

Article

Socio-economic status of fish retailers in Jashore sadar, Bangladesh

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Abstract: The study was conducted to determine the fish retailer's livelihood and socio-economic status in three markets of Jashore for a period of six months from February to August, 2016. The average net profit of fish retailers was found higher in Boro bazaar (Tk.350) followed by Palbari bazaar (Tk.325), Chuadanga Bus Stand bazaar (TK.275). The average age groups of 20-65 years were found among the markets. The study shows that 53% fish retailers had nuclear family and 47% had joint family. Most of the housing conditions were kacha (69%) and Muslim fish retailers were predominant in all markets. Among the total 45 traders interviewed, 42% were illiterate, 31% have primary level education, 24% have secondary level education and none of them had bachelor level of education. It was found that fish retailers of Boro bazaar and Palbari bazaar sold an average of 35 kg fish daily, compared with Chuadanga Bus Stand bazaar 15 kg per day. The daily supply of fish in Boro bazaar can be estimated at 1.6 MT (25 retailers × 65 kg) while 0.3 MT (15 retailers × 20 kg) and 0.45 MT (15 retailers × 30 kg) in C.B Bazar and Palbari bazaar respectively. Improvement in basic infrastructure such as, clean water supply, sanitation facilities, adequate drainage and ice facilities are recommended by the present study.

Keywords: livelihood status; fish retailers; fish markets

1. Introduction

Bangladesh is blessed with rich extensive inland and marine fisheries potential resources with a wide variety of indigenous and exotic fish fauna (Hasan *et al.*, 2014). Bangladesh is the fifth leading country in the world for inland fisheries production (FAO, 2015). Fisheries sector contributes 2.46% of the country's export earning, 4.39% of its GDP, provides 60% of the national animal protein consumption and 22.76% to agricultural sector. It shows annual fish production 25,63,000 MT in 2007-2008 fiscal years which has increased up to 30,22,000 MT in 2010-11 and 32,62,000 MT in 2011-12 (DoF, 2013). In 2015 total employment in fisheries sector were 17.80 million people which 11% of the total population with a total fish production of 3684894 MT (DoF, 2015). A large amount of fishes ilish, chingri, boal, Tilapia, catla, rui, grass carp, mrigel, nilotica, koi, air, tengra, silver carp, bata, shol, taki, shing etc. are transported to Jashore town from different part of country. In Bangladesh, fish marketing is almost exclusively governed by the private sector where the livelihoods of a large number of people are associated with fish production and marketing systems. Bangladesh is called a riverine country due to the presence of a large number of rivers. Its plays an important role in the national economy of Bangladesh through employment generation, poverty alleviation, supply of animal protein and foreign exchange earnings (Rahman *et al.*, 2015). According to Chambers and Conway (1992) livelihood comprise the

capabilities, the assets (natural, physical, human, financial and social), the activities and the accesses to these that together determine the living gained by the individual household. Livelihood status of fish retailers mostly depend on fisheries resources. But the fishermen cannot catch fish properly due to economic, social and technical constraints. Thus, the socio-economic conditions of the fisher, farmer and retailers are not so good. They are not proficient to earn sufficient amount of money to meet basic needs. Fish retailer community is deemed to be one of the most vulnerable communities in terms of their livelihood opportunities in fisheries sector of Bangladesh. Most of the fish retailers are deprived of many amenities. All the times they have to struggle to survive, so, livelihood status of fish retailers community is not satisfactory at all. For proper development of fish retailers community, it is essential to understand the baseline information to initiate proper developmental steps and improve the livelihood of fish retailers. However, few studies on socio-economic conditions of fish retailers were carried out but all these efforts lack specific information of livelihood. Considering the importance of the matter, the present study was undertaken to study the socio-economic condition of fish retailers.

2. Materials and Methods

2.1. Study area and periods

Present investigation was conducted in three fish markets in Jashore sadar upazila namely, Boro Bazar (23°10'02.5"N 89°12'49.6"E), Palbari Bazar (23°10'48.2"N 89°11'40.9"E) and Chuadanga Bus Stand Bazar (23°10'11.5"N 89°12'11.0"E) to evaluate the socio-economic status of traders from March 2016 to August 2016.

2.2. Study population

There were taken total 45 fish retailers selected from the Jashore fish market. Both the professional and subsistence fish retailers living around the area of Jashore District.

2.3. Data collection technique

A planned questionnaire was developed containing both the closed and open ended query to collect data through face-to-face interview with the respondents. The questionnaire was pretested in areas far away from the sample areas and revised according to the feedback gained in the field level. The questionnaire was formed to obtain the relevant information considering socio-demographic condition, income of fishermen and family members, factors affecting the livelihood of the respondents and other relevant question of the fish retailers.

2.4. Questionnaire interview with fish retailers

The questionnaire was simple and focused on marketing as well as their socio-economic information. Each interview was consumed about half an hour.

2.5. Statistical analysis

The data were processed to undergo statistical analysis using SPSS 17 windows program. Microsoft Word, Microsoft Excel were used to represent the tabular and chart icon.

3. Results

3.1. Age group distribution

This study showed that, majority 42% of the fishermen was middle aged (21-40 years), other 18% was aged up to 20 years, 26% was aged 41-50 years and 21% was old (50 years and above) aged group (Figure 1).

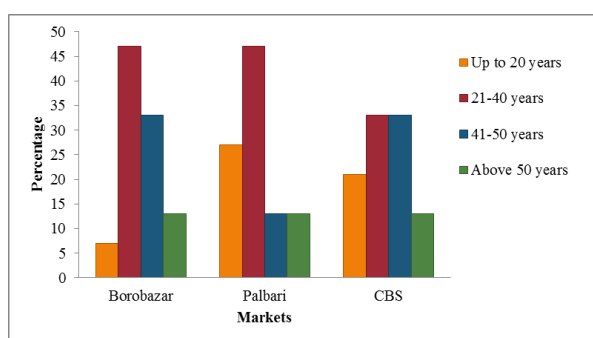


Figure 1. Age group distribution of fish retailers in the study area.

*C.B.S = Chuadanga Bus Stand

3.2. Educational background

Nearby, 42% had no education or illiterate, 31% traders had primary level of education, 24% had secondary level, 3% had S. S. C. level of education and none of them H.S.C. and bachelor level of education (Figure 2).

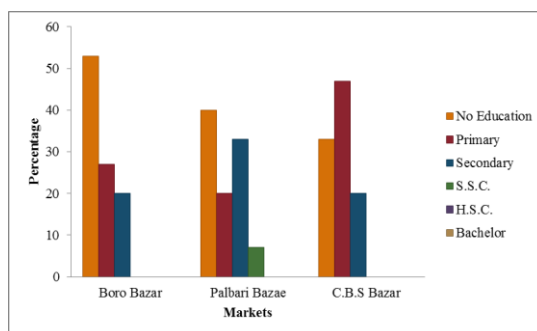


Figure 2. Educational background of fish retailers in the study area.

3.3. Family type

The study shows that 53% fish retailers had nuclear family and 47% had joint family (Figure 3).

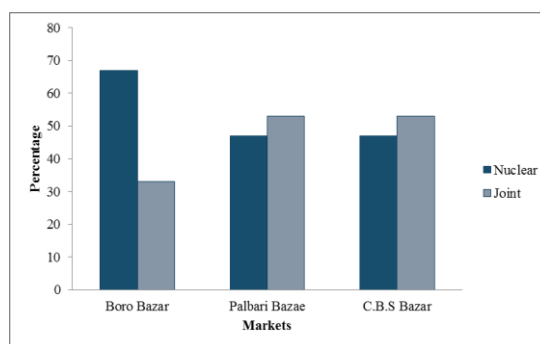


Figure 3. Family type of fish retailers in the study area.

3.4. Religion

In the study area, 80% of interviewed retailers were Muslims and the remainders 20% were Hindus, with no Christian or Buddhist (Figure 4).

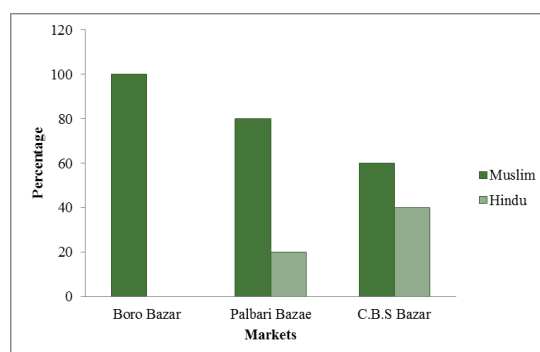


Figure 4. Religious status of fish retailers in the study area.

3.5. Housing condition

The study reveals that 69% of housing structures were Kacha (earthen floor and straw roof), while 27% were semi-pakka (Concrete floor and tin shed roof) and only 4% were pakka (Concrete floor and roof) (Figure 5).

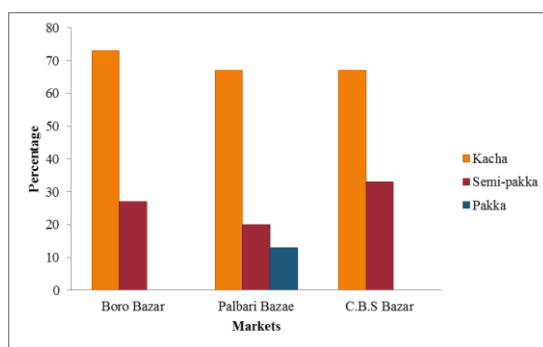


Figure 5. Housing condition of fish retailers in the study area.

3.6. Drinking water facilities

It was found that 100% of the retailer’s household used tube wells for drinking water; among them 71% used own tube-wells for drinking water and the remaining 29% collected water from others tube-wells (Figure 6).

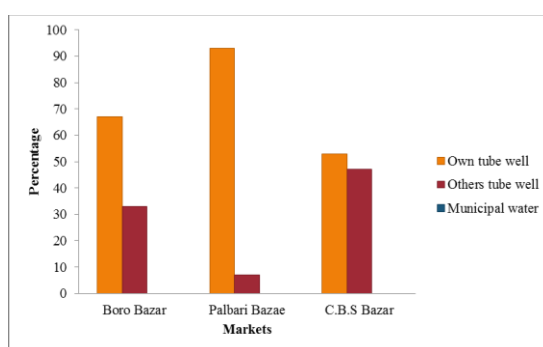


Figure 6. Drinking water facilities of fish retailers in the study area.

3.7. Health facilities

The study showed that 16% of retailers household were dependent on village doctor (unqualified practitioners), who did not have any understanding and knowledge of medical science, while 18% got health service from community hospital and 4% private clinic and 62% from upazila health complex (Figure 7).

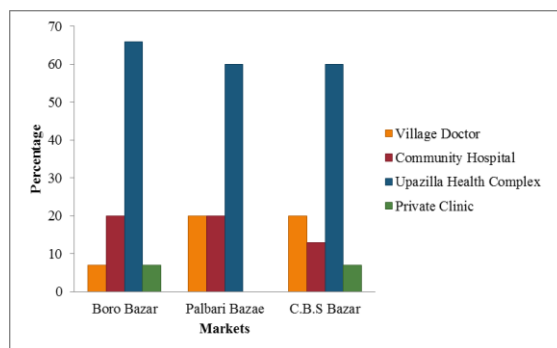


Figure 7. Health facilities of fish retailers in the study area.

3.8. Income profit range

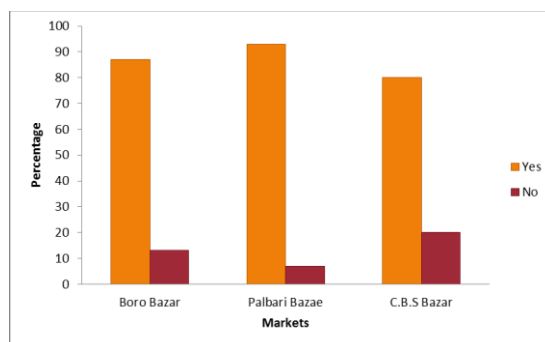
Fish retailers are trying to improve their socio-economic conditions. During trading, fish retailers always tried to get maximum profit. But now a day, fish trading is a competitive job, as reported by the traders. According to the survey, The average net profit of fish retailers was found higher in Boro bazaar (350) followed by C.B.S. bazaar (TK.275) and Palbari bazaar (Tk. 325/day/retailers) (Table 1).

Table 1. The average of net profit of fish retailers of three markets.

Name of markets	Profit range (Peak season) (Tk/day)	Profit range (Off season) (Tk/day)	Average profit (Tk/day)
Boro Bazaar	480	220	350
Palbari Bazaar	450	200	325
C.B.S Bazaar	400	150	275

3.9. Improvement of socio-economic condition

Retailers generally operate a capital of around Tk. 300 to 600 per day. From the study, it was found that about 10% retailers used their own money for fish trading while the rest 90% received loans from moneylender or aratdars without paying any interest (Figure 8).

**Figure 8. Improvement of socio-economic condition of fish retailers.**

3.10. Season and time of fish trading

More or less the season of fish trading is year round. The traders of Boro bazaar, Chuadanga Bus stand bazaar are engaged in fish trading from 7am to 10pm, Palbari bazaar from 9am to 4pm. It was found that almost all traders of three markets spend around 8 to 12 hours in fish selling if sufficient fishes are available. But some traders can sell their fish earlier and engage themselves in other homestead works.

3.11. Amount of fish sold

It was found that a fish retailers of Boro bazaar and Palbari bazaar sold an average of 35 kg fish daily, compared with Chuadanga Bus stand bazaar 15 kg per day. There were about 100 retailers involved in Boro bazaar, about 20 retailers in Palbari bazaar and about 15 retailers in Chuadanga bus stand bazaar. The daily supply of fish in Boro bazaar can be estimated at 1.6 m. tons (25 retailers × 65 kg) while 0.3 m. tons (15 retailers × 20 kg) and 0.45 m. tons (15 retailers × 30 kg) in C.B.S and Palbari bazaar respectively.

3.12. Fish availability of the market

The fish species were available in Jashore fish market as, Rui (*Labeo rohita*), Catla (*Gibelion catla*) Tilapia (*Oreochromis niloticus.*) Ilish (*Tenualosa Ilisha*), Golda chingri (*Macrobrachium rosenbergii*), Bagda chingri (*Penaes monodon*), Poa (*Otolithoides pama*), Tulardati (*Sillaginopsis panijus*), Bele (*Glossogobius giuris*), Ramsos (*Thryssa hamiltonii*), Koral (*Lates calcarifer*), Shing (*Heteropneustes fossilis*), Magur (*Clarias sp.*), Rita (*Rita rita*), Tengra (*Mystus annulus*), Air (*Sperata aor*), Deshi pangus (*Pangasius pangasius*), Thai pangus (*Pangasius hypophthalmus*), Koi (*Anabas testudineus*), Dhela (*Osteobrama cotio*), Mola (*Amblypharyngodon mola*), Sarputi (*Puntius sarana*), Raj puti (*Barbonymus gonionotus*), Shilong (*Silonia silondia*), Pabda (*Ompok pabda*), Boal (*Wallago attu*) etc.

4. Discussion

This present study presented that, bulk 42% of the fishermen was mid aged (21-40 years), other 18% was aged up to 20 years, 26% was aged 41-50 years and 21% was old (50 years and above) aged group. According to Mondal *et al.* (2018) in 2005 Kattoli and Kumira has largest portion of the 20-30 age group, 55% and 58% respectively and according to survey, in 2018 it was found 30-40 age group is dominant as 50% and 46% of total fisher population. Rahman (2003) noted that in Jashore the highest percentage of fish traders up to 30 age groups. Among 50 farmers, it was found that the highest proportions (36%) of fish farmer were middle aged (31

years-40 years) and above 50 years was the lowest (14%) Adhikary *et al.* (2018). Kaiya *et al.*, (1987) found that fish culture efficiency varied with the age and number of owners of pond in Tangail district. Vaumik *et al.* (2017) stated that, 30% farmers remained 31-35 years old, 31% were between 36-40 in Lalmonirhat district. Sharif *et al.* (2015) determined 85% farmer has the age of 40 and above in Jessore district. Islam *et al.* (2015) founded in sundarban the maximum age level was 20-30 years old. Islam *et al.* (2014) revealed 44% farmer had an age level 31-40 years as well as Asif and Habib (2017) research found the 38% people has an age group of 51-60 years which is similar with the present study.

Nearby, 42% had no education or illiterate, 31% traders had primary level of education, 24% had secondary level, 3% had S.S.C. level of education and none of them H.S.C. and bachelor level of education. Mondal *et al.* (2018) remarks primary education obtainer in two villages in Chittagong were 65% and 69% whereas Secondary education obtainer as 45% and 47% respectively. Mia (1996) found that most of the fish retailers had secondary level of education in his study in Jashore town. On the contrary, Dasgupta (2004) reported that majority of the fish traders in Fulpur upazila had primary level of education. Fish farmer had 44% education up to primary level, 24% fish farmer had secondary education, 18% had S.S.C passed and 14% had no education Adhikary *et al.* (2018). Zaman *et al.*, (2006) found that 23.3% farmers were illiterate whereas 14.4%, 8.9% and 6.7% were educated up to primary, secondary and higher secondary or above level respectively in Rajshahi district. Asif *et al.* (2015) 46% of traders have institutional education; Asif and Habib (2017) stated 36% had primary level, 42% had secondary level (up to X), 10% had S.S.C. level, 4% had H.S.C. level and 4% had bachelor level of education. Hossain *et al.* (2016) found most of the respondents (40%) are illiterate. In Meherpur another study found 16% farmer had primary level, 36% had secondary level, 20% had S.S.C. level, 14% had H.S.C. level, and 6% had bachelor level of education Islam *et al.* (2017). Hossain *et al.* (2015) mentioned only 18.33% are secondary educated in Dinajpur district. Rahman *et al.* (2017) mentioned that, 33% of the contact farmers had up to secondary level of education (S.S.C) and only 7% of the contact farmers had masters' degree.

The present study showed that, 53% fish retailers had nuclear family and 47% had joint family. Adhikary *et al.* (2018) found about 77% of fish farmer family was jointed and 23% percentage fish farmer family was nuclear. Joint family was predominant in the study area which also correspondents well with the findings of Ali *et al.* (2009) in Mymensingh district; Ali *et al.* (2016); Asif *et al.* (2015); Asif and Habib (2017); Hossain *et al.* (2015); Sharif *et al.* (2015); Vaumik *et al.* (2017) and Zaman *et al.* (2017) also found the similar family in their research. Moreover, it was found that Small family was 24%, medium family was 54% and large family was 18%. Farid *et al.* (2013) found that, 58% fishermen were lived in joint families which are similar with the present study. Masud (2000) observed in his study that average family size of farmers related to fish culture in inundated water bodies was 6.36 (members) in Kishorgonj district. Gupta (2004) found that, there was no significant difference in average family size of retailers among the three markets.

In the study area, 80% of interviewed retailers were Muslims and the remainders 20% were Hindus, with no Christian or Buddhist. About 65% Hindu communities and 35% Muslim in two villages of Chittagong was denoted by Mondal *et al.* (2018). From the study it was found that Muslim fish traders (68.33%) were predominant. Siddique (2001) mentioned that Muslim fish retailers were predominant in the market in Mymensingh. Khatun *et al.* (2013) observed in his study in Charbata in Noakhali district that 82% of fish farmers were Muslims and 18% were Hindus. Sharif *et al.* (2015) observed that all of fish farmers (100%) were Muslims that relates with my study. Asif *et al.* (2015); Hossain *et al.* (2015); Islam *et al.* (2014) and Islam *et al.* (2015) also found the similar results.

The present study reveals that 69% of housing structures were Kacha (earthen floor and straw roof), while 27% were semi-pakka (Concrete floor and tin shed roof) and only 4% were pakka (Concrete floor and roof). About 69% households of the fish farmer were tinshed, 23% katcha and only 8% half building (Adhikary *et al.*, 2018). Rahman (2003) reported that 70% of were katcha, while 21% were semi-pucca and only 9% were pucca in Gazipur district. Ahmed (2001) also found that 62% of katcha housing structure of prawn farmers in Mymensingh area. Asif and Habib (2017) stated around 88% had concrete house in Jhikargachha upazila, Jessore which is not similar with the study. Sharif *et al.* (2015) found 54% farmers used semi pucca, 19% of fish farmers used to live pucca houses and rest of 27% farmers used to live earthen houses in Chaugachha, Jessore. Islam *et al.* (2014) revealed full katcha (17 %) houses were few, while the semipucca (40%) and pucca (43%) houses were more abundant.

It was found that 100% of the retailer's household used tube wells for drinking water; among them 71% used own tube-wells for drinking water and the remaining 29% collected water from others tube-wells. Hundred percentage of the studied fishermen used tube-wells' water for drinking purposes and among them 64% fishermen had own tube-well and 36% used neighbors tube-well (Adhikary *et al.*, 2018; Mondal *et al.*, 2018).

Kabir *et al.* (2012) found that the highest (100%) fishermen of the old Brahmaputra River used tube-well water for drinking purposes, among them 40% had their own tube-well, 50% used shared tube-well and remaining 10% used neighbors tube-well. Same study conducted by Ali *et al.* (2016); Asif *et al.* (2015); Asif and Habib (2017); Hossain *et al.* (2015); Sharif *et al.* (2015); Rahman *et al.* (2014); Vaumik *et al.* (2017); Zaman *et al.* (2017); Shabuj *et al.* (2016); Siddika *et al.* (2016) and Razeim *et al.* (2017) also they have found the similar results.

The study showed that 16% of retailers household were dependent on village doctor (unqualified practitioners), who did not have any understanding and knowledge of medical science, while 18% got health service from community hospital and 4% private clinic and 62% from upazila health complex. Around 52% to 92% of fisher used to visit MBBS doctor which is found in two villages of Chittagong from the study of Mondal *et al.* (2018). Fourteen percentages took medical facility from upazila health complex and only 6% took medical facility from MBBS doctor (Adhikary *et al.*, 2018). Ali *et al.* (2008) found that 46% of the farmers received health service from village doctors, 18% from upazila health complex, 14% from district hospital and 20% from MBBS doctors in Rajshahi district. Asif *et al.* (2015); Asif and Habib (2017); Hossain *et al.* (2015); Sharif *et al.* (2015); Vaumik *et al.* (2017) and Islam *et al.* (2014) have had the similar results with present study.

According to the survey, the average net profit of fish retailers was found higher in Boro bazaar (350) followed by C.B.S. bazaar (TK.275) and Palbari bazaar (Tk. 325/day/retailers). From our survey it was found that the fish retailers make a significant amount of profit. Generally they make a profit of Tk. 150-600 per day. The fish retailers invest more capital than the wholesalers, and as such, they have greater control over the agent and retailers. The present findings are in agreement with the report of Rahman (2003) who observed similar scenario in Gazipur Sadar and Sripur upazila markets. Majority of farmers (48%) had income around BDT 10000-20,000 per month before fish farming and after fish farming 41% had above BDT 20,000-30,000 per month and income level of fish farmers increased and no one had income below BDT 10,000 per month. Average income of fish farmer was 15,000-25,000 per month (Adhikary *et al.*, 2018; Leela *et al.*, 2018). Okorie (2000) reported that average monthly income from cage culture was BDT 2250 (USD\$30). The highest percentage (34%) fish farmers earned BDT 75,000 to 1,00,000 per year. It was higher than the national average BDT 28,430 (BBS, 2004). The present findings of annual income of fish farmers correspond well with the findings of Rahman *et al.* (2012) in Noakhali district and Rahaman *et al.* (2015) in Jashore district. Khan *et al.* (1986) stated that levels of family income are important economic factor affecting utilization of pond fish farming in Mymensingh district. Retailers generally operate a capital of around Tk. 300 to 600 per day. From the study, it was found that about 10% retailers used their own money for fish trading while the rest 90% received loans from moneylender or aratdars without paying any interest. Quddus (1991) reported similar seasonality for the prices of fish in Mymensingh fish markets. Rahman (2003) also mentioned that the price of fish varies with the season and highest prices are found in the summer and lowest in the winter in Gazipur. The traders of Boro bazaar, Chuadanga Bus stand bazaar are engaged in fish trading from 7am to 10pm, Palbari bazaar from 9am to 4pm which is similar with the findings of Rahaman *et al.* (2015). It was found that almost all traders of three markets spend around 8 to 12 hours in fish selling if sufficient fishes are available. It was found that a fish retailers of Boro bazaar and Palbari bazaar sold an average of 35 kg fish daily, compared with Chuadanga Bus stand bazaar 15 kg per day. There were about 100 retailers involved in Boro bazaar, about 20 retailers in Palbari bazaar and about 15 retailers in Chuadanga bus stand bazaar. The daily supply of fish in Boro bazaar can be estimated at 1.6 m. tons (25 retailers × 65 kg) while 0.3 m. tons (15 retailers × 20 kg) and 0.45 m. tons (15 retailers × 30 kg) in C.B.S and Palbari bazaar respectively. Plethora fish species are abundant in markets of Jashore sadar which is relevant with the study of Leela *et al.* (2018) and Samad *et al.* (2013).

5. Conclusions

Fish retailers, especially in developing countries, contribute to livelihood in a range of ways; as a source of income and through other social benefits, such as reduced vulnerability to poverty. Most of the fish retailers in the study area live in below the poverty level. Fish retailers' community is deemed to be one of the most vulnerable communities in terms of their livelihood opportunities in Bangladesh. Fish sell is main occupation of them which cannot be carried out throughout the year, they lack alternative job opportunities. The overall livelihood status of fish retailers' communities of this area is not good.

Conflict of interest

None to declare.

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