

Importance of Sociology and Sociological Ethics, and Its Value on Bioethics Perspective

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Abstract--- *This pilot study has been undertaken with a primary objective to find the intersection of 'Bioethics and Sociology'. In this study, an effort is made to understand five different perspectives based on a sample of respondents and bringing several stakeholders like Sociologist, people from the medical fraternity, clinical practitioners, behavioral scientists and Bioethicist on the same platform. The authors have presented a precise statistical reasoning after assembling useful data. This will empower the researchers to take appropriate decisions for further study. For this study, several literatures have been reviewed in determining an appropriate hypothesis and accordingly structured questionnaires was prepared for the collection of data. The collected data were analyzed using non-parametric inferential statistics (Kolmogorov-Smirnov Goodness of Fit Test and Sign Test) for testing five hypotheses. The study is concluded based on an inference research, so that the researcher can make more effective and efficient decisions to enhance the future research study of the significance of Sociology on Bioethics in a broader range.*

Keywords--- *Bioethics, Sociology, Moral, Ethics, Moral Belief, Sociologists and Medical Fraternities.*

I. BACKGROUND

Before a formal discussion on bioethics and sociology, it is imperative to understand the importance of sociology in medicine and the effect of social and cultural factors on medicine as well as health. Sociologists from the medical field keep on taking an initiative to transform the people of the medical fraternity working on health and medical system play a much bigger role in the society.

As far as bioethics and sociology relationship is concerned, it started way back on March 2005 when a team of 30 scholars from different country for a two-day conference to explore the alliance of sociology to the concept of bioethics and also to discuss few more ethical queries voiced by technological advances in medicine. They all were gathered at Washington in the United States, England, Canada and few others developed and under developed country. Sociology is concerned with the learning of social order where ethics relate to moral order in the society. It is very natural that if there is no moral order, there is no social order. Therefore the base of any society stands upon the moral value of the populace and their perception messages the good and bad in human rapport.

There are many wellknown sociologists are remembered such as Renee Fox and Robin Williams, who are the pioneer of beginning of interdisciplinary discussions concerning the bioethics and sociology. Since a long many

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years the discussions related to the ground of intersection of bioethics and sociology was extended and finally it was institutionalized, fundamentally it was under the control of philosophers and forms of argumentation edgy from methodical philosophy.

With scholars from various disciplines, Sociologists were pushed towards the borderline that ultimately converted into bioethical debates. Despite marginalization, sociologists have nevertheless made significant individual contributions. Conference organizers, aware of these contributions and looking for building upon them, acknowledged that sociology has theoretical and methodological tools that can productively intensify and spread out the agenda of bioethics.

Two elements - Ethics and Moral, of Sociology are the significant key elements of bioethics. Ethics is a moral principle, which governs the behavior of the people and Moral is a principle that makes the difference between right and wrong.

Sociology of Ethics ideology can be seen in the works of individuals such as Karl Marx (1818–1883), Max Weber (1864–1920), and Emile Durkheim (1858–1917). Morality and the link between society itself and science have influenced Durkheim's work on professional ethics.

Principles of the American Sociological Association's Code of Ethics have propounded five codes of ethics for conducting sociological research: (a) Professional Competence (b) Integrity (c) Professional and Scientific Responsibility (d) Respect for People's Rights, Dignity, and Diversity and (e) Social responsibility.

Morality is rooted in collective life. Since the time of Emile Durkheim, the renowned Sociologist, sociology has understood that moral beliefs are rooted in group membership and loyalty, and that such belief had not been shaped through argument. It has also not been formed by isolation from other people. Durkheim also provided a model for the empirical study of morality, a topic too often left to philosophers and theologians from Sociology. Moral beliefs and morality are important elements of sociology.

The 'Sociology of Bioethics' is considered to be one of the significant concepts, which was discovered by the sociological approach to bioethics. The prime motive of the goal is to realize the outlook of the bioethics profession and its approaches of the act or process of forming reasons, drawing conclusions, applying them to a case in discussion, and to explore the cultural, social, political, and the professional foundation of bioethical debates.

As it is known that the subject of human actions, usually included in the fields of sociology, social and cultural anthropology, which are one of the significant areas of Behavioral science also, that is why researchers have opted one hypothesis concerned with behavioural science.

II. OBJECTIVES

1. To what extent, Sociologist's contribution is required to promote Bioethics.
2. To what extent, the medical fraternities require to have knowledge of sociological ethics to understand the bioethics principle.
3. To what extent, knowledge of sociology can change the thought process of clinical practitioner.

4. To what extent, training of behavioral science should be mandatory for the people belonging to the medical fraternity in a regular interval
5. To what extent, application of Bioethics has properly been focused in the film “Munnabhai MBBS”

III. REVIEW OF LITERATURE

Since 1950 Medical sociologists had greater participation in health and medical education. They were involved in many sub-areas in medical education, such as participating in making and modifying curricula, modifying the behavior of physician and reducing the unethical behavior and stress by virtue of arranging training time and again. Number of sociologists started messaging these goals to educators from the medical field and performed many outstanding studies about those issues as dealing with the selection of an area of expertise and factors affecting professional socialization¹ (Merton R.et al.). Biology and medicine are being used as a figurative language and symbolic or emblematic medium, bioethics deals with values, norms, beliefs, and education, which are the main institutions of the our society to set up proper cultural practice and its group ethics (Fox and Swaze’s 1984)². (Key points: Beliefs, values and norm are the basic elements of Sociology)

Reich, Warren in his book *The Encyclopedia of Bioethics*, has told that the methodical investigation of the moral dimension....dealing with both arguments about the content of morality and meta-ethical discussion of the nature of the moral judgment, language, argument, and value along with ethical visualization, assessments, demeanour, and rules,norms and various policies of the life sciences followed by health care, making use of diversified ethical methods of an interdisciplinary ambiance.³ (Moral dimensions and ethical methodologies can be learned better in Sociology)

‘In bioethics, we come across a model arena in which we extend our ideas about the making and organization of new professions, the social context of morality and the role of expertise in society’ (DeVries and Subedi 1998)⁴. ((Key points: Social context of morality can be learned from sociology)

Sociology and bioethics have an edgy relationship. Though Bioethicists understood that sociology undoubtedly supportive for explaining and examining ethical issues, but at the end, sociologists are not taking much interest at the time of sociological scrutiny of bioethics. De Vries told precisely ‘I made it clear the reason that how bioethics will promote after proper application of the tools of sociology for answering its various questions ("sociology in bioethics") and by letting sociology to exercise bioethics to respond to various sociological questions ("sociology of bioethics") (1998)', which is possible after reviewing the detail of reviewing of various approaches of sociology on bioethics topics⁵.

Jose Lopez, how sociology can save bioethics... May be... 2004: How sociology can save bioethics... Maybe... his paper argues for the importance of a broad sociological engagement with bioethics. It initiates by considering a question mark that why sociologists will take interest in bioethics and then goes on to explore the cognitive critique of bioethics developed by different ethnographers⁶.

Sociological literature in recent time in the line of bioethics, focusing predominantly on its interface with research ethics, it has been observed after reviewing that two disciplines of bioethics and sociology have an

inclination to approach subject matters from the opposite viewpoint. The said approach differences have now been generally recognized, accepted and accommodated by experts of both disciplines. Greater mutual respect, appreciation and even learning turned towards a good relationship between the two disciplines.⁷

Now days bioethics started thinking that center of attention of reflection of sociologists and the truth and various social issue.: “ There are many controversial medical practices such as practices such as purposeful apply of artificial methods or any other techniques to avert pregnancy and termination of a pregnancy, more broadly speaking transplant and donation of various organs and the painless killing of a patient suffering from an incurable and painful disease is a significantly promising matter of study on the ground of sociological approach in which it is needed the social dimensions to be brought to the frontage position and of course under the purview of the ethical incidence as well (Bateman Novaes, 1998)⁸.

In this field, certain numbers of sociological studies have proven predominantly productive, one example it is found in Anne Paillet’s study (2002) of the decisions is that the ethical dimension is one of the significant matter in which it is indicated that when doctors go for neonatal intensive care services, they must think about practice in the light of ethical dimension because doctor’s basic medical practices specifically in those circumstances where obligation duties are not properly working⁹.

IV. HYPOTHESES

H¹: Sociologist’s contribution is required to promote Bioethics

H²: Medical fraternities require having knowledge of sociological ethics to understand bioethics principle.

H³: Knowledge of sociology can change thought process of clinical practitioner.

H⁴: Training of behavioral science should be mandatory for the people belonging to the medical fraternity in a regular interval

H⁵: Application of Bioethics has properly been focused in the film “Munnabhai MBBS”

V. RESEARCH METHODOLOGY

Types of Research Design

1. Cross-sectional study
2. Quantitative research Methods
3. Likert Ordinal scale- (Strongly disagreed-1, Disagreed-2, Neutral-3, Agreed-4 and Strongly agreed-5)

Unit of Analysis

Selected private medical practitioner

Methods of data Collection

Primary Data: The Primary data was collected from the respondents by administering structured questionnaire, apart from observation, interview and discussion with management

Sampling if Applicable

50 medical practitioners from various specialized field were asked on random sampling process.

VI. ANALYSIS AND FINDINGS

Study 1: Sociologists contribution is required to promote Bioethics (i.e. Majority of the respondents has to strongly agree or agree about the Sociologists contribution in promoting Bioethics)

Table 1: Likert Response to Qn. 5 (i)

Likert Code	Likert Scale	No. of Respondents
1	Strongly Disagree (SDA)	6
2	Disagree (DA)	5
3	Neutral (N)	4
4	Agree (A)	19
5	Strongly Agree (SA)	16

H₀: All the 5 scales are equally preferred

H₁: All the 5 scales are not equally preferred

Table 2: Kolmogov-Smirnov Goodness of Fit Test

Likert Scale	Observed Frequency	Observed Proportion	Observed Cumulative Proportion S _n (X)	Expected Proportion	Expected Cumulative Proportion F ₀ (X)	F ₀ (X) – S _n (X)
SDA (1)	6	.12	.12	.20	.20	0.08
DA (2)	5	.10	.22	.20	.40	0.18
N (3)	4	.08	.30	.20	.60	0.30
A (4)	19	.38	.68	.20	.80	0.12
SA (5)	16	.32	1.00	.20	1.00	0.00

Computed D = Max. |F₀(X) – S_n(X)| = 0.30

Critical D Value at 5% level of Significance = $1.36 / \sqrt{n} = 1.36 / \sqrt{50} = 0.1923$

Since Computed D = 0.30 > Critical D = 0.1923, H₀ is Rejected, and it can be concluded that all the five scales are not equally preferred. We can see that there is a significant preference for Agreement and Strong Agreement scale.

We use One Sample Sign test to decide whether there is a significant difference between the two combined groups of Strongly Disagree + Disagree and Strongly Agree + Agree.

H₀ : Md. = 3 (Proportion of respondents who Strongly Disagree and Disagree, i.e. Sociologists do not contribute to Bioethics)

H₁: Md. > 3 (Proportion of respondents who strongly agree and Agree, i.e. Sociologists do contribute to Bioethics)

No. of + ve Sign = No. of Likert Scale who are SDA and DA having Likert Code less than 3 = 6 + 5 = 11

No. of - ve Sign = No. of Likert Scale who are SA and A having Likert Code greater than 3 = 19 + 16 = 35

S = Min. (+ ve, - ve) = Min. (11, 35) = 11

K = [(n-1) / 2] – 0.98 √n = (50 – 1)/2 – 0.98 √50 = 18.07

Since S < K, H₀ is rejected and it can be safely concluded that Sociologists contribution is required to promote Bioethics.

Study 2: Medical fraternities require having knowledge of sociological ethics to understand bioethics principle (i.e. Majority of the respondents has to strongly agree or agree about the above statement)

Table 3: Likert Response to Qn. 5 (ii)

Likert Code	Likert Scale	No. of Respondents
1	Strongly Disagree (SDA)	2
2	Disagree (DA)	11
3	Neutral (N)	2
4	Agree (A)	21
5	Strongly Agree (SA)	14

H₀: All the 5 scales are equally preferred

H₁: All the 5 scales are not equally preferred

Table 4: Kolmogov-Smirnov Goodness of Fit Test

Likert Scale	Observed Frequency	Observed Proportion	Observed Cumulative Proportion S _n (X)	Expected Proportion	Expected Cumulative Proportion F ₀ (X)	F ₀ (X) – S _n (X)
SDA (1)	2	0.04	0.04	.20	.20	0.16
DA (2)	11	0.22	0.26	.20	.40	0.14
N (3)	2	0.04	0.30	.20	.60	0.30
A (4)	21	0.42	0.72	.20	.80	0.08
SA (5)	14	0.28	1.00	.20	1.00	0.00

Computed D = Max. |F₀(X) – S_n(X)| = 0.30

Critical D Value at 5% level of Significance = $1.36 / \sqrt{n} = 1.36 / \sqrt{50} = 0.1923$

Since Computed D = 0.30 > Critical D = 0.1923, H₀ is Rejected, and it can be concluded that all the five scales are not equally preferred. We can see that there is a significant preference for Agreement and Strong Agreement scale.

We use One Sample Sign test to decide whether there is a significant difference between the two combined groups of Strongly Disagree + Disagree and Strongly Agree + Agree.

H₀ : Md. = 3 (Proportion of respondents who Strongly Disagree and Disagree, i.e. Medical Fraternities Do NOT require having knowledge of Sociology for the advancement of Bioethics)

H₁: Md. > 3 (Proportion of respondents who Strongly Agree and Agree, i.e. Medical Fraternities DO require having knowledge of Sociology for the advancement of Bioethics)

No. of + ve Sign = No. of Likert Scale who are SDA and DA having Likert Code less than 3 = 2 + 11 = 13

No. of – ve Sign = No. of Likert Scale who are SA and A having Likert Code greater than 3 = 21 + 14 = 35

S = Min. (+ ve, - ve) = Min. (13, 35) = 13

K = $[(n-1) / 2] - 0.98 \sqrt{n} = (50 - 1)/2 - 0.98 \sqrt{50} = 18.07$

Since S < K, H₀ is rejected and it can be safely concluded that Medical fraternities require having knowledge of sociological ethics to understand bioethics principle.

Study 3: Knowledge of Sociology can change thought process of clinical practitioner (i.e. Majority of the respondents has to strongly agree or agree about the above statement)

Table 5: Likert Response to Qn. 5 (iii)

Likert Code	Likert Scale	No. of Respondents
1	Strongly Disagree (SDA)	1
2	Disagree (DA)	13
3	Neutral (N)	8
4	Agree (A)	18
5	Strongly Agree (SA)	10

H₀: All the 5 scales are equally preferred

H₁: All the 5 scales are not equally preferred

Table 6: Kolmogov-Smirnov Goodness of Fit Test

Likert Scale	Observed Frequency	Observed Proportion	Observed Cumulative Proportion S _n (X)	Expected Proportion	Expected Cumulative Proportion F ₀ (X)	F ₀ (X) – S _n (X)
SDA (1)	1	0.02	0.02	.20	.20	0.18
DA (2)	13	0.26	0.28	.20	.40	0.12
N (3)	8	0.16	0.44	.20	.60	0.16
A (4)	18	0.36	0.80	.20	.80	0.00
SA (5)	10	0.20	1.00	.20	1.00	0.00

Computed D = Max. |F₀(X) – S_n(X)| = 0.16

Critical D Value at 5% level of Significance = $1.36 / \sqrt{n} = 1.36 / \sqrt{50} = 0.1923$

Since Computed D = 0.16 < Critical D = 0.1923, H₀ is Not Rejected, and it can be concluded that all the five scales are equally preferred, meaning that **the Knowledge of Sociology CANNOT change the thought process of clinical practitioner.**

Study 4: Training of Behavioural Science should be mandatory for the people belonging to medical fraternity in a regular interval (i.e. Majority of the respondents has to strongly agree or agree about the above statement)

Table 7: Likert Response to Qn. 5 (iv)

Likert Code	Likert Scale	No. of Respondents
1	Strongly Disagree (SDA)	5
2	Disagree (DA)	12
3	Neutral (N)	9
4	Agree (A)	15
5	Strongly Agree (SA)	9

H₀: All the 5 scales are equally preferred

H₁: All the 5 scales are not equally preferred

Table 8: Kolmogov-Smirnov Goodness of Fit Test

Likert Scale	Observed Frequency	Observed Proportion	Observed Cumulative Proportion $S_n(X)$	Expected Proportion	Expected Cumulative Proportion $F_0(X)$	$ F_0(X) - S_n(X) $
SDA (1)	5	0.10	0.10	.20	.20	0.10
DA (2)	12	0.24	0.34	.20	.40	0.06
N (3)	9	0.18	0.52	.20	.60	0.08
A (4)	15	0.30	0.82	.20	.80	0.02
SA (5)	9	0.18	1.00	.20	1.00	0.00

Computed $D = \text{Max. } |F_0(X) - S_n(X)| = 0.08$

Critical D Value at 5% level of Significance = $1.36 / \sqrt{n} = 1.36 / \sqrt{50} = 0.1923$

Since Computed $D = 0.08 < \text{Critical } D = 0.1923$, H_0 is NOT Rejected, and it can be concluded that all the five scales are equally preferred meaning that **the training of Behavioural Science should NOT be mandatory for the people belonging to medical fraternity in a regular interval**

Study 5: Application of Bioethics has properly been focussed in the film “Munnabhai MBBS” (i.e. Majority of the respondents has to Strongly Agree or Agree about the above statement)

Table 9: Likert Response to Qn. 5 (v)

Likert Code	Likert Scale	No. of Respondents
1	Strongly Disagree (SDA)	7
2	Disagree (DA)	15
3	Neutral (N)	9
4	Agree (A)	16
5	Strongly Agree (SA)	3

H_0 : All the 5 scales are equally preferred

H_1 : All the 5 scales are not equally preferred

Table 10: Kolmogov-Smirnov Goodness of Fit Test

Likert Scale	Observed Frequency	Observed Proportion	Observed Cumulative Proportion $S_n(X)$	Expected Proportion	Expected Cumulative Proportion $F_0(X)$	$ F_0(X) - S_n(X) $
SDA (1)	7	0.14	0.14	.20	.20	0.06
DA (2)	15	0.30	0.44	.20	.40	0.04
N (3)	9	0.18	0.62	.20	.60	0.02
A (4)	16	0.32	0.94	.20	.80	0.14
SA (5)	3	0.06	1.00	.20	1.00	0.00

Computed $D = \text{Max. } |F_0(X) - S_n(X)| = 0.14$

Critical D Value at 5% level of Significance = $1.36 / \sqrt{n} = 1.36 / \sqrt{50} = 0.1923$

Since Computed $D = 0.14 < \text{Critical } D = 0.1923$, H_0 is NOT Rejected, and it can be concluded that all the five scales are equally preferred, meaning that it can be safely **concluded that Application of Bioethics has NOT been properly focussed in the film “Munnabhai MBBS”**

VII. CONCLUSION AND RECOMMENDATION

Numerous theories have been propounded to figure out the intersection between sociology and bioethics. Investigation of social science for bioethics consistently causes the bioethicist to understand the values, roles,

and rituals in biosciences society and additionally, it explains the situation of biosciences and bioethics in contemporary society.

Since sociologists can see any society and social setting appropriately, they can draw a legitimate system of social development. People engaged with the medical occupation can create reasonable collaboration with them and thus can create reputable standards of guidelines for medical ethics and bioethics also.

So far as the first hypothesis “Sociologist’s contribution is required to promote bioethics” is concerned, Kolmogorov Smirnov Goodness of Fit test with computed value of D as 0.30 at 5% level of significance suggests that all the five Likert scales are not same or is not equally preferred. Hence a Sign test of Median is performed to suggest that the proportion of respondents who strongly agree or agree are more in number (35 out of 50). it is proved that ‘Sociologist’s contribution is required to promote Bioethics’.

As far as the 2nd hypothesis “Medical fraternities require having knowledge of sociology for the advancement of bioethics” is concerned, Kolmogorov Smirnov Goodness of Fit test with computed value of D as 0.30 at 5% level of significance suggests that all the five Likert scales are not same or is not equally preferred. Hence a Sign test of Median is performed to suggest that the proportions of respondents who strongly agree or agree are more in number (35 out of 50).-Therefore, it is proved that the medical fraternities require having knowledge of sociology for the advancement of bioethics.

In the 3rd hypothesis “Knowledge of sociology can change the thought process of the clinical practitioner”, Kolmogorov Smirnov Goodness of Fit test with computed value of D as 0.16 at 5% level of significance suggests that all the five Likert scales are same or is equally preferred. Therefore, the sample evidence suggests that the knowledge of sociology CANNOT change the thought process of a clinical practitioner.

In the 4th hypothesis “Training of Behavioral Science should be mandatory for the people belonging to medical fraternity in a regular interval”, Kolmogorov Smirnov Goodness of Fit test with computed value of D as 0.08 at 5% level of significance suggests that all the five Likert scales are same or is equally preferred. Therefore, the sample evidence suggests that training of Behavioral Science should NOT be mandatory for the people belonging to medical fraternity in a regular interval

In the 5th hypothesis “Application of Bioethics has been properly focused in the film “Munnabhai MBBS””, Kolmogorov Smirnov Goodness of Fit test with computed value of D as 0.14 at 5% level of significance suggests that all the five Likert scales are same or is equally preferred. Therefore, the sample evidence suggests that application of Bioethics has NOT been properly focused in the film “Munnabhai MBBS”

The result of pilot study establishes that there is a need for good knowledge on sociological science in medical society to understand bioethics from a sociological perspective.

Thinking about the connection between sociology and science, we can't overlook the idea of the Father of Sociology, Auguste Comte who said that it is not amazing that living being in this world should move by the sociological idea from all perspectives.

By considering the aforesaid idea, there is a requirement of training to the people of medical domain in regular interval to make them aware about moral and its value, ethics and its value in society.

In addition to that, it is also required to modify the curriculum of sociology in different therapeutic and paramedic courses. Factual and practiced sociological methods ought to be added in medical sociology to change the thought process. It is also required that students to realize the link between ‘Sociology and Bioethics’ and the significance of bioethics from the sociological perspective.

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