement Intervention:

In second research cycle, from November 2016 to May 2017, the intervention to improve the attendance of the students was planned, tested and evaluated. A group of peers (4th year MBBS students), motivated third year MBBS students, to attend clinical lectures. The name given to this practical action research was Peer-assisted Motivation (PAM). This intervention was designed to improve student motivation and counter the senior misguidance (explored in FGD by students and Director DME). Peer motivation was a new idea, which was tested in this study. The idea was deduced and established from preceding discussions with colleagues on absenteeism of medical students. Selection of name, PAM, was cogent inspiration from a well-known entity Peer-assisted learning (PAL).[14,15] Afore mentioned remunerations of PAL are feasibility, cost effectiveness, and improved learning environment; same advantages were shared in PAM. The peers' selection was demanding. After informal need assessment interviews with students, faculty and other research workers, a group of 30 volunteers, comprising male and female, boarders and day-scholars, and from different student groups were selected (purposeful maximal variation sampling).

One of the authors and DME facilitator with expertise in communication skills arranged one day workshop for the selected peers' group. For hands on training all participants were divided in groups of 2-5. They were asked to role play the character of motivator. On role-playing, students could reflect on their performance, followed by feedbacks by the facilitator and participants. Two further meetings were held with the purpose to give moral support and formative feedback to motivators. It also facilitated training, cleared ambiguities and helped in monitoring. To generate further interest in peer motivators, DME planned to give a certificate to all participants.

Attendance record was then collected from student section to avoid Hawthorne effect. Attendance was compared before and after intervention. Attendance of initial 2 and a half months (30 clinical lectures) of a session before intervention and succeeding session, after intervention were recorded. Data was entered and analyzed by SPSS version 22. Means for number of students attending lectures were calculated. Paired student t-test was applied to number of students attending lectures before and after intervention. A $p \leq 0.05$ was considered statistically significant.

Table 1: Student perspective of Truancy in clinical lectures Survey-1 and 2

No	Causes of Absenteeism explored from students	Survey No. 1 N= 114		Survey No. 2 N=217	
		N	%	N	%
1	I am much busy in basic subjects in 3rd year	87	76.4	173	79.7
2	To attend clinical lecture is not a criteria to sit in exam	57	50	163	75.1
3	It is too early, exam is too far, I will forget all concepts	42	41.1	143	65.9
4	It is too early I cannot understand the topics	32	28	138	63.5
5	I don't have enough time to learn surgery	31	27.4	134	61.8
6	Lectures do not clarify my concepts	21	19.1	NI	NI
7	Morning lecture is a waste of time	17	15	NI	NI
8	Lecture is boring for me	17	14.9	NI	NI
9	The topics asked in examination are different	14	12.3	NI	NI
10	Lectures are not according to curriculum provided	13	11.7	NI	NI
11	The topics taught to me are useless in practice	8	7.1	NI	NI
12	Seniors misguided me "It is useless to attend lecture"	NI	NI	128	59
13	I don't have enough time to learn surgery	NI	NI	117	53.9
14	It is too early I cannot understand the topics	NI	NI	104	47.9
15	I have a lack of interest/ motivation to attend lecture	NI	NI	96	44.2
16	Schedule for lecture is not good	NI	NI	78	36
17	I dislike the lecturing style	NI	NI	53	24.4
18	It is because of my personal reasons	NI	NI	42	19.4
19	Teachers are irregular in lectures	NI	NI	33	15.2
20	Behavior of the teacher is not good	NI	NI	13	6

N= Number of students participated; NI= Variables/ Causes not included in the survey

Table 3: Improvement in lecture attendance

No	Subject	Collective Means before Intervention		Collective Means After Intervention		Collective Mean Attendance Improvement	
		N	%	N	%	N	%
1	Surgery	75.9	23.21	123.3	37.70	47.4	14.49
2	Medicine	77.7	23.76	122.8	37.55	45.1	13.79
3	ENT	64.00	19.57	97.6	29.85	33.6	10.27
	Total	72.53	22.18	114.56	35.03	42.03	12.85

Means before Intervention: Mean number and percentage of students attending clinical lecture before PAM intervention January-March 2016
Means after Intervention: Mean number and percentage of students attending clinical lecture after PAM intervention January-March 2017
Attendance Improvement: Mean number and percentage of improvement in attendance after PAM intervention

RESULTS

In first survey, questionnaire was distributed to 132 students and 114 (86.36%) students responded. In second survey, the Questionnaires were filled and returned by 217 (98.19%) out of 221 students. Eleven variables were used for 1st and fourteen for 2nd survey. The main causes for absenteeism in clinical lectures in both surveys were being busy in basic subjects and no university examination in clinical subjects in 3rd year. The students mostly agreed with new causes identified by FGDs and interviews. In second survey, administrative (less importance of attendance, hectic schedule and no examination of the clinical subject) and teacher-related factors were given least importance (Table 1). Small groups of students (10 male and 05 female) and five teachers took part in FGD. A total 47 minutes FGD was recorded. Two coders did color coding after transcription. Students' FGD concluded four main themes: (1) Lack of motivation, (2) Administrative and technical issues, (3) Personal reasons, (4) Role of teachers. Lack of motivation was the theme mentioned by 10 out of 15 students. The subthemes concluded were, lack of internal motivation, no motivation by peers, no guidance by the teachers, inactive mentoring and lack of communication. An interesting subtheme was misguidance by the senior peers. Administrative issues included less importance of attendance, hectic schedule and no university examination of the clinical subject in third year. Two students mentioned personal negligence and laziness. Important subthemes for role of teacher were irregularity, non-interactive lectures, harsh behavior and over use of multimedia. One student mentioned that lectures are of higher cognitive level than their understanding, but others denied this. Comments verbatim are given in Table 2.

Students gave different suggestions to improve attendance. The commonest suggestion was budding motivation in learning. In students' opinion, motivation can be improved, by involvement of senior teachers, interactive lecturing and communication, practicality and mentoring. Faculty training in teaching skills and rescheduling the lectures were also suggested. Similarly, rewards, punishments, mandatory attendance, and clinical examination in 3rd year can improve attendance.

Teacher's FGD concluded that roots of truancy were lack of an university examination in clinical subject and no requirement of attendance in clinical subjects as mandatory requirement for appearing the 3rd year university examination. Other identified causes were senior peers' misguidance and administration flaws. Faculty recommended that attendance can be improved by taking administration on board, making attendance mandatory as requirement for university examination (even if there is no examination held in clinical subject) and counseling for importance of these lectures that the topics will never be repeated afterwards and have an important bearing in final year examination. The qualitative interview of director DME concluded three main themes for absenteeism; factors related to students, teachers and administration. Student's factors mentioned were lack of interest and motivation, senior's misguidance and ignorance of relevance. Factors related to teachers were monotonous lectures, harsh behavior and threatening environment. The administrative factor was hectic schedule. His proposed remedies were making lectures interactive, creating learning environment and relevance in learning. Triangulation of the different factors by displaying qualitative and quantitative data showed that lack of motivation, clinical examination and attendance accountability in third year were important variables. Moreover, role of teacher and senior's misguidance were stressed by the participants. Students gave much importance to busy schedule in basic subjects, but faculty did not agree.

Results for Attendance Improvement Intervention (PAM): Total of 30 students, 18 females and 12 males, of 4th year MBBS were enrolled as peers. These 30 peers were given the task to motivate 327 3rd year students. The peers' preferred places to motivate students for attendance were cafeteria, college park,

Table 2: Comments verbatim of the students regarding the themes and subthemes

Theme 1: Lack of Motivation
Subtheme 1: Senior misguidance
1. We follow our seniors and they misguide that there is no need to attend clinical lectures
2. Seniors say "Surgery and other clinical subjects you will read in final year"
Subtheme 2: By Teachers:
3. Teachers must come forward and tell students that only passing is not sufficient and you must set goals for your future.
Subtheme 3: Internal Motivation:
4. There is no enthusiasm in students
5. There is no self-motivation. If you feel that you are going to get something in the lecture it is easy to get up and reach at 8 am.
Theme 2: Administrative and technical issues
Subtheme 1: Attendance:
6. Attendance of clinical lectures are not counted as criteria to sit in exam
7. Attendance is not very well considered and we don't get any point in internal assessment
8. Main issue is attendance and it should be counted
9. Attendance matters a lot for students
Subtheme 2: Examination:
10. There should be proper schedule of test throughout the year
11. Clinical subject will be taught in final year and exam is too far
Subtheme 3: Hectic schedule:
12. Clinical lectures must be in between pharmacology and forensic medicine lecture
13. Clinical lecture are in the weekend and we are tired
14. We are in stress due to tests and examination of other subjects
Theme 3: Personal negligence
15. I think personal negligence is the most important cause
16. We make excuse of the other factors but personal negligence is at number one
Theme 4: Role of teachers
Subtheme 1: Irregularities:
17. Some teachers missed their classes. Student came at 8 am and there was no class. So we wasted our time.
Subtheme 2: Non interactive lectures:
18. Multimedia system is damaging a lot. Teachers are doing slide show. But communication is finished
19. There is no communication voice between teacher and students
20. Multimedia should not be given task of teacher
21. Human can teach human but computer cannot teach human being
Subtheme 3: Harsh behavior:
22. Teacher must think when I was at this level how I want to learn

students. The peers' preferred places to motivate students for attendance were cafeteria, college park,student hostel and their homes. The collective means of attendance before and after intervention were 72.53, 22.18% (SD ± 41.54) and 114.56, 35.03 % (SD ± 53.16). The analysis of data concluded that attendance of students both male and female improved significantly after intervention in all clinical disciplines. An overall improvement in collective mean number noted was 42.03 (12.85 %) students per lecture (Table 3). Paired t-test for total (30) lectures before and after intervention was applied. The attendance improvements for male students with paired differences SD 19.54 and SEM 3.57 (p=0.011), for female students with paired difference SD 49.3 and SEM 9 (p=0.001) and for total students with paired difference SD 67.26 and SEM 0.002 (p=0.002) were statistically significant. Participants furnished a written feedback at the end of program. Peers found benefits of interaction with juniors as improved communication skill, confidence and convincing ability. They built up self-motivation, self-satisfaction and sense of responsibility. Other benefits noted were improved learning, attendance and learning environment. Initially, their reactions about program were varied (hopeful, confused, chaotic and scared of bullying), but at the end of program, they were happy and satisfied. The participants suggested continuing program in future. Most students suggested no modification in PAM. A few proposed that modifications like incentives and rewards can improve results.

DISCUSSION

The current study presented a tangible approach to deal absenteeism in medical institute. In the course of this research, while working with students and faculty, it was evident that problem is complex and multifaceted.[2] Authors mainly focused on different studies related to medical and allied institutes due to same context. In similar studies and surveys done at different medical and allied institution, the foremost reasons of truancy, "busy in other subjects" and "no examination in clinical subjects", were similar as we revealed in our institution.[2-4] Institutions mostly have no university examinations for clinical subjects in third year. External motivational factor is examination, and assessment

drives learning is the rule. In qualitative data analysis of first phase, some additional factors of absenteeism were explored. These were lack of interest, lack of motivation and unproductive role of teachers and staff. These identified variables were quantified in second survey. These findings closely correlate with other studies. Some researchers have grouped them in to student, family, community and institutional related factors.[9,16,17] Misguidance by senior class was a factor identified in qualitative study. In second survey, 128 (59%) student ratified this factor which shows the importance of peers. In PAM, it is important to train student peers for positive guidance. Student perspective for any educational problem is important. Their perspective had been discussed in many quantitative studies.[18] This study was mixed method and discussed the perspective of students and faculty as well. It was proven that qualitative data supported, clarified and improved the quantitative data. The suggestions given by students and faculty for improving attendance in this study were consistent with other studies. These suggestions were; enhance motivation, improve lecturing skills, implicate adult learning principles in practice, create attendance culture, implement laws for mandatory attendance and motivation by teachers.[2,3,10,18-20] Many factors overlap and influence other factors like motivation can be improved by providing relevance of learning, safe educational environment, clear directions and good experience.

A variety of intervention for improving attendance has been tried from elementary to high schools. The C&C, initially used for students with disability, was further tested for chronic absenteeism with good results.[21] In a series of studies, C&C model was reported to benefit students up to 12th grade.[21,22] An action research by 3rd year school counselor reported good results of a Perfect Pals Program.[23] An improved attendance of 70% students was reported through check-in and rewards method.[9] Last two mentioned studies were done in elementary school. Although there are some studies describing institutional policies to improve attendance in medical institution, yet no formal intervention in medical institutes was found.[24, 25] This study found PAM helpful to improve attendance. Idea of using peers influence for proper guidance and motivation worked very well in this study. The PAM can be helpful in quashing the negative influence of senior's misguidance. DME and administrative support made this PAM intervention easy and cost effective. Results deduced were practically and statistically significant. Education planners should consider misguidance by the seniors as an important factor. PAM must be planned before the beginning of the session and may be modified according to the context. The approach can be used as an isolated program or as a part of a multi-directional work where faculty and administration is also on board. Limitations of this study include enactment of willing senior peers and lack of their monitoring during actual motivation sessions to ensure the quality of their desired performance. These limitations may make the PAM tool vulnerable. This is suggested that a close collaboration by faculty, administration, students and other stakeholders is needed to solve the problem of absenteeism. Education planners should consider misguidance by the seniors as an important factor. PAM can be modified according to the context and must be planned before the beginning of an academic session. PAM can be used as an isolated program or as a part of a multi-directional work where faculty and administration is also on board.

CONCLUSION

PAM is helpful in improving the attendance and interest in students, this improving the learning environment. The intervention is easy, cost effective and achievable. Careful planning and timely execution remain the key to success of this novel approach.

Declaration of interest:
The article submitted is a compulsory requirement for MCPS-HPE degree. The authors alone are responsible for the contents and writing of this article.

Ethical consideration:
A synopsis for research was written and submitted to the ERC, Quaid-e-Azam medical college in May, 2016. The ERC discussed the synopsis in meeting, and a letter of permission to conduct research was given. In each stage, written consents from all participants were taken after discussing their ethical rights.

REFERENCES

1. Jacobs KD, Kritsonis WA. An analysis of teacher and student absenteeism in urban schools: what the research says and recommendations for educational leaders. Online Submission. 2007.
2. Westrick SC, Helms KL, McDonough SK, Breland ML. Factors influencing pharmacy students' attendance decisions in large lectures. Am J Pharm Edu. 2009 Sep;73(5):83.
3. Desalegn AA, Berhan A, Berhan Y. Absenteeism among medical and health science undergraduate students at Hawassa University, Ethiopia. BMC Med Edu. 2014: 14(1):81.
4. Alghamdi A, Yamani A, Khalil A, Albarakati B, Alrehili O, Salih M. Prevalence, causes and impact of absenteeism. Education. 2016; 6(1): 9-12
5. Aucejo EM, Romano TF. Assessing the effect of school days and absences on test score performance. Economics of Education Review. 2016; 55: 70-87.

6. Hafeez K, Khan MLZ, Jawaid M, Haroon S. Low attendance in lectures at medical colleges of Karachi – A cross sectional survey. JPMI. 2014; 28(2):161-4.
7. Lehr CA, Sinclair MF, Christenson SL. Addressing student engagement and truancy prevention during the elementary school years: A replication study of check and correct model. Journal of Education for Students Placed at Risk. 2004; 9(3), 279-301.
8. Barber RM, Kagey JR. Modification of school attendance for an elementary population. J Appl Behav Anal. 1977; 10(1): 41-8.
9. Cole JF. Interventions to Combat the Many Facets of Absenteeism: Action Research. GSCA. 2011; 18(1): 62-70.
10. DeKalb J. Ausenciaestudiantil sin permiso (Student Truancy). ERIC Digest. Number 125. English version: ED 429 334. Translated by Amado Lascar and University of Playa Ancha, Valparaiso, Chile.
11. Wilson KG. Tough on truants. American School Board Journal. 1993; 180(4): 43-6.
12. Creswell JW. Educational research: planning, conducting, and evaluating quantitative. Upper Saddle River, NJ: Prentice Hall.2002, 24: 534-75.
13. Burford B, Hesketh A, Wakeling J, Bagnall G, Colthart I, Illing J, et al. Asking the right questions and getting meaningful responses: 12 tips on developing and administering a questionnaire survey for healthcare professionals. Med Teach. 2009; 31(3): 207-11.
14. Field M, Burke JM, McAllister D, Lloyd DM. Peer-assisted learning: a novel approach to clinical skills learning for medical students. Med Educ. 2007; 41(4): 411-8.
15. Ross MT, Cumming AD. Peer-assisted learning. In: Dent JA, Harden RM (eds.) A practical guide for medical teachers. 2009; 3rd Ed. Edinburgh Churchill Livingstone. 143-50.
16. Greene JC. Mixed methods in social inquiry. John Wiley & Sons; First Ed. San Francisco. 2007, Vol. 9.
17. Black AT, Seder RC, Kekahio W. Review of research on student nonenrollment and chronic absenteeism: A report for the Pacific Region. National Center for Educational Evaluation and Regional Assistance. Retrieved from http://ies. ed. gov/ncee/edlabs/regions/pacific/pdf/RE L_2014054. pdf. 2014 Dec.
18. Hidayat L, Vansal S, Kim E, Sullivan M, Salbu R. Pharmacy student absenteeism and academic performance. Am J Pharmac Educ. 2012; 76(1): 8.
19. Gullatt DE, Lemoine DA. Truancy: What's a Principal to Do? American Secondary Education. 1997; 26(1): 7-12.
20. Stoner SC, Fincham JE. Faculty role in classroom engagement and attendance. Am J Pharm Educ. 2012; 76(5): 75.
21. Anderson AR, Christenson SL, Sinclair MF, Lehr CA. Check & Connect: The importance of relationships for promoting engagement with school. Journal of School Psychology. 2004; 42(2): 95-113.
22. Martin EJ, Tobin TJ, Sugai GM. Current information on dropout prevention: Ideas from practitioners and the literature. Preventing School Failure: Alternative Education for Children and Youth. 2003; 47(1):10-7.
23. Peek SD. Integrating Effective and Beneficial Interventions to Increase Student Attendance in an Elementary School Setting. Georgia School Counselors Association Journal. 2009; 16(1): 9-20.
24. Nevins EJ, Moori PL, Alexander L, Richards B, Bleasdale V, Sharma AK. 2016. Could Attendance at Medical School be improved? A Prospective Study of Medical Education at The University of Liverpool: Study of Attendance at a UK Medical School. Med Ed Publish. 13;5.
25. Dhaliwal UP. Absenteeism and under-achievement in final year medical students. Natl Med J India. 2003; 16(1): 34-6.