

# Impact of a Medical Journal on Residents' Research

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**Background:** To launch and sustain a medical journal based on high quality research articles and useful interesting case reports etc is not an easy task especially in a non conducive scientific culture and environment. International Journal of Pathology overcame difficulties of getting good papers through several mechanisms including motivating postgraduate students toward research and writing. The challenges turned into opportunities toward better training of postgraduate residents may be a very healthy and welcome outcome!

**Aims & Objective:** To assess the impact of International Journal of Pathology Medical Journal on Department of Pathology Residents' Research.

**Study Design:** Retrospective Cross Sectional Descriptive Study

**Site:** Department Of Pathology, Pakistan Institute Of Medical Sciences, Islamabad

**Material & Methods:** All 15 issues of International Journal of Pathology were reviewed to assess the impact of the International Journal of Pathology on the various aspects of the department as reflected from the papers published in the International Journal of Pathology (IJP). Numbers of original research articles and case reports authored by the postgraduate residents as first or second authors are determined and calculated as percentage of the total articles published in the journal. In addition editorials and papers related to the specific areas of interest of the editors cum faculty members were included.

**Inclusion Criteria:** All original research articles from Pakistan Institute of Medical Sciences where the first and second authors were residents. All editorials and articles in specific areas of the editors cum faculty members as described above.

**Exclusion Criteria:** Articles from outside Pakistan Institute of Medical Sciences, original articles and case reports where residents were not first or second authors.

**Results:** 43 % of the original articles and 44% case reports published in International Journal of Pathology were authored by the postgraduate residents of the Department of Pathology, PIMS. There were significant number of editorials and articles on ethical issues, teaching strategies and curricula, infection control & waste management, Cytopathology, Dermatopathology, Transfusion Medicine, history of medicine and new ideas in pathology

**Conclusion:** International Journal of Pathology was successful in generating good number of high quality articles from Department's Residents improving postgraduate training and patient care.

**Keywords:** *Medical Journal, Department, patient care, original articles, case reports, residents, history of science*

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International Journal of Pathology (IJP) was launched in 2003 from Islamabad. Bringing a new medical journal was both challenging and rewarding! It was not easy to get good articles from busy professionals. One had to be constantly on toes to look for opportunities to get useful and interesting original articles, case reports, review articles and timely pertinent editorials. Several of IJP's

Editorial Board members were with the Department of Pathology, Pakistan Institute of Medical Sciences (PIMS) who played key role in stimulating new research among postgraduate residents and devised various means to get good articles. They took deficiencies as challenges and opportunities to bring improvement along with generation of quality original research articles, case reports, review articles and editorials. This also sharpened the research abilities and skills of the residents, improved patient care through better training, grooming and removed deficiencies in all various areas. This study was conducted to objectively assess the impact of the journal on research activities of the residents of the department and on various areas which needed attention using the parameter of published articles.

### Material & Methods

The authors reviewed all 15 published issues of IJP in terms of:

- Total number of original articles published
- Percentage of total number of original articles authored by postgraduate residents in IJP
- Total number of case reports published
- Percentage of case reports authored by postgraduate residents in IJP
- Editorials, Review articles and articles related to the areas in need of attention and of interest of some members of the Editorial Board:
  - Transfusion Medicine
  - Curriculum development and teaching strategies
  - Cytology
  - Dermatopathology
  - Infection control
  - Moral and ethical issues
  - History of Science
  - News ideas

### Results

Approximately 44% of the original articles and case reports were generated by the postgraduate residents of Department of Pathology in IJP. This was a very respectable number of papers for any Department world wide. (Table 1).

RORP: Residents original research papers, TCR: total case reports, RCR: Residents' case reports,

**Table 1. Departmental Residents' papers**

Category Issues↓	TORP	RORP	TCR	RCR
1.	7	2	1	0
2.	6	5	4	2
3.	6	2	5	4
4.	6	5	6	4
5.	6	3	4	3
6.	6	3	6	2
7.	6	3	4	4
8.	6	4	5	1
9.	6	1	4	0
10.	6	2	4	1
11.	6	3	5	4
12.	6	0	2	0
13.	6	4	5	0
14.	6	2	5	1
15.	5	0	3	2
Total	90	39 (43%)	63	28 (44%)

TORP: Total original research papers,  
 RORP: Residents original research papers,  
 TCR: total case reports,  
 RCR: Residents' case reports,

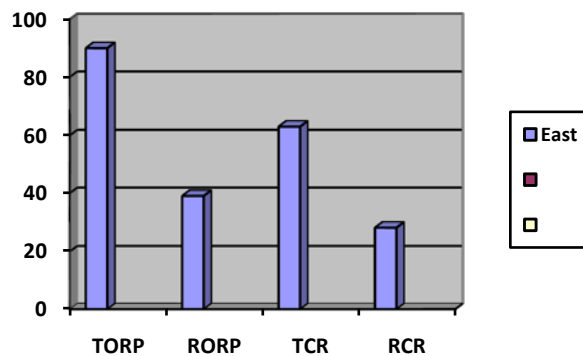


Table 2: Abbreviations as used in Table 1. Bar graphs showing comparison of Residents' vs. Total number of papers

Faculty specific areas articles were:

- |                             |    |
|-----------------------------|----|
| 1. Transfusion Medicine     | 07 |
| 2. Curriculum & teaching=   | 08 |
| 3. Cytology=                | 06 |
| 4. Dermatopathology         | 11 |
| 5. Infection control        | 05 |
| 6. Moral and ethical issues | 09 |
| 7. History of Science       | 14 |
| 8. News ideas               | 12 |

## Discussion

Medical Journal requires lot of enthusiasm; hard work, perpetual efforts to utilize all available resources and means to get interesting case reports, quality original articles, useful review articles and pertinent editorials. On the other hand resident training programs must develop an affinity in residents toward research and make them able to carry out good research. Research constitutes a very important learning tool and imparts numerous benefits to the individual and the entire health care system. It is a part of a learning orientation. Students with such an orientation tended to perform better and exhibited traits of successful students.<sup>1</sup>

The Accreditation Council for Graduate Medical Education clearly states the following three points in the Common Program Requirements for Graduate Medical Education<sup>2</sup>

1. The curriculum must advance residents' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.
2. Residents should participate in scholarly activity.
3. The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities.

Research remains a non-mandatory part of the curriculum and many residency programs do not enforce the research commitment of their faculty leading to a non-Gaussian distribution of the Research Productivity Scale<sup>2</sup>

A study on family physician researchers revealed that research training received during residency was poor. Reported keys to success included mentoring, a supportive infrastructure, and an inherent enjoyment in doing research. These factors did not differ between community residency faculty and non-faculty physicians. For community-based family physicians, success at conducting and publishing research is enhanced by the availability of mentoring, support from local or national foundations, and previous research experience. Respondents identified research training during residency as one area that needs improvement.<sup>3</sup>

Health research training is an essential component of medical education and a vital exercise to help develop physician research skills. A study carried out to assess the level of knowledge attitudes and practices towards research amongst a group of Post Graduate Medical Trainees (PGMTs) revealed inadequate knowledge, while they had moderate attitudes towards health research. Residency training and research facilities at the institution required major transformation in order to encourage meaningful research by resident trainees. <sup>4</sup>Needless to say that we did try hard to provide such an environment and support in our department with very gratifying results.

It is a known fact that all over the world many journals are finding it hard to get high quality, useful original articles. The situation is pathetic in the 3<sup>rd</sup> world with meagre resources and little respect for the genuine research. There is also shortage of time and no financial reward! For faculty research papers may mean early promotion; however this "forced" research has resulted in very low quality mere data collection and simple analysis type "research". (Please see the editorial in this issue of IJP)

Under these circumstance launching and maintaining a medical journal is not an easy task. International Journal of Pathology (IJP) which is a peer reviewed journal had to devise several mechanisms to get good and useful articles. Our efforts included motivating our residents all the time to write up interesting case reports. This required our perpetual mentoring, guidance and supervision. We helped them in microscopy and in getting their papers presented at different forums such as grand rounds and various seminars and symposia. As a result our residents generated about 44% of the total case reports published in IJP which was not a requirement for their degrees.

We encouraged students to carry out original research. This included research for their theses as well as for non-required situations. We utilized weekly journal clubs to sharpen their analytical thinking. The Journal clubs also gave us new ideas about research. We created and utilized opportunities for residents to do original research and present at annual symposia and conferences. As a result again approximately 44% original articles in IJP were authored by the resi-

dentsof our department. Some of these were no doubt a requirement for their thesis but to write up and publish a paper within their training time is rather rare and only a few students opt for writing two papers instead of submitting thesis for College of Physicians & Surgeons of Pakistan.

As we conducted several intra departmental and interdepartmental conferences every week and monthly workshops, and annual symposia, there were ample opportunities to inspire postgraduate students to engage in research activities. Of course we had to guide and mentor them on every step. We identified several problems in our institution and in our society which needed to be addressed. Various research studies were carried out to determine the types, magnitude and impact of the problems and their solutions. These became topics of our editorials and review articles as well of some original research.

Transfusion Medicine was the week area of the department and required a lot of improvement in terms of optimal utilization of blood and its components. Focusing on these problems and deficiencies led to improvement on one hand and generation of good articles on the other hand. Similarly Curriculum developments and teaching strategies required a lot of attention. Cytology has many advantages and is suited for countries like Pakistan. Fine Needle Aspiration Cytology's role in various areas provided us opportunity to do good useful original research and generate papers. Infection Control policies and practices were addressed again resulting in good research papers. As we regularly held had weekly Dermatopathology conference we were able to get several good papers from this filed. Rotating Residents from other departments were another source of good articles e.g. in the field of placental pathology. Last but not the least we had been observing various morphological features which were in contradiction to "established" facts. These and some new ideas provided us with another group of articles. This included lymphoma in situ<sup>5,6</sup>, morphology of blood vessels in Glioblastomamultiforme<sup>7</sup>, in situ hemorrhage<sup>8</sup>, serosal nerve pathology in Hirschprung's disease<sup>9</sup>, leukemoid reaction to liberated mucin<sup>10</sup>, giant cell tumor being a non neoplastic entity<sup>11</sup> and role of hemorrhage in shwannoma,<sup>12</sup>. We also carried out several experimental studies one of which was a com-

parison of various types of Fine Needles in Fine Needle Aspiration Cytology<sup>13</sup>. Some of our motivated residents published their articles in indexed journals of USA.<sup>14</sup>. These articles are not included here due to exclusion criteria.

During Pakistan's devastating earthquake the Pathology Department of PIMS played exceptional role in providing relief to thousands of victims. We shared our experience in the form of articles and editorials highlighting the various ways a pathology department can help in disasters.<sup>15-16</sup>. IJP also reported vey unique case reports including the very first case in the world of snail in the breast.<sup>17</sup>

## Conclusion

Through various mechanisms particularly motivation of the young postgraduate students we were able to get good articles for IJP. Our journal was recognized by PMDC and Higher Education Commission (HEC) which uplifted its category based on the quality of the papers. It also benefited the Department and the residents in terms of research, education, training and patient care. Very active participation of the members of the Editorial board was the key to the success. The challenge of a new medical journal can tremendously help in developing research capabilities of the residents and simultaneously improve various areas of the department and the institution.

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