

# Nutritional Assessment of Selected Transgenders

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## ABSTRACT

Around 5,00,000 to 1,00,000 transgender “Hijra” populations were found in India nearly 30,000 were recorded in Tamil Nadu. People with same sexual behavior are at greater risk for psychiatric disorders, negative health sequences such as body image dissatisfaction and eating disorder. Transgender tend to eat more or less to express their anger, depression on food. So they eat more or skip meals leading to malnutrition and obesity. Transgender people use tobacco products as much higher rates than others, this can lead to a number of serious health problems including heart diseases, high blood pressure, lung diseases and lung cancer and they are having sexually transmitted infections, including HIV. For the present study one hundred and twenty transgender in the age group of 20 to 70 years were selected by stratified random sampling. All the selected subjects were assessed for their nutritional status through anthropometric, clinical and dietary techniques. The results pertaining to the study revealed that 12 per cent of the selected transgender were underweight, five per cent were ideal weight, 26 per cent were overweight and 19 per cent were obese. Among the selected transgender people ten per cent of the selected subjects in the age group of 20to 30 yearsworked in private concern, 13 per cent of the subjects had started business, seven per cent of the subjects collecting money from the shops, three per cent are working in government jobs. Based on HUDCO income classification (2007) forty per cent of the subjects belong to low income level they were earned up to 5000 to 7000. It was evident from the result that the selected subjects did not have enough knowledge regarding the importance of nutrition and showed one per cent significance. No significance was seen in their proteins and carbohydrates intake with ICMR value. Life style pattern showed that eighty percent of the subjects had the habit of watching television more than 30 minutes, thirteen per cent of the transgender people is not having their food properly and they also had the habit of skipping meals.

**Keywords :** Nutritional status, Transgender, Trans people, Gender Identity

## I. INTRODUCTION

Transgender is an umbrella term used to describe people whose gender identity(sense of themselves as male or female) or gender expression differs from that usually associated with their birth sex (Glaade, 2010). Biological females who wish to live and be recognized as men are called female-to-male (FTM) transsexuals or transsexual men, biological males who wish to live and be recognized as women are called male-to-female (MTF) transsexuals or transsexual women (Curran, 2009). Transgender is a relatively rare condition, but is increasingly encountered in our modern society. In the worldwide, the transgender are estimates that implies 15, 324,000 trans people. (US Census Bureau,

estimates for mid, 2011), but in India, conservative estimates for “Hijra” is about 500,000, to 1,000,000 (Nanda, 2010). Tamil Nadu has an estimated population of 30,000 transgender people. The estimated transgender population in Coimbatore is roughly two thousand one hundred (Dinamalar, 2010). Transgender people may be eligible for diagnosis of gender identity disorder (GID)."Only if [being transgender] causes distress or disability. This distress is referred to as *gender dysphoria* and may manifest as depression or inability to work and form healthy relationships with others. Transgender people who are comfortable with their gender, whose gender does not directly cause inner frustration, or impair their functioning, do not suffer from Gender Identity

Disorder (Rounsely, 1997). Transiting from one gender to another gender is a complex process; many transsexual people have a wish to alter their bodies. These physical changes are collectively known as “sex reassignment therapy” (The American Psychological Association, 1994). The risk of surgery similar to those of other types of surgery, which includes a variety of complications such as nerve damage or infection (Stega et al., 2008). People with same sexual behaviors are at greater risk for psychiatric disorder. Negative health consequences such as body image dissatisfaction and eating disorders also came to be seen as related to the specific lifestyle and subculture of openly gay. People tend to eat more or less to express their anger, depression on food. So they eat more or skip meals leading to malnutrition obesity (Rondegraff, 2001). Transgender persons are often at higher risk for heart disease because of hormone use, as a part of the cross-gender transgender people may take hormones in order to achieve masculine and feminine effects. The hormone carries risks, low or high blood pressure, blood clot, dehydration and electrolyte imbalance, liver damage. Also transgender persons should learn about the signs and symptoms of heart disease and stroke (Ryan, 2009). The use of substance such as anabolic steroids and certain supplement can adversely affect the health. Substances used were amphetamines including crystal meth, marijuana, ecstasy and cocaine. Use of these drugs has been linked to higher rates of HIV transmission. Overweight and obesity are problem that also affect a large subset of this community. This can cause a serious of health problems with includes diabetes, hypertension, cancer and heart diseases (Tang et al., 2003). Many transgender women will continue to endure stigma discrimination, and can feel socially isolated and marginalized by society, social mechanisms put them at increased risk for mental and other health problems, Nutrition through visual aids and the group discussion can be implemented to change their life style pattern and improve the nutritional status among the transgender.

## II. METHODS AND MATERIAL

### *Selection of area*

The study was conducted at Coimbatore city. One twenty subjects in the age group of 20-70 years were selected using stratified sampling method.

### *Collection of data and formulation of interview schedule*

Face to face survey was conducted in the selected area. A survey was conducted to the selected one twenty subjects using a well-designed interview schedule was framed pretested components. An interview schedule comprised of age, occupation, income, anthropometric measurements like height, weight, waist and hip circumference was collected. The main details about this lifestyle patterns like their physical activity, smoking and the habit of alcohol consumption, chewing of tobacco, gudka, pan masala and their eating pattern were obtained. The psychological aspects of the selected subjects were also assessed; this will help the researcher to know the emotional stability in relation to their eating habits.

### *Assessment of nutritional status of the transgender*

The process of measuring nutritional health is usually termed as nutrition assessment. Assessment of nutritional status of the community is one of the first steps in the formation of any health strategy to compact malnutrition. Anthropometry is concerned with the measures of the variations of dimension and some aspects of gross composition of human body at different ages and at different levels of nutrition (Jellifee and Jellifee, 1991).

### *Anthropometric measurement*

The most commonly used anthropometric measurements such as height, weight; waist and hip circumference were recorded for all the selected 120 subjects. The Body Mass Index is to measure for human body shape based on an individual's weight and height to assess for underweight, normal or overweight and obese. The anthropometric measurements and the body build were in accordance is to their biological sex (Garrow, 2000).

### *Dietary survey*

Diet is a vital determinant of health and nutritional status of sample so dietary survey was conducted for all the selected for three days food recall method. 24 hour recall method was used to find out consumption pattern of foods from the selected subject's for period of three days.

### Imparting nutrition education

Diet counseling plays an important role in development of healthy habits and positive attitudes towards food. Counseling was given to the selected subjects, counseling plays an important role in motivating individual in development of healthy habits and positive attitudes towards life. Diet therapy for transgender which primarily involves moderately controlled carbohydrates and increase consumption of fruits and vegetables which improve their health condition to prevent their nutritional deficiencies.

### III. RESULTS AND DISCUSSION

#### Age wise distribution of the selected subjects

Table 1 shows the age wise distribution of the subjects

**Table 1.** Age Wise Distribution of the Selected Transgender

Age (years)	BMI								
	Total	Under weight		Ideal weight		Over weight		Obese	
	No	No	%	No	%	No	%	No	%
0-30	66	9	7	32	26	12	10	13	10.8
31-40	29	-	-	18	15	9	7.5	2	1.7
41-50	14	-	-	5	4.2	5	4.2	4	3.3
51-60	8	5	4.2	3	2.5	-	-	-	-
>60	3	1	0.8	2	1.7	-	-	-	-

Based on the WHO (2004), 12 percent were underweight, 50 percent were normal weight, 21 percent were overweight, 19 percent were obese as they consumed more amount of non-vegetarian foods and have the habit of consuming more amount of junk foods and they consume hormonal tablets, hormonal injection as a process of transition of the development of secondary sex organs. Among the selected transgenders, 26 percent and 7 percent of in the age group of 20-30 years had normal weight and underweight category respectively. Fifteen percent, seven percent and one percent of the selected subjects in the age group of 31-40 years were normal, over weight and obese respectively.

### Occupational status of the selected transgenders

Table 2 shows the occupational status of the selected transgenders.

**Table 2.** Occupational Status of the Selected Transgender Subjects

Income level Amount(Rs)	Under weight		Normal weight		Over weight		Obese	
	No	%	No	%	No	%	No	%
Low income(2500-4500)	5	4	49	40	16	13	8	6
Middle income(4500-7500)	6	5	9	7.5	9	7.5	10	8.
High income(>7500)	4	3.	2	1.7	1	0.8	1	0.

Based on HUDCO (2004) classification four percent, 40 percent, 13 percent and six percent of the underweight, ideal weight, overweight and obese subjects belonged to low income level, and only one percent of the subjects had ideal weight belonging to high income. Eight percent of the underweight belonged to high income.

### Life Style Pattern of The Transgender

#### Smoking pattern of the selected transgenders

Table 3 explains the pattern of smoking among the selected transgenders.

**Table 3.** Smoking Pattern of the Selected Transgenders

Income level Amount(Rs)	Under weight		Normal weight		Over weight		Obese	
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Low income(2500-4500)	5	4	49	40	16	13	8	6
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High income(>7500)	4	3.	2	1.7	1	0.8	1	0.

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### Life Style Pattern of The Transgender

#### Smoking pattern of the selected transgenders

Table 4. explains the pattern of smoking among the selected transgenders.

**Table 4.** Smoking Pattern of the Selected Transgenders

Type	Frequency			Number per day		
	Daily	Weekly	Rarely	<5	5-10	>5
Cigarette	19	-	-	9	6	4
Beedi	22	-	-	16	3	3

From table VIII it was clear that only 41 of them had the habit of smoking. It was Alarming to see that nine of them smoked cigarettes daily, among them 22 of them smoked half a packet a day.

### **Tobacco Chewing habits among the selected transgenders**

The tobacco chewing among selected subjects in shown in Table 5.

**Table 5.** Habit of Chewing Tobacco among the Selected Transgenders

Types of tobacco	Frequency			Number of products per day		
	Daily	Weekly	Rarely	>5	5-10	>10
Gudka	16	4	4	10	11	3
Panparag	4	-	4	2	4	2
Beetel leaves with tobacco	8	2	10	6	3	9

The above table reveals that chewing habit among the transgenders community. Out of the 120 transgenders, 52 of them had habit of chewing tobacco and others. Among the 24 selected transgenders were panparag users, four of them daily users and four of them chewed less than five packets a day; 11 of them chewed more than five to ten packets. Sixteen subjects chewed gudka daily and eight subjects chewed betel leaves with tobacco.

### **Alcohol consumption pattern among the selected transgender subjects**

Alcohol consumption pattern among the selected transgender subjects is explained in Table 6

**Table 6.** Habit of Alcohol Consumption Pattern Among The Selected Transgender Subjects

Type of alcohol	Frequency			Quantity (ml)		
	Daily	Weekly	Rarely	100-250 ml	250-500 ml	>500
Beer	10	26	14	16	11	23
Brandy	5	10	16	18	10	3
Whiskey	4	3	2	3	4	2
Wine	16	9	4	12	12	5
Toddy	-	-	4	1	3	-

Fifty seven of them had habit of consuming alcohol, twenty six of the selected subjects drank beer weekly and ten of them consumed daily. While considering the quantity 23 of they consumed more than 500ml daily. Sixteen of the selected transgenders consumed wine rarely. Twelve of the subjects consumed about 100-250 ml and five of the selected transgenders more than 500 ml of them drank wine, five of them drank toddy rarely.

### **Dietary Pattern of the Selected Transgenders**

#### **Dietary habits of the selected transgender transgenders**

Table 7 shows the preference of daily habits of the selected transgenders.

**Table 7.** Food Habits of the Selected Transgenders

Food habits	No	%
Vegetarian	32	26.7
Nonvegetarian	88	73.3

Eating habit is decided the person's health. This table shows that, 73 percent of them were non-vegetarian; 32 percent of them eating only vegetarian foods.

#### **Non-vegetarian food consumption pattern of the selected transgenders**

Table 8. shows the pattern of non-vegetarian consumption among selected transgenders.

**Table 8.** Non-Vegetarian Food Consumption Pattern Of the Selected Transgenders

Type of non-Vegetarian items	Frequency						Quantity(g)					
	Daily		Weekly		Monthly		Daily		Weekly		Monthly	
	No	%	No	%	No	%	No	%	No	%	No	%
Beef	-	-	6	5	16	13	12	10	5	4.2	5	4.2
Chicken	10	8.3	32	26	4	3.2	26	21.7	18	15	2	1.7
Eggs	40	33	8	6.6	2	1.7	29	24	21	17.5	-	-
Fish	12	10	2	1.7	8	6.6	22	23	20	16	-	-
Meat	18	15	16	13.3	8	6.6	26	21	16	13.3	-	-

The Consumption pattern of non-vegetarians among selected transgenders was shown in Table VII. Thirty three percent of selected transgenders consumed eggs daily and eight percent, ten percent, 15 percent were consume chicken, fish and meat respectively. Only one percent consumed fish weekly in the form of fry. Fish consumption was recommended by the doctors as reduced the chances of cardiac problems.

The green leafy vegetable consumption pattern among the selected transgenders. According to doctors recommendation on iron rich foods manathakkali leaves was consumed by most of the selected subjects followed by amaranth and fenugreek. Most of the selected transgenders consumed 100-150 grams of green leafy vegetables and weekly twice

The consumption pattern of fruits among the selected subjects and was found that banana was the most common fruit consumed by the transgenders. Among the 21 percent consumed banana daily as it is low cost and easily available. The next preferred fruit was apple, followed by grapes, sweet lime and orange. Ten percent of transgender consumed these fruits on weekly basis. Papaya and pine apple were never consumed by theselectedtransgenders, because these subjects were under the hormonal tablets and injection for development of secondary sexual growth.

Beverages consumption is most common among the transgenders. The study reported that beverages boost their energy and keep them active always. Thirty percent, 35 percent and 33 percent of the selected transgenders consumed tea coffee and softdrinks daily. Among the 33 percent drank 2-3 cups and two percent about 4-5 cups of tea.

#### IV. CONCLUSION

The present study from the results is that the transgenders are under privileged and lack of the basic infrastructure to lead a happy living in the present changing world. They are very few occupational choices

and are at times forced to do jobs against their interest and satisfaction.

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