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## Bioethics and Socio-Economic Conditions of Ragpickers in Tiruppur City, Tamil Nadu, India

- A. Sebastian Mahimairaj,  
Arul Anandar College, Karumathur, India  
Email: [asmrajaocd2002@gmail.com](mailto:asmrajaocd2002@gmail.com)

- M. Jothi Rajan  
Department of Physics, Arul Anandar College, Karumathur, India

- M. Michel John Peter  
Department of Economics, Arul Anandar College, Karumathur, India

- Darryl Macer  
President, AUSN, USA and Director, Eubios Ethics Institute, New Zealand

### Editorial address, and all correspondence to:

Prof. Darryl Macer, Ph.D., Hon.D.  
Provost, American University of Sovereign Nations (AUSN), Arizona, USA  
Email: [darryl@eubios.info](mailto:darryl@eubios.info)  
<http://www.eubios.info>

Registered address of EJAIB: P.O. Box 16 329, Hornby, Christchurch 8441, New Zealand

**Eubios Ethics Institute** is a nonprofit group that aims to stimulate the international discussion of ethical issues, and how we may use technology in ways consistent with "good life" (eu-bios). It aims at an integrated and cross-cultural approach to bioethics, and has a global network of partners. Eubios Ethics Institute was founded by Darryl Macer in 1990 in Christchurch, New Zealand and in Tsukuba Science City, Japan. In 2005 we added Bangkok, Thailand to the network. For 25 years Eubios Ethics Institute has cooperated with many individuals and groups, including UNESCO and UNU, Asian Bioethics Association, youth networks, and seeks to empower people to be free thinkers to change the world, motivating youth to be leaders, and honing the skills of professionals.

### Abstract

Ragpickers are people who salvage usable items from other person's rubbish, and they are spread over different localities all around the world. This raises numerous issues related to the dignity of human life, and the right to education. In addition to discussion of these issues, this paper includes an interview study on bioethics of 150 ragpickers engaged in collection of papers, bottles, waste plastic materials, scrap iron materials and so on in Tiruppur city, Tamil Nadu, India. Ragpickers are mostly children below 14 years of age. The objectives of the study were to find out the socio-economic conditions of ragpickers, to examine the effect of environment on their health conditions and to identify their problems at work.

Society as a whole regards rag picking children as anti-social elements, an embarrassment to the community and unfit to live. However their useful contribution to society and ecology is little understood and generally ignored. The waste collected by these children is recycled and produces 25% of writing paper, the packing materials, egg trays, economic plastic and metal house hold items, and so on, used in our homes. Society and ecology benefit from the production of cheaper household goods, and the

slowing down of the destruction of the already threatened rain forests. It also helps to prevent the mountains of putrifying waste materials from building up in city centres. The ragpickers valuable contribution to society should not be ignored and taken for granted. There are a number of ethical and human rights issues raised by this practice, which should not be condoned as ethically acceptable social attitudes to a child's life.

## 1. Introduction

### 1.1. The Indian Context

In India rural society is inevitably characterized by small and marginal economic units. Growing communities had to look beyond personal cultivation for subsistence. A class of landless laborers came into existence, often bonded to the large landowners. These laborers used their children to help in their economic activities. Child labour is a global phenomenon (Tripathy, 1989). Child labour exists both in the developing and the developed countries of the world, though with a difference in cause and magnitude. The prevalence is more in the developing countries as compared to the developed ones, because the families to which the working children belong are in an urgent need of income of child labour for their subsistence whereas children in the developed countries are often working for pocket money. As Suresh (2015) wrote, *"The informal sector of the rural and urban economies of the developing countries is an important source of employment for a major proportion of the labour force, particularly child and women labour."*

Although the sectoral distribution of working children differs from country to country, child labour is predominantly confined to the agricultural sector followed by services and industry. The working children themselves may not be productive but are capable of relieving the adults for productive employment by engaging themselves to domestic chores and looking after younger children in the home. Thus, they allow their parents to spend more time on income generating activities. They also free adults for their migration to the areas of high employment.

In the urban areas, child labour exists both in the formal as well as informal sector enterprises, though its presence in the latter is more frequent in small manufacturing enterprises, which are spread over wide locations and can ignore legal restrictions, the children often work along with their elder relatives and friends. They are possibly not paid directly but indirectly through a supplementary wage paid to the main worker. The main occupations where the children are employed in the urban sector are those that don't require heavy labour. The packing pasting, labeling, wrapping, etc. are the main activities of the children working in small industries. Domestic works, hostels and restaurants, canteens wayside shops and establishments or street vendors or helpers in repair shops are the main occupations of the working children in the urban areas. Construction work is another activity that attracts children. In this context, child labour is considered a major source of cheap

labour and means of quick profits to the employers. Normally the supply of child labour always exceeds the demand. Consequently, child labourers do not have any bargaining power and they are easily exploited by their masters. Hence they are working at much lower wages than adults and made to work for longer hours.

Amongst the various causes of child labour, unemployment, poverty and indebtedness of the households are the most important. Many parents secure advances from the landlords or the employers against which the children are forced to work till repayment. In some cases the children are compelled to migrate temporarily to the nearest cities, or the urban areas of adjoining states to earn the necessary subsistence.

In most developing countries, parents depend upon their children to assist them in performing important work at home or outside. In the absence of any social security measures to the poor the dependence on children increases and in many cases the working children are the main or the only support for their parents. In this way, the children of the poor are economically valuable to their parents as a source of labour contributing to household income and social security.

### 1.2. The International Context

In India the extent of child labour is not as large as in Turkey, Thailand, Bangladesh, Brazil, Pakistan, Indonesia, Mexico, and Egypt, (Kumar, 2001). It is estimated at around 5.2% of the total labour force in India, as against 27.3% in Turkey, 20.7% in Thailand, 19.5% in Bangladesh, 18.8% Brazil, 16.6% in Pakistan, 12.4% in Indonesia, 11.5% Mexico and 8.2% in Egypt.<sup>1</sup> However, in Sri Lanka child labourers accounts for only 4.4% of the total labour force (Kumar, 2001). The workforce participation rate of children in the age group 10 – 14 years of India (10.4%) is less than Bangladesh (33.3%), Nepal (22%) and Pakistan (11.6%) but greater than Indonesia (6%) and the Sri Lanka (1.8%).

However, according to the ILO, India contributes to about a third of Asia's child labour and a fourth of World's working children in terms of numbers. According to various social scientists with estimates varying between 60 to 115 million, Indian has the largest number of working children in the world. An important feature of child labour in India is that nearly eleven to eighteen million working children are street children and approximately fifteen million children work as bonded labourers (UNICEF, 1984).

In Ancient India, it was the duty of the kind to educate every girl and boy and parents could be punished for not sending their children to school called Ashrams, which were really residential schools under a Guru (a learned sage). Child labour existed only in the form of child slaves. Children sometime even less than 8 years of age were purchased to do so called "low and dishonourable" work. Kautilya (4<sup>th</sup> century B.C) conserved it degrading to make children work on such

<sup>1</sup> <http://www.pibaizawl.nic.in/feature/archives/july05/july5.htm>

jobs and hence prohibited purchase and sale of slave children below 8 years of age (Kautilya Arthshastra). The rural artisan rarely worked alone. In fact, the entire family is a work unit with the "pater familia" being the master craftsman, occupations is determined largely on the basis of heredity, and children are introduced to their traditional craft at a young age.

In the late 17<sup>th</sup> century the most significant change was the growth of organizations involving the employment of large number of artisans. The Dutch silk factory at Kasimbazar in Bengal employed 700-800 weavers. But the characteristic unit of production was still the small unit. "The persistent dominance of family based work units indicated that any disciplined organization of an industrial society was not seen.

In the Middle of the 19<sup>th</sup> century there was an enormous growth of European industry in India especially during 1860-70 as seen by the growth the tea, coffee, indigo and jute industry. At this time, the factory industry taking the place of handicrafts. It was in the 1950s that the cotton and industry and coal mining were started in an organized way. However, in 1980 the number of people employed in these industries was rather high even though people were quickly being driven out form their old crafts.

It was after the industrial revolution in the early 19<sup>th</sup> century that industrially developed countries like Germany and France started taking place. Factory type units started spinning up. Agriculture became more mechanized and small land holdings were no longer economically viable. Small land owners left their lands and started working as farm labourers on bigger farms. Factories required cheap and in factories because they provided a cheap, uncomplaining labour force as against adults who could be more demanding and hence more difficult to handle. In the course of the 19<sup>th</sup> and early 20<sup>th</sup> century.

People especially in the European countries became conscious of the evils of the exploitation of children and the International Labour Organisation (ILO) was setup in 1919 to formulate guidelines to improve the working conditions of children and ban their employment before the age of fourteen. In the preamble to the constitution of the ILO, it is stated that in many regions the conditions of labour are such as to result in untold misery which disturbs the peace and harmony of the world. Children and young persons especially must be protected. At the very first session of the International Labour Conference a convention was adopted fixing the minimum age as 14 years for children in industrial employment. Between 1919 and 1965, there were 10 conventions on the minimum age. Finally in 1973, the convention concerning minimum age for admission to Employment (No 138) and the Recommendation (No.146) were adopted and these replaced all the previous conventions. However much needs to be done through national legislation in the various in the countries where exploitation of children still exists. Today, child labour is almost non-existent in the developed countries of the world. However, it still persists in alarming proportions in the developing countries. According to the ILO, the number of working

children the world over increased from 43 million to 52 million between 1970 and 1979 of these approximately 29 million were from South Asia, 10 million from Africa, 9 million from East Africa, 3 million from South America and about 1 million from the developed countries.

### **1.3. Previous Research on Rag-picking in India**

Rag picking is probably one of the most dangerous and dehumanizing activities in India. Child ragpickers are working in filthy environments, surrounded by crows or dogs under any weather conditions and have to search through hazardous waste without gloves or shoes. They often eat the filthy food remnants they find in the garbage bins or in the dumping ground. Using the dumping ground as a playing field the children run the risk to come upon needles, syringes, used condoms, saline bottles, soiled gloves and other hospital wastes as well as ample of plastic and iron items. They suffer from many diseases, such as respiratory problems, worms, anaemia, fever and other problems which include cuts, rashes, dog bites (Shrestha, 2000).

Ragpicking is the profession mostly dominated by children aged 6 to 15 years who do not have any other skill and thus by way of refuse collection contribute to household income or own survival. These are mainly children of slum dwellers and poor people. Some of them are abandoned or runaway children. A sustained effort of national and international organizations in the recent past to combat child labour has thrown light on the issue leading to large scale debate and interest in the problem. This has resulted in research and development of literature on the subject.

Few research studies have been done on the situation of child ragpickers in India. There are, however a number of studies on child labour in different countries, as well as, in India. The studies, though not directly connected with the child ragpickers have a special bearing on the problem under investigation in this thesis.

### **1.4. Socio-economic conditions of Ragpickers in India**

Balkumar et.al. (2001) in their study of "Nepal – Situation of Child Ragpickers: A Rapid Assessment", mentions about the family of child ragpickers of Nepal. The authors conducted a survey of 300 children aged 5-17 years working currently as ragpickers in six major municipalities. The average family size of child ragpickers is 5.4 members, which is slightly higher than the national average of 5.1. The girl ragpickers usually come from larger families (6.3) than boys do (5.2). This assessment shows that 60% of children interviewed have both parents (own or biological father or mother), only few are belonging to families with a step parent or single parent or no parents. In this assessment, three indicators were chosen to determine the economic background of child ragpickers. Over two thirds of respondents (68%) indicated that their family owned home. The majority of child ragpickers families (55%) do not own farmland.

The main occupation among families of ragpickers is of a nonagricultural nature, which may include small business, mechanical work, low paid services and other activities. For a few families, their main activity is either in junkyard shops or ragpicking.

Tripathy and Pradhan (2003) in their work "*Girl Child in India*," explains the problem of child labour both male and females, and their condition in a hazardous occupation of ragpicking in Berhampur town (Orissa). In this work they mention about the family size of girl child ragpickers. The girl child ragpickers family size is more than 6 persons.

The work, *Ragpickers: Scavengers at a Different Graveyard A Documentary on The Ragpickers of Mumbai* (2005) explores the life of ragpickers that majority of them are below the poverty line and socio-economic strata and live a difficult life. Singh (2006) in his book "*Child Labour*" broadly categorized, ragpickers into 3 groups, based on the contact with their families:

i) Children who will be living with their families. Whether it be on the street, in slums, or waste land or abandoned/derelict building and so on, but would be spending a lot of time working or hanging about on the streets. It has been estimated that this will be the largest of the three categories; ii) Children who would be living and working on the street with occasional family contacts. These children, sometimes, send money to their families. They consider the streets as their homes; iii) Children who would be having no family contact what so ever. These children will be either orphaned abandoned or neglected by, or estranged from their families. Psychologically, they are deprived of love, affection and sympathy of a family.

Thilagaraj and Prasanna Poornachandra (2001) conducted a study of 706 street children of Chennai. Of the total they explain about family victimization. The survey reveals that most of ragpickers are deprived of basic facilities of food, shelter and clothing. A significant number of children do not live with their families and there are children who have to undergone a great deal of hardship to secure basic needs.

Ashoka (2006) made an attempt to explore the social status of street children in his work "Child and the Law". According to him, street children are those wandering on streets, begging for alms, vending goods, smoking besides sitting at corner places, indulging in quarrels and participating in major street brawls. These are the common features in most parts of urban areas. It is true that many children are pushed out of the home due to various factors. Among the many, poverty is the main contributing factor to give rise number of street children. Poverty and socio-political insatiability are the potent reasons that make children leave their homes and take to the streets.

### 1.5. Education Level of Ragpickers

Tripathy and Pradhan (2003) made an attempt to analyse the problem of child labour and their condition for those engaged in hazardous occupations like ragpicking in Berhampur town (Orissa). Analyzing the data the authors revealed most of child labourers are

illiterate who do not know even how to read and write, and almost all the female child labourers are illiterate.

Shishir Srivastava (2008) in his article "*Ragpickers in Modern Day India*" studied the child ragpickers, in the capital city of Delhi. According to him there are more than 100,000 ragpickers in India with most of them being young children. Young children's education has been promised from time to time, but this promise is never kept. Forget education, these children have to work in the harshest of environments and yet find it difficult to make ends meet. The government has tried to do a lot for the young children. The Sarva Shiksha Abhiyana, the Free Mid-Day Meal Programme are initiatives taken by the Government to improve their status.

Rai (2002) has conducted several case studies of child ragpickers.. Deepak Saxena in his research report analyzing educational status of ragpickers found that most (94%) ragpickers are illiterate. The remaining 6% of them are having only 1 to 5 standards of education.

## 2. Contemporary Scenario of Ragpickers

### 2.1. Forces to lead people to become ragpickers

The important factors include economic compulsion, which continues to raise the size of children in the labour market. Their life has become full of risks and their harsh poverty compels them to do any type of work irrespective of their age and sex. Undoubtedly, poverty alleviation programmes have been introduced by the government in these areas with help of voluntary organization. However, because of the limited coverage of the programme and defective service delivery policy, benefits don't reach the deserving section of the society in the sense their backwardness deserves and they perceive to overcome the poverty they are experiencing. Ultimately, the poor, needy, weak and fearful children who cannot go against their parents are ready to face neglect, abuse and exploitation, when they deserve to have extra protection, and care because they don't have the physical and mental maturity to face.

The Ministry of Programme Implementation (PTI) in its annual report of 1990-1991 pointed out there were 30% of population in 1987-1988 below the poverty line and it was estimated that the percentage will go down to 26% by 1989-1990. But unofficially, we know that still there are more than 50% of the population below the poverty line, but of this, the percentage of children, as stated earlier to be below poverty line, is very high. A study conducted by the Singh (1990) reveals that as high as 39% of child workers acted as labour because of poverty and 20% of increase their family income. The motivation for 19% employers to prefer the children is that they are cheaper. Another study (George, 1977) conducted in Madras says that three-fourth of children joined labour to supplement their family income. In the matchbox industry (CRSR, 1989), 95% children took up jobs because of poor economic conditions of their parents.

Increasing economic compulsion has been noted as a pull factor for migratory rural children. A study

conducted in Bombay (Singh, 1979) reveals that 63.2% of children migrated to Bombay in search of employment due to lack of family income. Inadequate income of the adult earner is another factor which leads to child labour practices. A study conducted in Varanasi, Badhoni and Mirzapur belt (Singh, 1990, p.114) reveals that one of the major compulsions for the majority of children to take up jobs has been the inadequate income of the family earners. In fact, economic compulsion is also increasing due to unemployment, under employment, large number of dependents, little or no skills and lack of productive assets due to which children have to work.

A developing country like India needs to have systematic planning to ensure a risk-free and secured future. Undoubtedly, some effective attempts have been made from time to time by the government and voluntary agencies to change the feeling of those who believe in large family size. In fact, the problem needs in depth education of population, implications of population's growth, complications which people (women and children) are likely to face in the absence of resources of different kinds which they deserve and the country feels to promote for the better quality of life. However, the limited size of population control programmes and its implementation at different levels in the way people don't perceive, it is not achieved its acceptance; therefore, rural and urban and tribal people still continue to believe in large family size. For these poor, unexposed and backward families, children are not a liability on them. Moreover, they understand that more children means more income for the family. In fact, to check the problem, it needs overall planning at every level in the way people perceive to accept it. As pointed out earlier, larger family size in a poverty ridden society puts the parents in a different situation where they fail to carry on their responsibilities towards family and force their children to take up jobs even at a tender age. Their ignorance encourages them to children the view that children are God gifted and we have no control on it.

## 2.2. Child labour

Child labour is a universal phenomenon, but estimates of the number of persons that are generated by different national and international organizations differ significantly. While it is impossible to quote a single figure for the extent of child labour in the world, it is clear that the number of children working worldwide runs into hundreds of millions.

The percentage of economically active population of children is very high in developing countries and it is estimated that 95% of the working children of the world are in these countries. It is also know that on an average 25% of the total child population is economically active in developing countries. The extent of child labour varies from country and country. For example, in Ethiopia, Senegal, Bangladesh, Pakistan and Nepal the percentage of economically active population of children ranges between 21 and 57% (UNICEF, 1984).

The highest workforce participation rates of children were reported from Asia, Africa and Latin America. But half of the child labour are located in Asia alone. In Africa one out of every three children is actively engaged in an economic activity. However, in Latin America one out of every ten child works. According to estimates of World Health Organisation (WHO) one out of every four children works in India, Thailand and Turkey, and about one in every three in Mali and Tanzania. In Mali about 45% of the children in the age group of 10-14 years were part of the labour force. In Bhutan, Bangladesh and India, the proportions of working children were 44% 32% and 20%, respectively.

The International Labour Organisation (ILO) estimated 52 million working children in the world during 1979. An overwhelming majority of the working children (50.7 million) was from the developing countries with Asia having a learning share (36.1million). In Asia, however, the South East Asia alone was having a major chunk of child labour force (29 million). In 1990, the ILO again estimated the economically active children under the age of 15 years as 75.5 million in many as 124 countries. Another significant finding was that 70.9 million of them were in age group of 10-14 years. In another estimates (1996) the ILO put the number of child labourers between the age of 10 and 14 years at 73 million in some 100 countries.

In a report entitled "*Child Labour Targeting the Intolerable*" the ILO doubles its previous estimates of child labour saying 250 million children between the ages of 5 to 14 years work in developing countries with some 120 million working of full time and 130 million as part time workers. The report has also highlighted that in the total child labour force the share of Asia was 61%, Africa, 32% and Latin America, 7%.

Whatsoever, the case one infers emerging from the figures given above, is that child labour is comparatively more in Asia than Africa and Latin America and also its magnitude is very high. The ILO in an experimental survey has also found that in Ghana, India and Indonesia the average percentage of economically active children aged between 5 to 14years is 24%. In Senegal it is as high as 40%. These estimates are based on a sample survey of 4000 households and 200 businesses in each country.

Another significant feature of child labour is that in the developing countries 56% of the children in the age group of 10-14 years are boys. However, if it was possible to measure the number of girls doing unregistered work as domestic help or working at home to enable other family members to take-up paid employment, the figures so arrived may show more female child labourers than male.

Developing countries of the world being agrarian in nature seen to employ child mainly in agricultural activities. Two thirds of the working children of the developing countries live in the rural areas and nearly three quarters of them are engaged in agriculture and related activities. Most of these workers are unpaid family workers (70%) and the proportion being higher

in rural areas (81%). The International Labour Organization has further reported that "in some developing countries nearly a third of the agriculture labour force is comprised of children. In India nearly 25% of the working children work in the agriculture sector. In Bangladesh, most of the economically active children (82%) are in agriculture and in Kenya 25% of the agriculture labour force are children.

In India the extent of child labour is not as large as in Turkey, Thailand, Bangladesh, Brazil, Pakistan, Indonesia, Mexico and Egypt. It is estimated around 5.2% of the total labour force in India as against 27.3% in Turkey, 20.7% in Thailand, 19.5% in Bangladesh, 18.8% in Brazil, 16.6% in Pakistan, 12.4% in Indonesia, 11.5% in Mexico and 8.2% in Egypt. However, in Sri Lanka child labour accounts for only 4.4% of the total labour force. Even the workforce participation rate of children in the age group 10-14 years of India (10.4%) is less than Bangladesh (33.3%). Nepal (22%) and Pakistan (11.6%) but greater than Indonesia (8%) and Sri Lanka (1.8%).

In India, as elsewhere, no proper estimates of child labour are available. Various social scientists and non-governmental organization have estimated their own figures depending upon their methodology and definition of child labour. Thus, the estimates of child labour are not exact and vary from source to source. However, according to the ILO India contributes to about a third of Asia's child labour and a fourth of World's working children. According to various social scientists, with estimates varying between 60 to 115 million. India has the largest number of working children in the world. An important feature of child labour in India is that nearly eleven to eighteen million working children are street children and approximately fifteen million children work as bonded labourers.

In India if all the children under 15 years of age who are not attending schools are considered as child labourers then the figures of child labour run into one hundred million. More recently, in 1997 UNICEF estimated –child labourers in India at 73 million of whom 15 million are said to be bonded and stated the condition of 70.6 million in the age group of 5-14 years who had not gone to school was not known.

A Baroda base operational Research Group placed the estimates of child labour in India for 1985 at 44 million. The study further reported that one –sixth of the working children are of tender age. Every third household has a working child and every fourth child in the age group of 5-15 years is employed. Even the Ministry of Education (1985) reported that no exact figure of child labour in India is available but the number of working children here may be nearly 4 crore. The Ministry of Labour has estimated the child working population in the country as 15 million.

The Planning Commission of India has pointed out that the extent of child labour in India is on the increase overtime. In 1985, the child labourers under the age of 14 years was 17.5 million, in 1990, 18 million and in 1995, 20 million. Even the commission on Labour standards has reported 25 million working children in the country with a growth rate of 4%

annum. A plan outlay, it is estimated of 1.500 billion USD is required to abolish child labour totally.

According to 1971 census 10.7 million children were working in India for their living. The national sample survey organization estimated the child labour force as 16.25 million on 1 March 1978 (14.68 million rural and 1.57 million urban) and 17.58 in 1985. The survey has shown that the extent of child labour among male children is higher than among female children. Also its magnitude is higher in the rural areas than in the urban areas. According to census estimates the number of children labourers (5-14 years) was 13.6 million in 1981 and reduced to 11.2 million in 1991.

Thus, the census estimates though show a progressive decline in the number of child labourers over the years yet several other surveys by Non-Governmental Organisations have shown that the problem of child labour has been on an increase over decades. Various estimates of child labour generated by a variety of sources make it difficult to draw inference. Whether child labour in India has increased or decreased over time. However, it is obvious that the country accommodates one third of the world child labour force, which contributes sustainability (nearly 20%) of the country's Gross Domestic Product. On an average, in India children's contribution to household income is between 20 and 30%.

While child labour is continuously being employed, not much is known about the contribution of child labour to the household income. Moreover, not many empirical studies exist on the subject in the state of Punjab, which is one of the most developed states of India in terms of its per capita income. The present study is a modest attempt in this direction.

### **2.3. Employer's preferences for child labour**

One of the main objectives of the employer is to get more profit from limited expenditure. Moreover, they are aware of the economic compulsions of the families having extreme poverty. They watch out for exploiting the parental economic compulsions when they know that children of backward families are more tolerant, can be put on difficult jobs for long hours, even on lower wages, secondly, they have understood the productive quality of children who do not raise grievances pertaining to their working conditions. A study conducted Singh, (1990), in Varanasi finds that 33.5% employers prefer children as they work hard. For 18.5%, child labour is cheaper; for 15% they can be put on any job, for 15% child workers create less trouble; for 15% they can work for long hours, these establish the importance of employers willingness to employ children which further becomes an important reason for increasing child labour in the country.

Overall literacy percentage in the country continues to be unsatisfactory. In the areas where the rate of child labour is higher, illiteracy is also longer and encouragement of child labour practices. It is a well established fact that educated, enlightened and exposed parents plan the future of their children and make every possible effort to ensure all round

development and protection to their children from insecurity and risks of life.

It is observed that the parents who are illiterate keep busy with their present happy life of the family and never think of the future. They believe in employing children rather than planning their future rather than planning their future. The study conducted (Singh, 1990, p.98) on child labour indicates that 84% of the child workers' fathers were illiterate, 13% were just primary school graduates and 3% were middle and high school graduates. Similarly, another study (George, 1997) reveals that most of the children who came to the labour force belonged to the lower literacy group. About 44% of children workers parents were illiterate.

There are some more factors like rapid urbanization, home environment, and broken homes, which have been found responsible for child employment which will be discussed in the following chapters. However, the employment of children holds both positive and negative aspects. Positive aspects motivate the parents and employers to employ children whereas negative aspects retard children's development, motivate them to develop evil practices which become areas of interest for the researchers, social thinkers, government and society in general to feel concerned about the problem.

The proper physical, mental, social and spiritual development of children is linked to the availability of education, nutrition, love and affection. Physical exercises keep their own place. These need priority work in the interest of children's physical fitness when they become capable to do work, should be encouraged with the care that its interests remain for developing people. Compulsion of work and excess load, as said earlier, retards the growth and development of the children and is not an economic gain of the family. The following points can be noted:

i. The child has vision to observe and learn to think without taking much of the time. If it is made interesting to him/her. He/she has more flexibility of arms, fingers and body as compared to adults which helps them learn and pickup work skills easily, and develop a sense of responsibility and confidence.

ii. By and large, a child takes more interest in knowing and learning a thing. In this way, a curious child by nature gradually becomes trained in different skills provided it is made more purposeful with availability of all possible development services

iii. Children who assist in the family occupation or work with their relatives do not have the same kind of the problem and treatment, which employed children are getting with their employers and adult co-workers. Therefore, these self-employed children have freedom to express their grievances and difficulties they face while working. Therefore, work is not much burden on them as employed children feel and experience.

iv. The aim of education and training institution is to help the people to become more responsible and independent. Work environment, if developmental provides a kind of climate which makes children sincere, punctual and disciplined.

#### **2.4. Negative Aspects of Child Work**

Being young and the future architect of the nation, the children deserve to have overall protective, primitive and development opportunities in the areas of their interests. Compulsion of work, when they are young, deprives them of their right stand is unjustified to humanity and the future of the nation. In the absence of these, there will be problems in proper human resource development. The future of a large chunk of young population will be full of risks and it will further raise the rate of dependency in the country.

Long hours of work place along with morning and evening hours at home is injurious to their growth and development. Night work, continuous standing or sitting or use of single set of muscles in poor working environment where they carry heavy loads, pressure of speed of work, contact with the industrial poisons and so on, provide harmful conditions for the future of child labourers. Compulsion of work performance in a given time with controlled supervision leads furthermore to problems relating to the physical fitness and mental alertness of working children.

Children while working get liberty from the parents and are given importance when they supplement the family income or give or helping hand to their family. This kind of parental freedom motivates these children to take up independent decisions which further lead them to spend more of their earnings on their own and start smoking, gambling and join gangs which can affect their future development.

Employers attitude to have more and more protection on lower expenditure encourages them to put the children in exploitative and abusive conditions and mature them in a watchful night administration which results in the form of occupation diseases, physical deformity and handicap. A study conducted on working children (Singh, 1990, p.145) reveals that after working 57 parents, 65 child workers themselves accept that child workers have the problem of headache. Eye ache has been seen in 54 cases, which has been confirmed by 30 parents stomach and joint pain has found in 160 cases. Chest pain is reported by 25 child respondents. Other problems reported by child workers are finger pain, skin diseases and so on, they study further reveals the king of bad habits which children develop after working. This show that as high as 51% children develop the practice of playing cards, 45% smoking and 5% gambling.

It is felt by some of the employers who employ children that output of the child worker is comparatively less profitable as compared to the adults. According to them, child needs more supervision and care and chances of damaging raw material are higher especially when they learn to work.

Children, while working, decrease the value of adults in the labour market and raise the risk of adult employment. It further moves with a lot of psychological, social and moral implications for children, economic implications for adults and a social stigma to the society at large. These deserve in-depth

study of the problem reality of their situation, responsible reasons motivating them to continue the practices and to have desirable and perceived corrective strategies, which will be discussed in the coming chapters.

Research of any kind needs proper, systematic and in depth understanding of the subject one is going to select for study. Therefore, or selection of the problem, which is new and need based picking up the pattern of studies in the field introduced by the researches and to have an all dimensional understanding of the problem, one has to go through the studies conducted in the field. Consultation of related literature helps the researcher to have an adequate, comprehensive understanding and up today knowledge of the subject. More so, it brings enough explanation of doubts one finds in the process of study and also generates sufficient guidelines, which enable the researcher to conduct his study without experiencing complications, which could come in the absence of its consultation.

As per the 1981 census, India is the second largest country in the world and has the largest chunk of the child population. The estimate of the Director- General, ILO shows that about one-eighth of the children in the age group 10-14 years are at work, and further one – third of rural children are seen working. According to the census reports of 1961, 1971 and 1981, the number of working children are 14.6, 10.8 and 13.6 million respectively. The Operation Research Group (ORG), Baroda, on the basis of an all India survey estimates that there are 44 million children at work. Further, labour force projection estimates that the number of child workers is to go up to about 33.38 million by 1990 and 37.95 million by 1995. It means a threefold rise of child labour population between 1981 and 1990. This demands the concern of academics, bureaucrats and those who are in national planning and development.

Undoubtedly there has been a regular increase in the work participation rate of child worker in the years for which we have census data. Moreover, projections made and studies conducted thereafter also reveal the non-stop increase of child labour population in different forms. During 1971-81, available data show that over 90% of child workers come from rural areas. In total, there has been 3.91% increase of child workers from 1971 to 1981. Of the total increase, 25.64% are in urban areas whereas in rural areas, this increase is just 2.12%. The rate of increase has been noticed higher in case of girl child workers in both rural as well as urban areas. That is, 30.48% and 47.06% respectively. In case of male child workers, there has been increase of 19.67% in urban areas i.e., 30.48% and 47.06% respectively. In case of male child workers, there has been increase of 19.67% in urban areas whereas their rate of participation in rural areas goes down to 8.24%. The data available further indicates that in 1981, 63% male and 77% female child workers were illiterate in urban areas, whereas in rural areas, the percentage of illiteracy had been 80% for male workers and 89% for girl child workers. Sector-wise participation on percentage basis shows that in

the year 1981, male child workers participation in primary sector was 84.63 for male and 86.39 for girl workers, and in the secondary sector, the participation percentage of male workers was 9.18, girl workers participation percentage was 9.7 in the tertiary sector, it was 3.91 whereas male workers participation was 6.19 percentage points.

The priority of employees to employ children for profit has raised the extent of child workers because of which they now found to be seen in almost all states and by and large, in the fields where adult workers are working. A comparative rate of child workers participation between 1971 -81 given here reveals the increasing rate of their participation of both rural as well as urban areas and in both the years, the participation rate of employed worker is higher as compared to those working in household.

As evident from above, over 90% child work force comes from rural area. The participation rate of child workers varies from state to state and from one organization to another. For example, according to a 1978 survey male child workers participation rate in same area varies from 0.3% in Punjab to 10.5% in Andhra Pradesh. However, the appearance of child labour in organized sector is reported to be eliminated. Statistics of the Ministry of Labour show a decline in the average daily employment in the registered factories from 7784 in 1950 to 3592 in 1986. It is also reported that children constituted only 0.07% of total employment in factories in 1976. However, these figures don't underestimate the incidence of child labour in the organized sector, even so, there is hardly any doubt that child employment is mainly concentrated in the unorganized and semi organized sector and small scale establishments. One example (UNICEF, 1984) in Mirzapur carpet weaving belt, found child workers are reported to be more than 40%, in Sivakashi, 60% of the workers were girls. Similarly out of 800,000 were children from 0-14 years. Of total workers in mica and shllac factories, the percentage of children is 30% and ,10% respectively. An ILO study says that about 35% of workers in the Firozabad glass bangles industry are children. A study (NIPCCD, 1977) reveals that 18.7% of children start working before they complete an age of 12 years. In urban areas, significant number of children are found to be seen working in small establishments like shops, way side restaurants, domestic help, brick industry, stone breaking, garage, metal workshops, handloom and handicraft industries. Thus their area of operation is scattered across various work establishments.

Child labour is a heinous social economic problem. Countries all over the world have denounced child labour regarding it as a social evil that destroys the potentially of the future generation in any society. Most of the developed and some of the developing countries have passed probably legislations to curb the practice of child labour.

To a large extent, the entrepreneurs who run workshops employing orphans have a free hand where their access to child labour was concerned. However, the attempts to develop workshops for orphans into



dependent enterprises failed due to inadequate profits. A system of “renting out” cheap child labour developed next, with the entrepreneurs working in conjunction with feudal political authorities (Kings) here. As a result of this, the spheres of life and work of the children were duly separated from each other.

The Napoleonic system has led to the liberalization of the economics in the western territories (Rapport and McPhee, 2013). Prussia followed suit by promulgating the Hardenberg Legislation in 1810. There remained only a few small territories in which efforts were being made to restore the economic system of the Ancient Regime. The first measures towards child protection were initiated in England 1802 (Kumar, 2006), sparking off a controversy in Germany about the pedagogic value. Child labour has deleterious effects on health and its economic effects. The protective clauses for labour embodied in the statutes of guilds dating back to the Middle Ages were either no longer in keeping with changes in reality or were forgotten. It was not altruistic but rather socio-political considerations which led to Legislation for child Protection. Here, the statement made by General Von Horn in 1818 as a result of child employment for night work in factories the army was being deprived of sufficient stand – by recruits induced suitable legislation. Industrial pedagogy proceeded on the assumption that the disciplining of child factory workers could be combined with the development of creative skills. However, no specific line of teaching was developed for this purpose.

In the “Communist Manifesto” Marx and Engel already defend the parents of working children against these accusations. But they seized on a realization which was to surface later when they formulated the following questions addressed to the bourgeois. “Are you accusing us of wanting to put an end to this exploitation of children by the parents?”. To which they replied. “We admit this crime” lashed out at the “Pharisacainess” behind these accusations in 1863 in his *“Das Capital”*. In 1827, the world renowned “Bourgeois” pedagogue F.A.W. Diesterweg criticized the utilization of children as factory workers – a view from the Pedagogic Angle, *“However he did not at the same time question the phenomenon of capitalist exploitation”*. In Diesterweg’s opinion, children under 10 should not be allowed to enter a factory and should only work for a maximum of 4 to 6 hours there. He pleads for socially corrective state intervention in economic life through the education system.

The emergence of the proletarian movement in the *“Fraternity of Workers”* (Arbeiterverbruenderun) official protest against child labour was articulated for the first time by the workers themselves. According the congress of workers convened in Berlin between 23 March 1848 and 3 September 1848 resolved that no child should be engaged in industrial work of any sort which prevents regular and full attendance of school before completing 14 years of age, however, the recruitment of children infantries and for paddling is not permitted on any grounds whatsoever before the child completes 14 years of age.

In opposition to the representatives of the bourgeois parties the social democratic members of parliament attacked child labour during the last quarter of 19<sup>th</sup> century and questioned their ideological justification that child labour has educational value. They also voiced strong criticism on “the transformation of mature human beings into mere machines” (Karl Marx) and pointed out the harm this was causing to the mental, physical and moral development of these. Child Labour – “Social Assassination” as Engels termed it – was an expression of the prevalent bourgeois form of society. Despite legislation against child labour, the number of children working in factories doubled between 1880-86.

The Social Democratic education movement of the “Friends of Children” (Kinderfreunde). Since 1908 in Austria and 1923 in Germany became the largest non-professional pedagogical and child movement of its co-educational, a religious, child education and self-managed children’s groups formed an alternative to bourgeois and clerical institutions of education and followed the thoughts of August Bebel. The suppression by the state of the proletariats emerged under social democracy, with its Marxian Eisenach programme was simultaneously or soon after supplemented by the positive role played by the state through social legislation in shaping social conditions.

India has the largest number of child labourer in the world and withdrawing them from work and ensuring their rehabilitation is a major challenge facing the country. The country has the largest child labour population in the world. The 50<sup>th</sup> round of the National Sample Survey conducted in 1993-94 estimated the child labour population as 13.5 million and according to 1991 census it is 11.28 million.

However, child labour is not peculiar to India alone – it is global phenomenon. Recent estimates (1998) by ILO point out that developing countries alone account for 120 million full-time working children (between 5-14 years of age). Of these 61% are found in Asia.

As a country, India has the largest child labour population in the world in terms of absolute numbers. But the proportion of working children to the total labour force is lower in India that in many other developing countries. In 1991, the total working population in the country was 314 million, out of which the number of working children was 11.28 million, which works out be only 3.59%.

Another important source of data to estimate the number of working children is the data on children out of school. As per the estimates for 1995 -96 there were 173 million children in the age group of 6-14. O these 110 million children are estimated to be out of school. Of the 110 million children 60 million are girl children. (Source: Government of India 1995-96 estimates MHRD, NCERT, SAIES provisional statistics).

Another aspect of child labour in India is that it is much more of a rural phenomenon than urban. More than 91% of the working children are in the rural areas and employed in agriculture and allied activities. Cultivation, agriculture labour, livestock, forestry and fisheries account for 85% of child labour. In the urban

areas, child labour account for 8.74% in the manufacturing servicing and repairs. Out of this only, 0.8% of the children work in factories.

The unorganized and informal sector both in urban and rural areas account for almost all the child labour force. The distribution of child labour in various states appears to indicate certain correlations. States having a longer population living below the poverty line have a higher incidence of child labour. Similarly, higher incidence of child labour is accompanied by high dropout rates in schools. The incidence of child labours partly linked to the level of socio-economic development of an area and partly to the attitude and approach of parents of the children and employers and socio-cultural compulsions.

### 3. Field survey of Rag-picking

#### 3.1. Objectives of the study

1. To assess the age of the ragpickers
2. To find out socio-economic condition of ragpickers
3. To examine the effect of environment on their health condition
4. To identify the factors responsible for poor conditions of the ragpickers.
5. To identify their problems with respect to bio-ethics and to suggest remedial measures to enable them lead a dignified life.

#### 3.2. Methodology and Sampling

The district of Triuppur is one of the industrially developed districts in Tamil Nadu, India. 150 ragpickers were selected randomly from different parts of Triuppur city in Tamil Nadu for purpose of collecting data. A structured questionnaire / interview guide has been used in which questions and items regarding the socio-economic background and other problems of the child ragpickers are included. Efforts have been made to elicit their free and frank views, and the research was approved by the Institutional Review Board of AUSN.

#### 3.3. Research Design

A simple descriptive research design was used when data were collected by using a survey methodology in order to examine the effect of environment on their health condition. Since, one of the objectives of the study was to determine the socio-economic conditions of ragpickers, earning patterns and to identify their problem at work, thus, the researchers have adopted a descriptive design. This study has thus used a descriptive design based on survey methodology.

#### 3.4. Profile of the study area

Tiruppur is one of the emerging industrial cities in Tamil Nadu, India, formed in February 2009. The district is well-developed and industrialized. The Tiruppurbanian industry, the cotton market, and the famous Uthukklui butter, among other things, provide for a vibrant economy. The city of Tiruppur is the administrative headquarters for the district. As of 2011, the district had a population of 2,479,052 with a sex-

ratio of 989 females for every 1,000 males. Being an industrialized city, ragpickers are found around the city, so the researcher decided to select the district of Triuppur in Tamil Nadu for the present study.

#### 3.5. Collection of Data

The required primary data were collected from the same respondents through the questionnaire and by meeting them in the railway station and bus stand. The information was gathered during the working hours. The data were collected during the month of July and August 2015.

#### 3.6. Limitations

There are a few problems encountered by the researcher. The respondents were located in different parts of the city. Hence, contacting them directly for asking questions was time consuming. The researcher was often travelling from one place to another place for collecting the data.

### 4. Analysis and Interpretation of the Field Data

#### 4.1 Socio-economic Characteristics

The tables present the distribution of the ragpickers of various socio-economic characteristics.

**Table 1: Distribution of Respondents based on the Age Group**

Age group	N	SD (standard deviation)	%
Below 10 years	40	6.6	26
11 – 20 years	105	17.5	70
21 – 30 years	5	0.8	3.4

It is evident from Table 1, that a majority of the respondents (70%) belong to the age group of 11 to 20, and one quarter (26%) of the respondents belong to the age group of below 10 years. The age group between 21 to 30 years represents just 3%. The majority of them (70%) are boys (N=106/150). Two thirds (N=99) were illiterate.

**Table 2: Distribution of Respondents based on Past Residence**

Locality	N	SD	%
Rural	103	17.16	69
Urban	42	7.0	28
Semi-urban	05	0.8	3.4

It is seen from Table 2 that 69% of the respondents are from the rural areas of the Triuppur district itself. Only 28% of respondents came from urban areas of different districts in different towns of Tamil Nadu and Andhra Pradesh. The remaining 3% of the respondents are from semi urban areas.

Most, 76% of the rag pickers belong to a nuclear and the remaining 24% belongs to joint families. It indicates that family which keeps less number of helping hands is producing the higher number of child ragpickers. It may be to supplement the income of the family.

**Table 3: Distribution of Respondents Based on Place of Living**

Place of staying	N	SD	%
As a tenant	17	2.8	11.40
Small Hut	16	2.6	10.70
Bus station	07	1.1	4.10
Railway station	110	18.3	73.40
Total	150	25	100

It is seen from Table 6, that 73% of the respondents are staying at the railway station, and 4% of the respondents are staying at Bus Station (seven persons). Only 11% of the respondents are staying as a tenant and the same number in a small hut.

The respondents are divided into two groups based on the experience. 58% of the respondents are working in the field of picking 1 to 5 years and the remaining 42% of respondents have worked in the field of picking for 6 to 10 years!

One third of respondents self-reported annual savings (47 out of 150 respondents), whereas 107 out of 150 sample respondents said that their savings are nil. Most, 80% of respondents are in debt, while the rest, 20%, of the respondents are not. Hence, there is a clear trend of indebtedness found among the ragpickers.

**Table 4 Distribution of Respondents Based on Means of Transportation for Collection of Garbages**

Source	N	SD	%
Bicycle	15	2.5	10.0
Four wheeler cycle	05	0.8	3.40
On Foot	130	21.6	86.70
Total	150	25	100

It is clear from Table 4, that 87% of the respondents go on foot for rag picking, 10% of the respondents are going by bicycle and remaining 3.4% by four wheeled cycle. This indicates that the majority of children are collecting garbages on foot.

#### 4.3 Problems facing Ragpickers

Almost all, 91% of the respondents confirmed the statement regarding the bad effect of this work on their health and only 9% of respondents expressed in the negative. Most, 82% of the respondents are affected primarily by health issues as their most important concern amongst the list presented to them. 13% of respondents faced problems by Gang leader and goondas while collecting garbage, and remaining 5% of the respondents aid that their largest issue was being disturbed by the local police.

**Table 5: Nature of Problems Faced by the Ragpickers**

Type of Problem	N	SD	%
Health	111	18.5	82
Police	07	1.1	5
Gang leader and Goondas	18	3.0	13

Almost all, 97%, of the respondents expressed that they don't want any welfare schemes from the government and remaining 3% of respondents want the government welfare schemes.

### 5. Bioethical concerns of Ragpickers

#### 5.1. Age Group

Even the poorest of the poor will keep the children at home even in their total poverty. That is why from infant to the age of ten years there are major incidents of ragpicking. Poverty makes some parents helpless. This throws the children into the streets. This starts at the early age of ten years and continues for a decade in the life of children. The major reason for this long period of ten years could be the non-availability of safety jobs. Since, there is no substitute available to the children; they are forced to continue as ragpickers. Their mental makeup is turned to such occupation. But this has to change according to age because of various factors. By this time their mind will be matured to some extent which make them to realize the situation. The other reason could be to attain marriageable age, which brings a lot of changes in one's mental makeup. The other reason could be that they become physically fit to carry out difficult tasks. This physical labour can be escaped from the humiliating occupation like ragpicking.

#### 5.2. Sex

Males have more freedom in doing the lower tasks like ragpicking. The pattern shows that this occupation also has no exemption from the male dominated society. There is no inter-gender justice. The other reason could be the influence of the patriarchic community in which the male has shouldered the responsibility of the families. The male has more responsibility to the family needs of the female. Of course the female also comes to the streets to attend the family needs.

#### 5.3 Education

Illiteracy causes ignorance. The ignorance is the mother of all evils. That is why there is fifty percent difference between the literate and illiterate children in the occupation of ragpicking. Literacy throws many windows of knowledge to the children like reading, access to newspapers, reacting to the contemporary incidents in the society, and so on. Naturally the awareness makes one to be ashamed of the occupation. The awareness makes a lot of difference in determining the consciousness of human beings. The existing social condition of the awareness of social

conditions will contribute a lot in making one's own personality.

Another reason could be the parents themselves. The parents deliberately or inevitably keep the children out of the educational atmosphere even though education is free. The reason is that the income from children makes a difference in their living conditions positively. Some parents themselves degrade the dignity of their own children. Of course the parents may feel constrained by the forces around them, the whole social issue needs to be resolved.

#### **5.4 Migration**

The majority of ragpickers in this study migrated children from the rural areas. They have come to this occupation because their parents themselves are in need of such a condition so that the children are thrown into the streets and they will be forced to take up any small work to contribute something to be suffering families. The autonomy of their children is denied.

This scenario is reduced to half when we come to the urban situation. The reason is that the parents are already habituated to the city conditions. They are little bit better though they may be living in the slums or in such bad conditions. Since they have a little financial capacity they try to educate their children by sending to schools. This income is slightly better because of the nature of work available to them. The income level will be higher to a maid servant than to a agricultural labour in the village. This small change in the income naturally affects the growth of the children and their occupation.

#### **5.5 Family Type**

The impact of industrialization and urbanization is clearly indicated. The families which are migrated from rural areas are bound to be a family in its economic structure. The individual revolutions make people for not only to migrate, from the villages but also to realize the strict financial limitations. The families which migrated from the village are in search of their employment. They are in constant struggle and search for their own livelihood.

#### **5.6. Place of Living**

There are more ragpickers in and around railway stations. This is largely due to the convenience. The railway stations provide not only a good shelter but also a good source of livelihood. As the railway station size is large when compared to other places, this provides them ample opportunity to take shelter in sun and rain. It also gives an opportunity to occasional begging on the platform. The major reason could be source of income which is fetched through the garbage thrown by the passengers on the platform, on the track and in the railway compartments. The proximate of work place and shelter is a strong reason for sheltering in the railway station. The state has failed to give reasonable justice for livelihood.

#### **5.7 Duration of Rag picking/ Years of Experience**

This data indicates that ragpicking is a source of livelihood and the only job they got easily. This occupation just fills their stomach. But at the same time it does not allow the children to die. In this inevitable conditions the children continue this job but in course of time they gradually search for another alternatives because the present job cannot give them proper food and clothing. The growing children will realize the insult in the job. The sample clearly indicates a decrease in the percentage of ragpicking as the time goes on. Even the ragpickers who are continuing in the same job due to the non-availability of other alternatives, strive to seek for alternatives.

#### **5.8 Annual Family Savings**

With regard to the savings in the family, most the savings are used for either purchasing cycles or constructing new houses. Some of the savings are utilized for purchasing four wheeler cycles. The respondents are saving through chits, relatives and other agencies. Majority of the respondents do not have the habit of saving because the monthly used for alcohol, seeing films and drugs, which gives them solace.

#### **5.9 Debt Particulars**

The economic compulsion of the parents of child ragpickers leads them to borrow money from one source or the other. The majority of parents who are illiterate neither understand the situation they live nor do they feel concerned enough about proper planning and management of the family. Therefore, whatever money they earn during the day is spent on alcohol and drugs without thinking of insecurity of income in the next day and most of the consumption on unproductive things like celebrating birth, death and marriages yet they are happy. This is surely exploitation of the rich people towards the poor.

#### **5.10. Means of Transportation for Collection of Garbage**

The poverty of ragpickers is severe. They cannot even afford to buy a bicycle. Since their income cannot allow them to make arrangements for transport, that is using a majority of ragpickers have no other means of transportation that their own feet. Making a means of transportation is a sign of organized system. Since the ragpickers are themselves, they continue this job on daily basis knowing nothing about their tomorrow. One view is that some NGOs can help them form an organized sector and get them their insurance benefits. Non-maleficence is found to a larger extend in the affluent society.

#### **5.11 Problems Faced by Ragpickers at the Collection Spot**

The problem of ragpicking is not an old phenomenon. It is relatively new which is prevailing in urban and industrial cities only. In fact that, the recycling of the waste material has emerged due to increases in the cost of raw materials for producing paper, plastic, glass, bottles etc., however the

materials which child ragpickers collect include waste and unused paper, paper boxes and cartons, water clothes, sackings, plastic containers, bags, tins, boxes, discarded utensils, glass bottles, jars, broken glasses, used medical syringes, medical waste, like contaminated plastic bottle screws, bandages, tablet containers from garbage roadside bins and such other places.

By and large, as stated earlier these materials produce chemical poison including pesticides, skin infections, gastric infections etc., which hamper the growth and development of children engaged in the collection and sale of all these material. Besides these problems, children in this work usually experience injuries, cuts and bruises, which further leads to ulcers and tetanus. Biting by dogs and other animals who feed on refuse is quite common in their occupation.

In the area of the study, 82% of the child ragpickers feel that this work affects the health. While interviewing the parents of the child ragpickers, not only health problems, but also some times they are facing problems with gundas, gang leaders, street leaders and police people, to make them get involved in anti-social activities. Non-maleficence is ignored to a larger extent in the affluent society.

#### **5.12 Nature of Problems Faced by the Ragpickers**

With regards to the health, this job is linked with dirt and other unhygienic conditions. They fall prey to ill health. They cannot avoid this, because this originates from dirt. The other considerable problem is from gundas and gang leaders. These anti-social elements depend on small earners because it is very easy to threaten them, since they lack proper support either from parents or from society. Their problem also includes the harassment of police since their job in and around the residential areas; there is every suspicion of theft. The data indicates that, there are many problems in the ragpickers at the collection centres. When asked about the problems the respondents reveals some of them this shows that almost the ragpickers are facing problems. Thus we can understand that the problem of these respondents are unbearable.

#### **5.13 Assistance by the Government**

The respondents are of the opinion that the government is almost unknown to them. The presence of the government cannot make any difference in their lives in the form of suitable assistance. The government also cannot extend any scheme to the respondents since they are in unorganized sector. A negligible part of the respondents feel that they are the help extended to other schemes like street children or other similar schemes.

#### **5.14 Justice**

Street children, aged between five and eighteen years of age, earn their livelihood by polishing shoes, washing care, finding park spaces, ragpicking (recycling garbages), selling lottery tickets and news papers, and so on, so they also work as coolies and

helpers in automobile repair shops, construction sites, and hotels. Their average earnings vary between Rs. 25 and Rs.30/- per day, while the more experienced ones earn Rs.30 to 50/-Rupees. However, these are the lucky ones. The girls are forced into prostitution at an early age. Arising at dawn, the ragpickers children start their work. With bare feet and backs aching they carry the heavy gunny bags that contain the day's pickings. Sometimes on foot they travel even 20 kilometers each day for the best pickings. Their clothing is filthy, tattered, ill fitting, and wholly inadequate for protection especially, when the weather is wet and cold. Therefore, life is very hard as they rummage (competing and fighting with stray bugs and cattle) through filthy garbage heaps in the city and railway station.

However, the issue of greater concern is related to their pattern of spending where a major part of their income is spent on drugs, alcohol, solvent abuse (sniffing solvents) and gambling. They frequently become involved in street fights. With little money and too much freedom, they are vulnerable and fall prey to a great number of situations that threaten life and soul.

Late in the afternoon they resume their second round of collection. Then after sorting and selling their loot, they spend their nights on the streets or in graveyards, where they are exploited and abused. Older ragpickers and perverted people give them drugs or threaten them for sexual purposes. Thus, this exposes them to HIV and AIDS, and many more sexual and life threatening diseases.

From the study, it is implicit that ragpickers are facing so many problems physically, psychologically and socially. Therefore, justice must be provided to them by the State Government.

#### **5.15. Autonomy**

More autonomy must be given in making decisions independently, going to school regularly, doing no harm at the work place and doing good for ragpickers. Human dignity must be respected at every level of their growth, and sustainability. All principles of the bioethics are violated when this society encourages ragpicking even in this modern era of nanotechnology and enabling technologies.

### **6. Discussion**

#### **6.1. An unethical social trap**

Basing on the data interpretation and analysis, we make the following specific suggestions on the profession of ragpickers in Trippur city. Society as a whole, regards ragpicking children as an antisocial element, an embarrassment to the community and the children are even considered unfit to live by some. However, their useful contribution to society and ecology is little understood and generally ignored. The waste collected by these children is recycled and produces 25% of the writing paper, the packing materials, egg trays, economical plastic and metal household items, and so on, used in our homes. This benefits society and world ecology enormously by the production of cheaper household goods and by

slowing down of the destruction of the already threatened rain forests. It also helps to prevent the mountains of purifying waste materials from building up in city centres. The ragpickers valuable contribution to society should not be ignored and taken for granted.

As a street child, between five and eighteen years of age, these children earn their livelihood by polishing shoes, washing cars, finding parking spaces, ragpicking (recycling garbage), selling lottery tickets and newspapers. They also work as coolies and helpers in automobile repair shops, construction sites and hotels. Their average earnings vary between Rs 20/- per day, while the more experienced ones earn Rs. 30 to Rs.60/- Rupees. However these are the lucky ones. Some girls are forced into prostitution at an early age. Arising at dawn, the ragpicker children start their rounds. With bare feet and backs aching they carry the heavy bags that contain the day's picking sometimes on foot they travel over 20 kilometers each day for the best pickings. Their clothing is filthy, tattered, ill fitting and wholly inadequate for protection especially when the weather is wet and cold.

Life is very hard as they rummage (competing and fighting with stray dogs and cattle) through every filthy garbage heap in the city and railway stations. All recyclable garbage is collected and sorted, paper, plastic, bottles, bones, metals and rotting discarded food thrown out by households and railway passengers, with this they fill their bags and often they have starving bellies. If the day's collection is bad, they resort to stealing for survival. If good, they rush to the nearest way side shop to ease their hunger. All have regular scrap dealers to buy their loot. They recover a meager pittance and sometimes this pittance is withheld to repay a previous enforced loan. Some days they starve if another dealer negotiates a better price, the child is frequently beaten and tied up.

However, perhaps the issue of great concern is their pattern of spending, where a major part of their income is spent on drugs, alcohol solvent abuse (sniffing solvents) and gambling. They frequently become involved in street fights. With little money and too much freedom, they are vulnerable and fall prey to any number of situations that threaten life and soul.

A ragpicker is not a beggar. He/she works hard and considers ragpicking a profession of choice. It enables them to earn money, daily and offers him ample amounts of free time. They are very loyal and protective of each other, sharing food and money. The ragpicker is proud and feels that she/he is master of her/his own life.

However, they are physically vulnerable and suffer from infectious skin diseases, and they are victimized socially through poverty, illiteracy and rejection. Street children and ragpickers suffer from diseases like scabies; lice; chronic dysentery; lung, ear, nose and throat infections; cuts and abrasions. These are caused by poverty, malnutrition and the unhygienic surroundings in which the children are forced live. With no facilities available for bathing or laundry, they are forced to live in filth and squalor (they have no education in personal hygiene) since they live in

corrupt gangs for security and survival, they face society as gangs it is very difficult to isolate one member, since group pressure is so strong that they are soon threatened, forced and blackmailed to return to their old habits.

They soon become dependents, both physically and mentally on their readily available addictions, enabling them to forget for a while their pitiful existence. This is a huge problem and expert help is needed to treat their physical and psychological dependence and addiction. They are many disappointments for the worker as relapses are very common. Integration into society is difficult, as the public has preconceived ideas about the ragpickers and neither accepts nor encourages the vision to transform such street children who became ragpickers.

Most importantly, the children on the streets remain deprived of their basic needs of food, shelter, clothing and the security of family love and a home. With no adult to care for them, these children have to fend for themselves and cope with the problems of the world, before they have developed the emotional maturity.

## **6.2. What solution?**

Counseling, and through informal talks and befriending allow some children to start to trust us and be less defensive. Non-formal education is being provided on weekdays. To set up training centers, teaching marketable and useful skills which will provide self-sufficiency and independence are goals that emerge. We encourage them to save money. We discourage borrowing money.

Street children represent the end point of a complex set of factors which require a multitude of resources and efforts to address the problem. A situation that has been created due to the existing social, political and economic pressures in society, which need to be addressed at the root of the problem through an attitudinal change. However, change is not any easy process. A change that demands a modification in attitudes, as well as change in the social, economic and political situation is a slower process. Policy makers, government and society need to view the street children with compassion and sensitivity.

This is the only way forward towards ensuring a better future for the children, and it is strongly believed that this is only possible through commitment and perseverance. The term "child labour" is commonly understood in the contrast of exploitation when a child is gainfully employed and works in such conditions which deny him the opportunities of growth and development both physically and mentally. It may also be defined and activity done by children which either contributed to production gives adults free time, facilitates the work of other or substitutes for the employment of others.

## **6.3. Education of children**

The term "child labour" is at times used as a synonym for an employed child or working child. In this sense it is co-extensive with any work done by a child for gain. The practice of children working is

economically unsound, psychologically disastrous, physically and morally dangerous and harmful for any society and even for the individual child, as it involves the use of labour as its point of lowest productivity and is as inefficient utilization of labour power. It deprives people of education, training and skills which are the necessary pre-requisites for earning capability and economic development. The child labour in a restricted sense means the employment of children in gainful occupations, which are dangerous to their health and denies them the opportunities of development.

The vital aspect of provision of education to the child labourers did not receive proper attention during the five year plans of India. The central and state governments are concerned and concentrated on primary education, secondary education, higher education, technical, medical, adult education, and so on, but did not throw light on the ever increasing problem of child labour education and child health aspects. The illiteracy rates are unsatisfactory, unhygienic and unhealthy conditions rampant among the lives of the child labourers of our country as a whole.

The Government of India and the different state Governments are undertaking a number of measures for provision of education to the people of our country from time to time. But the rate of illiteracy is higher and prevailing among the children and adults of our country. Millions of child labourers are increasing day by day in the rural and urban and tribal areas of our country. It is estimated that the prevalence of more child labourers ratio is very high in the state of Tamil Nadu, Bihar, Orissa, Delhi and Andhra Pradesh, when compared to the other states of our country.

A healthy happy educated child is an asset to a country, while an illiterate ignorant child is liability to nation. The Government of India has launched a national child labour project in the year 1987 to free the child labourers and to provide education. In 1995 some states of our country have launched similar project such as kakatiya Balam Karmika Vidya Vikasatakam has been undertaken in Tiruppur district of Tamil Nadu state, from the month of November 1995.

Since independence, the Government of India has appointed a number of committees and commissions on different aspects of education from time to time for the solution of illiteracy problems and further development of the educational status of our country. A survey on the appointment of committees and commissions by the Government of India from 1947 to 1980 reveals that, committees have been appointed on the aspects of technical education, education technology, adult education, co-operative education, working groups on education of child labour, labour study groups for the construction industries, study groups on tribal labour, and so on, and the survey also reveals that no single committee or commission has not been appointed on the aspects of child labour education in India. It is an unfortunate and sorry state of affairs, that the ever increasing problem of child labour educational aspect has been ignored, neglected

and rejected by the various state and central governments of our country.

Child labour education has been a major problem in our country since 1947, which has not paid any serious attention by Government to improve the educational status of children of our country. But unfortunately until 1986 a National Commission on Labour Policy has not been formulated it was carried on as a part of National Five year plans. The expression child labour is used as synopsis for employed child working child. Child labour according to the United Nations is any work by children that according with their full physical development, the opportunities for minimum of education. With the intention of protecting and promoting childhood. Article 45 of the constitution of India requires the state to endeavor to provide free and compulsory education for all the children until they complete the age of 14 years.

#### **6.4. Abolition of Child Labour**

The Supreme Court of India in 1996 delivered a significant judgment aimed at abolition of child labour and implementation of free and compulsory education for all children until they attain the age of 14 years and gave a series of directions to all state governments. 1987 is the landmark in the milestone of education development of India, because the Government of India has formulated a specific National Child Labour Policy. The National Child Labour policy was approved by the cabinet in August 1987, during the seventh plan period under the policy a project –based plan of action was envisaged.

The National Child Labour Policy was formulated with the basic objective of suitably rehabilitating the children withdrawn from employment and to reduce the incidence of child labour in areas where there is a known concentration of child labour. Under that National Labour Policy Project based plan of action, that is, a National child labour project envisaged eighty thousand working children in the selected areas of our country as a result of National Child Labour Policy 1987. Ten Child Labour Projects were sanctioned for the benefit of child labourers engaged in industries.

The Ministry of Labour, Government of India has taken an initiative to withdraw the children in the age group of 6-14 years from the child work force in Tamil Nadu. Working in the hazardous occupations was to be stopped and to prepare them for their education and rehabilitation. For the purpose of achieving the above objective special schools for the child labourers have been started in month of November 1995 in different places of rural and urban areas of the Trippur districts with the help of some of the Non-Government Organizations (NGOs) of the district for the purpose of implementation of child labour educational program in the district. The district collector appoints the field officers. They work under the control of the project director in the district. The district collector is responsible for the implementation of the project. He is assisted by two field officers and a clerk cum accountant at the district level.

Every child labour school administered by the NGO has one vocational teacher, two non-vocational

educational teachers, one accountant and one attendee for imparting education to the children who are enrolled in special schools will be provided. Every parent of child labourers enrolled in each special school will be paid Rs.150 as stipend every month by the respective NGO. Every child labour student will be given nutritious food during such period and supplementary diet like egg, bread, milk, upma and fruits. One variety and each day will be followed regularly. The children of special school will be provided a free medical checkup every month by the NGO. There are a few tribal community students studying in the labour school. The percentage of male child labour students is more when compared to the female child labour students. The occupational background of the parents of the child labour students are agricultural labourers, rickshaw pullers, stone cutters, metal cutters and hotel servants.

A key priority for action in the short term implication is in the area of prevention. States along with national and international organizations should promote anti-poverty strategies, improved flow of information, universal primary education, community consciousness raising, mobilization, the satisfaction of basic needs, occupational opportunities and alternative forms of employment for families.

Protection of children from child labour exploitation depends upon adequate and effective laws and policies together with their implementation at the national and local levels. All countries already have laws, which can be used to protect children, for instance the criminal law. These should be implemented in a more committed manner. The quality of the law enforcement authorities, namely police force, immigration authorities, judges, inspectors others, needs also to be improved.

A key priority for action is in the area of protection. States should promote anti-poverty and universal primary education, universal primary education, community consciousness and satisfaction of basic needs, occupational opportunity forms of employment for families. Protection of children from child labour exploitation depends upon adequate and effective laws and policies together with their implementation at the national and local levels. All countries already have laws, which can be used to protect children, for instance the criminal law. These should be implemented in a more committed manner. The quality of the law enforcement authorities, namely policy force, immigration authorities, judges, inspectors and others needs also to be improved.

## **7. Conclusions**

### **7.1. Summary of the Results of the Empirical Study**

The socio-economic background of the sample respondents shows that a majority of the child ragpickers are male; belonging to those under 20 years of age. Out of 150 child ragpickers, 102 (65%) belong to scheduled castes, 19% belong to scheduled tribes, and 13% belong to backward classes.

The majority of the ragpickers are from rural areas of the Trippur district. Other ragpickers came from the

urban areas of different districts and towns of the Tamil Nadu. The majority of the child ragpickers family type is nuclear (76%) and size of the family is identified as one of the important reasons for child rag picking. 110 (73%) are staying in railway stations, among many risks. Nearly 58% of them, 87 out of 150, have taken to ragpicking for the last five years.

Illiteracy and other economic factors were important reasons for their ragpicking. Nearly 80% of the sampled child ragpickers families are still having debt. Debt is also identified as one of the reasons for child ragpicking and the source of debt is rich money lenders. The majority of sample child ragpickers went for collection of garbage on foot. All the sample child ragpickers responded positively that they would not continue this field more than five years.

Nearly 90% of the respondents were facing different problems at the time of ragpicking, and 82% of the ragpickers are suffering from health hazards. 70% of the ragpickers thought that they were not getting reasonable prices for they have collected garbage. The majority of child ragpickers have bad habits such as underage homosexuality, tobacco and alcoholism. It is observed that majority of child ragpickers are unproductive as they spend the hard earned money for seeing movies and drinking alcohol. It is observed that majority of the sample ragpickers did not purchase any significant consumer articles.

### **7.2. Specific suggestions**

1. Sufficient publicity has not given regarding the awareness of child labour education and the facilities provided by the government for education of illiteracy of the child labour students, therefore, wide publicity should be given through mass media regarding the gravity of the child labour problem. Their situation should be more widely known, and we should make use of the facilities provided by the government from time to time

2. The unrelated departmental supervision for visits with Director for the purpose of supervising the child labour educational program in the district.

3. The present study reveals that in many schools, un-trained teachers were appointed in special schools by the voluntary organizations for educating the unorganized freed child laborers. It is very important to note that the permanent teachers and trained staff are very essential for the effective and successful implementation of the child labour education program and inculcating discipline and for molding the future of the child labour students.

4. There is a need for proper supply of first Aid Services at the school, and every child labourer should be given proper medical and health check up.

5. Periodical counseling should be given to both parents and their children.

6. The Indian government has recognized ragpickers and the informal recycling sector through policies and law, some of them are like E-waste (management and handling) of 2011, Plastic waste (management and handling) of 2011, National action plan on climate change of 2009, and the National



environment policy of 2008. Apart from the government efforts, many NGOs such as ARD, VidiVelli, and child help line are working for the betterment of ragpickers.

7. Governments should really look after these deprived people and must provide them with social status, job opportunity, reduction and look after their health and shelter related problems.

### 7.3. Financial suggestions

1. Proper sanction and release of grants from the Ministry of Labour, and proper running of special schools is essential. A delay in release of funds hinders implementation of the schemes.

2. The researcher has observed and found that the students' performance and academic development was not satisfactory. Most of the students were studying in the same class from year together, because of the defective method of teaching curriculum, syllabus and lack of trained teachers, the child labour education policy has ignored. About the co-operation and the role of parents of the child labour students effective in utilization of the facilities provided for the child labourer is found.

3. Permission and the establishment contact of a child labour schools generally will be given to NGO which will have about Rs.50000/-of annual income, but in Trippur district the contract and permission for running of a child labour school were given to many NGOs which have less income than Rs.50000/- per annum. Wherever the allocation and sanctioning the grants for the maintenance of child labour schools were given then there will be a scope for closing of the child labourer school. Some schools were closed for sometime not only due delay in allocation of the funds to the schools but also the self sufficiency of respective voluntary organization.

### 7.4. Conclusion

This study on ragpickers is one of the research areas of deep concern in the society today. However, limited research has been done in this area. Moreover, this area has been unprobed by social scientists or social work professionals. This research is an attempt to study bioethical principles violated and socio economic conditions of ragpickers at Trippur District. It is an attempt by a researcher to venture into the study, which will be an eye opener to future researchers.

A rag picker is not a beggar. He/she works hard and considers ragpicking a profession of choice. It enables him to earn money daily and offers him ample amounts of free time. They are very loyal and protective of each other sharing food and money. The rag picker is proud and feels that he is a master of his own life. He/she also helps the family and sharing the responsibilities of the family. In spite of difficulties and poverty, they are also being exploited by the antisocial elements. While involvement in ragpicking causes diseases like scabies, lice chronic dysentery; lung, ear, nose and throat infections, cuts and abrasions which are caused by poverty, malnutrition and the unhygienic

surroundings in which the children are forced to live. Therefore, a solid awareness must be given to ragpicker families on health, education and other social status, so that ragpicking is banned from the Indian society and hence these ragpickers maintain dignity by doing alternative jobs which are safe to their health and the society in which they live.

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# Sex Selection In Indonesia: An Ethical and Legal Perspective

- Rani Tiyas Budiyanti<sup>1</sup>, Adi Sulistiyono<sup>2</sup>, Pujiyono<sup>2</sup>

<sup>1</sup> Master Student of Health Law, Sebelas Maret University, Surakarta, Indonesia

<sup>2</sup> Faculty of Law, Sebelas Maret University, Surakarta, Indonesia

Email: ranitiyasbudiyanti@gmail.com

## Abstract

The development of Assisted Reproductive Technology (ART) may provide some beneficial effects. However, some ethical and legal issues have been associated with ART, particularly sex selection. Indonesia allows sex selection in ART for the second child without mentioning medical or non-medical reasons. Sex selection based on medical reason is ethically acceptable. However, sex selection for non-medical reasons remains controversial. Sex selection in ART contradicts to the ethics that includes natural law, religion, human rights, eugenics, and designer babies. Sex selection may also generate gender discrimination. Some countries in the world have accepted sex selection for medical reasons which is not limited by the order of child. Indonesia needs to review the sex selection policy in ART through consideration of the medical or non-medical reasons either in sperm separation technique or PGD.

**Key words:** sex selection, assisted reproductive technologies, ethics, legal

## Introduction

The development of technology affects all aspects of life, including health. Technology that is created by humans may increase the quality of human life, one of which is in the field of reproduction [Basic, et al, 2010]. Assisted reproductive technology (ART) has been identified as a result of the medical technology development which may help couples who are trying to conceive.

In its development, ART not only provides the opportunity to obtain offspring but also allows a couple to get a child the desired sex. Sex selection using ART can be achieved by separation of X and Y chromosomes in the sperm (sperm separation) or using preimplantation genetic diagnosis (PGD). [Dondorp, et al, 2013].

## Sex Selection Using ART

Attempted sex selection has occurred for some decades with changes in timing and positioning during coitus and also with food intake. Along with the development of technology, sex selection has been attempted through prenatal procedures such as ultrasonography (USG), amniocentesis, and maternal blood tests [Lipman, 1991]. Sex selection in that way is considered unethical because it may cause selective abortion which against the law in some countries. Sex selection using ART through pre-implantation

procedures has been developed either by separation of X and Y chromosome containing sperm or pre-implantation genetic diagnosis (PGD). Nevertheless, sex selection using ART raises several controversies whether for medical or non-medical reasons.

## Medical and Non-Medical Reasons

In general, sex selection is attempted for either medical or non-medical reasons [ACOG, 2013]. Non-medical reasons refer to social reasons such as social and economic factors, the tendency towards a particular gender, religion, personal reasons and family balance.

Sex selection for medical reasons is linked to sex-linked genetic diseases and uses genetic screening technology. Pre implantation Genetic Screening (PGS) or Pre implantation Genetic Diagnosis (PGD) may help a healthy fetus to be implanted into the uterus during in vitro fertilization process [Bumgarner, 2007]. This process provides an alternative solution to prenatal diagnosis and selective abortion for some types of genetic diseases related to the sex such as Thalassemia which tends to affect girls and Duchene Muscular Dystrophy which tends to affect boys [Daar, 2005].

In various international discussions, sex selection for medical reasons is acceptable and in line with ethics. A study by Marcy Darnovsky of *The Center for Genetics and Society* in April 2009 demonstrated that 36 countries include 25 countries from Europe, 8 countries from Asia, two countries from Australia, and one country from North America refused to use IVF for sex selection for non-medical reasons [Darnovsky, 2009]. Austria, New Zealand, South Korea, Switzerland, and Vietnam refuse sex selection using IVF both for medical or non-medical reasons. In the UK, the Human Fertilization Embryology Act (HFEA) allows sex selection only for medical reasons. The underlying diseases that may affect sex selection are severe diseases that are associated with sex such as Thalassemia and Duchene Muscular Dystrophy. Serious illnesses that may cause genetic defects and severe mental illness are also allowed to be treated so that they prevent the occurrence of eugenics (gene conversion) in humans [HFEA, 2003].

In some countries sex selection with ART are also allowed for trans-generational reasons which may prevent inherited diseases. Although, the inherited diseases remain unknown in the embryos that are obtained, but sex selection to prevent inherited diseases is acceptable [Brenoord, 2012].

The use of ART for non-medical reasons such as social reasons, particular gender desired or family balanced, is controversial in the international community. Rejection of sex selection for non-medical reasons is considered to violate the natural process. The undesired gender or balancing gender in family is not an anomaly and should not be used as a reason to change the sex. In contrast to medical reasons, sex selection is expected to improve the quality and extend life expectancy [Daar 2005].

For those who agree with sex selection due to non-medical reasons said that sex selection is a right the same as the right to reproduce. They said that the desire to obtain the particular sex of a future child is one of the autonomous rights of parents to be cherished and respected. However, that statement is rejected by many. For those who disagree argue that the autonomy rights of parents should not deprive the rights and freedoms of children.

On the other hand, there is an idea that if the gender of children in line with parent expectation then it will reduce the rate of abortions, child neglect and abuse because the child of the desired gender will be cared for and loved by their parents. But if this condition was denied and questioned parents might be less loving and accepting if they have too many demands and expectations of what their child should be, including what gender the child should be.

The legalization of sex selection for social reasons may cause potential gender discrimination. In some societies, males are preferred compared to females. In China and India, males are preferred by a majority of citizens for religious, economic, and social reasons. ART may provide great opportunities for sex selection. Therefore, ART is interesting in medical business. Selective abortion rate is also growing quite rapidly due to the emergence of assistive technologies such as ultrasound that may detect the baby's gender before birth. The tendency toward the male gender in the country leads to abortion and birth sex ratio (SBR) which may increase the ratio of males compared to females (115: 100). Baldauf reported that in India in 2006, there were 874 girls for 1000 boys born. This situation leads to gender inequality. The Indian government has tried to overcome this problem by giving money of 2500 rupees for every birth of a daughter, and 25,000 rupees at their 18 year old birthday [Baldauf, 2006].

Sex selection due to non-medical reasons is triggered by the desire of parents to have a child with particular gender. In some families, having both male and female children gives pride for themselves because they can feel how to care for children of different gender. This reason is so-called family balance. For those who agree with the family balance argument suggest that the desire of parents to have both male and female children indicated an ideal family and should be encouraged by ART. However, this argument should be re-examined. If this argument is correct, then for family who do not have both male and female children is a non-ideal family. In fact, having either male or female children is a natural random process.

Other non-medical reasons for sex selection are the emergence of eugenics and designing a baby as the parent desire. Each couple would like to have a child who healthy and perfect either physically or mentally. If sex selection based on non-medical reasons is granted, then another reason for designing baby such as smart, beautiful and handsome will be unstoppable. Manipulation of genes and reproduction will develop

and further problems will arise, if there is no policy to overcome these consequences.

### **Sex Selection in Indonesia**

Indonesia legalizes sex selection using ART. However, the implementation was not based on medical or non-medical reasons but based on the sequence of children. ART is permitted for the second children. This policy is regulated by Government Regulation No. 61, Article 44, 2014 on Reproductive Health. Further questions have arisen, if sex selection in ART is performed on the first child for medical reasons. ART could be implemented for a second child.

Legalization of sex selection in ART without differentiating medical or non-medical reasons may cause several issues in ethics, law, and religion. The Indonesian Society of Obstetrics and Genealogical (POGI) consists of professional obstetricians suggests that sex selection in ART should be implemented only for medical reasons. This statement is contained in the Guideline of Ethics and Professionals for Indonesian Obstetrics and Genealogy, article 28. Sex selection based on medical reason is used to avoid further consequences such as abortion. This argument is encouraged due to poor acceptance of parents regarding the gender of their children. Whereas, in Indonesia abortion is allowed for medical indications and emergencies such as rape victims.

Sex selection for non-medical reasons are also against religious rules. Sex selection in ART should be done in accordance with the development of science and technology when it does not conflict with religious norms. According to Islam, the majority religion in Indonesia, sex selection for non-medical reasons is contrary to the holy Qur'an: "*He created man with the will and his power solely in the form of what he wants*" [QS. Al-Infithar (82): 8]. According to the fatwa of the Islamic World League in November 2007, sex selection is only allowed for medical reasons [Islamic World League, 2007].

Some argue that sex selection for non-medical reasons should be taken into account in Indonesia to prevent gender discrimination. In Indonesia, there are some ethnicities that prefer children of a particular gender. For example, Batak people in North Sumatra prefer male gender because the descendant of the family is determined by the male line. This tradition is the so-called patrilineal system [Baiduri, 2014]. Conversely, Minang people in West Sumatra prefer female gender because the descendant of the family is determined by the female line. This tradition is the so-called matrilineal system [Stark, 2013]. Although there are no reports of gender discrimination in Indonesia but sex selection for non-medical reasons increases the risk of gender discrimination among people of particular traditions. Sex selection may cause an imbalanced gender ratio.

Although sex selection should be done for medical reasons, Indonesia still faces many challenges. Lack of resources and instruments for screening and diagnosis of genetic diseases through PGS or PGD

may underlie the challenges. There is no regulation for PGD implementation so it may cause a gap or potential violations of ethics and other laws. Informed consent and counseling between parents and service providers of ART are required to prevent the consequences of sex selection such as selective abortion. Parents are expected to accept the final result of this process, assume the child is not a product that should be perfect, but as a party that should be accepted and cherished whatever the conditions.

The use of ART for sex selection should be addressed wisely. ART should be used for medical reasons rather than non-medical reasons. Therefore, technology should not be used to deprive the rights and nature of human beings.

### Conclusion

Regulation of sex selection using ART should allow ART to be used for medical reasons rather than non-medical reasons. Indonesia should review the rules regarding sex selection using ART on the order of a child, to just those based on medical and non-medical reasons. Advanced regulations concerning sex selection are needed to prevent the negative effects that may not conflict with ethics, law, and religion in Indonesia.

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## Letter to the Editor: The challenges of medical ethics educators at a research university

- Atsushi Asai, Taketoshi Okita, Aya Enzo  
Department of Medical Ethics, Tohoku University Graduate School of Medicine, Sendai, Japan  
Email: aasai@med.tohoku.ac.jp

As medical ethics educators at a research facility, we are in charge of ethics reviews and research misconduct prevention education and come in contact with many researchers. In this letter to the Editor, we would like to briefly discuss conflicts of interest and ethics education concerning research activities in present Japan. First, we are critical of the assumption that a researcher's conflicts of interest can be well managed through the current self-reporting system. Self-declaration of the researcher's conflict of interest to one's institution, academic society, and journal is expected to prevent one from both interpreting and presenting study results in a biased manner according to self-interest. However, we feel that undesirable influences of researchers' conflicts of interest are likely never going to be eliminated at the basic level. This is because self-advancement, self-actualization, self-preservation, and family life of researchers all depend on the amount of research funds they have obtained and the number of papers they publish. Regardless of self-declaration, substantial conflicts between fundamental self-interests and public and professional interests never dissolve.

Second, ethics education for researchers is not likely to be effective enough to prevent research misconduct. In Japan, the Ethical Guidelines for Medical and Health Research Involving Human Subjects (December, 2014) state that the chief executive of the research implementing entity as well as investigators shall receive education and training on the ethics of research and on knowledge and skills necessary to carry out the research prior to its implementation and that they shall also receive education and training during the research period on a regular basis as necessary. At Japanese research institutions, one cannot receive an ethics review of a research proposal without undergoing research ethics education. A "certificate" of having received the education is necessary. Nowadays, many researchers do not participate in the education to learn about ethics, but rather to obtain proof that they attended the classes. There is a feeling that they are undergoing education merely to expedite the process of ethics review. In other words, they are akin to students who show up to class merely for attendance purposes.

Current research misconduct prevention policies in Japan could be summarized as "plowing the field and forgetting the seeds." Many researchers adopt the "shortest distance principle," making it their motto to achieve maximal results with the least amount of time

and effort. There is no room to consider ethics with such a mindset. We ourselves have no bright ideas for planting the seeds of ethics in people's minds, and welcome any suggestions from the readers.

## Informed Consent: Substantive v. Formalistic Approach and the Law

- Chung-Lin Chen, S.J.D.  
Professor, Institute of Law for Science and Technology, National Tsing Hua University, No. 101, Section 2, Kuang-Fu Road, Hsinchu, Taiwan 30013  
Email: clchen@mx.nthu.edu.tw

### Abstract

The rule of informed consent is universally regarded as a cornerstone in governing patient-physician relationships. The key element of "informed" stresses that only the consent given after consideration of sufficient information constitutes valid consent. However, various studies in many countries have shown inadequate information can often take place resulting in lack of understanding of medical procedures. What role does the legal system play in promoting substantive informing and respecting the will of the patients? And how does it realize the true idea of informed consent?

Taking Taiwan as an example, this paper reveals the dynamic and interactive relationships between law and practices on this issue. First, the law may incorporate the idea of informed consent into specific mandates to prompt its implementation. Second, however, the need of evidence in court may sustain or even reinforce undesirable formalistic practices that largely focus on written consent forms rather than substantive explanation. Third, to respond to these formalistic practices, courts could reconstruct the shape of the legal requirement and guide institutions and physicians to the new direction. The assertion of this paper is that formalistic practices are inconsistent with the legal nature of informed consent, regardless of whether they appear to have complied with the law or not. If courts can acknowledge the problem of formalism and are willing to actively investigate or request institutions for alternative evidence to determine whether a meaningful dialogue existed or not, the practices may be directed further towards fulfilling the spirit of informing.

### Introduction

The rule of informed consent is universally regarded as a cornerstone in governing patient-physician relationships. The key element of "informed" stresses that only the consent given after consideration of sufficient information constitutes valid consent. It follows that the purpose of requiring physicians to provide this information is so as to allow patients to gain sufficient enough understanding to

make a sound decision. Hence, imparting a large amount of medical or technical terminology onto a patient without reasonable explanation would be considered inadequate. In reality though, medical institutions may comply with the rule of informed consent formalistically by merely asking patients to sign consent forms that contain too much complex medical terminology for patients to digest and not giving the patients the necessary time to reflect on the situation based on their own values.

When the law absorbs the idea of informed consent into its system, does it intrinsically promote substantive informing and the respect of the patient's will? Legalizing the rule of informed consent does impel physicians and medical institutions to demonstrate compliance. However, when physicians and medical institutions do not sincerely embrace the core value of the rule, practices may be directed to solely avoid legal liability rather than to pursue true respect for patients' autonomy. Physicians and medical institutions may place much emphasis on signed forms of consent, as a means to be supporting evidence in case of litigation, rather than truly helping the patient to make a sound decision.

The assertion of this paper is that the factor of legal liability may to some extent contribute to the occurrence or at least fail to address the continuing existence of the formalistic practices, which actually are inconsistent with the legal nature of informed consent; if courts can acknowledge the problem of formalism and are willing to actively investigate or request institutions for alternative evidence to determine whether a meaningful dialogue existed or not, the practices may be directed further towards fulfilling the spirit of informing. The argument is presented in three parts: Part I clarifies the legal foundation of informed consent and comments on the formalistic practices from a perspective based on the spirit of law. Part II explores the informed consent law in literature and its formalistic operation in action.<sup>2</sup> Lastly, Part III seeks to respond to the issue of formalistic practices through judicial actions, while also acknowledging the limits of this approach.

Since observations and analysis of laws and practices require the context of jurisdiction, Taiwan is used as an example.<sup>3</sup> Yet, the thesis in this paper can improve general understanding with respect to the interactions of the law and practices of informed consent anywhere. The insufficient or even formalistic informed consent process appears to be a problem worldwide. Many studies conducted in different countries similarly report doctors' inadequate informing and patients' poor understanding of certain medical

procedures.<sup>4</sup> Hence, it is the author's hope that this paper could provide valuable insight to people in many countries, especially in where the practices of informed consent remain in the developing stage.

### I. The Foundation of Informed Consent from a Legal Perspective

Although the idea of informed consent in the view of many doctors is originated from bioethics rather than law, this rule actually has strong legal background that precedes bioethics. The most influential approach of bioethics establishes its analysis through specific "principles," such as respect for persons, beneficence, and justice.<sup>5</sup> From this perspective, informed consent is primarily rooted in the principle of respect for persons/autonomy.<sup>6</sup> In comparison, law constructs its framework by "rights," which have surfaced in constitutions, civil codes, and other laws in most countries. Therefore, finding a foundation for informed consent in legal systems should begin with protection of the rights that are involved in medical intervention.

Medical intervention impacts patients' rights of bodily integrity and health, which are legally protected. Taiwan's Constitution does not explicitly list the rights of bodily integrity and health. However, recognizing them as constitutional rights has been supported by scholarly opinions and judicial decisions.<sup>7</sup> Taiwan's Constitution contains a provision of *unenumerated rights*,<sup>8</sup> and in one case the Constitutional Court has interpreted the Constitution to include the right of bodily integrity through that provision.<sup>9</sup> Additionally, in many other cases, the Constitutional Court has

<sup>4</sup> E.g., Jawaid, M. *et al.*, "Preoperative Informed Consent: Is It Truly Informed?," pp. 25-30; Falagas, Matthew E. *et al.*, "Informed Consent: How Much and What Do Patients Understand?," pp. 420-435; Kušec, Sanja *et al.*, "Improving Comprehension of Informed Consent," pp. 294-300; Amir, Mohammed *et al.*, "Informed Consent in Elective Surgical Procedures: 'What Do the Patients Think?'," pp. 679-82.

<sup>5</sup> The National Commission for the Protection of Human Subjects of Biomedical Behavioral Research (1979). The Belmont Report, Part B. <http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html> (Retrieved: December 21, 2016); Beauchamp, T.L. & J.F. Childress, *Principles of Biomedical Ethics*, pp. 12-13.

<sup>6</sup> The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, *supra* note 5, at Part C.1.; Beauchamp & Childress, *supra* note 5, p. 117.

<sup>7</sup> For scholarly opinions supporting the recognition of the constitutional rights of bodily integrity and/or health, see e.g., Li, Chen-Shan, "On the Right to Be Free from Bodily Harm from the Perspective of Constitutional Law," In *Human Dignity and the Protection of Human Rights*, p. 159 (*in Chinese*); Li, Chen-Shan, *Plurality, Tolerance, and the Protection of Human Rights*, pp. 121-128 (*in Chinese*); Chen, Tsung-Fu, "The Realization of Patients' Medical Human Rights," p. 33 (*in Chinese*); Chen, Chung-Lin, "The Right to Bodily Integrity as a Constitutional Right," p. 113 (*in Chinese*).

<sup>8</sup> Article 22 of the Constitution ("All other freedoms and rights of the people that are not detrimental to social order or public welfare shall be guaranteed under the Constitution.")

<sup>9</sup> Interpretation No. 689.

<sup>2</sup> The law and society movement has provided an important insight that not only the written law but also the law functioning in reality deserves careful attention. See generally, e.g., Macaulay, Steward, *et al.*, *Law in Action*, pp. 15-141; Pound, Roscoe, "Law in Books and Law in Action," pp. 12-36.

<sup>3</sup> For a brief legal history of Taiwan, see Lo, Chang-Fa, *The Legal Culture and System of Taiwan*, pp. 1-4.

stressed the importance of protecting the interests of people with respects to health and bodily integrity.<sup>10</sup>

In the level of statutory law, civil and criminal laws establish rules to embody the protection of the rights of bodily integrity and health. The Civil Code specifically mentions the interests of bodily integrity and health as protected personal interests.<sup>11</sup> Infringing those interests triggers delictual liability.<sup>12</sup> At the same time, intentionally or negligently harming the body or health of a person constitutes a crime under the Criminal Code.<sup>13</sup> Similarly to the delict, the purpose of the provisions of the Criminal Code is to realize the protection of the rights of bodily integrity and health. Here it is worth mentioning that this paper intentionally uses the term delict rather than tort. Although delict (a concept in the civil law) and tort (a concept in the common law) share many of the same ideas and characteristics, they do develop into different forms.<sup>14</sup> For example, delict manifests itself in a general fashion of expression, while tort constructs the whole picture through formulating particular causes of action.<sup>15</sup> Because of the high visibility of the U.S. development of informed consent, legal discussions in Taiwan often begin with the U.S. laws and proceeds under the notion of tort. However, because of the restriction from the statute language as well as established civil law principles in Taiwan, the informed consent laws developed through individual tort cases in the United States<sup>16</sup> might not necessarily fit squarely into the legal context in Taiwan. On the other hand, despite the emphasis above on the differences in name and substance between delict and tort, both systems are established and designed to protect rights.<sup>17</sup>

The very notion of the rights of bodily integrity and health entitles an individual the control over her/his body and health. An individual may authorize intervention or otherwise prevent it, depending on how she/he views her/his best interests. These two sides of power constitute complete control. It naturally follows that medical intervention must have the individual's authorization, that is, consent; otherwise, the patient's rights are violated. In addition, consent must be made fully voluntarily, and cannot be considered as such when an individual made it based on insufficient information. To illustrate, an *ill-informed* patient who consented to a certain medical intervention could have declined that intervention or have chosen an alternative treatment, consequently avoiding the harm resulting from the intervention. Therefore, valid

consent must be made after the individual has been adequately informed.

Based on this perspective of patients' rights, deeming informed consent as merely a legal obligation of physicians, with view to avoiding liability as its purpose, oversimplifies its legal meaning. Since legal liability constitutes an imminent threat to physicians, physicians may tend to focus attention on the obligation of informed consent. However, it is the person's rights that represent the ultimate purpose behind legal rules, and legal obligations are merely the means to advance rights. Similarly, non-liability does not necessarily mean full compliance with the rule of informed consent. Law, under adequate understanding, requires physicians to act under respect for patients' rights. Sincerely informing patients and helping them to make sound decisions fulfills that requirement whereas devoting effort to escape liability does not.

The discussion above demonstrates that the rule of informed consent has solid justification in legal systems and that the constitutive elements of the rule exist independently from bioethical theories on informed consent. Properly understanding patients' rights protected by law would naturally lead to acknowledging the rule. In turn, this right-based understanding grants us the adequate perception of informed consent, indicating that placing much emphasis on obtaining a signed consent form, rather than being committed to constructive dialogue with patients with view toward making sound medical decisions, does not truly satisfy the expectation of law.

## II. The Informed Consent Law and Formalistic Practices

After describing the legal nature of informed consent from a perspective of jurisprudence, the discussion in this section is turned to specific laws that provide the rule. In Taiwan, the rule of informed consent has clearly become a legal mandate. The legislature incorporates it into the Medical Care Act and the Patient Autonomy Rights Act, and scholars and courts include it into civil law and criminal law through interpretation. Still, it should be noted that although the informed consent law implicates medical practices, it does not necessarily ensure ideal or desired results.

According to the Medical Care Act, in principle, medical institutions are obliged to provide information to the patient and to obtain his/her consent in writing before commencing surgery, invasive examination or treatment.<sup>18</sup> The provisions specifically stipulate that institutions must obtain not only consent but also signed consent forms.<sup>19</sup> Violation of the law leads to a fine of between TWD50,000 and TWD250,000 (USD1,500 to USD7,500).<sup>20</sup> The competent agency can fine not only the medical institution but also the

<sup>10</sup> *E.g.*, Interpretations No. 414, 472, 476, 531, 547, 550, 551, 577, 612.

<sup>11</sup> Articles 195 of the Civil Code.

<sup>12</sup> Article 184 of the Civil Code.

<sup>13</sup> Articles 277, 284 of the Criminal Code.

<sup>14</sup> Lee, R. W., "Torts and Delicts," pp. 721-730.

<sup>15</sup> *Ibid.*, pp. 727-29.

<sup>16</sup> For an introduction to the evolution of the informed consent case law in the United States, see King, J. S. & B. W. Moulton, "Rethinking Informed Consent: The Case for Shared Medical Decision-making," pp. 429-501.

<sup>17</sup> *Ibid.*, pp. 727-729.

<sup>18</sup> Articles 63, 64 of the Medical Care Act.

<sup>19</sup> *Ibid.*

<sup>20</sup> Article 103 of the Medical Care Act.



acting persons.<sup>21</sup> Moreover, if the acting persons are medical professionals, they could be subject to professional sanctions.<sup>22</sup>

To stress the idea of patient autonomy and further embody the rule of informed consent, the Legislative Yuan enacted the Patient Autonomy Rights Act in December, 2015. The Act, repealing the Medical Care Act, mandates medical institutions to obtain signed consent forms from patients before commencing surgery, invasive examination or treatment.<sup>23</sup> More importantly, it clearly establishes that “a patient has the right to be informed about his/her condition, treatment options and their potential effects, and prognosis and has the right to choose from treatment options provided by physicians and make related decisions.”<sup>24</sup> Nevertheless, it is worth noting that the Act does not contain any sanction provision. It should also be noted that this new law provides a three-year grace period and will not come into effect until January 6, 2019.<sup>25</sup>

In addition to administrative fines and professional sanctions mentioned previously, civil liability and criminal penalty may be triggered by a violation of informed consent. The Civil Code establishes that a person is liable for wrongfully infringing, with intent or negligence, the rights of another person.<sup>26</sup> Medical institutions or professionals that implement invasive procedures without obtaining legally valid consent may be held liable for the harm that they cause. By the same token, these medical professionals may also violate criminal law, which imposes the penalty of imprisonment or a fine for intentionally or negligently harming the body or health of a person.<sup>27</sup> These potential liabilities place significant pressure on institutions and physicians, and impels them to adhere to the rule of informed consent.

The meaning of informed consent under contract law is also worth noting. Although the implication of informed consent in contract law draws much less attention, some have indicated that the informing that a physician delivers and the consent that the patient gives may well constitute an offer and an acceptance and together form a contract.<sup>28</sup> To illustrate, imagine someone buying food from a night market stand, or looking for a massage from a massage parlor. In both cases, it is easy to assume that in order to make a practical decision, this person would require certain information about the food he is buying or the service he is soliciting. Otherwise there would not be a valid contract. Making such choices based on sufficient information is an everyday activity. This also applies in

the patient-physician relationship. Undergoing medical intervention at a medical institution naturally involves a contract, which provides the subject matter, quality, quantity and so on of the service. It follows that when the physician does not fulfill the promises outlined in the contract, the patient may rescind the contract or sue for enforcement or damages, depending on what kind of obligations had been violated.<sup>29</sup>

Despite the clear mandate of informed consent empowered by administrative fines, professional sanctions, civil liability, and criminal penalty, some have indicated that medical institutions and professionals often carry out informed consent by formalistically asking patients to sign consent forms and do not pay sufficient attention on offering reasonable explanations.<sup>30</sup> When the liability is a weighty concern for medical communities, preparing evidence that can later be presented in court if required becomes an important task. Naturally, a written consent form with required information and the patient's signature on it constitutes a convenient piece of evidence of informed consent. Moreover, in order to avoid a stalemate of one person's word against another, the Medical Care Act has explicitly required written consent forms and patients' signatures. With this clear mandate, the focus becomes even further directed towards the formalistical implementation of informed consent. In one study a doctor reported that this requirement leads to a misguided focus of clinical practices, placing more emphasis on written consent forms than on providing adequate information.<sup>31</sup>

Such observation indicates that the law does not necessarily bring the sound embodiment of the idea of informed consent and that the overhanging threat of legal liability may misguide physicians. Obviously, this is not the intention behind the legislation, nor is it consistent with the spirit of law. Some have indeed criticized this situation and have argued in favor of establishing the patient-physician relationship on more positive and firmer ground than that of the fear of litigation.<sup>32</sup> In that light, guiding practices toward the realization of the ideal, recognizing the true legal meaning of informed consent is a key step.

### III. The Judicial Response to the Formalism and Its Limits

<sup>29</sup> See Hung, *supra* note 28, pp. 69-70; Chen, *supra* note 28, pp. 500.

<sup>30</sup> Yang, Hsiu-I, “Warm Paternalism vs. Empty Autonomy: Exactly What Physician-Patient Relationships Does Law Want?,” p. 23 (*in Chinese*); Wang, Huang-Yu, “The Obligations of Physicians for Informing and Examining: Comments on the Court Decision No. 2005-Taishang-2676,” p. 267 (*in Chinese*); Yang, Hsiao-Yu *et al.*, “Clinical Ethics Case Discussion (7): Informed Consent,” p. 30 (*in Chinese*); Guo, Suh-Er *et al.*, “Informed Consent: What Patients Want to Know Before the Surgical Operation,” p. 146 (*in Chinese*).

<sup>31</sup> Wang, Chih-Chia, *Patient Autonomy and Related Criminal Issues: Case Study*, p. 212 (*in Chinese*).

<sup>32</sup> Sprumont, Dominique, “Informed Consent: Do Not Be afraid,” published on line on 28 September 2015, <http://dx.doi.org/10.1016/j.jfma.2015.08.013> (Retrieved: December 21, 2016).

<sup>21</sup> Article 107, Section 1 of the Medical Care Act.

<sup>22</sup> Article 107, Section 2 of the Medical Care Act.

<sup>23</sup> Article 6 of the Patient Autonomy Rights Act.

<sup>24</sup> Article 4 of the Patient Autonomy Rights Act.

<sup>25</sup> Article 19 of the Patient Autonomy Rights Act.

<sup>26</sup> Article 184 of the Civil Code.

<sup>27</sup> Articles 277, 284 of the Criminal Code.

<sup>28</sup> Chen, Chung-Lin, “The Legal Meaning of Informed Consent in Human Tissue Research and the Application of the Biobank Act,” pp. 499-500 (*in Chinese*); Hung, Min-Yu, “The Legal Meaning of Informed Consent in Medical Research,” pp. 65-67 (*in Chinese*).

In reality, the situation largely depends on the action of institutional forces. The judiciary, the final authority regarding law interpretation, has the potential to change how the law is viewed. Since the analysis in the previous chapter demonstrates that practices do not completely realize the true legal nature of informed consent, is it possible that courts could take the true legal nature into account, reconstruct the application of law, thereby guiding institutions and physicians to a new direction? The discussion below addresses this inquiry by taking into account observations of current opinions of the courts.

In some cases, written consent forms heavily influenced the judicial determinations regarding the existence of informed consent. The courts in those cases based their findings on signed consent forms to find that institutions or physicians have fulfilled their obligations of informing the patients.<sup>33</sup> This way of fact finding is not without legal grounds. As certain declarations of the Supreme Court have previously explained, institutions or physicians carry the burden of proof to show that they have satisfied the rule of informed consent; however, when they submit the signed consent forms as evidence, the burden of proof may shift to the patient to show that adequate informing did not exist.<sup>34</sup>

In comparison, in several cases, the Supreme Court has declared that merely relying on signed consent forms is not sufficient enough to determine the satisfaction of informed consent.<sup>35</sup> After elaborating on the spirit of informed consent and identifying the protection of patient body autonomy as the purpose, the court made it clear that the obligation of informing requires substantive explanation and merely asking patients to sign a consent form with related information does not fulfill the obligation.<sup>36</sup> Accordingly, the court criticized the lower court in its failure to sufficiently investigate whether the physician really fulfilled the obligation of informing and whether the patient understood the content of the consent form.<sup>37</sup> In a more recent case, although the court did not elaborate as clearly, it seemed to follow the same train of thought. The court questioned the sufficiency of the consent form before the court as proof that the physician had explained and helped the patient understand the risk and alternatives of the surgery, in light of the fact that the consent form did not contain

the signature of the physician as the form itself required.<sup>38</sup>

These two views lead to different realities. Following the traditional rule of burden of proof, the first view protects institutions and physicians from the accusation without a factual basis. However, it may reinforce the practices that place a great deal of focus on the written consent form. As the previous chapter shows, the formalistic practice is actually not the desired result of the law. To pursue a clearer realization of the spirit of law, courts need to consider changing the interpretation of law. The second view has indicated a possibility of this changing, although the first view appears to remain more common. Considering the severity of criminal sanctions, the traditional view of assigning burden of proof could be sustained in determining criminal liability. On the other hand, in the context of civil liability, this paper argues for a change to the second view. Courts should actively investigate or request institutions for evidence other than consent forms to determine whether any meaningful dialogue existed. This should not be deemed as particularly harsh, considering that institutions are in a better position to find potential witnesses – nurses, anesthetists, and other medical professionals, and so on. This interpretation of law, if it becomes a mainstream judicial view, would help urge institutions and physicians to pay attention to not only written information but also adequate informing.

That is not to say that this proposed judicial response would fundamentally eliminate formalism. Relying on judicial judgments on civil liability still confines physicians to a perspective of legal obligation and liability. Only when physicians sincerely respect patients' rights, will they sincerely practice informed consent and formalism will no longer be an issue. The achievement of this ideal depends on to what extent physicians absorb genuine understanding of informed consent, rather than the threat of legal liability. To promote a more appropriate practice of informed consent, the proposed judicial response could be a key step. But seeking a fundamental change may need to appeal to a scheme that plants the idea of respect for patients' rights deep into every physician's heart when they inquire what the law is truly concerned with.

## Conclusion

This paper has revealed the dynamics and the interactive relationship between law and practices. First, the law may incorporate the idea of informed consent into specific mandates and prompt the implementation in reality. Second, however, the need of evidence in court may sustain or even reinforce the undesirable formalistic practices, which largely focus on written consent forms rather than substantive explanation. Third, to respond to formalistic practices, courts may reconstruct the shape of the legal requirement and guide institutions and physicians toward the practices that further fulfill the spirit of informing. This observation clearly shows the

<sup>33</sup> *E.g.*, Supreme Court judgment No. 2013-Tai Shang-192; Supreme Court judgment No. 2010-Tai Shang-588; Supreme Court ruling No. 2009-Tai Shang-1877; Taiwan High Court judgment No. 2011-Yi Shang Geng Er-1; Taiwan High Court judgment No. 2012-Yi Shang-5.

<sup>34</sup> Supreme Court judgment No. 2010-Tai Shang-2428; Supreme Court judgment No. 2013-Tai Shang-192.

<sup>35</sup> Supreme Court judgment No. 2005-Tai Shang-2676; Supreme Court judgment No. 2006-Tai Shang-3476.

<sup>36</sup> Supreme Court judgment No. 2005-Tai Shang-2676; Supreme Court judgment No. 2006-Tai Shang-3476.

<sup>37</sup> Supreme Court judgment No. 2005-Tai Shang-2676; Supreme Court judgment No. 2006-Tai Shang-3476.

<sup>38</sup> Supreme Court judgment No. 2014-Tai Shang-774.

importance of attending to *law in action*<sup>39</sup> and provides valuable insights on the relationship between law and practices regarding informed consent.

In terms of theoretical understanding, this paper clarifies the legal foundation of informed consent and indicates the failure of the formalistic practices in complying with the spirit of informed consent. The legal requirements of informed consent is rooted in patients' rights, and only approaching the requirement through this right-based perspective provides adequate understanding. Deeming informed consent as merely a legal obligation of physicians, with view to avoiding liability as its purpose, is an oversimplification. After acknowledging that the expectation of law is actually sincere respect for patients' rights, physicians should implement the rule of informed consent by promoting substantive and meaningful dialogue with patients. In that light, providing information only through written forms fails the expectation of law.

Fulfilling the expectation of law largely depends on institutional responses though. The judiciary, as an actor that possesses the final authority over law interpretation, plays a key role. If courts are willing to actively investigate or request institutions for not only consent forms but also more effective evidence to determine whether a meaningful dialogue existed, institutions would be encouraged to focus more on the essence of substantive informing. However, the schemes that seek to transform physicians' understanding of informed consent, other than threatening physicians with legal liability and judicial enforcement, are more important. As this paper has clarified, the true expectation of law is to act out of respect for patients' rights. This sincere respect is the fundamental solution.

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# Nurses' Awareness of Biomedical Ethics and Their Attitudes Toward Withdrawal of Life-Sustaining Treatment

- Eunsuk Choi, Kyung Suk Sung, Gil Hee Seo, Geun MyunKim  
Department of Nursing, Graduate School, Gangneung-Wonju National University, Wonju, South Korea  
Email: [sungks@gwnu.ac.kr](mailto:sungks@gwnu.ac.kr)

## I. Introduction

### 1. The need for research

The development of technologies in life science and medicine have enriched our lives by extending life expectancy through the cure of various diseases. As such, changes bring about abortions, euthanasia, organ transplants, the criteria of death, and stem cells, and they are creating new ethical situation, which make the ethical judgments and practices for them inevitable.

Especially, the development of life science targeting human life and natural environment requires careful ethical judgments and the right institutional responses because of its influences on human lives today and in the future. Accordingly, biomedical ethics began coming to the fore in the sense of new ethical choices for humans in the age of life science since 1960s (1,2).

Since biomedical ethics is a field that concerns human life and is an important issue for health care providers working in areas related to life, a consensus on the ethical standards of bioethics are needed (3). While the development of modern medical technology made a large contribution to curing human diseases and saving lives, it also brought about the meaningless extension of the painful lives of critically ill terminal patients due to limitations of treatment (4).

Such a situation creates many conflicts and ethical issues for health care providers between continuing life-sustaining treatment to prolong the life of the patient and stopping it to relieve the pain and protect the patient's right to die with dignity (5).

Especially, nurses who do not have clearly established opinions on death or withdrawal of life-sustaining treatment face ethical conflicts and tend to be passive in nursing (6). Therefore, nurses' firm awareness of biomedical ethics can be an important factor when they face ethical issues, such as withdrawal of life-sustaining treatment in health care facilities.

Despite such importance, there is very limited research on nursing related to biomedical ethics and

withdrawal of life-sustaining treatment. The majority of nursing research related to biomedical ethics are on the ethics of nurses (7), ethical values of nurses (8), health care professionals or nurses (3, 9,10), or medical or nursing students (11-14). Previous studies on the withdrawal of life-sustaining treatment are mostly focused on the institutional, ethical, and religious aspects (15) attitude of the general public toward life-sustaining treatment; and medical staff and families on euthanasia (5,16).

Accordingly, the present study was conducted to create the foundation of educational data on the establishment of the desirable bioethical viewpoint of nurses by identifying the level of consciousness of bioethics among nurses and investigating their attitudes toward the corresponding withdrawal of life-sustaining treatment.

## 2. Research purpose

The purpose of the present study was to identify the level of consciousness of biomedical ethics and attitudes toward withdrawal of life-sustaining treatment among nurses, and the objectives are as follows:

- 1) To identify the general characteristics of the subjects.
- 2) To identify the consciousness of biomedical ethics among nurses.
- 3) To identify nurses' attitude toward withdrawal of life-sustaining treatment.
- 4) To identify nurses' consciousness of biomedical ethics and the attitude toward withdrawal of life-sustaining treatment based on their general characteristics.
- 5) To analyze the correlation between nurses' consciousness of biomedical ethics and the attitude toward withdrawal of life-sustaining treatment.

## II. Research methods and procedures

### 1. Research design

The present study is a descriptive research to identify the nurses' consciousness of biomedical ethics and the attitude toward withdrawal of life-sustaining treatment, and the relationship between these two variables.

### 2. Subjects

The subjects were nurses working at Y hospital in W city who understood the purpose of the present study and consented to participate. The minimum number of subjects needed to maintain the significance level of .05, effect size of 0.5, and power of .95 was 210, based on the G\*power program, and with the consideration given to the dropout rate, 250 subjects were randomly sampled, and the data from 230 subjects excluding insincere responses were used in the final analysis.

### 3. Research instruments

#### 1) Consciousness of biomedical ethics

The Biomedical Ethics Scale by Gwon (2003), a modified and supplemented version of the ethical value scale developed by Lee (1990), was used for

measurements with the author's permission. The scale comprises of 49 items, which include five items on the right to life of the fetus, six items on artificial termination of pregnancy, seven items on artificial insemination, five items on fetal diagnosis, five items on the right to life of the newborn, five items on euthanasia, four items on organ transplant, five items on brain death, and seven items on human biotechnology. The responses are scored on a four-point Likert scale, with higher scores indicating higher consciousness of biomedical ethics. The instrument reliability measured using Cronbach's  $\alpha$  was .76 in the study by Gwon (2003), and Cronbach's  $\alpha$  in the present study was .73.

## 2) Attitudes toward life-sustaining treatment

The measurement of the attitudes toward withdrawal of life-sustaining treatment was made using the instrument on the attitude toward withdrawal of life-sustaining treatment developed by Park (2000), modified and supplemented by Byeon et al. (2003), with the authors' permission. The instrument is scored on a five-point Likert scale comprising of 19 items, which include 15 items describing a positive position on the withdrawal of life-sustaining treatment and four items describing a negative position; a higher score indicates a positive attitude toward withdrawal of life-sustaining treatment. The reliability measured using Cronbach's  $\alpha$  was .88 in the study by Byeon et al. (2003), and Cronbach's  $\alpha$  in the present study was .81.

## 4. Data collection method and ethical consideration

Permission was obtained for data collection for the present study from the Institutional Review Board (IRB) (Permission number: GWNUIRB-2015-16). Data was collected from subjects who consented to participate after the purpose and contents of the research were explained to them, and that were told that they could discontinue participation while the research was in progress, if they wished. Data collection was conducted from 5-15 September 2015.

## 5. Data analysis

The general characteristics of the subjects were analyzed using frequencies and percentages, and the consciousness of biomedical ethics and attitude toward withdrawal of life-sustaining treatment were analyzed using averages and standard deviations. To identify the consciousness of biomedical ethics and attitude toward withdrawal of life-sustaining treatment according to the general characteristics, the t-test and one-way ANOVA were performed, and the Scheffe post-hoc test was conducted if the difference was significant. For the correlation between the consciousness of biomedical ethics and attitude toward withdrawal of life-sustaining treatment, Pearson's correlation analysis was conducted.

## III. Results

### 1. General characteristics of the subjects

Table 1: General characteristics (N=230)

Characteristics	Classification	N (%)
Age	29 years or younger	118 (51.3)
	30 - 39 years	60 (26.1)
	40 years or older	52 (22.6)
Marital status	Single	143 (62.2)
	Married	87 (37.8)
Education	Graduated from a 3-year nursing college	35 (15.2)
	Graduated from a 4-year nursing college	163 (70.9)
	Attending graduate school or higher	32 (13.9)
Work experience	Less than 1 year	43 (18.7)
	1 year to less than 10 years	104 (45.2)
	More than 10 years	83 (36.1)
Work unit	Ward	137 (59.6)
	Intensive Care Unit	47 (20.4)
	Emergency room, operating room, outpatient	46 (20.0)
Job position	General nurse	211 (91.7)
	Charge nurse	11 (4.8)
	Head Nurse or higher	8 (3.5)
Religion	Yes	147 (63.9)
	No	83 (36.1)
Religious activities Level of participation	Very active	12 (5.2)
	Generally active	56 (24.3)
	Casual participation	25 (10.9)
Ethical values	Almost no participation	61 (26.5)
	Very firm	46 (20.0)
	Sometimes confused	106 (46.1)
Biomedical ethics training	Changes by the situation	74 (32.2)
	Think it is not realistic	4 (1.7)
	Yes	57 (24.8)
	No	173 (75.2)

The analysis of general characteristics of the subjects showed that most subjects were aged 29 years or younger (51%), and there were more unmarried than married subjects (62% unmarried). The most prevalent highest level of education was four-year nursing college graduation (71%); work experience was between 1-10 years (45%); and ward working as part of the work unit (60%). For job positions, general nurses were the most prevalent (92%). Further, most subjects reported as "having a religion" (64%), "sometimes confused" was the most

prevalent ethical value (46%), and for the experience of receiving an education on biomedical ethics within the last one year, "no" was the most common response (75%).

## 2. Characteristics of research variables

The characteristics of the research variables in the present study are shown in Table 2.

Table 2: Consciousness of biomedical ethics (N=230)

Characteristics	M (SD)
<b>Consciousness of biomedical ethics (Overall average)</b>	3.03 (0.22)
The right to life of the fetus	3.38 (0.49)
Organ transplant	3.31 (0.64)
The right to life of the newborn	3.27 (0.48)
Artificial insemination	3.14 (0.44)
Artificial termination of pregnancy	2.96 (0.35)
Human biotechnology	2.93 (0.36)
Fetal diagnosis	2.86 (0.33)
Euthanasia	2.85 (0.41)
Brain death	2.58 (0.28)
Attitudes toward withdrawal of life-sustaining treatment	3.40 (0.46)

## 3. Characteristics of research variables according to the general characteristics

Among the research variables according to the general characteristics, age ( $F=4.67$ ,  $p=.010$ ), marital status ( $t=-3.79$ ,  $p<.001$ ), work experience ( $F=5.23$ ,  $p=.006$ ), and the level of religious participation ( $F=3.16$ ,  $p=.026$ ) showed significant differences. According to age, over 40-year-old group was highest with 3.09 points followed by 30-39 years old group with 3.07 points, and 29 year old or younger group with 2.99 points, which showed significant differences; the biggest difference was seen in the over 40 year old group and the consciousness of biomedical ethics was highest in that group.

For work experience, more than 10 years was highest with 3.09 points, one year to under ten years was 3.01 points, and under one year was 2.97 points, which showed significant differences. Those who had more than 10 years of work experience showed higher consciousness of biomedical ethics than those who had 1-10 years or under one year or experience.

For the level of religious participation, "very active" was the highest with 3.24 points, followed by "casual participation" with 3.07 points, "generally active" with 3.06 points, and "almost no participation" with 3.02, and the differences were significant. The consciousness of biomedical ethics was higher for 'very active' than 'almost no participation'. For marital status, the married group scored 3.10 points, which was significantly higher than the unmarried group who scored 2.99. The consciousness of biomedical ethics was significantly higher for the married group than the unmarried group. Significant differences were found in the subareas of the consciousness of biomedical

ethics, i.e., marital status ( $t=-3.45$ ,  $p=.001$ ) for the right to life of the newborn; job position ( $F=3.76$ ,  $p=.025$ ) for artificial termination of pregnancy; age ( $F=12.19$ ,  $p<.001$ ), marital status ( $t=4.14$ ,  $p<.001$ ), education ( $F=6.86$ ,  $p=.001$ ), and work career ( $F=12.36$ ,  $p<.001$ ) for artificial insemination; age ( $F=8.52$ ,  $p<.001$ ), marital status ( $t=-4.37$ ,  $p<.001$ ), and work career ( $f=7.12$ ,  $p=.001$ ) for fetal diagnosis; job position ( $F=4.81$ ,  $p=.009$ ) for the right to life of the newborn; level of religious participation ( $F=3.16$ ,  $p=.026$ ) for euthanasia; and age ( $F=8.02$ ,  $p<.001$ ), marital status ( $t=-3.76$ ,  $p<.001$ ), and work career ( $F=9.36$ ,  $p<.001$ ) for human biotechnology.

The consciousness of the right to life of the fetus was significantly higher for the married group than unmarried group, and the consciousness of the artificial termination of pregnancy was significantly higher for head nurses or higher ranking nurses than charge nurses. The consciousness of artificial insemination was significantly higher for the group aged 30-39 years or 40 years and older compared to 29 years or younger group, married group than unmarried group, and attending graduate school or higher than three- and four-year nursing college, and the work career was significantly higher for 10 years or higher group than under one year and one to ten year groups.

The consciousness was higher for the 40 years or older group than 29 years or younger group, and for married group than unmarried group in fetal diagnosis and human biotechnology, and the 10 years or higher group than under one year and one to ten year groups in work career. The consciousness was higher for charge nurses than general nurses with regards to the idea of the right to life of the newborn. Higher consciousness was found for euthanasia for "very active" group than "almost no participation" in the level of religious participation. The difference in the attitude toward withdrawal of life-sustaining treatment according to the general characteristics was non-significant (Table 3).

## 4. Correlation between the consciousness of biomedical ethics and the attitude toward withdrawal of life-sustaining treatment

The results of the correlational analysis between the consciousness of biomedical ethics and the attitude toward withdrawal of life-sustaining treatment showed significant correlation ( $r=-.200$ ,  $p=.003$ ). Among the subareas of the consciousness of biomedical ethics, artificial termination of pregnancy ( $r=-.179$ ,  $p=.007$ ), euthanasia ( $r=-.418$ ,  $p<.001$ ), and the right to life of the newborn ( $r=-.383$ ,  $p<.001$ ) showed significant correlations. No significant correlations were found in the right to life of the fetus, artificial insemination, fetal diagnosis, the brain death, organ transplants, and human biotechnology. It was found that the higher the biomedical ethics score, the attitude toward withdrawal of life-sustaining treatment was more negative (Table 5).

Table 3: The consciousness of biomedical ethics according to the general characteristics (N=230)

Characteristics	Classification	M (SD)	t or F	p	Scheffe
Age	29 years or vounder (a)	2.99 (0.21)	4.67	.010	a<c
	30-39 years old (b)	3.07 (0.21)			
	40 years or older (c)	3.09 (0.24)			
Marital status	Single	2.99 (0.21)	-3.79	(p<.001)	
	Married	3.10 (0.22)			
Education	Graduated from a 3-year nursing college	3.01 (0.18)	1.25	.288	
	Graduated from a 4-year nursing college				
	Attending a graduate school or higher	3.09 (0.26)			
Work career	Under one year (a)	2.97 (0.20)	5.23	.006	a.b<c
	1 year to under 10 years (b)	3.01 (0.22)			
	10 years or more (c)	3.09 (0.23)			
Work unit	Ward	3.06 (0.23)	2.08	.127	
	Intensive Care Unit	3.03 (0.19)			
	Emergency room, operating room, outpatient	2.98 (0.24)			
Job position	General nurse	3.03 (0.22)	1.09	.336	
	Charge nurse	2.96 (0.24)			
	Head Nurse or higher	3.11 (0.33)			
Religion	Yes	3.05 (0.22)	1.56	.121	
	No	3.00 (0.22)			
Level of religious participation	Very active (a)	3.24 (0.14)	3.16	.026	a>d
	Generally active (b)	3.06 (0.25)			
	Casual participation (c)	3.07 (0.18)			
	Almost no participation (d)	3.02 (0.20)			
Ethical values	Very firm	3.08 (0.24)	.88	.450	
	Sometimes confused	3.03 (0.23)			
	Changes by the situation	3.01 (0.19)			
	Think it is unrealistic	3.03 (0.29)			
Biomedical ethics	Yes	3.04 (0.20)	.13	.889	

Table 5: Correlation between the consciousness of biomedical ethics and the Attitude toward withdrawal of life sustaining treatment (r (p) N=230)

	Consciousness of biomedical ethics	The right to life of the fetus	Artificial termination of pregnancy	Artificial insemination	Fetal diagnosis	The right to life of the newborn	Euthanasia	Organ transplant	Brain death	Human biotechnology
Attitude toward withdrawal of life-sustaining treatment	-.200 (.003)	-.048 (.470)	-.179 (.007)	-.121 (.069)	.068 (.307)	-.383 (p<.001)	-.418 (p<.001)	.069 (.302)	.043 (.518)	.074 (.269)

Table 4: The consciousness of biomedical ethics according to the general characteristics (N=230)

Characteristic	Classification	The right to life of the fetus			Termination of pregnancy			Fetal diagnosis			Artificial insemination			The right to life of the newborn			Human biotechnology			Euthanasia			Organ transplant			Brain death		
		M (SD)	t/F	P	M (SD)	t/F	P	M (SD)	t/F	P	M (SD)	t/F	P	M (SD)	t/F	P	M (SD)	t/F	P	M (SD)	t/F	P	M (SD)	t/F	P			
<b>Age</b>																												
29 years or younger		3.32 (0.46)	236	.096	2.96 (0.35)	.03	.968	2.79 (0.30)	852	<.001	3.01 (0.44)	1219	<.001	3.30 (0.46)	28	.755	2.84 (0.34)	8.02	<.001	2.84 (0.37)	26	.770	3.26 (0.45)	1.55	214	2.59 (0.29)	.13	.870
30-39 years old		3.48 (0.47)			2.96 (0.33)			2.87 (0.35)		a-c	3.20 (0.38)		a-b-c	3.25 (0.47)			3.05 (0.36)		a-c	2.85 (0.42)			3.36 (0.41)			2.58 (0.31)		
40 years or older		3.42 (0.56)			2.97 (0.40)			3.01 (0.36)			3.35 (0.44)			3.25 (0.56)			2.99 (0.36)			2.89 (0.49)			3.38 (0.53)			2.56 (0.23)		
<b>Marital status</b>																												
Single		3.30 (0.47)	345	.001	2.95 (0.34)	.80	.420	2.78 (0.28)	437	<.001	3.05 (0.45)	4.14	<.001	3.26 (0.47)	-.34	.729	2.86 (0.34)	-3.76	<.001	2.85 (0.37)	25	.800	3.27 (0.45)	1.89	.060	2.58 (0.28)	24	.803
Married		3.52 (0.49)			2.98 (0.38)			2.99 (0.37)			3.28 (0.39)			3.29 (0.51)			3.04 (0.36)			2.86 (0.47)			3.39 (0.47)			2.57 (0.28)		
<b>Education</b>																												
3-year college		3.39 (0.46)	69	.500	2.89 (0.30)	.85	.428	2.81 (0.33)	155	.214	3.03 (0.46)	6.86	.001	3.26 (0.39)	.74	.478	3.00 (0.30)	.81	.444	2.79 (0.37)	237	.086	3.24 (0.47)	.61	.541	2.64 (0.28)	.99	.372
4-year nursing college		3.36 (0.49)			2.97 (0.36)			2.86 (0.32)			3.11 (0.42)		ab-c	3.29 (0.48)			2.92 (0.38)			2.84 (0.41)			3.33 (0.46)			2.57 (0.29)		
Attending graduate school or higher		3.47 (0.53)			2.99 (0.42)			2.95 (0.37)			3.39 (0.46)			3.18 (0.59)			2.89 (0.29)			2.99 (0.44)			3.34 (0.49)			2.58 (0.25)		
<b>Work Experience</b>																												
Less than 1 year		3.29 (0.48)	243	.089	2.98 (0.31)	.43	.648	2.78 (0.24)	712	.001	2.99 (0.39)	1236	<.001	3.31 (0.49)	.15	.855	2.76 (0.38)	9.36	<.001	2.86 (0.38)	.05	.944	3.20 (0.39)	2.47	.086	2.60 (0.27)	.09	.907
1-10 yrs		3.35 (0.44)			2.94 (0.35)			2.81 (0.32)		ab-c	3.05 (0.45)		ab-c	3.27 (0.44)			2.92 (0.32)			2.86 (0.36)			3.30 (0.45)			2.57 (0.30)		
More than 10 years		3.47 (0.54)			2.98 (0.38)			2.97 (0.37)			3.32 (0.40)			3.26 (0.55)			3.04 (0.36)			2.84 (0.47)			3.39 (0.50)			2.58 (0.27)		
<b>Work unit</b>																												
Ward		3.42 (0.50)	83	.439	3.00 (0.36)	224	.109	2.88 (0.33)	359	.029	3.15 (0.45)	0.34	.712	3.28 (0.50)	.04	.963	2.95 (0.36)	.55	.577	2.96 (0.44)	.50	.607	3.35 (0.45)	1.78	.171	2.60 (0.29)	.91	.402
Intensive Care Unit		3.32 (0.48)			2.93 (0.31)			2.91 (0.34)			3.16 (0.41)			3.26 (0.49)			2.90 (0.37)			2.88 (0.34)			3.33 (0.47)			2.5 (0.28)		
Emergency room, operating room, outpatient		3.35 (0.49)			2.88 (0.39)			2.75 (0.33)			3.09 (0.47)			3.26 (0.48)			2.90 (0.48)			2.80 (0.39)			3.20 (0.50)			2.54 (0.26)		



Characteristics	Classification	The right to life of the fetus			Termination of pregnancy			Fetal diagnosis			Artificial insemination			The right to life of the newborn			Human biotechnology			Euthanasia			Organ transplant			Brain death			
		M (SD)	t/ F	P	M (SD)	t/ F	P	M (SD)	t/ F	P	M (SD)	t/ F	P	M (SD)	t/ F	P	M (SD)	t/ F	P	M (SD)	t/ F	P	M (SD)	t/ F	P	M (SD)	t/ F	P	
<b>Job position</b>																													
General nurse		3.38 (0.48)	.03	.963	2.96 (0.35)	3.76	.025	2.85 (0.32)	1.06	.346	3.12 (0.44)	2.03	.133	3.30 (0.47)	4.81	.009	2.93 (0.37)	.08	.921	2.85 (0.41)	1.84	.160	3.32 (0.45)	.33	.716	2.59 (0.29)	1.07	.344	
Charge nurse		3.36 (0.60)			2.76 (0.30)		b-c	3.00 (0.32)			3.22 (0.36)			2.84 (0.53)		a-b	2.96 (0.22)			2.75 (0.37)			3.20 (0.56)			2.53 (0.26)			
Head nurse		3.43 (0.65)			3.21 (0.54)			2.90 (0.47)			3.43 (0.59)			3.25 (0.72)			2.89 (0.35)			3.10 (0.39)			3.34 (0.64)			2.45 (0.20)			
<b>Religion</b>																													
Yes		3.40 (0.52)	.60	.547	2.98 (0.35)	1.16	.248	2.87 (0.33)	.54	.587	3.18 (0.43)	1.82	.069	3.29 (0.50)	.69	.490	2.95 (0.37)	.90	.368	2.87 (0.44)	1.01	.313	3.35 (0.46)	1.35	.178	2.57 (0.26)	-.68	.488	
No		3.36 (0.44)			2.92 (0.37)			2.85 (0.35)			3.07 (0.47)			3.24 (0.47)			2.90 (0.33)			2.82 (0.35)			3.26 (0.47)			2.60 (0.32)			
<b>Level of religious participation</b>																													
Very active		3.60 (0.49)	.62	.599	3.21 (0.27)	2.39	.071	2.92 (0.28)	.60	.614	3.32 (0.47)	.69	.569	3.63 (0.25)	2.51	.061	3.06 (0.32)	.63	.596	3.20 (0.32)	3.16	.026	3.42 (0.39)	.33	.798	2.57 (0.25)	.16	.921	
Generally active		3.39 (0.53)			3.01 (0.37)			2.90 (0.33)			3.21 (0.43)			3.26 (0.49)			2.91 (0.29)			2.89 (0.46)		(a-d)	3.34 (0.53)			2.59 (0.28)			
Casual participation		3.39 (0.47)			2.96 (0.29)			2.89 (0.28)			3.13 (0.47)			3.39 (0.45)			2.99 (0.40)			2.94 (0.43)			3.37 (0.39)			2.55 (0.17)			
Almost no participation		3.38 (0.54)			2.93 (0.36)			2.83 (0.33)			3.16 (0.39)			3.25 (0.52)			2.96 (0.43)			2.78 (0.41)			3.29 (0.46)			2.59 (0.28)			
<b>Ethical values</b>																													
Very firm		3.50 (0.50)	1.19	.120	3.02 (0.39)	1.15	.329	2.87 (0.35)	.80	.967	3.20 (0.41)	.46	.705	3.34 (0.50)	.88	.452	2.93 (0.35)	.07	.974	2.89 (0.46)	1.02	.382	3.41 (0.48)	1.25	.291	2.5 (0.243)	1.20	.308	
Sometimes confused		3.31 (0.50)			2.97 (0.35)			2.85 (0.33)			3.14 (0.48)			3.29 (0.49)			2.94 (0.33)			2.88 (0.40)			3.32 (0.42)			2.58 (0.28)			
Changes by the situation		3.40 (0.47)			2.91 (0.33)			2.87 (0.34)			3.11 (0.41)			3.20 (0.46)			2.92 (0.40)			2.80 (0.37)			3.25 (0.48)			2.58 (0.30)			
Think it is unrealistic		3.65 (0.47)			2.83 (0.38)			2.80 (0.16)			3.00 (0.48)			3.30 (0.26)			3.00 (0.26)			2.65 (0.61)			3.25 (0.67)			2.80 (0.36)			
<b>Biomedical ethics training</b>																													
Yes		3.40 (0.48)	.38	.829	2.99 (0.32)	2.95	.86	.368	2.84 (0.32)	2.87	3.10 (0.40)	-.81	.417	3.38 (0.39)	3.24	1.94	.56	2.91 (0.33)	-.55	.582	2.88 (0.38)	.61	.540	3.26 (0.44)	-.107	.284	2.58 (0.24)	.13	.896
No		3.38 (0.49)			2.95 (0.37)			2.87 (0.33)	.63	.528	3.16 (0.45)			3.24 (0.51)			2.94 (0.37)			2.84 (0.42)			3.33 (0.46)			2.58 (0.29)			

#### IV. Discussion

Due to rapid development, issues on the consciousness of biomedical ethics and withdrawal of life-sustaining treatment have started to emerge. Accordingly, the present study was attempted so that nurses can be conscious of biomedical ethics, and to help to understand values on withdrawal of life-sustaining treatment without having conflicts, and ethics related training by identifying the consciousness of biomedical ethics among nurses and the attitude toward withdrawal of life-sustaining treatment. The subjects' average score on the consciousness of biomedical ethics was 3.03 out of four points and the result is similar to the results of a previous study (1).

The reason for the similar scores in the consciousness of biomedical ethics between nurses who deal with life in their clinical work and nursing students is that consciousness does not change easily and is influenced by ethics education in college. Further, continuing education is considered necessary for the nurses who face ethical conflicts in their clinical work.

Among the subareas of the consciousness of biomedical ethics, the right to life of the fetus was the highest with 3.38 points, and brain death was the lowest with 2.58 points. Such results partially agree with previous study on nurses' consciousness of biomedical ethics and the attitude toward withdrawal of life-sustaining treatment (17). It also partially agrees with the results of a previous study, which found that the highest area among nurses' consciousness of biomedical ethics and attitude toward human tissue donation and transplants was the right to life of the newborn and the lowest area was brain death (11). The reason for the right to life of the fetus obtaining the highest score among the consciousness of biomedical ethics is considered to be because nurses are acknowledging the fetus as a human being that already has life and perceive it as a weak life that cannot assert its rights by itself or have its rights recognized.

The reason for brain death to be the lowest among the consciousness of biomedical ethics is that the issues of brain death are still actively discussed, and because the other person has to make the decision for the patient, even if brain death is recognized as legitimate.

When the consciousness of biomedical ethics according to the general characteristics was examined, it was higher for married and older subjects, and this could be because of the influence of life experience on the relatively stable and desirable ethical belief. In addition, the consciousness of biomedical ethics was higher for nurses with more work experience, which is considered helpful in establishing ethical values.

In terms of the level of religious participation, the consciousness of biomedical ethics was higher for "very active" than "almost no participation," and it appears that due to the nature of religion that considers respect for life as important, "very active" can positively influence the consciousness of biomedical ethics.<sup>18)</sup>

Among the subareas of the consciousness of biomedical ethics according to general characteristics, marital status, religious participation, job position, age, education, and work experience were influencing factors, and since detailed studies on the areas of consciousness of biomedical ethics according to the general characteristics are lacking, further studies are needed.

The average score of the attitude toward withdrawal of life-sustaining treatment was 3.40 out of five points, which shows a somewhat positive position on the withdrawal of life-sustaining treatment, and "the patient has the right to decide his or her own death" on the question of nurses' attitude toward withdrawal of life-sustaining treatment scored the highest point, and "basic medication (fluid and antibiotics) should be given even if the patient is terminally ill during hospitalization" scored the lowest point. The reason for the highest score on "the patient has the right to decide his or her own death" is perhaps that it puts the greatest significance on the principle of autonomy among the ethical principles of withdrawal of life-sustaining treatment.

A significant negative correlation was found in the relationship between the consciousness of biomedical ethics and withdrawal of life-sustaining treatment. In the consciousness of biomedical ethics area, artificial termination of pregnancy, euthanasia, and the right to life of the newborn showed significant negative correlation, and the results are similar to the findings of a previous study, "Awareness of biomedical ethics and attitudes to euthanasia of clinical nurse's" (17). It can be seen that the higher the consciousness in the areas of artificial termination of pregnancy, euthanasia and the right to life of the newborn, the more negative it is about withdrawal of life-sustaining treatment; overall, the higher the consciousness of biomedical ethics, the attitude toward withdrawal of life-sustaining treatment is more negative.

In summary, the consciousness of biomedical ethics and withdrawal of life-sustaining treatment are related to each other, and there are many conflicts and ethical issues between sustaining patient's life and withdrawing life-sustaining treatment. As a means to resolve the issues, active and systematic education on biomedical ethics and withdrawal of life-sustaining treatment is necessary.

#### V. Conclusion

The present study intended to help nurses firmly have the consciousness of biomedical ethics, help establish values on withdrawal of life-sustaining treatment without having conflicts, and provide ethics related training by identifying the consciousness of biomedical ethics among nurses and the attitude toward withdrawal of life-sustaining treatment.

Summarizing the results of the present study, the average score of nurses' consciousness of biomedical ethics was 3.03 out of 4 points, which indicates relatively high consciousness of biomedical ethics.

The attitude toward withdrawal of life-sustaining treatment was 3.40 points out of 5 points, which shows an overall positive attitude.

An inverse correlation was found between the consciousness of biomedical ethics and attitude toward withdrawal of life-sustaining treatment, which signifies the higher the score of the consciousness of biomedical ethics, the more negative the attitude toward withdrawal of life-sustaining treatment.

Based on the results discussed above, a repeated and detailed study on conflicts based on the subareas of consciousness of biomedical ethics is needed, since easily accessible continuing education for nurses is required and there is a lack of research on this topic. In addition, a qualitative and repeated study to generalize the results of the present study is needed to conduct proper intervention for nurses to understand their role in the decision-making process on the withdrawal of life-sustaining treatment.

**Note:** The present study is based on an excerpt from the thesis for the degree of Master of Science at the Graduate School of Gangneung-Wonju National University in 2016.

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