

Characteristics of the Flunking Occurrence and Comparison of the Opinion on Flunking System between Faculty and Students at a Medical School in Korea

Soo-Koung Jun¹

¹Institute of Education, University of London

Abstract

The change of the situation of medical education requires the re-consideration of flunking system in Korea. The aim of this research is to explore the flunking status at a medical college and to compare opinion differences between faculty members and students on the flunking system. Grades and marks of flunking-experienced students (N=98) from 1997 to 2005 were analyzed. Questionnaires were carried out to those students who have registered in the subsequent academic years from the premedical to clerkship courses and to faculty members of the basic medical sciences. Data from questionnaires were analyzed by the Mann Whitney Test method with SPSS+ program. This medical school showed high ratio of flunking and re-flunking(22.5%). The subject areas which resulted in flunking included anatomy-related courses and biology/chemistry in the premedical programs. Statistically significant differences and debates were found against the flunking between the faculty and student bodies who were asked whether there was a meaningful communication between students and faculties after flunking occurred, why it occurred and how to cope with it. One of the strategies to prevent students from receiving of F grade, it is strongly suggested that the school authority set up the pre-warning and the individual mentoring system to help those students who are likely to receive or have already received F grades.

Keywords: flunking, medical school

1. Introduction

The regulations on going up to higher grade at medical colleges (from year 1 to year 6) in Korea¹ are far stricter than other types of college, even though they are some variation on each college. If medical students fail in a compulsory subject or the grade is below average, they cannot go up to the further year and should repeat the whole year or at least one semester. This is called flunking. The most of subjects related to medicine in medical college are compulsory.

This flunking regulation was introduced as a way of controlling the quality of medical education in those days in which small number but the most excellent doctors were trained. However, the number of medical colleges doubled from 1978 to 1998. There were 16 colleges (total student number: 1,870) in 1978, but 41 colleges (students: 3,300) in 1998 (MOHW, 1999). Therefore, it has been argued that educational methods and evaluation system should be changed and flunking system should be abolished (Yoon, et al., 1989). One of the most serious problems of current flunking system in Korea is that credits which students gained are nullified, which causes legal issue (Lee & Lee, 2001). Above all, from the student part, those who experience flunking tend to become fearful on the specific subject that they failed rather than to take it positively to use a year or a semester for improving their knowledge and academic skills (Kim, 2006).

Therefore the learning intervention programs for medical students at a risk of academic difficulty are needed rather than making students flunk and repeat the whole academic year. In prior developing learning intervention program or improving flunking system for the students' benefit at a medical college, the real situation and issues related to flunking occurrence need to be analyzed.

2. Method

This study was carried out in two different phases. The first phase was the school data analysis of flunking-experienced students for 9 years and the second phase was to undertake questionnaires to faculty members and students.

The number of students who experienced flunking during the academic year from 1997 to 2005 are 98: 49 in college, 27 graduated, 5 dropouts, 12 expelled, 5 in temporary withdrawal. Questionnaires were sent to 18 faculty members for basic medicine subjects and 49 students in college. The year grades of 49 students in college were: 1 (pre-medical year 1), 4(pre-medical, year 2), 11(pre-clinical year 1), 12(pre-clinical year 2), 13(clinical year 1), and 8(clinical year 2).

Questionnaire items were designed in order to compare the differences of opinion on the flunking system and it was made of 5-scaled likert (see Table 1). On the cover letter, the research purpose and confidentiality were written in detail and asked subjects to fill in and return it only if they agreed with this research. The questionnaires were implemented for two weeks. Students' questionnaires were sent by post and faculty ones were sent by email. The return rate of students was 23.4% (11 out of 49), and one of faculty was 61% (11 out of 18). Data from questionnaires were analyzed by the Mann Whitney Test Method with SPSS+ program.

3. Results

3.1. The characteristics of flunking

The ratio of flunking, re-flunking, and academic subjects of flunking were analysed from the grades and marks of flunked students. First, the flunking rate from 1997 to 2004 and by college year was analyzed in matrix format (see Table 1). The result of this analysis showed that it is quite high rate for the last 9 years. The cases of flunking rate ranged between 10 percent and 20 percent are 7 out of 39, and even the cases of over 20 percent are 4 out of 39. Therefore the flunking rate of over 10 percent is 28.2 percent (11 out of 39) and if the cases of M6 (no flunking happens) are excluded, the rate increases up to 32.4 percent. The average of flunking rate by college year is: 7.7 percent of M1, 10.5 percent of M2, 15.4 percent of M3, 5.9 percent of M4, 2.1 percent of M5, and none of M6. The flunking rate increased highly from the year of 2000 and it was the most high in the year of 2001 as 20.2 percent (33 students out of 163). Secondly, the re-flunking rate was analyzed. The frequencies of flunking occurrence are 122 while the numbers of students are 98. This means that some students experienced re-flunking. The number of students who experienced flunking twice is 20 and one of three times is 2. Therefore, the re-flunking rate is 22.5 percent (22 out of 98), which show that one out of 4 re-experiences flunking. Thirdly, the subjects at which students failed were analyzed and categorized. The pre-medical related subjects occupy 39.5 percent (53 out of 134), anatomy related subjects are 49.2 percent, biochemistry related is 4.4 percent, and physiology related is 6.7%.

Table 1 Responses summary of questionnaire on flunking among students and faculty members

Group Questionnaire items	Faculty		Students		Signi fi- cance	
	M	SD	M	SD	Z	P
Was the flunking the opportunity to reflect and develop your academic competencies?	2.82	.874	3.64	1.286	-1.571	.116
Do you believe flunking influenced on your sense of self-respect?	1.73	1.009	3.09	1.578	-2.148	.032*
Was your grade improved after experience of flunking?	3.09	.831	3.45	1.036	-.982	.326
Do you think flunking results from only the students' fault?	3.55	1.036	3.91	.944	-.862	.389
Do you think flunking happened partly by the fault of school authority?	2.73	.786	1.91	.701	-2.239	.025*
Was there enough explanation about your flunking from faculty members?	2.55	1.293	4.09	1.044	-2.658	.008**
Do you think special care is essential for flunked students?	2.18	.751	2.73	1.104	-1.409	.159
Do you think the academic competency development program is necessary?	2.45	.934	2.73	1.348	-.383	.702

* p<0.05, ** p<0.01

3.2. The opinion difference between faculty and students

The result of questionnaires of students and faculty members was analyzed (see Table 2). In 5 point likert scale, "Very agree" is 1 point and "Never agree" is 5 point. The statistically significance in three items was shown. First, on the question of 'Do you believe flunking influenced on your sense of self-respect?', the average of faculty is 1.73 while it is 3.09 of students. This means that students are more negative than faculties. Secondly, on the question of 'Do you think flunking

happened partly by the fault of school authority?', it shows that faculty members tend to not agree to the fault of school authority with the average of 2.73 while students tend to be more positive on college's fault as 1.91. Finally, on the 'Was there enough explanation about your flunking from faculty members?(to student) or Did you explain the reason of flunking to students? (to faculty members)', students responded negatively that they did not have enough explanation from faculty members with the average of 4.09.

The other items did not show significant differences. Both faculty members and students responded negatively: 'was the flunking the opportunity to reflect and develop your academic competencies?' (Faculty M=2.82, SD=0.874/ Student M=3.64, SD=1.286); 'Was your grade improved after experience of flunking?' (Faculty M=3.09, SD=0.831/ Student M=3.45, SD=1.036); 'Do you think flunking results from only the students' fault?' (Faculty M=3.55, SD=1.036/ Student M=3.91, SD=0.944). Regarding intervention program or special care for flunked students, both faculty members and students showed that they do not want those kinds of program: 'Do you think special care is essential for flunked students? (Faculty M=2.81, SD=0.751/ Student M=2.73, SD=1.104)' and 'Do you think the academic competency development program is necessary? (Faculty M=2.45, SD=0.934/ Student M=2.73, SD=1.348).

On the open-ended question to the faculties 'what kind of strategy should be made in order to protect flunking in advance?', 'pre-warning system' and 'appointment of faculty in charge' were mentioned the most frequently. In addition, the establishment of care committee and the need for making parents be involved were addressed. On the open-ended question to the students, students wanted that

re-opportunity of taking on exam who are at risk of flunking is given and if flunking happens, the system of re-taking the course of the specific subject rather than repeating the whole academic year should be made.

Table 2 Subjects areas of flunking

Course	%	Name of subject	Flunking	
			Number	%
Pre-medical related	39.5% (53)	Biology	14	10.4%
		Chemistry	16	11.9%
		Body and physics	7	5.2%
		English	8	5.9%
		Organic chemistry	8	5.9%
Anatomy related	49.2% (66)	Basic neurology	16	11.9%
		Anatomy	21	15.6%
		Histology	3	2.2%
		Introduction to human body	7	5.2%
		Embryology	9	6.7%
		Body structure	10	7.4%
Biochemistry related	4.4% (6)	Biochemistry	4	2.9%
		Cell and metabolism	2	1.4%
Physiology related	6.7% (9)	Human body response	5	3.7%
		Physiology	4	2.9%
	100% (134)		Total 134	100%

4. Conclusion

The findings of this study was that this medical college's showed high flunking and re-flunking rate for the 9 years and flunking subjects are mostly pre-medical related and anatomy-related. SooGon Lee and Eunll Lee (2001) surveyed the flunking rate of all 41 medical colleges in 2001. The result was that the average of flunk-

ing rate of pre-clinical year 1 was 8.25 percent, pre-clinical year 2 was 5.9 percent, clinical year 1 was 3.1 percent, and clinical year 2 was 3.1 percent. Compared to the study result by them, the flunking rate of this college of pre-clinical year 1 from 2000 to 2005 is doubled than the nationwide average. The reason why the flunking rate of pre-clinical year 2 (M4) was high was that anatomy and practice were transferred in M4. Considered the high re-flunking rate, it was shown that those who experienced flunking at the pre-medical stage tend to re-experience again at the pre-clinical stage. Out of the subjects which students failed, anatomy related ones were 49.2 percent, which suggested further in-depth research on the specific reason in the future.

More than 70 percent of students agreed that flunking influenced on the sense of self-respect, flunking happened partly by the fault of school authority, and there was not enough explanation to students about the flunking from faculty, which showed he most distinguished opinion difference from faculties. The adequate feedback on the result of exam to students is the most necessary as a guide for further study.

It is suggested that if the current flunking system cannot be revised immediately like transition from the whole year or at least semester repetition after flunking with full fee payment to re-taking only the relevant subject, for those who are at risk or already flunked, various intervention programs should be devised like counseling about life and study or mentoring for continuous help.

In order to make more meaningful and helpful programs for students at risk, in-depth interview was planned for the first time. However, it was not easy to recruit flunking experienced students who can report their experience. Therefore, the study scope this time was limited to analysis of general characteristics of flunking

occurrence for the last 9 years from the foundation of this medical college and to comparison of opinion on flunking between faculties and students.

5. Reference

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ⁱ Traditionally medical study is 6 year course which is comprised of three blocks: pre-medical (2 year); pre-clinical (2 year); and clinical (2 year). From 2005 the graduate medical school was introduced. Therefore, currently in Korea two systems for doctor training are used.