Pakistani Society and Autopsy Practices

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ABSTRACT

Objective: Development of medical sciences is based upon understanding of complete course of a disease. But sometime during treatment a physician does not reach to a conclusion regarding diagnosis. In such situations a medical autopsy provides complete picture of disease process. The willingness for such autopsy is prerogative of the family of the deceased. This study is aimed to assess the attitudes of our society for acceptance of autopsy.
Study Design: Cross-sectional study.
Place and Duration of Study: This study was conducted at the Department of Forensic Medicine, University College of Medicine, University of Lahore from 1st January to 30th June, 2012.
Material and Methods: The study is based on response of 97 adult persons randomly selected from general population belonging to various categories regarding age, gender, marital status, education, profession, income, location, family structure & family size.
Results: The willingness for medical autopsy after death was variable in different category of persons. Out of total 97 (36 female & 61 females) cases 28% showed willingness and this tendency was more in males, people in third decade of age, married, graduates & above, government employees, Lahorites, nuclear living families, small sized families and income range from 20 to 50 thousand per month.
Conclusion: The value of medical autopsy for development of medical sciences is without doubt. The peoples are reluctant for acceptance of autopsy because of inadequate awareness about the procedure and its benefits. Public cooperation for autopsy acceptance can be enhanced by improving their awareness and also by developing a motivated team of pathologists and clinicians.
Key Words: Autopsy, Medical Autopsy

INTRODUCTION

All the living persons in this world when die they die due to some cause, whether the cause is obvious or obscure. In majority of the cases when death is corollary of a prolonged illness it never raises any suspicion regarding cause of death. Similarly death of an old person not suffering from any significant illness is not in doubt. Suspicion regarding cause of death arises in cases of sudden unexpected death.[1] In developed societies whenever death occurs death certificate is to be filled by the last attending registered medical practitioner. If due to any reason he has got some doubt regarding the cause of death the dead body is handed over for autopsy examination to find cause of death.[2] This policy that every death in the society must be assigned cause of death is followed in some countries, but in underdeveloped countries like Pakistan it is not so.

Autopsies can be divided in two major categories, medico-legal autopsy and medical autopsy. Medico-legal autopsy is always conducted as a legal requirement on the instruction of the state, as state is interested in such cases to know the identity of the deceased, time of death, cause, mode & manner of death. Whereas medical autopsy has other objectives, in majority of cases, where the cause of death is a natural one[3], or the cause of death is not known[4,5] or the deceased was suffering from obscure disease[6], to assess the effect of the treatment, or something new which was never expected.[7,8] In order to get more awareness about disease processes we should not base our opinions on presumptions, but rather more realistically to arrive at some conclusion we need to perform autopsy and thereby medical science is helped in better way. Why such autopsies are never encouraged in countries like Pakistan due to various reasons such as, deficient and overburdened staff, those involved in medico-legal autopsies are not interested in conduction of medical autopsies, lack of incentives and multiple other reasons. Ideally, such autopsies should be conducted by those people who have been involved in the treatment of the patient in his terminal illness; but they already have huge task at hospitals, which curtails this additional responsibility. In other words, we can reach to a conclusion that such autopsies due to multiple reasons have never gained popularity in our society.

Despite its decline, medical autopsy remains a major diagnostic tool to understand death mechanisms and to improve the quality of cases.[9] Autopsy has played a unique role in the progression of clinical medicine, medical education, epidemiology, and public health. However, the autopsy rate has been decreasing during

the past several decades worldwide, and its necessity is frequently argued.[10]

The present study was conducted to get the point of view of the society whether they are interested to help the ongoing process of medical development by subjecting themselves for medical autopsy after their death.

MATERIALS AND METHODS

Setting: Department of Forensic Medicine, University College of Medicine, University of Lahor**e.**
Study design: Cross-sectional study.
Sampling: Randomly from general population involving adult persons.

Sample size: 150 adult persons were approached but 97 cases consented to take part in study. Response was recorded on predesigned proforma.

RESULTS

1. Gender

Total 97 cases were included in the study, 36 (37.11%) were males and 61 (62.89%) were females. (Table No.1) Majority (71.13%) declined for autopsy. (Table No. 2 & Fig. No. 1)

Table No. 1: Sex distribution (n=97)

Sr. No.	Gender	No.	%age
1.	Females	36	37.11
2.	Males	61	62.89
	Total	97	100.00

Table No. 2: Frequency distribution of cases willing or not willing for autopsy (n=97)

Sr. No.	Gender	Willing for autopsy		Not willing for autopsy		Total	
		No.	%age	No.	%age	No.	%age
1.	Male	26	72.22	10	27.78	36	100.00
2.	Females	16	26.23	45	73.77	61	100.00
	Total	42	43.30	55	56.70	97	100.00
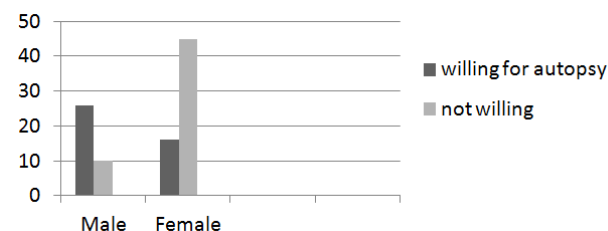
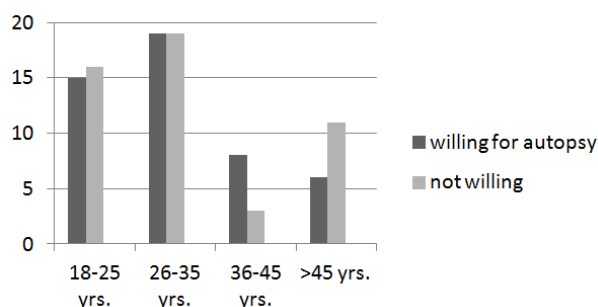**Figure No. 1: Gender-wise distribution of cases willing or not willing for autopsy**

2. Age

There were 31.96% cases between 18–25 years, out of which 48.93% agreed for medical autopsy whereas 51.61% did not agree for medial autopsy, 39.18% cases

were between 26– 35 years, out of which 50% agreed for medial autopsy & same number declined, 11.34 % cases were between 36–45 years, out of which 72.73% agreed for medical autopsy whereas 27.27 % did not agree, 17.52% cases were above 45 years, out of which 35.29% agreed for medical autopsy whereas 64.61% did not agree. (Table No. 3 & Fig. No. 2)

Table No. 3: Age-wise distribution of cases (n=97)

| Sr. No	Age	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	%age	No.	%age	No.	% age
1	10-25	15	48.93	16	51.61	31	31.96
2	26-35	19	50.0	19	50.00	38	39.18
3	36-45	8	72.73	3	27.27	11	11.34
4	> 45	6	35.29	11	64.61	17	17.52
	Total					97	100.00

Figure No. 2: Age-wise distribution of cases.

3. Marital Status

Unmarried cases were 41.24 %, out of which 47.50 % did not agree for medical autopsy whereas 52.50 % agreed. Married cases were 58.76% and out of which 50.88% did not agree for medical autopsy whereas 49.12% agreed. (Table No. 4 and Fig. No. 3)

Table No. 4: Frequency distribution of cases according to marital status

| Sr. No	Marital Status	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	% age	No.	% age	No.	% age
1	Un-married	21	52.50	19	47.50	40	41.24
2	Married	28	49.12	29	50.88	57	58.76
	Total					97	100
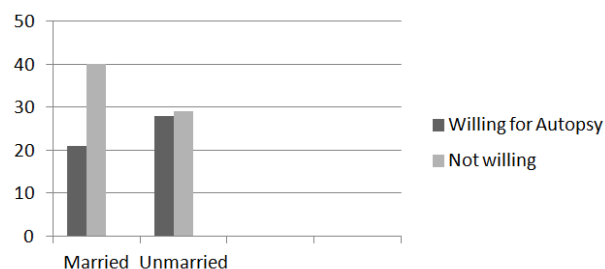
Figure No. 3: Acceptance of autopsy according to marital status

4. Location

The 80.41 % of the participants belonged to Lahore, out of which 11.53% did not agree for medical autopsy whereas 88.44 % agreed. People who were from outside Lahore accounted for 19.59 % of the total, out of which 68.42% did not agree for medical autopsy whereas 31.58 % agreed.(Table No. 5 & Fig. No. 4)

Table No. 5: Distribution of cases with reference to resident status

| Sr. No	Lahorites or other	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	% age	No.	% age	No.	% age
1	Lahorites (permanent residents of Lahore city)	69	88.44	9	11.53	78	80.41
2	Non Lahorites (presently at Lahore)	6	31.58	13	68.42	19	19.59
	Total					97	100
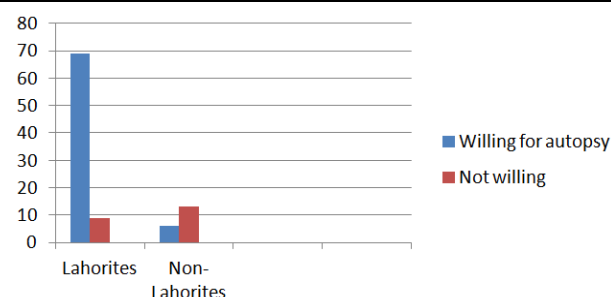
Figure No. 4: Residential status wise distribution of cases

5. Family Structure

The 27.84% of the total participant belonged to nuclear family type out of which 37.04% did not agreed for medical autopsy whereas 62.96% agreed, whereas 72.16 % of the total participants belonged to joint family type, out of which 52.86 % did not agree for medical autopsy whereas 47.14% agree. (Table 6 & Fig. No. 5) Trend for acceptance of autopsy is better in joint families

Table No. 6: Distribution of cases with reference to family type

| Sr. No	Family Type	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	% age	No.	% age	No.	% age
1	Nuclear	17	62.96	10	37.04	27	27.84
2	Joint	33	47.14	37	52.86	70	72.16
	Total					97	100
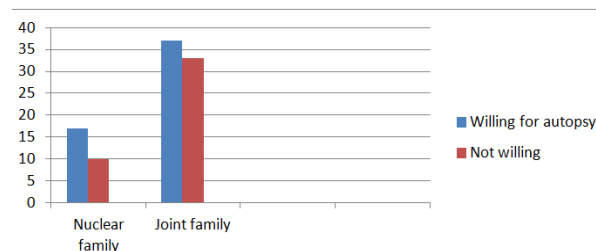
Figure No. 5: Family status-wise distribution of cases

6. Education

The 6.19% of the total participants were illiterate and declined, 2.06% had religious education and same No. had primary education and both declined, 11.34% had middle education, out of which 36.36% did not agree for medical autopsy whereas 64.64% agreed, 6.19% of the total had education up to matriculation, they all declined, 18.56 % of the total were at intermediate level, out of which 61.11% did not agreed for medical autopsy whereas 15.4% agreed for medical autopsy, 31.6 % of the total was graduated out of which 45.16% did not agree for medical autopsy whereas 54.84% agreed, 21.64% of the total was educated up to masters level, out of which 42.86 % did not agreed for medical autopsy whereas 57.14% agreed. (Table No.7 & Fig. No. 6) It is evident that trends for acceptance of autopsy is better in highly qualifed people.

Table No. 7: Distribution of cases with reference to education level

| Sr. No	Education	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	% age	No.	% age	No.	% age
1	Illiterate	-	-	6	100	6	6.19
2	Religious	-	-	2	100	2	2.06
3	Primary	-	-	2	100	2	2.06
4	Middle	7	64.64	4	36.36	11	11.34
5	Matri-culation	-	-	6	100	6	6.19
6	Inter-mediate	7	38.89	11	61.11	18	18.56
7	Graduate	17	54.84	14	45.16	31	31.96
8	Master	12	57.14	9	42.86	21	21.64
	Total					97	100.00
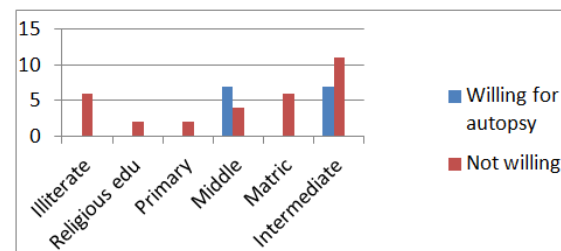
Figure No. 6: Educational status-wise distribution

7. Profession

Out of the total participants 14.3 % were students, out of which 42.86% did not agree for medical autopsy whereas 77.14% agreed, 37.4 % of the total were government employees, out of which 27.78% did not agree whereas 72.22% agreed, 12.1 % of the total was doing business out of which 83.33% did not agree whereas 16.67% agreed, 2.20 % of the total was unemployed and all declined for autopsy, 34.1 % did not mention their profession out of which 72.73% did not agree whereas 27.27% agree. (Table No. 8, Fig. No. 7) In all professions, majority of the people are not in favor of autopsy. No single one of unemployed is in favour of autopsy. About 83% bussiness community is against autopsy.

Table No. 8: Profession wise distribution of cases

| Sr. No	Profession	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	% ge	No.	% age	No.	%age
1	Student	8	77.14	6	42.86	14	14.3
2	Govt. Employee	26	72.22	10	27.78	36	37.4
3	Business	2	16.67	10	83.33	12	12.1
4	Un-employed	-	-	2	100.00	2	2.20
5	Other	15	27.27	24	72.73	33	34.1
Total						97	100
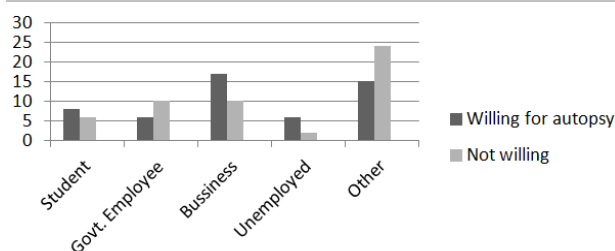
Figure No. 7: Distribution of cases profession-wise

8. Income

Out of the total 35.05 % did not mention their income, out of which 79.41% did not agree whereas 20.59% agreed for medical autopsy, 10.31 % of the total had monthly income up to 10,000 rupees, out of which 20.00 % did not agree whereas 80.00% agreed for medical autopsy, 17.53% had monthly income between 10,000 to 20,000 rupees, out of which 14.61% did not agree whereas 85.39% agreed for medical autopsy, 26.80% had monthly income between 20,000 to 50,000 rupees out of which out of which 14.61% did not agree whereas 85.39% agreed for medical autopsy, 10.31 % had monthly income above 50,000 rupees out of which 40.00% did not agree whereas 60.00% agreed for medial autopsy. (Table No. 9, Fig. No. 8)

Table No. 9: Income wise distribution of cases

| Sr. No	Monthly Income	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	% age	No.	% age	No.	% age
1	0	7	20.59	27	79.41	34	35.05
2	1 – 10,000	8	80.00	2	20.00	10	10.31
3	10,001 – 20,000	6	35.30	11	64.70	17	17.53
4	20,000 – 50,000	17	85.39	9	14.61	26	26.80
5	Above 50,000.	6	60.00	4	40.00	10	10.31
Total						97	100.00
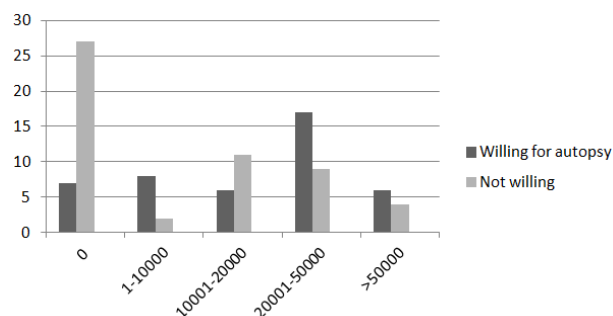
Figure No. 8: Distribution of cases income-wise (in PKR)

9. Family Size

The data shows that a large number of families consisting of 6-10 members has non acceptance for autopsy. (Table No. 10, Fig. No. 9)

Table No. 10:Distribution of cases with referece to family size

Sr. No	Family Member	Willingness for Autopsy		Not Willingness for Autopsy		Total	
		No.	% age	No.	% age	No.	% age
1	1 – 5	19	65.52	10	34.48	29	30.40
2	6 – 10	23	39.00	36	61.00	59	59.80
3	Above 10	6	66.67	3	33.33	9	9.80
Total						97	100.00
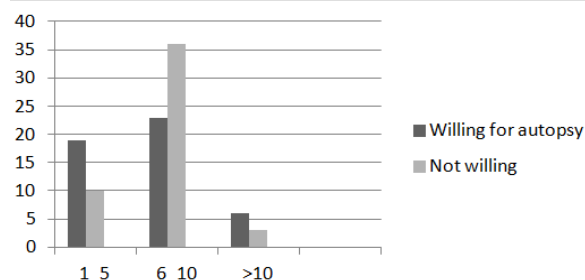
Figure No. 9: Distribution of cases family member-wise

DISCUSSION

The importance of conduction of medical autopsies is without any doubt. There are number of studies which highlight its significance.

The contribution of the autopsy based research is reflected from the fact that 81% articles dealing central nervous system referred autopsy based research and 6% articles dealing other organs used autopsy based research.[11]

In a Norwegian study the opinion regarding usefulness of autopsy practice was procured from clinicians. Fifty percent responded and out of those 82% considered autopsies to be a good means of quality assurance and quality control of clinical work. 83% considered that more autopsies should be performed on a national basis.[12]

In another Norwegian study in 2005, 65% cases showed disparity in cause of death given in a death certificates and came out at autopsy which again reflects its importance.[13]

In a German study the clinical and autopsy diagnoses were compared and discrepancies were identified in 23.1% cases.[14]

In our study we have made effort to see the attitude of public from various social levels regarding acceptance of conduction of medical autopsy. The positively responding participants in different groups have been identified. In this study females participants were more (63%) as compared to males(37%).(Table No.1) Males showed more willingness to medical autopsy 72.22 % as compared to females 26.23%.(Table No.2)

Majority of the participants (39.18%) fell in third decade and out of which 50% were willing for medical autopsy. It was followed by those in second decade (31.96) in which 48.93% agreed for autopsy. (Table No.3)

Amongst the married people 58.76 % and amongst unmarried 41.24% were willing for medical autopsy.

The study was based in Lahore but participants included both permanent residents of Lahore(Lahorites) as well as presently residing. The 88.44 of Lahorites & 31.58% non- Lahorites showed willingness for medical autopsy. (Table No.5)

The 47.14% of the people living in joint family showed acceptance for medical autopsy whereas 62.96% of the people living in nuclear family showed their interest in medical autopsy.(Table No. 6)

It was presumed that education has impact on the intellect of the people which was supported by the statistics in our study. The 54.84% of the graduates & 57.14% postgraduates showed willingness for medical autopsy. People who are illiterate, with religious education or education of primary level showed no interest in medical autopsy at all. (Table No. 7)

The 72.22% of government employees were willing for medical autopsy followed by students. People involved in business showed least interest in medical autopsy. (Table No.8)

The participants with no income were 35% and majority of them did not accept medical autopsy. Participants with good income showed interest in medical autopsy where as low income group showed least interest in medical autopsy. (Table No. 9)

The family including 6-10 people showed less interest in medical autopsy as compared to small family including 1-5 people. (Table No. 10)

The individuals who showed willingness for conduction of autopsy on their bodies had this feeling in their minds that this gesture will help promote the medical sciences and consequently it will be a service to humanity.

If autopsy trends are seen globally it is apparent that there is worldwide decline in autopsy rate. The various studies has shown different factors being involved in this decline.

A study in china comments that the reasons for reduction in autopsy rate in china include negligence by hospital administrators & relevant government authorities, unmotivated clinicians, helpless pathologists, unenforceable regulations / laws & local cultures & customs.[9]

In a study at Paris bioethics law was one cause of recent decrease in autopsy rate.[11] In Haematological Oncology Unit of St. Bartholomew's hospital London willingness for autopsy was given in 89% cases and over all autopsy rate came out 69.5%. The overall attitude of general public is positive and this results into high autopsy rate when they are explained the value of examination.[15]

In a study at Mulago Hospital Kampala, in 54% cases willingness for autopsy was asked but out of these only 38% accepted for autopsy conduction. The reason for refusal was that they do not want delay in burial (58%), no use to know the cause of death (16%), being satisfied with the clinical cause of death (10%).[16]

In other studies delay in conduction and reporting the cause of death is a reason for non acceptance of conduction of autopsy.[12]

CONCLUSION

The value of medical autopsy for development of medical sciences is without doubt. The peoples are reluctant for acceptance of autopsy because of inadequate awareness about the procedure and its benefits. Public cooperation for autopsy acceptance can be enhanced by improving their awareness and also by developing a motivated team of pathologists and clinicians.

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