



Analysis of Awareness About Liver Transplantation with Medical and Non- Medical Students Using Questionnaires and Social Demographic Data

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ABSTRACT:

Liver transplantation will help to enhance the outcome of quality and length of the survival rate of humans which was initiated in the year of 1963 to follow it as a routine procedure for humans for healthier life. The clinical practice with different immunosuppressive connectors has developed and introduced by lacking in evidence based on selective immunosuppression. In this research article, the study has done to analyse the awareness rate about liver transplantation among medical and non-medical students based on volunteer participation for the questionnaires. The result were compared and analysed in the form of chart and graphs with 511 sample data has studied for the months of six. Survey like cross sectional observation has taken in the private institution with medical and non- medical students based on social demographic data. As per the study, we came to know the awareness about the liver transplant and various parameters like risks, changes after transplant, etc., will be analysed on two different aspect from medical students and non- medical students clearly.

Introduction

Liver transplantation is the recommended therapeutic intervention for individuals diagnosed with end-stage liver disorders, including cirrhosis, decompensated illness, acute liver failure, and hepatocellular carcinoma that meet the Milan criteria. It has become the standard of care for individuals suffering from such conditions [1]. The implementation of live-donor liver transplant (LDLT) was initiated in 1989 with the first successful surgery on a child suffering from biliary atresia. However, the limited availability of deceased donors, especially in Asian countries, remains a major obstacle [2]. Due to the extreme lack of dead donors and the great demand for liver transplantation, living donor liver transplantation (LDLT) emerged increasingly out of need in Asia. The first LDLT (the fourth case worldwide) with a left lateral section graft was carried out in 1989 by Nagasue. (Shimane Medical University, Japan). As of right now, 90% of LTs in Asia are still conducted using grafts provided by the patient's family [3]. Another way to increase the limited pool of donors is through living donor liver transplantation (LDLT)

[4,5]. The primary objective of the assessment method is to ensure the safety of the donor and provide recipients with high-quality grafts. Therefore, it is crucial to design a comprehensive screening strategy aimed at evaluating potential donors while saving time and resources for a liver transplant program. Typically, the order of exams performed during the assessment process follows a progression from the least to the most intrusive. However, it is also essential to determine which investigations identify a larger proportion of inappropriate candidates. Thus, a well-designed assessment strategy should aim to strike a balance between minimizing the risk of harm to donors and maximizing the benefits for recipients. As a result, a person who has no genuine probability of donating might be eliminated as soon as possible during the screening process, saving the LDLT program significant time and money [6, 7]. Depression was another barrier to adherence identified in this study. It is worth mentioning that anxiety and sadness have been identified as a problem connected with chronic diseases. According to a study conducted on liver transplant



recipients, the probability of persistent anxiety and depression was found to be between 29% and 30%, and 23% to 26%, respectively. Additionally, delirium, symptoms of post-traumatic stress disorder, and psychosis were reported in 23% to 26%, and 7.5% of individuals who underwent liver transplantation, respectively. The results of this study are consistent with those of previous studies that have quantitatively analysed the causes of non-adherence in patients. Among the key drivers of non-adherence, mood disorders, an inactive lifestyle, a history of drug or alcohol addiction, and a lack of peer support have been identified. Additionally, divorce, separation, and amnesia have been recognized as major factors that contribute to non-adherence. These findings underscore the significance of addressing these underlying issues to improve adherence to treatment regimens.

Objective of the Research

- **Critical life-saving procedure:**

Liver transplantation is vital for end-stage liver diseases.

- **Global demand and awareness:**

Understand awareness amid rising global liver transplant demand

- **Comparing Medical and Non-Medical understanding:**

Explore if medical students knowledge translates to higher awareness

- **Non-Medical influence :**

Assess the impact of non-medical students on public perception and support

- **Targeted Educational Interventions:**

Identify gaps for precise educational campaigns

- **Informed Public Support:**

Inform initiatives for a supportive societal attitude towards liver transplantation

Methods and Results

In this section, the proposed methodology along with results is discussed in the form of charts and graphs. Tables are used for comparison and analysis of data

collected based on demographic information collected manually. The design is based on cross sectional observation organized with private institution in the duration of six months and collected 511 samples in the form of questionnaires. This comparative analysis is conducted with all the genders aged above 18 and below 25 are considered for participation. Students those are interested to attend the questionnaires with primary education knowledge are involved in the research to collect the data in manual. Non enrolled students of any institutions or universities are not included for participation and those who affected with chronic mental conditions are excluded from this research.

Table 1: Distribution of data in group wise

Response	Number of participants	Percentage
	n=511	
Non- Medical students	255	49.9
Medical students	256	50.1

Figure 1: Participation distributed based on Medical vs Non- Medical students

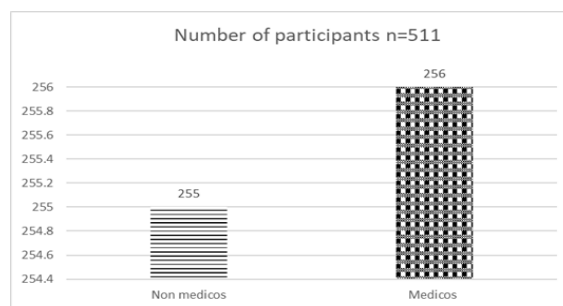


Table 2: Analysis of participation gender wise

Response	No. of participants	%
	N=511	
Male	268	50.6 %
Female	261	49.2%
Transgender	0	0%



In table 2, explore the data about the performance percentage of participants categorized as male, female and transgender out of 511. Among the 511 participants 268 participants are male and 261 participants are

female whereas there is no transgender participants has participated in the study and founds to be 49.2% of female, 50.6% of male and 0% of transgender from medical and non- medical category has participated.

Table 3: Questionnaire (1st set) collected from students (Medical & Non- Medical)

Response	Medical students No of participants n=256	%	Non- medical students No of participants n=255	%
To improve skin health	05	1.9%	65	25.4%
To treat liver failure or severe liver disease	207	80.8%	140	54.9%
To enhance digestive function	24	9.3%	21	8.2%
To cure common infections	20	7.8%	29	11.3%

From table 3, first set of questionnaires are started to collect student’s responses for comparison analysis in the form of positive and negative percentages. Based on the study, positive responses are highly recorded with 39.4% out of 256 candidates in medical professionals

which is significantly higher. The below chart explains the positive and negative responses in the form of percentages between medical and non- medical students.

Figure 2: Chart representation data collection and responses

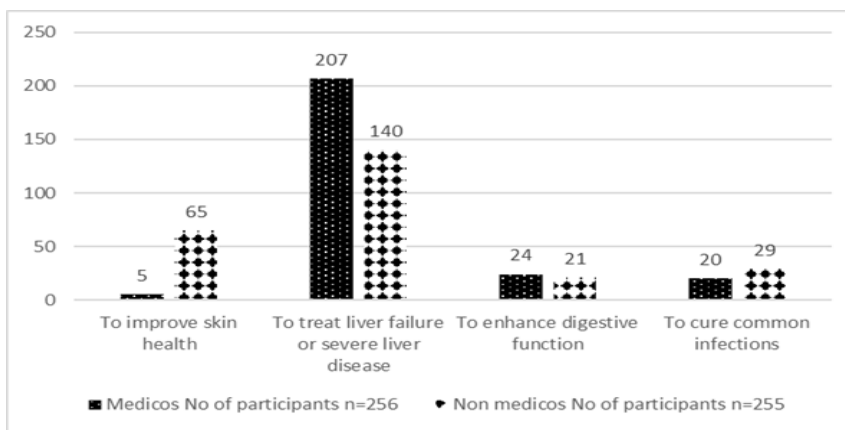


Table 4: Questionnaires (2nd set) collected from students (Medical & Non- Medical)

Response	Medical students No of participants n=256	%	Non- medical students. No of participants n=255	%
Producing insulin, chronic bronchitis	24	9.3%	84	32.9%
Blood filtration, hepatitis	215	83.9%	110	43.15%
Muscle growth, influenza	12	4.6%	40	15.6%
Hair growth, arthritis	05	1.9%	21	8.2%



Figure 3: Chart representation data collection and responses

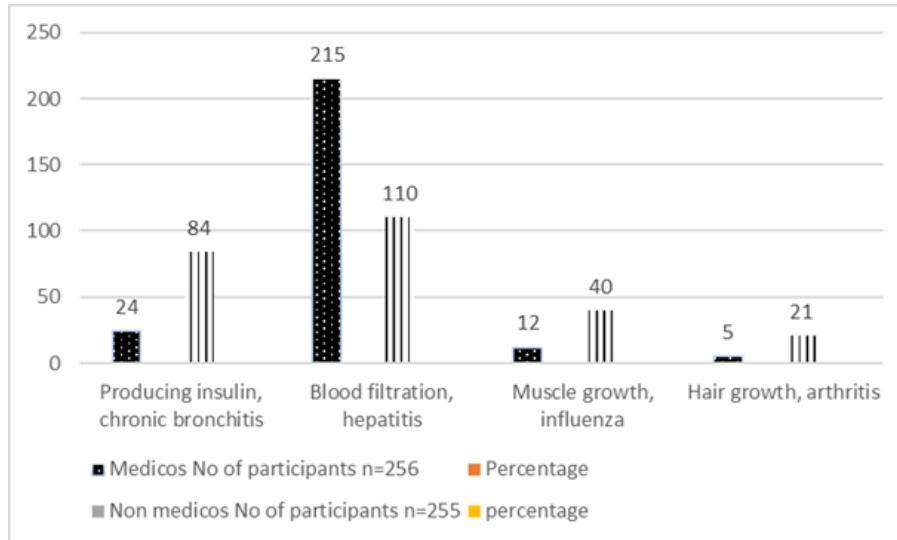


Table 5: Questionnaires (3rd set) collected about difference of deceased and living donor transplant of liver

Response	Medical students No of participants n=256	%	Non- medical students No of participants n=255	%
No difference	35	13.6%	83	32.5%
Deceased donor is passed away, living donor is alive	165	64.4%	91	35.6%
Living donor is temporary	25	9.7%	51	20%
Deceased donor for kidneys only	31	12.1%	30	11.7%

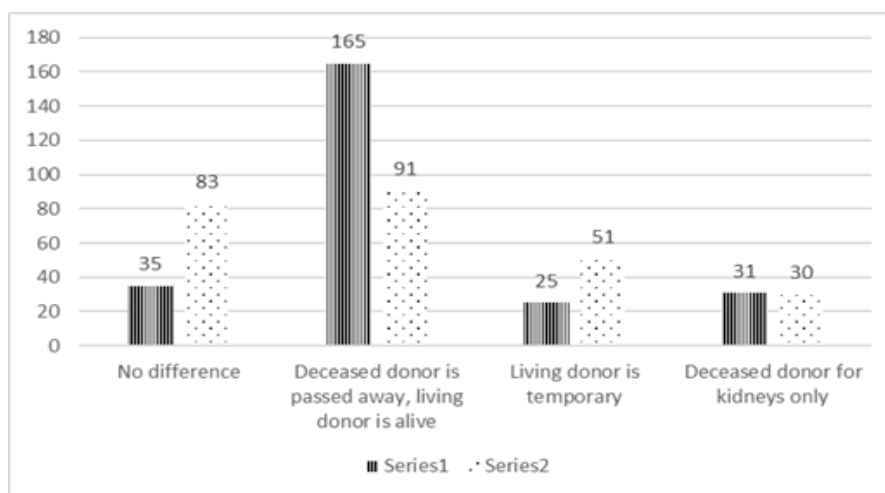


Figure 4: Chart representation of deceased and living donor liver transplantation

From the above table 5 and figure 4, it explores the calculation of interests about the liver transplantation

done in two different stages as deceased and living stage. The participants of 256 from medical students



responded 64.4% positively and non- medical students responded with 36% positively where rest of the

responses are recorded negatively from medical and non- medical professionals.

Table 6: Questionnaires (4th set) collected about changes and risk after transplant

Response	Medical students No of participants n=256	%	Non- medical students No of participants n=255	%
No changes or risk	38	14.8%	94	36.8%
Lifestyle changes and medication risks	185	72.2%	85	33.3%
Frequent surgery risk	20	7.8%	42	16.4%
Dietary changes only	13	5.07%	34	13.3%

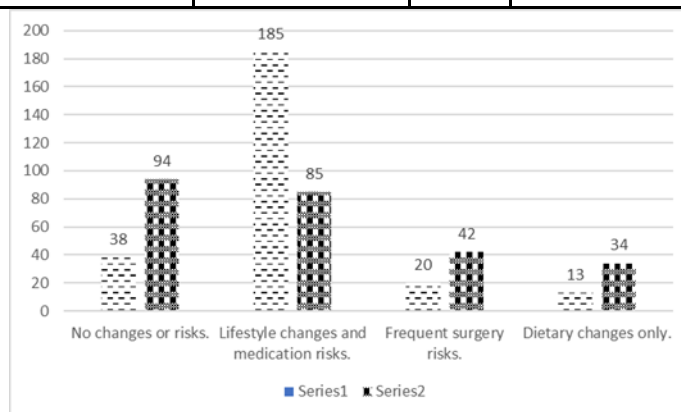


Figure 5: Chart representation of changes and risks after liver transplantation

Table 6 and figure 5, represents the risks and changes of the patients after liver transplantation has done are recorded and 72.2% are aware and 30 % were non aware about the risks and changes of the patients

among 256 (medical student) and 255 (non- medical students) and the figure represents the same with showcasing the data in the form of chart.

Table 7: Questionnaires (5th set) collected about organ donation vs liver transplant in education

Response	Medical student No of participants n=256	%	Non- medical student No of participants n=255	%
Very positive, and I believe it's well-understood in society.	208	81.2%	110	43.1%
Unsure and I think more education is needed.	23	8.9%	70	27.4%
Negative, due to societal stigmas.	05	1.9%	39	15.2%
No opinion on the matter.	19	7.2%	36	14.1%

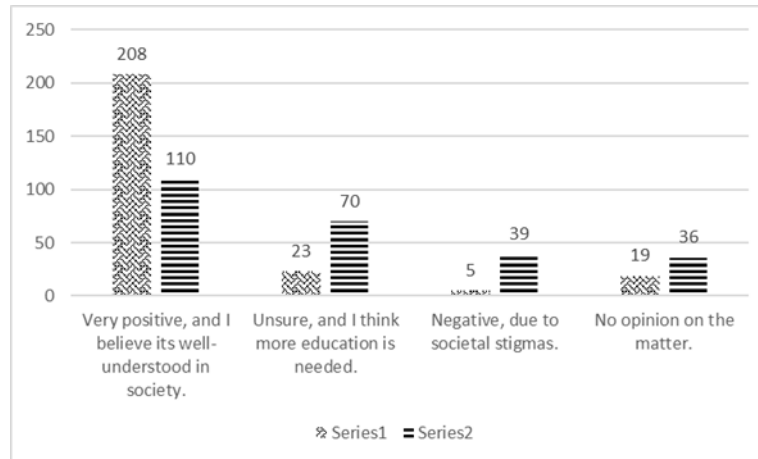


Figure 6: Chart representation of organ donation vs liver transplantation in education

Table 8: Questionnaires (6th set) collected about being organ donor and your decision?

Response	Medical student No of participants n=256	%	Non-medical student No of participants n=255	%
Yes, I'm willing to be an organ donor; influenced by helping others.	178	69.5%	90	35.2%
No, I'm not willing; personal or religious beliefs.	35	13.6%	73	28.6%
Unsure; need more information.	28	10.9%	53	20.7%
Yes, but only for specific organs; health concerns.	15	5.8%	39	15.2%

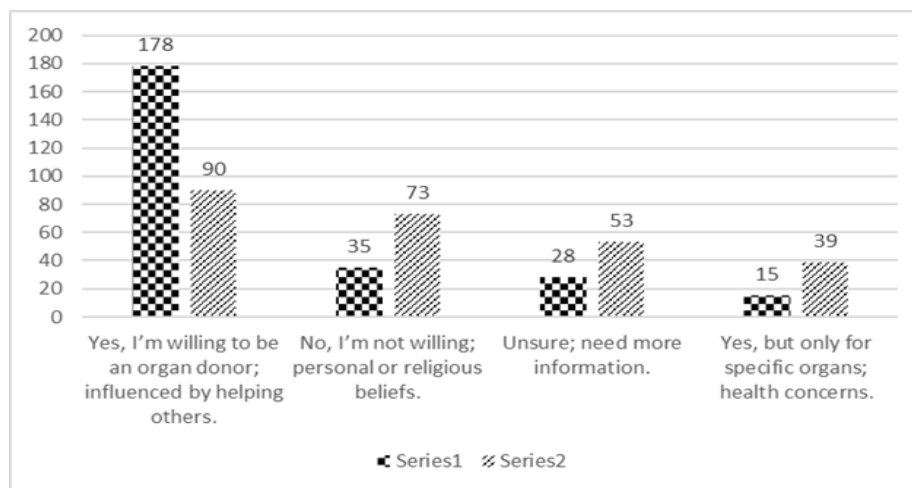


Figure 7: Chart representation of being an organ donor and your decisions



Table 9: Questionnaires (7th set) collected about factors of liver disease and prevention

Response	Medical student No of participants n=256	%	Non- medical student No of participants n=255	%
Yes, I'm aware of both factors and prevention.	215	83.9	111	43.5%
No, I'm not aware of either.	22	8.5%	78	30.5%
I know the factors, but not the prevention.	17	6.6%	41	16%
I know how to prevent it, but not the factors.	02	0.7%	25	9.8%

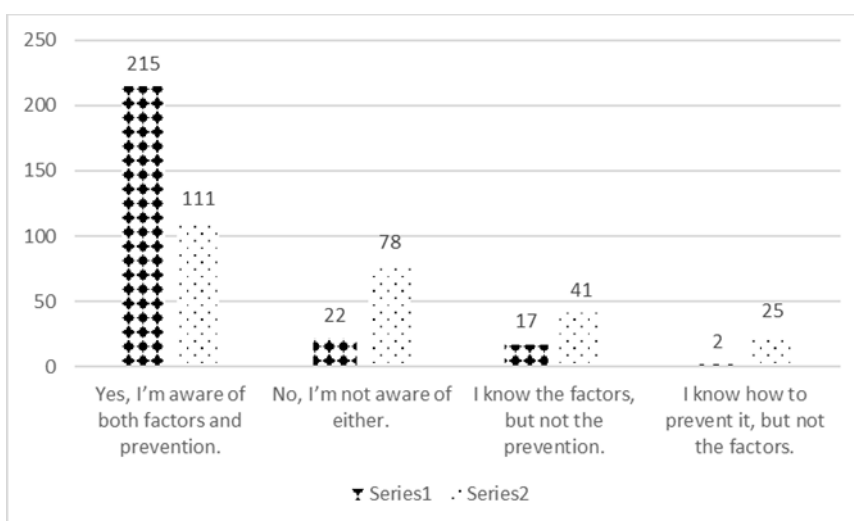


Figure 8: Chart representation about factors of liver disease and prevention

Table 10: Questionnaires (10th set) collected about liver donation, requirements and outcomes

Response	Medical student No of participants n=256	%	Non- medical student No of participants n=255	%
I understand the entire liver donation process, including donor criteria and differences in transplant outcomes.	162	63.2%	112	43.9%
I have limited or no knowledge about liver donation and its aspects.	45	17.5%	70	27.4%
I know about becoming a liver donor, but not about the specific restrictions or differences in transplant outcomes.	38	14.4%	40	15.6%
I'm aware of age and health restrictions for donors but unclear about the donation process and transplant outcomes.	11	4.29%	33	12.9%

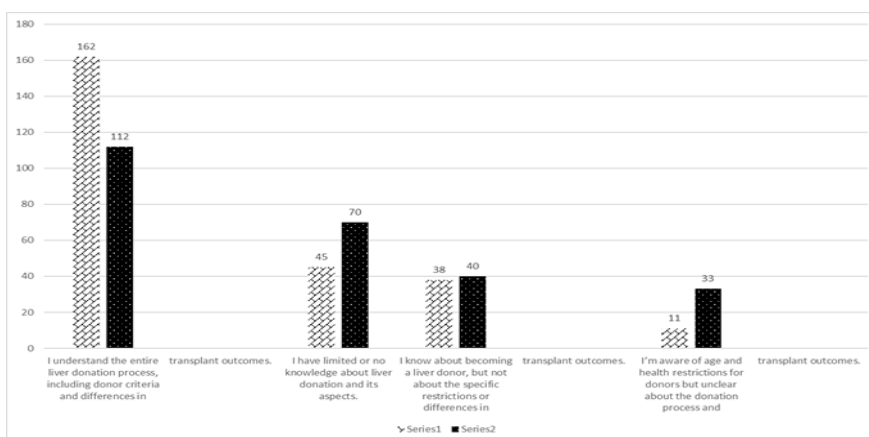


Figure 9: Chart representation of requirements, liver donors and outcomes

Table 11: Questionnaires (11th set) collected about global liver transplant practices and cultural influences

Response	Medical student No of participants n=256	%	Non-student No of participants n=255	%
I understand global variations, cultural beliefs, and regional differences in liver transplantation.	188	73.4%	97	38%
I'm somewhat aware but lack detailed knowledge.	22	8.5%	85	33.3%
I have no information on global variations or cultural impacts.	38	14.8%	53	20.7%
I know about cultural beliefs but not about global or regional practices.	08	3.1%	20	7.8%

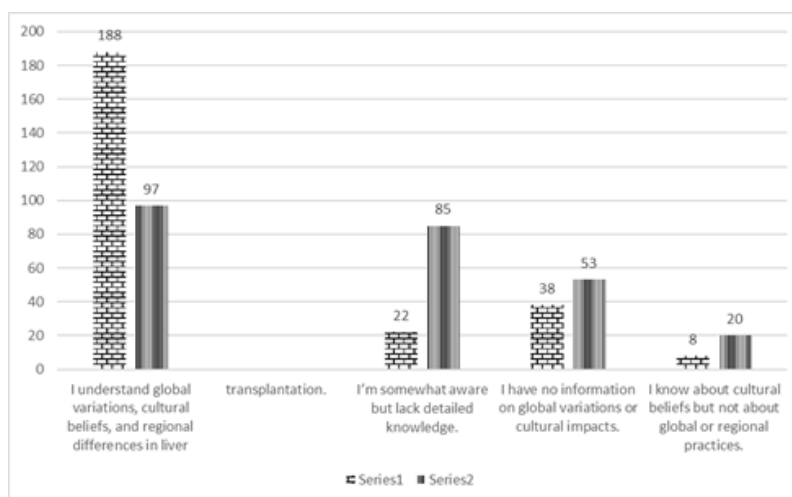


Figure 10: Chart representation about global liver transplant practices and cultural influences



Table 12: Questionnaires (12th set) collected about liver transplant policies, and would you support liver health initiatives?

Response	Medical student participants n=256	No of %	Non- medical student No of participants n=255	%
I know the policies and would support initiatives.	158	61.7%	96	37.6%
I don't know the policies but would support initiatives.	51	19.9%	89	34.9%
I know the policies but wouldn't support initiatives.	35	13.6%	40	15.6%
I don't know the policies and wouldn't support initiatives.	12	4.6%	30	11.7%

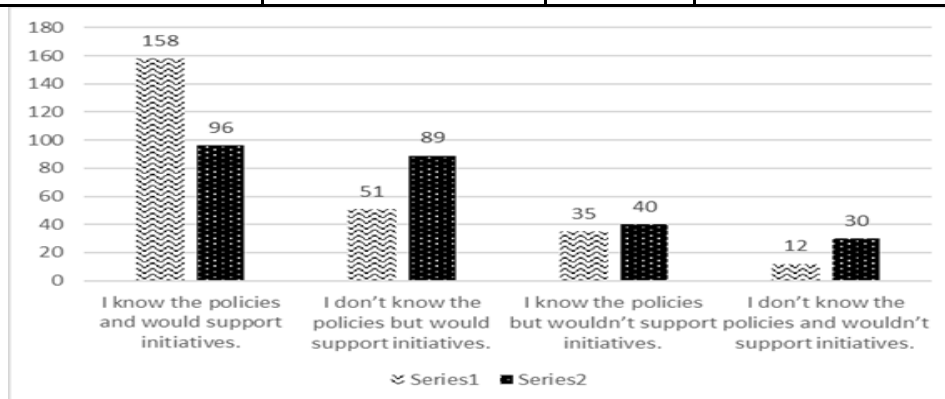


Figure 10: Chart representation about liver transplant policies, and would you support liver health initiatives

Table 13: Questionnaires (13th set) collected about willingness for donating liver

Response	Medical students participants n=256	No of %	Non- medical students No of participants n=255	%
Yes	101	39.4%	35	13.6%
no	70	27.3%	123	48%
May be	85	33.2%	97	37.8%

The questionnaires are categorized into different sets and responses were entered manually by the medical and non- medical students as per their own interest. All the above mentioned tables are divided into two different aspects with 256 participants from medical and 255 students belongs to non- medical and percentage of responses are compared for analysis of the research in the form of chart representation.

Conclusion and Discussion

The study involved with a total of 511 participants, with an equal distribution of questionnaires with medical and

non- medical students. This distribution could be considered appropriate, as it allows for a comparison of the level of knowledge about liver donation between the two groups. The proposed study has done with 511 participants were 255 are non- medical students and 256 are medical students. This study has provided the valuable information about the factors of influencing the willingness about healthcare to professionals and non- professional members to aware about the organ donation and become organ donors for the better lifestyle in medication. The data collected and presented in this study will explore the interventions the gaps in



knowledge and attitude among the professionals in medical and non- medical students.

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