

ORIGINAL RESEARCH

A Study on Public Perception of Pathology; “*Behind the Paraffin Curtain*”**Rajatha Anand¹, Dhanashree Akshatha HS², Chaitra H³, Geetha JP⁴**¹Associate Professor, Department of Pathology, Sri Siddhartha Medical College, Tumkur, India.²Associate Professor, Department of Psychiatry, Sri Siddhartha Medical College, Tumkur, India.³Associate Professor, Department of Pathology, Sri Siddhartha Medical College, Tumkur, India.⁴Professor, Department of Pathology, Sri Siddhartha Medical College, Tumkur, India.**ABSTRACT**

Introduction: Pathologists have always been an integral part of the healthcare system striving to deliver quality care to patients. However, the speciality has mostly become invisible, with only certain clinical specialities receiving attention from the public population. **Objectives:** To analyse the public perception of Pathology and Pathologists among the general population. **Material and Methods:** In our survey with 150 respondents, the questionnaire used was developed and approved by Manitoba Research Ethics Board, USA. We used Pearson’s chi square test to evaluate the association between correct responses and if respondent had undergone the procedure. Two-sided p values < 0.05 were considered statistically significant. **Results:** Pathology was identified as a medical speciality by only 4.7%. Only 9.3% of the participants recognised that it would take more than 8 years to become a Pathologist. The most commonly undertaken test with the identified specialists were Pap test (gynaecologist), breast biopsies or surgical excisions (surgeons / oncosurgeons), blood tests (medical laboratory technicians). For the participants who underwent pap test/biopsy p value and chi-square test were applied, which was statistically significant [< 0.05]. **Conclusion:** Implementing pathologist-patient interaction would definitely help patients understand their disease, help them make more informed decisions, and also provide an opportunity to change our image as a speciality.

Key words: Pathologist, Patient, Manitoba research.

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INTRODUCTION

Pathologists have been an integral part of the healthcare system, striving to deliver quality care to patients. Through accurate and timely diagnostics, various medical specialties ranging from internal medicine to surgical subspecialties are able to treat, manage and cure patient’s illnesses efficiently. Their expert opinion, leads to targeted treatments and faster remission of the illness, thereby preventing misutilization of medical services or leading to inordinate delay before initiation of appropriate treatment.

Even though a pathologist is known as a consultant’s consultant, the missing recognition unfortunately affects their reputation, deters medical graduates from choosing pathology as a choice in their residency, makes recruiting challenging, and does not help the pathologist community as a whole, in spite of their ongoing advocating efforts. The paradoxical doctor-patient relationship, as constructed over the decades implies a typical clinician-patient

relationship, in which only the clinician communicates the results of diagnostic studies directly to patients, bypassing the pathologist.

In this regard, we noticed that the general public seem to know very little regarding pathology as a speciality. Why are patients so much in the dark about such a vital speciality? For a start, most patients view the laboratory as a room filled with machines and instruments that takes in samples and sends out reports, than actually seeing it as comprising of a group of highly qualified specialised doctors. The fierce competition in healthcare system conspires to keep pathologists focused only on “glass”, rather than be involved in case discussions and patient interactions which are kept at a bare minimum. Pathology touches the lives of nearly every patient stepping into the healthcare system, yet it continues to be the specialty to live behind a curtain, and seemingly beyond the reach of patients.

Aim

To study the public perception regarding pathology and the role of Pathologists in the healthcare system

Objective

1. To know the perception of public about the Pathologist's role and their nature of work.
2. To assess the public perception of Pathology as a medical speciality compared to other specialities

MATERIALS AND METHODS

A cross sectional study was conducted on 150 participants for a period of 3 months. The sample was collected from the family members of patients visiting a tertiary care hospital in rural Karnataka, India. Institutional ethical clearance was taken. We used a semi-structured questionnaire for collecting socio-demographic data and another tool approved by the University of Manitoba Research Ethics Board^[1] to assess the public perception of Pathology and Pathologists.

Questions were explained to the participants in the local language. The various questions explored the public knowledge on their understanding of different aspects of pathologists' profession like identifying it as a speciality, job entails, length of training, and reputation. Questions were also asked to identify which medical profession makes a diagnosis on various specimen types, and if the participants themselves had undergone any corresponding procedure in their past.

Statistical analysis

Data was collected, entered and analysed using SPSS version 20.0 software. Descriptive statistics like proportion and Inferential statistics like Chi square test were used. P value <0.05 was taken as statistically significant.

RESULTS

The age of the participants ranged from 18 to 65 years. Of these, 40% were 45 years or older. In the gender ratio, 71.3% were male and 28.7% were female. From the list of more than 10 occupations, farmers and students represented more than 44% of the sample. Majority [64%] of the participants had completed their graduation. The rest were illiterates or had only finished their primary education.

Pathology was identified as a medical specialty by only 4.7% of the participants. This was the third lowest proportion of the given list of different medical specialties. [Table 1] Only 34% of the sample recognized pathologists as a medical doctors and the rest 66% of them considered them to be either technicians, scientists or even police personnel. More than half [51.3%] of the participants indicated that running tests in a laboratory was a pathologist's main job. A mere 19.3% of the participants recognized that it took more than 8 years of

training to be qualified as a pathologist while the rest grossly underestimated the same or had no idea about it. [Table 2]

However, 65% of the participants recognised that pathologists were good investigators and 20% of them indicated that they had a high level of intellectual curiosity. [Table 3] Majority of our participants were not aware of the diagnostic role of pathologists in various screening tests and biopsies. Clinicians were chosen by most of our participants as the decision makers for all the diagnosis. 74.3% chose gynecologists for pap tests, 76.7% indicated surgeons for FNAC, 55.3% as oncologists for tissue biopsy reporting and 70% said that laboratory technicians were sufficient for reporting of blood tests. Only a fraction of the participants recognized the role of pathologists in these tests as indicated in Table 4.

As a response for Question 7, only 13.3% of participants agreed that pathologists diagnose cancer, while on another question enquiring if pathologists helped in deciding the treatment modality, only 15.3% agreed to it, whereas 40.7% stated that they were not aware of the same. Question 9 asking participants if they had undergone any procedure such as a blood test, pap test, FNAC or a biopsy and if yes, had they ever interacted with a pathologist, 92.7% disagreed to it. Most of our participants were unaware that pathologists are the ultimate decision makers. The last question was an open ended one, asking the participants on their general perception of a Pathologist to which 94.3% said that they did not have any idea.

For the participants who underwent pap test/biopsy p value and chi-square test were applied, which was statistically significant [< 0.05]

[Table 5]

Table 1

Question 1; Which profession represent a medical speciality'?	
Specialities	Percentage
Surgeon	30.0
Gynaecologist	29.3
Pediatrician	18.7
Radiologist	2.7
Pathologist	4.7
Ophthalmologist	7
Oncologist	2.7
Physician	11.3

Table 2

Question 2- Pathologists are :	Percentage
Medical doctors	34.0
Laboratory Technicians	27.3
Scientists	12.7
Police detectives	26.0
Question 3: The main job of Pathologists is to :	
Diagnose disease in living patients	25.3
Perform autopsies	18.7
Run tests in the laboratory	51.3
To do research in the laboratory	4.7
Question 4: how long do you think the training takes to be a pathologist:	
More than 8 years	19.3
4-8 years	25.3
3 years	16.7

2 years	17.3
I dont know	21.3

Table 3

Question 5: pathologists have a reputation for	Percentage
Being good investigators	65
Having high level of intellectual curiosity	20
Being good decision makers	10
Making many errors	5

Table 4

Procedure type	Identified specialist as decision maker
Pap test	gynaecologist – 74.3% Oncologist – 24.7%
FNAC	Physician 14.7% Surgeon 76.7% Pathologist 6.7% Radiologist 2%
Tissue biopsy reporting	Pathologist 7.3% Physician 16.7% Oncologist 55.3% Surgeon 20.7%
Blood test reporting	Physician 10.3% Pathologist 10% laboratory technician 70% Surgeon 9.7%

Table 5

Q10 & 11: Responses selecting pathologists as ultimate diagnostic decision maker of samples between participants who underwent the procedure				
Procedure	Thinks diagnosis made by pathologist		Chi square	P value
Underwent Pap test	Yes	No	4.46	0.05
	Yes	121		
	No	18		
Total	11	139		
Underwent biopsy (breast, cervical, prostate, GI, cancer biospy)				
Yes	6	120	7.66	0.017
No	5	19		
Total	11	139		

DISCUSSION

Our study proved that the general public lacks a basic understanding of pathology as a speciality, which was similar to the findings of another study by Fischer G et al^[1] unfortunately most participants (72%) thought that an undergraduate medical degree is not even required to become a pathologist, let alone postgraduate training.

Another disheartening finding was the under recognition of a pathologist's importance in making the final diagnosis in various diagnostic tests. Only a relative minority of patients identified a pathologist as the final decision maker, comparable to the finding in a similar study by Fischer et al.^[1] The numbers are even lower among the participants who did not undergo any procedures.

This could be attributed to various reasons such as lack of public knowledge due to limited interaction with a pathologist, limited exposure to clinical pathology during UG training and internship and lack of proper education about diagnostic tests among patients.^[7] Our clinical colleagues may not have the drive or motivation to educate the patients on a pathologist's role in their rushed clinical hours. Under these circumstances, there would be fewer students in the coming decades, if not already, seeking admission in pathology, as they might not think of this speciality as a competitive career choice for residency.^[7]

Dilemma on what do we implement to improve on this, needs to be answered as we have not made any significant progress over the last decade. Campaigns and sporadic attempts have not delivered a dramatic improvement in our recognition up to this point, and we need to think of other fundamental changes in positioning our speciality.^[8]

There are different methods suggested to expand the role of a Pathologist such as including explanatory materials, participation on social media, public awareness campaigns, conducting health camps with provisions to avail diagnostic tests and so on.^[3,4,5] Among these, the integration of pathologist-patient interactions in the health care system maybe a potential solution to the problem. Pathologists should take the sole ownership task of introducing themselves and explaining the findings to patients, which has also been suggested by multiple studies.^[2,3,4] Pathologists stepping into this role would make a bigger impact on the public perception of this profession than all other attempts combined.^[9] Improved communication skills could go a long way in getting the recognition which pathology truly deserves. Studies have claimed that face-to-face interactions with patients have the biggest potential to put an end to our 'invisibility'.^[5,10]

The answer to expanding the role of Pathologists could be by the development of pathology explanatory clinics; focusing on explaining pathological findings or choosing to discuss their diagnosis with patients in a multidisciplinary approach along with other specialists. Some of the clinicians may not appreciate this new development, if implemented. Few Pathologists themselves might not be ready to accept this new role due to lack of communication skills and training. In this regard, few studies suggest a training route for interested pathologists to become 'Certified Pathology Navigators' or 'CPNs'.^[5] However, pathologists should also be aware of the limitations of their roles and respect the boundaries of their fellow colleagues.^[11] Finally, we opine that a holistic approach within the hospital setting with a well integrated consultation-liaison system would help in getting pathology and pathologists its long overdue recognition.

CONCLUSION

Implementing pathologist-patient interaction would definitely help patients understand their disease, help them make more informed decisions, and also provide an opportunity to change our image as a speciality. It would be a hard task no doubt, with many details to be worked out with clinicians, administrators, insurance agencies and other members of the healthcare team, because exploring new territories would have tremendous potential benefit to our fraternity. All these and more may help us gain more visibility by stepping out from behind the 'paraffin curtain', thereby helping the entire pathology community to earn more respect and recognition among fellow colleagues, clinicians, students, residents, and patients. Administrators may thus be in a better position to recruit pathologists with this broader recognition.

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