Socioeconomic status of Khulna university students deduced from their dietary intake profile

Papry Akther and Md. Matiul Islam
Agrotechnology Discipline, Khulna University, Khulna-9208, Bangladesh.

For any information: ask.author@journalbinet.com
Article Received: 07 February 2019; Revised: 09 March 2019 and Published online: 25 March 2019.

ABSTRACT

Socioeconomic factors play a crucial role and could affect nutritional status and health condition of the students which supposed to have relation with academic performances. Socioeconomic status could be deduced from the dietary intake profile of a person. This study was attempted to explore the current socioeconomic status based on dietary intake of the proportionate-randomly selected 138 students of 28 Disciplines of Khulna University. Data were on relevant indicators (personal: gender, age, family size and type; economic: monthly family income, monthly requirement of money, different sources of money, dependency extent on different sources, earning through private tuition, contribution to family from tuition earning, tuition earnings share to meet-up monthly monetary need, hamper of study due to private tuition and monthly expenditure) were identified and discussed in this study representing the common socioeconomic status of the students. Dietary food intake profile was determined by using 24-hour recall method where some indicators used including calorie intake from different meal times, calorie intake status in terms of different poverty scales (CBN- Cost of Basic Needs; HIES- Household Income and Expenditure Survey; and Students Need), daily dietary food cost (Taka) and monthly food cost status in terms of different poverty scales (mentioned earlier). The findings showed that the highest proportion (56.50%) of the respondents were female students, and highest proportion (64.49%) was 21-23 years aged. Majority of the respondents (76.10%) were from small sized (<5 members) nuclear (7.3.90%) family and belonged to low (<30,000 Taka; 43.50%) to medium (30,000-50,000 Taka; 41.30%) income family. The mean amount of required money per month was 6,902.90 Taka. The findings showed that family (50%) and family+private tuition (30.40%) were the most important sources of money for the students. Among the respondents 46.40% provided private tuition and 4.30% contributed to family from the earnings from private tuition. About one-fifth (20.30%) of the respondents said that they earn 50% share of monthly expenditure from private tuition; and 36.30% mentioned that tuition time and their effort in tuition had a negative impact on their own study. This negative impact could be overcome through judicious time management between tuition providing and university's academic need. Monthly average expenditure for study purpose was only 17.80% and monthly average food cost was 28.80%. Average total calorie intake was 1,923.90 Kilocalories student-1 day-1 which was below standard in terms different poverty scales. The research findings showed that a student should spend 132 Taka per day to achieve 1,923.90 Kilocalorie (average) and monthly food expenditure should be 3,960 Taka. In this way a student should spend 4,368 Taka,
4,800 Taka and 5,900 Taka to achieve CBN, HIES and Students Need standard, respectively, for food consumption purpose. According to CBN scale, HIES scale and Students need scale, 70.30%, 76.80% and 93.5% student belonged to below poverty line. These results showing the students lower socioeconomic status. The university authority as well as government should take necessary steps to overcome this situation. The steps might include tuition fees waiver, Discipline's and/or School's scholarships, free seats in the residential halls, subsidized meal facilities in the dining of residential halls, study-loans, sponsorships for the poverty stricken students; and all these should be done fairly with unbiased and enthusiastic predisposition.

Keywords: Poverty, 24-hour recall, CBN, HIES and Students need

I. Introduction

The socioeconomic status of the university students is not usually measured. However, the socioeconomic status of the students might have some influence on their academic study performance and achievements either in positive way or in negative way. It is very often observed in our surroundings that, the students provided with adequate resource supports do well in the academic performances and achieve better grades; whereas, the students with scanty resource supplements achieve inferior grades proving their poor academic performances (Ma et al. 2015). In the worst cases, this might lead to deep frustration among the students causing various nuisances in the society. According to Parson et al. (2000), “Socioeconomic status is the term used to distinguish between people’s relative position in the society in terms of family income, political power, educational background and occupational prestige”. Morgan et al. (2009) showed that children from lower socioeconomic status households and communities develop academic skills slower than children from higher socioeconomic groups. Eamon’s (2005) research showed that low socioeconomic status prevents access to resources and leads to additional stress and conflicts at home that affects student’s academic achievements. Barry (2006) supported the findings of Eamon’s study and reported that socioeconomic status had greater impact on student’s test scores. Haverman and Wolf (1995) found that children’s attainment depends on the social investment in children; the parental investment in children; and the choices that children make, given the investments in and opportunities available to them. But in Bangladesh this kind of choice is limited. The relationship between students’ socioeconomic status and students’ academic performances are not expected to be different from other countries.

Khulna University has 6,798 students of varied socioeconomic background (KU diary 2018). It is a common idea that the students’ status vary from gender and other social and economic aspects, but no researches have been conducted till now to know about the socioeconomic status and food consumption behavior of the students of Khulna University. There are various methods of measuring the socioeconomic status of a target group of people. In this study survey was conducted to find out the socioeconomic status of the students of Khulna University from their dietary intake profile using 24-hour recall method (Lee and Nieman, 1996; Nelson et al. 2008; Hammond 2004).

Considering the above mentioned issues and facts the study was conducted to fulfill the following specific objectives:

i. To describe few selected socioeconomic characteristics of the students.

ii. To provide detailed information on sources of money including personal earnings.

iii. To provide information about expenditure for different purposes including food costs.
iv. To determine poverty profile from their dietary intake.

II. Materials and Methods

Khulna University had 28 academic Disciplines in 2018. In this research, 5 samples were randomly selected from 26 Disciplines and 4 samples were selected from 2 Disciplines containing respondents from every existing undergraduate batch. Thus, total 138 sample respondents were selected maintaining inclusion of both male and female students from 28 Disciplines. In order to collect data from the respondents, an interview schedule was prepared keeping the study objectives in focus. The interview schedule contained both open and closed form of questions. The researchers collected data from the respondents through personal contact using the pre-tested interview schedule from 28 August to 17 October, 2018. Primary data were collected on personal (gender, age, family size and type) and economic (monthly family income, monthly requirement of money, different sources of money, dependency extent on different sources, earning through private tuition, contribution to family from tuition earning, tuition earnings share to meet-up monthly monetary need, hamper of study due to private tuition and monthly expenditure) parameters following standard procedure and appropriate units. Dietary food intake profile was determined by using 24-hour recall method (Lee and Nieman, 1996; Nelson et al. 2008; Hammond 2004). Data were collected on calorie intake from different meal times, calorie intake status in terms of different poverty scales (CBN- Cost of Basic Needs; HIES- Household Income and Expenditure Survey; and, Students Need), daily dietary food cost (Taka) and monthly food cost status in terms of different poverty scales.

The average monthly expenditure and monthly specific cost for different purposes were determined on the basis of students' statements. Students mentioned what they ate in different meal-times in a day. The researchers converted those food materials into calories and calculated average calorie consumption figures to describe their food consumption scenario. The calorie conversion rates are mentioned here (Fitness Bangladesh 2011).

   a) One plate rice from hall canteen contains 208.8 Kilocalorie
   b) One plate rice from hall dining, home, hotel contains 255.2 Kilocalorie
   c) One piece Ruti contains 60 Kilocalorie
   d) One piece Porata contains 140 Kilocalorie
   e) Egg omlet contains 110 Kilocalorie
   f) One bowl vegetable contains 150 Kilocalorie
   g) 100 g chick pea contains 380 Kilocalorie
   h) 100 g chicken contains 385 Kilocalorie
   i) 100 g beef contains 434 Kilocalorie
   j) 100 g mutton contains 323 Kilocalorie
   k) 100 g noodles contains 225 Kilocalorie
   l) One piece banana contains 110 Kilocalorie

The researchers converted all food items into calories which respondents mentioned into 24-hour recall schedule. The researchers found that average 1,900 Kilocalories student-1 day-1 was consumed spending average food cost 132 Taka student-1 day-1. To estimate the cost to achieve different standards of calorie consumption under different scales this formula was used. Cost of Basic Needs (CBN) has categorized calorie consumption into three heads: Below standard (<2,100), Standard (2,100-2,200) and Above Standard (>2,200). Similarly Household Income and Expenditure Survey (HIES) has also categorized calorie consumption into three heads: Below standard (<2,300), Standard (2,300-2,400) and Above Standard (>2,400). Students Need has categorized calorie consumption into three heads too: Below standard (<2,800), Standard (2,800-2,900) and Above Standard (>2,900) (BBS 2011). All these standards might be the determinant factors of students’ poverty profile disclosing the socioeconomic status.
At the end of the survey all the data contained in the interview schedule were compiled, coded and analyzed using Statistical Package for Social Sciences (SPSS). The statistical measures such as number, percentage, mean, standard deviation, minimum, maximum, etc. were used for describing the variables.

### III. Results and Discussion

**Selected socioeconomic characteristics of students**

Majority of the respondents were female (56.50%), while male respondents were 43.50%. Among the students females were found more enthusiastic than their male counterparts in providing response to the personal interview conducted by the researchers. Thus, the percentage of females became higher than the males (Table 01). Age of the respondents ranged from 18 to 26 years. They were classified into three categories: (i) very young (18-20), (ii) young (21-23) and (iii) senior (24-26). The findings showed that the highest proportion (64.49%) of the respondents were of young aged followed by very young (21.74%) and senior (13.77%) (Table 01). The students of the age group of 21-23 (young) were found more cosmopolite than the very young and senior categories and had been found eager to cooperate the researchers in providing information.

| Table 01. Selected personal characteristics of the respondents |
|---------------------------------------------------------------|
| **Personal parameters** | **Categories** | **Score** | **Respondents (N=138)** | **Average** | **Standard deviation** | **Min.** | **Max.** |
|-------------------------|----------------|----------|-------------------------|-------------|------------------------|--------|--------|
| **Gender**              | Male           | 60       | 43.50                   |             |                        |        |        |
|                         | Female         | 78       | 56.50                   |             |                        |        |        |
| **Age (years)**         | Very young     | 18-20    | 30                      | 21.74       |                        |        |        |
|                         | Young          | 21-23    | 89                      | 64.49       |                        |        |        |
|                         | Senior         | 24-26    | 19                      | 13.77       |                        |        |        |
| **Family size (members)** | Small       | <5       | 105                     | 76.10       |                        |        |        |
|                         | Medium         | 5-7      | 21                      | 15.20       |                        |        |        |
|                         | Large          | >7       | 12                      | 8.70        |                        |        |        |
| **Family type**         | Nuclear        |          | 102                     | 73.90       |                        |        |        |
|                         | Joint          |          | 13                      | 9.40        |                        |        |        |
|                         | Extended       |          | 23                      | 16.70       |                        |        |        |

Family size of the students ranged from 2-19. The mean number of family members was 5. The findings represented that most of the respondent (76.10%) belonged to small sized (<5) family, while 15.20% and 8.70% of respondents belonged to medium (5-7) and large (>7) sized family, respectively. The distribution of students according to their family size has been presented in Table 01. The findings also indicate that the participation in the interview was found dominant in case of the respondents having small and medium sized family. Family type was categorized into three groups: (i) nuclear (ii) joint and (iii) extended. Nuclear family means unit family with father, mother and siblings. Joint family means horizontal extension of family and extended family means a family with vertical extension. The findings represented that most of the respondents (73.90%) belonged to nuclear family, while 9.40% and 16.70% of the respondents belonged to joint and extended family, respectively (Table 01). Nuclear families are financially more stable than joint and extended family where parents can provide children with better opportunities in life. Since it’s a smaller family, the expenses and responsibilities are considerably lesser, which means better financial stability. So, the number of nuclear families is increasing gradually.

**Sources of money including personal earnings**

Monthly family income of the students ranged from 3,000 to 1,20,000 Taka. The mean monthly family income was 39,101 Taka and the standard deviation was 22,645.56 Taka. The findings represented that the highest proportion of the respondents (43.50%) belonged to low income (<30,000 Taka) family, while 41.30% and 15.20% of the respondents belonged to medium (30,000-50,000 Taka) and high income (>50,000) family, respectively (Table 02). Data presented in Table 02 reveals that around 84.80%
students of Khulna University belonged to low to medium income families. Thus, it might be said that the monthly family income of the respondents’ family was an important factor determining the food related expenditure as well as calorie consumption behavior. It’s also proving the students low to medium economic status.

Table 02. Monthly family income of the respondents

| Categories       | Score (Taka) | Respondent (N=138) | Mean | Standard deviation | Min. | Max. |
|------------------|--------------|---------------------|------|--------------------|------|------|
| Low income       | <30,000      | 60                  | 39,101 | 22,645.56          | 3,000 | 1,20,000 |
| Medium income    | 30,000-50,000| 57                  | 41.30 |                    | 3,000 | 1,20,000 |
| High income      | >50,000      | 21                  | 15.20 |                    | 3,000 | 1,20,000 |

The students were asked about their monthly monetary requirements to fulfill their monthly expenditures regarding different purposes. The obtained responses showed that the average money requirement per month ranged from 2,500-20,000 Taka. The mean of the required money per month was 6,902.90 Taka, and the standard deviation was 2,696.79 Taka (Table 03). This result is proving the wide range of socioeconomic status of the students of Khulna University.

Table 03. Monthly average requirement of money by the respondents

| Obtained money per month (Taka) | Mean          | Standard deviation | Min.  | Max.  |
|---------------------------------|---------------|--------------------|-------|-------|
|                                 | 6,902.90      | 2,696.79           | 2,500 | 20,000 |

The students were also asked about the sources of money to meet-up the monthly requirements. Students responded that they (135 students) got 1,000 to 20,000 Taka from family source. The mean 4,992.59 Taka, and standard deviation 2,870.97 Taka were observed in case of family source. Some students (64 students) got 1,500 to 12,000 Taka from tuition source. The mean was 4,009.37 Taka, and standard deviation was 2,012 Taka for tuition source. Few students (13 students) got 500 to 2,000 Taka from scholarship source. The mean was 1,230.77 Taka and Standard deviation was 563.30 Taka for scholarship source. Very few (3 students) also got 1,000 to 3,000 Taka from other sources. The mean was 2,000 Taka and standard deviation was 1,000 Taka for other sources of money (Table 04).

Table 04. Different sources of money on which student depends on

| Sources        | Number of students cited | Mean (Taka) | SD      | Min.  | Max.  |
|----------------|--------------------------|-------------|---------|-------|-------|
| Family         | 135                      | 4,992.59    | 2,870.97| 1,000 | 20,000|
| Tuition        | 64                       | 4,009.37    | 2,012   | 1,500 | 12,000|
| Scholarship    | 13                       | 1,230.77    | 563.30  | 500   | 2,000 |
| Other          | 3                        | 2,000       | 1,000   | 1,000 | 3,000 |

Figure 01 showed that half of the students (50%) are fully dependent on family, and 3.60% students fully dependent on tuition for receiving and/or earning their monthly required money. A large number of students (30.40%) depended on “family + tuition”. Besides, students were dependent on sources like, “family + scholarship” (2.20%), “family + other” (1.40%), “family + tuition + scholarship” (10.90%), and “family + tuition + scholarship + other” (0.70%). Figure 01 has been presenting a vivid graphical comparison among the different sources for monetary dependency mirroring the lifestyle of Khulna University students.
Among 138 students, 64 students were engaged in providing private tuitions for earning money to meet-up the monthly requirements (Table 05). That means, 46.40% students were providing tuitions for their livelihoods and daily expenditures. Among them 6 students (4.30%) said that they send money to their families to support their monthly expenses, and left students (42.10%) didn’t send money to their families (Table 05). Obviously it is a difficult task for a student to manage family and own expenditure by own incomes. This type of burden causes student poverty as well as insufficient calorie intake. The highest proportion (20.30%) of the students carried half (50%) share of their total monthly expenditures, and 8.70% students managed their full (100%) monthly expenditures by own-self through providing private tuitions, and 9.40% students managed their 75% monthly expenditures through private tuitions (Table 06). So, the findings reveal that tuition earning is one of the major and important sources of money of Khulna University students.

![Figure 01. Dependency of the students on different sources of money.](image)

**Table 05. Engagement of the respondents in private tuition and contribution to family from tuition earnings**

| Engaged in private tuition | Send money to family |
|----------------------------|----------------------|
| Number | % | Number | % |
| Yes | 64 | 46.40 | Yes | 6 | 4.30 |
| No | 74 | 53.60 | No | 58 | 42.10 |
| Total | 138 | 100 | Total | 64 | 46.40 |

**Table 06. Private tuition’s share to meet-up monthly monetary requirements**

| Categories                              | Respondent( N=64) |
|-----------------------------------------|-------------------|
|                                         | Frequency | %   |
| 25% share in monthly expenditure        | 11         | 8   |
| 50% share in monthly expenditure        | 28         | 20.30 |
| 75% share in monthly expenditure        | 13         | 9.40 |
| 100% share in monthly expenditure       | 12         | 8.70 |
| Total                                  | 64         | 46.40 |
The range of providing private tuitions was 1-4 tuitions (average 2), and they spent about 1-6 hours per day (average 2.6 hours) (Data not shown in Table). This huge time allocation in tuition had a negative effect on their study. Highest number of students (10.90%) mentioned that their study hamper was considerable, and 7.20%, 8.70%, 9.40% and 10.10% students marked that their study hamper as very high, to some extent, little and no hamper, respectively (Table 07). Tuition time allocation and their effort in tuition have negative impact on their own study. They become tired after completion of tuition and accordingly they cannot concentrate on their own study. This is not a good indication for the university students. The students should ensure priority of academic study over providing private tuitions for money. They must manage their time judiciously between these two events. The university authority and government could create provisions for scholarships and other economic subsidies for the comparatively poorer section of the students’ community to overcome this kind of unwanted situation.

Table 07. Hamper of academic study due to engagement in private tuition service

| Categories          | Respondent (N=64) | Spending time (hours) in tuition | Frequency | %    | Mean | Standard deviation | Min. | Max. |
|---------------------|-------------------|-----------------------------------|-----------|------|------|--------------------|------|------|
| Very high           | 10                | 7.20                              |           |      |      |                    |      |      |
| Considerable        | 15                | 10.90                             |           |      |      |                    |      |      |
| To some extent      | 12                | 8.70                              |           |      | 2.61 | 1.37               | 1    | 6    |
| Little              | 13                | 9.40                              |           |      |      |                    |      |      |
| No hamper           | 14                | 10.10                             |           |      |      |                    |      |      |
| Total               | 64                | 46.40%                            |           |      |      |                    |      |      |

Expenditure for different purposes including food costs

The students were asked to provide information regarding the monthly expenditures for different purposes. The average cost for food, cloth, education, medical, recreation, internet and transport purposes were 2,400 (28.80%), 534.05 (6.40%), 1,483.69 (17.80%), 293.98 (3.53%), 440.79 (5.29%), 415.63 (5%), 608.58 (7.30%) and 2,110.15 (25.32%) Taka, respectively (Figure 02). The main purpose of university going students is to study hard for their future. But this chart shows their monthly average cost for study purpose is only 17.80% and it ranges from 100-5000 Taka. Their monthly average food cost is 28.80% only, and it reveals that maximum of the students are not sincere about their calorie intake. This meager amount share of expenditure for food is representing their inferior socioeconomic status.

Figure 02. Monthly expenditure in different purposes of the students.
Poverty profile from dietary intake deducing socioeconomic status

The Table 08 shows the minimum, maximum, average and standard deviation of calorie consumption by the students at different meal times in a day. The mean and standard deviation of calorie consumption from breakfast was 411.23 Kilocalories and 181.51 Kilocalories, respectively. The mean and standard deviation of calorie intake from lunch was 617.55 Kilocalories and 218.42 Kilocalories, respectively. The mean and standard deviation of calorie consumption from dinner was 617.27 Kilocalories and 237.65 Kilocalories, respectively. The mean and standard deviation of calorie intake from snacks was 382.87 Kilocalories and 349.97 Kilocalories, respectively. The mean and standard deviation of total calorie consumption in a day was 1,923.9 Kilocalories and 500.89 Kilocalories, respectively.

Table 08. Calorie intake from different meal times

| Categories                            | Mean   | Standard deviation | Min.  | Max.   |
|---------------------------------------|--------|--------------------|-------|--------|
| Calories from breakfast (Kilocalorie) | 411.23 | 181.51             | 10    | 960    |
| Calories from lunch (Kilocalorie)     | 617.55 | 218.42             | 240   | 1,133.40 |
| Calories from dinner (Kilocalorie)    | 617.27 | 237.65             | 10    | 1,263.40 |
| Calories from snacks (Kilocalorie)    | 382.87 | 349.97             | 10    | 1,220  |
| Total calories (Kilocalorie)          | 1,923.90 | 500.89             | 872.80 | 3,341.60 |

Data presented in Table 08 states that the average calorie achieved from breakfast is 411.23 Kilocalories which is not enough for a university going student. The minimum calorie from breakfast, dinner and snack is not up to the standard mark. The average from lunch (617.55 Kilocalories), dinner (617.27 Kilocalories) are very low too. The average total calorie consumption is 1,923.90 Kilocalories which is below standard in terms of standard scales. So, average students are not consuming standard amount of calories which might cause sickness and weakness of the students ultimately hampering their study for which they enrolled to University.

Table 09. Calculated daily food cost

| Categories                  | Mean   | Standard deviation | Min.  | Max.   |
|-----------------------------|--------|--------------------|-------|--------|
| Cost for food per day (Taka)| 132.04 | 61.07              | 45    | 324    |

Table 09 shows that daily food cost ranged from 45 to 324 Taka. The mean cost for food was 132.04 Taka while standard deviation was 61.07. Data presented in Table 08 and Table 09 shows that 132.04 Takais needed to consume 1,923.90 Kilocalories per day (average). According to this, a student requires 3,960 Taka monthly to consume average amount of calories (Table 10). But they spend only 2,400 Taka for food purpose (average) as they mentioned in their monthly purpose specific expenditures (Figure 2). This kind of disparity probably indicates that, they do not eat same kind of food every day in a month and here is a gap between what they mentioned and what they actually eat.

In Table 10, CBN is categorized into three groups: Below standard (<2,100), Standard (2,100-2,200) and Above Standard (>2,200). Similarly HIES is categorized into three portions: Below standard (<2,300), Standard (2,300-2,400) and Above Standard (>2,400). Students Need is categorized into three groups: Below standard (<2,800), Standard (2,800-2,900) and Above Standard (>2,900). About 5.10%, 6.50% and 2.20% students consumed standard calorie according to CBN, HIES and Student Need scale, respectively. These data are proving the lower socioeconomic status of the Khulna University students.
Table 10. Food cost status of the respondents in terms of different scales showing poverty prevalence disclosing socioeconomic status

| Scales        | Status          | Kilocalories | Cost per day (Taka) | Monthly cost (Taka) |
|---------------|-----------------|--------------|---------------------|---------------------|
| Average       | Average result obtained from this research | 1,923.90     | 132                 | 3,960               |
| CBN           | Below Standard  | 2,000        | 137                 | 4,110               |
|               | Standard        | 2,122        | 145.60              | 4,368               |
|               | Above Standard  | 2,200        | 146.42              | 4,392.60            |
| HIES          | Below Standard  | 2,200        | 146.42              | 4,392.60            |
|               | Standard        | 2,318.3      | 160                 | 4,800               |
|               | Above Standard  | 2,500        | 172.5               | 5,175               |
| Students Need | Below Standard  | 2,700        | 186.3               | 5,589               |
|               | Standard        | 2,850        | 196.65              | 5,900               |
|               | Above Standard  | 3,000        | 207                 | 6,210               |

Figure 03. Calories intake status in terms of different scales.

The findings (Figure 03) states that, according to CBN scale, 70.30% student belongs to below standard category (below poverty line), while only 29.70% student consumes above-standard calories. In the case of HIES scale, 76.80% student belongs to below standard category, while only 23.20% student consumes above-standard calories. In the case of Student Need scale, 93.50% student belongs to below standard category, while only 6.50% student consumes above-standard calories (Figure 03).

Table 10 represents the costs to achieve different standards of calorie intake. To achieve CBN, HIES and Students Need standard, a student needs daily 144.08 Taka, 159.06 Taka and 192 Taka; respectively. It
states that a student should spend 4,368 Taka, 4,800 Taka and 5,900 Taka monthly to achieve CBN, HIES and Students Need standard, respectively. Data presented in Table 03 shows that monthly mean required money is 6,902.90. A student requires 3,960 Taka monthly to consume average amount of calories (1,923.90 Kilocalories) but average 2,400 Taka is actually spent (Table 10) by the students. A high amount of money should be spent by the students for food purpose to achieve standard calories. Majority of the students cannot cope with this high cost to study in Khulna University. It causes poverty and unhealthy life of students.

The graph (Figure 04) shows that students get monthly 6,902.90 Taka (average) from different sources. They mentioned their monthly purpose specific expenditure of different purposes in Figure 04. It reveals that they need monthly 8,286.87 Taka to fulfill their different demands. Some students manage this extra 1,383.97 Taka from scholarship, gifts, bonuses, etc. But many students are unable to manage this extra required money and might remain indebted. Students spend monthly average 2,400 Taka for food purpose. But a student should spend 4,368 Taka, 4,800 Taka and 5,900 Taka monthly for food purpose to achieve CBN, HIES and Students Need standard amount of calorie consumption, respectively. So a student requires monthly 1,968 Taka, 2,400 Taka and 3,500 Taka more for food purpose to achieve CBN, HIES and Students Need standard, respectively.

Figure 04. Average of monthly earning, expenditure, food cost, and food cost standards (CBN, HIES, Students need).

The students, in the worst cases, suffer from indebtedness. This graph shows that their average total monthly expenditure is far from the costs to achieve different calorie standards under different scales of food consumption. 70.30%, 76.80% and 93.50% students stand below standard level according to CBN, HIES and Students Need scale; respectively (Figure 04), disclosing the low to medium socioeconomic status of the students. So medium to low socioeconomic status of the students of Khulna University can be assumed from their deduced low calorie consumption behavior. A research conducted in Jahangirnagar University also had reported the similar type of socioeconomic status of the students studying therein (রায়হান, ২০১৮).

IV. Conclusion
The findings of the study indicate that majority of the students belongs to medium to low income family proving their medium to low socioeconomic status. This study depicted the overall scenario of source of
money for the students and expenditure of money by the students. Majority of the students received money either regularly or occasionally from parents/guardians and from private tuition. Students can’t fulfill their monthly needs by the money received only from the family and/or tuition. They have to meet their needs spending additional amount of money. Sometimes they try to reduce their food cost to fulfill their other needs. So their average calorie consumption status is below standard of CBN, HIES and Students need scales of calorie intake. Majority of the students of Khulna University stand below standard calorie intake status which will be create great hamper to their health. The poverty profile deduced from their dietary intake indicates their poor socioeconomic status and poor nutritional knowledge, for which they cannot manage their proper diet. The university authority and The Government of Bangladesh could help the students of Khulna University, one of the largest public universities in Bangladesh, to overcome this poor socioeconomic condition by creating provisions for scholarships, fee waiver, subsidies, loans, grants, part-time jobs, etc. Counseling for the indebted students might be another strategy to resolve the situation. All these efforts should be done fairly with unbiased and enthusiastic predisposition.

Acknowledgements
The authors would like to acknowledge the contribution of Professor Dr. Mohammad Bashir Ahmed and Professor Dr. Md. Monirul Islam of Agrotechnology Discipline, Khulna University, Khulna, Bangladesh for their cordial inspiration and idea sharing during the tenure of conducting this study. Special thanks and gratitude for the respondents for their cordial helps and assistances during the data collection period.

Funding
There is none competing for the interests regarding the submitted manuscript, and the conducted research, except the authors mentioned in the author list. This work was conducted completely using personal funding.

Author contribution
P. A. collected the data of this study and prepared the manuscript. M. M. I. design the research, prepare interview schedule, analyze data and contributed in final manuscript preparation and editing. Authors acknowledge the contribution of anonymous reviewers.

References
[1]. Bangladesh Bureau of Statistics (BBS). (2011). Preliminary report on household income & expenditure survey-2010. Bangladesh Bureau of Statistics, Ministry of Panning.
[2]. Barry, J. (2006). The effect of socioeconomic status on academic achievement (Master Thesis). Wichita State University, Wichita, KS 67260, USA.
[3]. Eamon, M. K. (2005). Social-demographic, school, neighborhood and parenting influences on academic achievement of Latino young adolescents. Journal of Youth and Adolescence. 34(2), 163-175. https://doi.org/10.1007/s10964-005-3214-x
[4]. Fitness Bangladesh (2011). Diet tips: List of calories in popular foods. Retrieved November 15, 2018 from https://fitnessbd.net/2011/12/16/list-of-calories-in-popular-foods.
[5]. Hammond, K. A. (2004). Dietary and clinical assessment. Krause’s Food and Nutrition Therapy, 12.
[6]. Haverman, R. and Wolf, B. (1995). The determinants of children attainments: A review of methods and findings. Journal of Economic Literature. 23, 1829–78.
[7]. Khulna University diary (2018). Public relations and publications Khulna University, Khulna, Bangladesh.
[8]. Lee, R. D. and Nieman, D. C. (1996). Nutritional assessment. McGraw-hill companies, New York, USA, pp. 223-252.
[9]. Ma, J., Baum, S., Matea, P. and D’Wayne, B. (2015). Trends in college pricing, 2015. Trend in higher education series. ERIC, College Board Advocacy & Policy Center, New York.
[10]. Morgan, P. L., Farkas, G., Hillemeyer, M. M. and Maczuga, S. (2009). Risk factors for learning-related behavior problems at 24 months of age: Population-based estimates. Journal of Abnormal Child Psychology. 37, 401-413. https://doi.org/10.1007/s10802-008-9279-8
[11]. Nelson, M. C., Story, M., Larson, N. I., Neumark-Sztainer, D. and Lytle, L. A. (2008). Emerging adulthood and college-aged youth: An overlooked age for weight-related behavior change. Obesity. 16(10), 2205-2211. https://doi.org/10.1038/oby.2008.365

[12]. Parson, R. D., Stephanie, Lewis, H. and Deborah, S. (2000). Educational psychology: a practitioner-researcher model of teaching. Singapore: Thomson Learning Inc.

[13]. রায়হান, ই. (২০১৮). বিশ্ববিদ্যালয়ের শিক্ষার্থীদের দারিদ্র বিষয়ে সমীক্ষা : নমুনা জাহাঙ্গীরনগর বিশ্ববিদ্যালয়. সর্বজনকতা.

How to Cite this Article?

Crossref: https://doi.org/10.18801/ijbmsr.060119.36

MLA
Akther and Islam. "Socioeconomic status of Khulna university students deduced from their dietary intake profile." International Journal of Business, Management and Social Research 06(01) (2019): 338-349.

APA
Akther, P. and Islam, M. M. (2019). Socioeconomic status of Khulna university students deduced from their dietary intake profile. International Journal of Business, Management and Social Research, 06(01), 338-349.

Chicago
Akther, P. and Islam, M. M. "Socioeconomic status of Khulna university students deduced from their dietary intake profile." International Journal of Business, Management and Social Research 06(01) (2019): 338-349.

Harvard
Akther, P. and Islam, M. M. 2019. Socioeconomic status of Khulna university students deduced from their dietary intake profile. International Journal of Business, Management and Social Research, 06(01), pp. 338-349.

Vancouver
Akther P and Islam MM. Socioeconomic status of Khulna university students deduced from their dietary intake profile. International Journal of Business, Management and Social Research. 2019 March 06(01): 338-349.