

Original Article

Research Mentorship Program (RMP) to Enhance the Research Productivity in a Psychiatric Hospital: First Report

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ABSTRACT:

Background: Despite rapid movement in student research in recent years, there is still little evidence that shows the impact of students' activities on research productivity. In this RMP (Research Mentorship Program), we have tried to create a link between medical students with little experience and the professors in the field of medicine. This research was led by a group of medical students who are highly experienced in research. The aim of this study has been to evaluate the impact of the RMP on research productivity.

Methods: The Research Mentorship Program began in July 2009 and the program continued for 6 months. After that initial period, the results were evaluated following another 18 months. Some of the interventions included: introducing the RMP to the students; student meetings of the RMP; meetings with the professors; designing a psychiatric history and mental status examination checklist; and research workshops.

Results: In eleven semi years, the research productivity scores were evaluated, including eight semi years before interventions and 3 semi years after it. The results show a significant increase in the research productivity score after the RMP in comparison to the research productivity score before it (P-value=0.047). The mean RPS before the RMP was 16.56 ± 7.30 and the score changed to 28.16 ± 7.94 after the RMP.

Conclusions: This study shows that with suitable interventions the student researcher's have the potential to increase research productivity.

Keywords: Research Mentorship Program ; Mentor ; research productivity

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1. INTRODUCTION

Despite a rapid improvement in student research in recent years, there is still little evidence that shows the impact of students' activities on research productivity. Previous studies have shown that factors, such as, lack of budget, lack of motivation, lack of time and low research skills have been important barriers to students' activities. Another important barrier to students' research is the lack of suitable relations between medical students and specialists of different fields of medicine. Misunderstandings might prevent the continuation of research activities between medical students and specialists (1-4).

In order to solve this problem, we suggested the creation of a Research Mentorship Program (RMP) for the student researcher's in order to improve the relationship between medical students and the professors and to enhance research productivity (3).

Similar studies have been focused on the impact of the interventions on the research skills of the medical students and their attitudes towards research. It is well known that workshops and mentorship programs can improve the medical students' research skills and their attitudes (2, 5-8). Often these studies observed the increase in the students' research skills and their attitudes towards research in a short duration after the intervention (9-13). However, there is still a concern that these improvements in their skills and attitudes may be temporary and they might not influence the research productivity. Few studies observed the long-term impacts of mentorship programs and workshops or similar interventions.

In this RMP, we tried to create a link between medical students with little experience and the professors in the field of medicine. The research was led by a group of medical students who were highly experienced in research. The aim of this study has been to evaluate the impact of the RMP on research productivity.

2. MATERIAL AND METHODS

The Research Mentorship Program (RMP) started its work in July 2009 and continued the program for 6 months. The results were evaluated again after another 18 months. The following activities were completed in the program:

Introducing the RMP to the students:

We selected some active students from each class as representatives of the RMP. These students participated in all of the RMP meetings and introduced the program to the other students.

Student meetings of the RMP:

The representatives of the RMP participated in these meetings and in the first sessions. A logo and letterhead were designed and the representatives were taught how to register their activities in the university. The meetings were followed by research training sessions and as well as lessons on how to start and complete a research project. Meetings with the faculty members:

These meetings were held less often than the student meetings and each session was focused on specific research projects and solving any difficulties.

Designing a psychiatric history and mental status examination checklist:

The checklist was designed by medical students. It went under evaluation in the psychiatry department meetings and then, went under revision. After getting the approval of the psychiatry department and getting the permission of the chief of the hospital, a copy of the checklist entered the patients' medical history. The interns and medical students were required to fill in the checklist after taking the psychiatric history and performing the mental status examination.

Gathering the upcoming research project information of the Ebne Sina hospital:

Information about the upcoming research project of the professors was gathered. The information included the names of the projects, the number of the students needed for each project and the projects that could be used for the medical students research theses.

Research workshops:

Different sessions of workshops were held. The subjects of the workshops were: research methodology; search strategy; how to write an abstract; and how to write a scientific paper. These workshops were held with the cooperation of the student research committee and the student committee of the Education Development Center. After 6 months of intervention the Research Productivity Score (RPS) was calculated for each 6 month period (semiyear). This score was calculated according to the national promotion regulations of faculty members of the universities.

The original articles published in English and Persian language journals that have been indexed in Pubmed and ISI knowledge of science received 5 points. Journals indexed in Scopus had a score of 3.5 and other credible scientific databases received a score of 3. Published papers in journals without indexation received 2 points. Short reports and Letters to the Editor received 2 points.

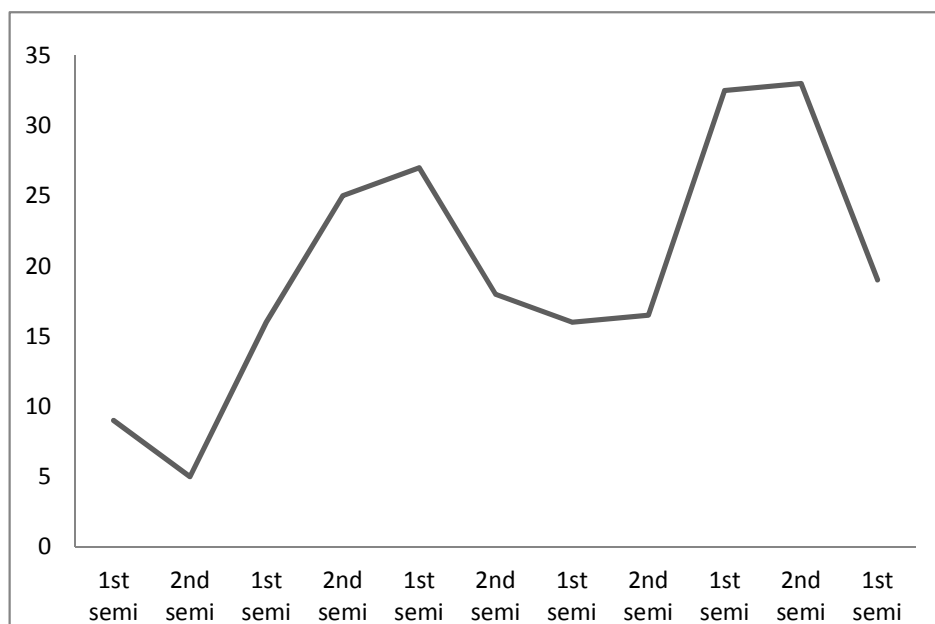
Papers published in electronic journals that had a peer review process would achieve the same scores mentioned above and other electronic journals received 80 percentage points.

For every abstract that was accepted in the congresses, 1 point was achieved. For each approved research project, 1 point, and for each thesis, 2 points were received. After that the items mentioned above were calculated for each semi year period; 8 semi years before and 3 semi year were after the intervention.

Since the RPS was normally distributed according to the Kolmogorov-Smirnov test, independent sample t-test was used for its comparison before and after the RMP. The charts were drawn using Microsoft Excel software. A P-value less than 0.05 was considered as significant.

RESULTS

In eleven semi years, the research productivity scores were evaluated, including eight semiyears before interventions and 3 semi years after it. As shown in figure 1, the higher research productivity score was obtained in the 10th semi year (two semiyears after RMP). Also, the lowest research productivity score was obtained in the 2nd semiyear. Therresults show a significant increase in research productivity score after the RMP in comparison to research productivity score before it (P-value=0.047). This means that the RPS before the RMP was 16.56 ± 7.30 and the score changed to 28.16 ± 7.94 after the RMP.



4. DISCUSSIONS

A large number of studies have shown the influence that interventions such as, mentorship programs and research workshops can have on medical student research (9-13). In this study, RPS was used in order to evaluate the long term outcome of the intervention.

The advantage of this way of scoring, over other methods, such as using students' skills, knowledge and attitude, is in its ability to determine the answer to the question of whether these potentials can convert to results. Improvement in students' research skills, knowledge and their attitudes towards research does not guarantee the increase in research productivity, and in fact, improvement may only be temporary.

Often other studies evaluated these variables before, after a short term intervention (9-13). RPS evaluated the long term outcomes of the intervention

and has appeared to be more stable than short term outcomes

In this study, a significant increase was shown in RPS after the RMP. This intervention was performed in a psychiatric hospital and therefore the results were more reliable than similar results that showed the impact of intervention on a group of students in a class or in a workshop.

However, our study had several limitations. We were not able to control the impact of some outside factors in research productivity. For example, the increase seen in the 3rd and 4th semiyears was due to two psychiatric related congresses held at our university.

Also, the decrease seen in the 3rd semiyear after the intervention was mainly related to two factors: the time that was needed to document the scientific products; and the fact that some faculty

members document their research products only shortly before their promotion date deadlines.

In addition, we know that the research results increase over time and the increase in the RPS might have been influenced by this effect. However, the fixed number of faculty members in the hospital during the intervention might decrease this influence.

5. CONCLUSION

This study shows that with suitable intervention the student researchers have the potential to increase research productivity.

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