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ARTICLE

Promotion of Human Capital in Traditional Fishing Villages: An Empirical Analysis

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ABSTRACT

Bangladesh is a lower-categorized middle-income country where traditional fishermen, here, *Jaladas* are at extreme risk of long-lasting poverty. Two *Jaladas* villages were study locations where an endeavor was carried out to identify major driving forces causative for promoting human capital in these communities, and socio-economic transformations through this process. This study adopted a qualitative method, specifically, Focus Group Discussion (FGD). In addition, a 100-household survey was conducted by random sampling. The findings revealed that NGO-led interventions increase awareness, leadership, education, training and skill development, and access to health facilities. The quality of lives and livelihoods has improved through human capital development in one of the villages studied. Human capitals contribute in socio-economic transformation especially, in the areas of employment, income, housing, drinking water, sanitation, fish marketing, self-help groups, social alliances and networking, claiming rights & entitlements, and bargaining power. Another study village was lagging behind due to inadequate attention from the Government of Bangladesh (GoB), private sector, donor-funded NGOs, and other actors. This study critically analyzes the reasons for advancement and lagging behind between the two study villages through a human capital lens. This study urges to bring the disadvantaged *Jaladas* communities into the mainstreaming and sustainable development process.

Keywords: Human Capital; Marine Fishing Community; NGOs; Poverty; Sustainability; Well-Being

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1. Introduction

Human capital is intangible assets like education, training, skills, specialization, health, and other things embodied within one person which facilitate the creating personal, economic, and social well-being[1]. Sen and Ali (2013) claimed that poverty measurement is very contextual in the case of South Asian countries[2]. A lower level of human capital is one of the major bottlenecks to escape from the poverty threshold. Chowdhury et al. (2018) revealed that human capital is an important factor for economic growth of a country[3]. Bangladesh Planning Commission (2020) decidedly featured human development especially, in lagging behind areas and underprivileged communities to reach Bangladesh as a developed country by 2041[4]. However, United Nations Development Programme (UNDP, 2024) identified that although Bangladesh has economic progress, approximately 40 million people still live within multidimensional poverty. Inadequate cooking fuel, housing, and years of schooling are the biggest deprivations among poor people. Bangladesh must emphasize to reducing structural exclusion, ensuring quality education, upskilling and reskilling the labor force[5]. Therefore, this paper takes an endeavor to describe conditions of human capital in traditional small-scale fishing communities, herein, *Jaladas* (slave of water) where the focus of researchers is still inadequate and overlooked.

Rashid et al. (2020) revealed that Asia, especially South Asian countries, contributes a lion's share which is almost 90% in the global fish production. Small-Scale Fishing (SSF) villages of South Asian countries have been threatened by several difficulties such as the absence of governance; illegal, unregulated, underreported fishing; and adverse effects of climate change[6]. Exclusive Economic Zone (EEZ) of Bangladesh possesses 166,000 square kilometers; and has territorial rights beyond 200 nautical miles. Department of Fisheries (DoF, 2020) confirmed that marine capture fisheries a contribution to 14.90% of total fish production[7]. Marine Fisheries Office (MFO, 2019) revealed that SSF contribute 83.72% of whole marine catches[8]. Khan and Latif (1997) claimed that economic conditions of SSF communities and other groups of this sector are adversely affected because of certain exogenous factors[9]. Islam (2011) also indicated that SSF communities of Bangladesh are in challenges of multidimensional poverty[10].

Historically, marine fishermen of Bangladesh had been regarded as various castes and sub-castes among Hindus. Census of 1901 clearly revealed that there were 550,000 fishers in Bengal; out of them over 95% comprised Hindus[11]. Few substantial studies proved that *Jaladas* are low-caste Hindus belonging to SSF communities and catch fish in the Bay of Bengal of Bangladesh from generations to generations[12–15]. Alam (1996) identified that *Jaladas* are socially neglected, powerless and seriously deprived of economic benefits. Their personal freedoms are encircled by wishes of Muslim moneylenders. Entrepreneurs slowly establish control over natural resources; and it is anticipated that *Jaladas* communities will be de facto waged labour of investors[15]. Jentoft and Midré (2011) mentioned that traditional Hindu fishing communities not only suffer from income erosion but also other types of poverty such as poor access to healthcare, malnutrition, poor sanitation, lack of education and so on[16]. Rashid (2016) also identified that majority of Muslims are involved in fishing due to population pressure, economic constraints in agricultural sector, and adverse effects of climate change. It further deteriorates hardship of *Jaladas* communities[17].

This paper aims to explain settings of human capital in *Jaladas* communities and its effect. The study will, therefore, answer of two questions: 1) What are major driving forces to promote human capital in these communities? 2) What are socio-economic transformations in these communities due to human capital? This paper also identifies responsible aspects for ruining the potentialities of human capital; and finally urges towards emergency initiatives of national and global actors for sustainable well-being of *Jaladas* communities in Bangladesh.

1.1. Literature Review

In the context of Bangladesh, biological aspects and production related literature on fisheries dominate highly and overlook human issues particularly inadequate literature on the lives of traditional Hindu fishing communities. This is a vital research gap. This section describes the findings from previous limited research works on traditional Hindu fishing communities and is mutually sequenced as per study objectives. Three theories i.e., human capital theory, poverty theory, and well-being theory have been incorporated and described to portray an operational framework which addresses promotion of human capital in *Jaladas* communities.

Deb and Haque (2017) presented a popular exemplar of a proactive way of ecosystems, livelihood insecurity, vulnerabilities, adaptation, resilience and uncertainty resulting from both anthropogenic and climate-induced changes in small-scale fisheries in Bangladesh. Any climate-induced transformation within the ecology of production of the productivity and delivery of fishery resources will fundamentally affect the well-being of all other small-scale fishers [18]. Most fishermen are very poor and they are the primary targets of adverse environmental attacks such as cyclones and flooding. Many fishermen believe that their strongest vulnerability is continual financial problems, and climate change issues have added a further layer of vulnerability to them. Hasan and Nursey-Bray (2018); Rashid (2013) mentioned that coastal fishing communities are recurring victims of major climate changes. They are at the top of list. The effects include massive temperature fluctuations, torrential rain, cyclones, storms, flooding, erosion, strong sea waves, sea turbulence, rising water levels, salinity, declining fertility of soil, and landslides. There are physical, technological, social and institutional obstacles to adaptation in coastal fishing communities [19, 20]. Department for International Development (DFID, 2000) [21] proved that Sustainable Livelihood Approach (SLA) is human-oriented and comprehensive that provides an inclusive approach to people's livelihoods within social, economic, institutional, political and environmental contexts. Unfortunately, marginalized fishermen are highly exploited by market functionaries due to a lack of education, awareness, financial capital, and bargaining capacities.

Traditional fishing communities belong to Hinduism face chronic poverty in Bangladesh. Rahman et al. (2002) revealed that the fishing community is in a high level of poverty. It was measured that 88% of families were below poverty line [22]. *Jaladas* are in an awful debt trap. Jonayed (2009) indicated that debt is a fatal cause for social distress in fishing community. Fishermen receive *dadan* (advance money as loans) for different reasons (e.g., repair & buy net, boat and other fishing gears, bearing accidental cost, treatment for sickness, ransom to sea pirate, dowry of marriage and rituals, living expenses during off-season, etc.) on condition that fishermen will supply their catches to *Dadandar* (the informal moneylender). *Dadandar* exploits fishermen by fixing a lower price of fish than real market price. Tale of *dadan* is very painful and pathetic; it enslaves social and personal freedoms of fishermen [23]. Jentoft et al. (2011) mentioned that *Jaladas* is a class-exploited group. Fragile institutions and poor organization are other forms of vulnerabilities; *Jaladas* live without bargaining power. As a result, they become helpless against any exploitation, for example mistreatment by middlemen [24].

Kleih et al. (2003); Rashid (2017) and Singh et al. (2019) stated that *Jaladas* are poor and have limited assets for livelihood. Decline of fish catches, piracy, poorly conditioned boats, exploitation by moneylenders, lack of access to stress-free credits, denied access to the marketing structure, and social exclusion are major causes of their livelihood constraints [25–27]. Dastidar (2009) revealed that economy of *Jaladas* communities in Bangladesh has been changed due to technological innovation by financial investors. It also transforms socio-economic conditions in *Jaladas* communities. Formations of new socio-economic class, changing production relations; and broadly physical and psychological conflicts between small-scale fishers and capitalist groups have increased. Moreover, conflicts increase over control of *faars* (spaces for fixing-up nets) due to demographic expansion in *Jaladas* communities; and influx of newcomers in fishing mostly Muslims [28]. Deb (2010) stated that livelihoods of *Jaladas* are primarily dependent on the income from natural resources and mode of engagement with income generating activities. Fishermen who have low income, are not only at high risk of malnutrition but also live with a humiliated social status. Vulnerabilities have cross-sectional linkages in *Jaladas* communities with root causes like interventions on natural resources, institutional governance, endowments, geographical location, political environment, religious and cultural ethnicity which influence fishermen to cope, collectively or individually, with changing situations [29].

This paper takes into consideration a few theories that align with study objectives. Incorporation of poverty theory helps to find out dimensions of poverty in *Jaladas* communities. Many poverty authors point out that the various ways poverty is conceptualized and measured are very crucial because different poverty measures tend to capture different people as poor. Elesh (1973) revealed that theories of poverty can be broadly classified into two types: cultural and structural [30]. Cultural theories find the explanation for poverty in the traits of the poor themselves. These theories assert that it is the valuational, attitudinal, and behavioral patterns of

the poor which prevent them from being socially mobile. In contrast, structural theories explain poverty in terms of the conditions under which the poor live such as unemployment, underemployment, poor education, and poor health. The distinctive traits of the poor so central to the explanation of the cultural theorists are, for the structural theorists, responses or adaptations to the hostility of the structural conditions the poor face. Structural theorists fully accept the cultural theorists' characterization of the poor; they merely place another interpretation on it. Poverty breeds poverty. But in reality, it is constituted by an integrated network of deprivations. However, Dahliah and Nur (2021) mentioned that supports of multiple actors contribute to human development index and results to poverty reduction [31].

According to MacDuffie (1995) [32], "A more educated, better-trained person is capable of supplying a larger amount of useful productive effort than one with less education and training." Term of human capital was introduced by Theodore William Schultz in 1961. Backer (1964) initiated 'human capital theory' and claimed that human capital can be accumulated in different forms of education, training, migration, and health. Later, Davenport (1999) [33] advanced that component of human capital consisted of abilities, knowledge, skills, personal talent, behavior, and effort. Authors select this theory to find out its elements in disadvantaged communities and roles of multiple actors to promote human capital.

Crisp (2006) claimed that a theory of well-being is a theory of 'what of is ultimately good for any individual,' and defines hedonism as the view that 'what is good for any individual is the enjoyable experience in her life, what is bad is the suffering in that life, and the life best for an individual is that with the greatest balance of enjoyment over suffering [34]. Fletcher (2009) agreed that no single theory of sustainable well-being successfully explains every case [35]. Well-being can be understood as how people feel and how they function both on a personal and social level, and how they evaluate their lives as a whole. This characterization points to well-being having multiple elements within and across the broad categories of emotion, behavior, cognition, and relationships. Wellness; flourishing; thriving; life satisfaction; happiness; quality of life; mental health; and subjective well-being, to name only a few. This paper includes these theories to investigate promotion of human capital in *Jaladas* community; conditions of multidimensional poverty and endeavors, individual or collective, to overcome poverty threshold for improving standard of living & quality of life.

1.2. Conceptual Framework

Conceptualization is a process of defining, theorizing, purifying, and specifying the meaning of an abstract idea or concept to use as variables in a study. That's why, it is a comprehensive procedure in which an imprecise concept becomes more specific and exact in meaning used by the study [36]. From literatures review and theoretical engagement, present study assumes that human capital of *Jaladas* communities is functioned by entrance and effectiveness of multiple actors which improve their lives and livelihoods through socio-economic transformation. A part of poverty theorists claims that it can be reduced through multi-actors supports. Thus, authors bring a glimpse of support from the government, NGOs, private sectors and other sources in two fishing villages especially for human development. 'Human capital theory' emphasized different forms of education, training, and health; thus, these variables have been described with facts and figures.

Education. Oxford Poverty & Human Development Initiative (2019) noted that deprivations from education continue to affect South Asia. One in four, of 436 million South Asians, lives in a household where no adult was able to complete six years of schooling [37]. It is the main cause of deterioration of the ranking of the Human Development Index (HDI). Jentoft and Midré (2011) showed that a lack of education in Hindu fishing communities of Bangladesh is a key problem [16]. Present study aims to determine which actor mostly contributes to education in *Jaladas* communities.

Training and Skills. Training and skills enhance socio-economic condition and status of poor people. It plays a role in improving prospects for ensuring decent work and better income [38]. Ali et. al. (2016) indicated that the households of Bangladesh who have limited set of skills their capacities are lower for adaption [39]. For purpose of present study, training and skills development support by different actors will be checked and advanced further to find out its linkage with job placement.

Health and Nutrition. Rahman and Schmidlin (2019) revealed that natural calamities and poor health are major causes of hardship in small-scale fishing communities of

Bangladesh[40]. National Health Policy, 2011 of Bangladesh aims to ensure primary and emergency healthcare for all[41]. It sets 19 specific objectives for quality healthcare. Accessibility of disadvantaged people, gender equity, immunization, family planning, mobile clinic, climate change induced diseases and e-health are some of these objectives. Present study is beyond the scope of figuring out caloric value and nutritional adequacy of the meals. However, it is supposed to find out mobility of *Jaladas* communities to healthcare services, quality of services, level of awareness, affordability, and obstacles which are outputs of functioning of multiple actors.

Bak et al. (2021) indicated that socio-economic transformation, especially in employment and income contributes to improved lives and livelihoods of rural people[42]. Well-being theory emphasized on feelings of people about their personal and social life. From essence of well-being theory and earlier literature, authors identified 12 items of socio-economic transformation and their linkage with human capital in **Figure 1**.

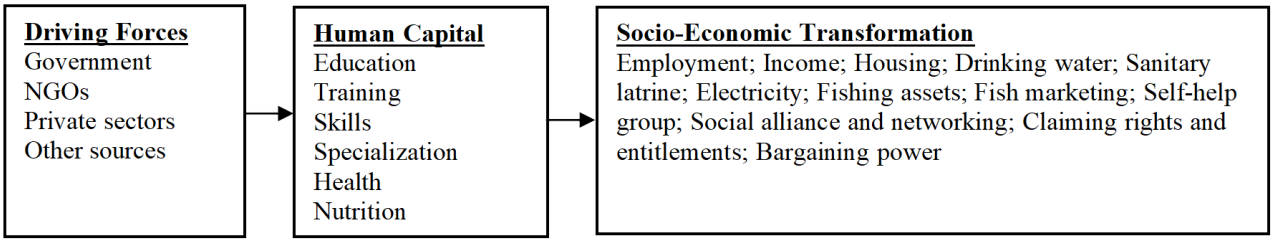

Figure 1. Conceptual Framework.

2. Materials and Methods

2.1. Study Design

Study design outlines each stage of processes to obtain a comprehensive understanding and fulfill the objectives. Azman et al. (2020) suggested to consider aim of research during study design[43]. Creswell (2014) termed it as a step-by-step procedure espoused before collection of data, data analysis and ensuring reliability & validity for fulfilling objectives[44]. On top of that, this study is explorative and phenomenological, henceforth, mainly adopted the qualitative method. Gambino and Silva (2009) urged that household survey is a particular category of social survey[45]. Ricci et al. (2018) also emphasized that reflection of respondents by qualitative method are strengthened more through incorporation of household survey. Questionnaire items are helpful to safeguard content validity of qualitative method[46]. As regards to scholars, 100 households survey (randomly) was conducted to find out key information of two fishing villages. Main domain of human development by multiple actors were organized by 32 questions for household survey. Features of study design are in **Table 1**:

Table 1. Features of Study Design.

Features	Application in Promotion of Human Capital in Traditional Fishing Villages Study
Theories	Poverty theory, human capital theory, and well-being theory
Method	Qualitative: Applying the Focus Group Discussion (FGD) technique Household survey to strengthen opinions of respondents
Sample strategy	Qualitative: Maximum variation to select FGD participants, determination of inclusion and exclusion criteria Put on random sampling for household survey
Data collection	Gender segregated FGD setting and facilitation for reliable findings Using printed questionnaire and door to door visit for survey
Data validation	Spot-checking for the face, content, and construct validity Process-centric FGD
Data analysis	Excel spreadsheet for tabulation and data analysis ATLAS.ti software for analysis of qualitative data

2.2. Study Location and Respondents

This study was conducted in two fishing villages of Bangladesh. North Salimpur Fishing Village is in 10 Salimpur Union Parishad (UP), Sitakunda, Chittagong. On the other hand, South Dhurung Fishing Village is located in 2 South Dhurung Union Parishad (UP), Kutubdia, Cox's Bazar. Location of study village is indicated on the map of Bangladesh. **Figure A1** shows location of study villages on map. Key considerations for selection of two study villages are: *Jaladas* live in two villages and have engaged with marine fishing for many generations. Fishermen use different fishing methods and are involved with various types of production organization & relations; and marketing linkage. Moreover, one fishing village is located in remote-island and another fishing village is in at an industrialized zone.

Qualitative method i.e., Focus Group Discussion (FGD) technique was followed to comply issues of study objectives. Authors also included 100 household surveys (randomly) as suggested by Ricci et al. (2018)[46]. They urged that incorporating a household survey in qualitative method strengthen reflection of respondents with more acceptability and comprehensiveness. Van and Angehrn (2017) suggested that smaller group is more effective & informative; and 6 to 12 participants are perfect size for one FGD[47]. Corresponding author arranged four FGDs comprising 24 participants (12 females and 12 males). By considering socio-economic and cultural perspectives of Bangladesh, separate FGD was facilitated for males and females. Total six participants joined each FGD which, was relatively sufficient and manageable to obtain information. Willingness, knowledge about fishing community and real-life experience were considered for selecting the participants of FGD. Rashid et al. (2023) revealed that facilitation skill of moderator is essential to ensure quality of an FGD. Managing time, asking, deeply listening and thinking capabilities of moderator are pre-conditions for high-quality FGD; and moderator must avoid expression of personal judgment and domination over participants. Discussions must be inclusive and balanced[48]. Social worker (female) helped which co-facilitating in FGD with females; gender segregated seating, and congenial environment for facilitation were ensured. According to consent of participants, author used tape-recorder. This idea derived from suggestion of renowned social researchers[49]. They suggested that recording of discussion is a reliable source for coding of data and its analysis.

North Salimpur and South Dhurung Fishing Village had 408 and 190 households respectively who were involved with fishing activities. Total sample was 100 (half from each village) for household survey in two fishing villages. Author adopted random sampling technique as Rashid (2014)[50]; Singh and Masuku (2014)[51] argued that random sampling is unbiased comparing with other samplings; and gives better estimate of parameters. Each unit has same probability of inclusion. Head of household, willingness to provide information, living in study village, mentally sound, and minimum 18 years old were major inclusion criteria to be a respondent of household survey.

2.3. Data Collection

Corresponding author carried fieldwork from July 2020 to February 2021. Authors followed Global Multidimensional Poverty Index- 2019, developed by Oxford Poverty & Human Development Initiative and UNDP, for addressing three dimensions of poverty i.e., health, education and standard of living in questionnaire. Possible actors for socio-economic development i.e. the government / NGO / private sector / others had been considered to prepare close-ended and open-ended questions. The questionnaire comprises a total of 32 questions aligning to study objectives. Author visited randomly selected houses and interviewed with head of household using a printed questionnaire.

Process-centric FGD was conducted where tape-recorder was main tool for data collection. Author emphasized on broad and then narrows questions for obtaining information from FGD. The issues like awareness building, education, cultural activities, attendance in school, scholarship support, dropout, child labor, early marriage, dowry, training and financial support, skills development, life-saving information, vaccination and child mortality, family planning, nutrition, access to health services, income, scope of income generating activities, migration, conditions of working environment, fishing assets, institutional supports, structural exclusion, social stigma & cohesion were discussed through interactive dialogue and recorded. List of FGD participants is given in **Table 2**.

Table 2. FGD Participants of North Salimpur Fishing Village and South Dhurung Fishing Village.

Participant	Living Village	Sex	Age	Occupation	Education
1	North Salimpur	Male	57	Fisherman	Illiterate
2	North Salimpur	Male	60	Fisherman	Class Five
3	North Salimpur	Male	57	Fisherman	Class Seven
4	North Salimpur	Male	30	Fisherman	Class Eight
5	North Salimpur	Male	40	Fisherman	Illiterate
6	North Salimpur	Male	30	Fisherman	Class Six
7	North Salimpur	Female	28	Sewing	Class Five
8	North Salimpur	Female	28	Homemaker	Class Ten
9	North Salimpur	Female	36	Fish selling	Illiterate
10	North Salimpur	Female	26	Sewing	Class Seven
11	North Salimpur	Female	48	Fish selling	Class Five
12	North Salimpur	Female	37	Fish selling	Illiterate
13	South Dhurung	Male	25	Fishing labor of big boat	Illiterate
14	South Dhurung	Male	50	Fisherman	Illiterate
15	South Dhurung	Male	65	Fisherman	Illiterate
16	South Dhurung	Male	56	Fishing labor of big boat	Illiterate
17	South Dhurung	Male	32	Fishing labor of big boat	Illiterate
18	South Dhurung	Male	51	Fisherman	Class Four
19	South Dhurung	Female	28	Homemaker	Illiterate
20	South Dhurung	Female	38	Fish selling	Illiterate
21	South Dhurung	Female	28	Homemaker	Class Five
22	South Dhurung	Female	24	Homemaker	Class Four
23	South Dhurung	Female	40	Fish selling	Illiterate
24	South Dhurung	Female	28	Homemaker	Class Six

2.4. Reliability and Validity of Data

Internal consistency usually elucidates whether respective respondents steadfastly agree or disagree with each item of questionnaire [52, 53]. Author arranged pilot study to check reliability of questionnaire in one study village. Head of five households universally agreed with consistency of questionnaire items and also advisedadding three questions. Reply and suggestion of respondents evidenced that questionnaire construction had good reliability. Reliability and validity are strongly correlated. Validity is a process to ensure data accuracy; and a method of accurate measurement which were intended to measure. Babbie (2020) emphasized on face validity, content validity, and construct validity [54]. Authors ensured aforesaid three aspects of validity during questionnaire-led household survey. Two social workers (male and female) assisted the author for data rechecking given by respondents. In addition, data was also cross-checked with neighbor of respective respondent.

Cypress (2017) indicated that reliability and validity of qualitative research are process-oriented rather than post evaluation. Inquiry (constructive) during fieldwork is very fruitful than post verification [55]. Author facilitated each FGD by following step by step procedure. For example, setting criteria for inclusion and exclusion of participants, building a trusted relationship with community members, gender segregated seating and a congenial environment for facilitation, participation of knowledgeable person, standard number of participants, cross-person discussion, sub-questions to gather truthful answers from participants, proper time management, and tape-recording of conversation.

2.5. Data Analysis Procedure

Data of household survey was limited in size. Thus, simple arithmetical analysis was made by using an Excel Spreadsheet. Profile of respondents, education, employment, income, financial supports, condition of houses, latrine, electricity, drinking water, etc. were quantified by hand tabulation. Survey data analysis is highly emphasized to approaches for fulfilling study objectives. Qualitative data analysis is an initiative to interpret data content and text by defining themes and systematical classification. ATLAS.ti (8 Windows Version) software was used for analyzing FGD findings. Coding process was helpful for interpretation of different types of text. It also helped to identify themes. Verbatim quotes of FGD respondent were aligned with respective codes. Analyzing relevant data generated themes.

Ensuring the flexibility and accessibility of data was key aim of thematic analysis. Authors followed six steps for thematic analysis as suggested by Braun and Clarke (2012) in **Figure 2**[56]:

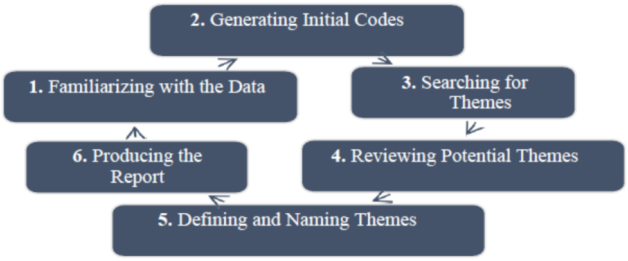

Figure 2. Six Steps for Thematic Analysis.

2.6. Ethical Considerations

Authors followed all ethical considerations, at every stage, from data collection to publication of this paper. Corresponding author clearly explained the academic publication purpose of this study and maintaining the privacy of all data, information and comments of participants. Participation of respondents was absolutely voluntary. Author strived best to avoid leading & sensitive questions and assured the respondents that no one can identify who participated. Present study interpreted field findings into multiple perspectives. Therefore, authors followed the principle of bias-free data collection, critical analysis and interpretation. The corresponding author created congenial environment by considerable seating arrangement. Participants were encouraged to speak spontaneously without any shyness or hesitation. Authors did not disclose name of any respondent which may cause possible harm(s) to them. Results and directions of other relevant literatures were properly acknowledged in this paper. Three authors had no personal interest and had nor worked in study village.

2.7. Limitations of Study

One study village i.e., South Dhurung Fishing Village is on remote island. Corresponding author had to stay there many days for data collection. It was a bit difficult to understand their local dialect. Two *Jaladas* villages from two coastal districts were selected for fieldworks. Thus, results of existing study must be generalized with carefulness. Calculating yearly income of fishermen was very difficult because their daily income is not fixed; and they do not keep any record. It was really difficult to distinguish between human development interventions and other programs in light of supports from the government, NGOs, private sectors, etc. 'Government' and 'State' are completely separated. In some cases, respondents mix it up with each other. Author writes their verbatim quote without any editing; it may mislead any reader.

3. Results

3.1. General Supports from Government, NGO and Other Actors

DoF issued database-led Identity Card for each fisherman. It helps genuine fishers to obtain 86 kilograms of rice grains from Union Parished (UP), lower tier of local government of Bangladesh, during 65-day (i.e., from 20 May to 23 July) fishing ban. Government of Bangladesh (GoB) ensured vaccination for children and childbearing women in two fishing villages. Only North Salimpur Fishing Village obtained electricity facility (i.e., payment based on use) from government. One-kilometer road beside this village was constructed by brick in 2015 through initiative of Local Government Support Project-2. Total of 36% households of in North Salimpur Fishing Village received Vulnerable Group Development (VGD) and other allowances by advocacy with Union Parishad (UP).

Five NGOs i.e., Association for Social Advancement (ASA), BRAC (Building Resources Across Communities), Community Development Centre (CODEC), Society for Development Initiatives (SDI), and Village Education Resource Center (VERC) worked in North Salimpur Fishing Village from 2007, 2019, 1985, 2005 and 2006 respectively. Their loan outstanding is, as on 31 August 2020, Taka 6,014,083/- (1 US$ = Taka 84.83 in 2020). CODEC facilitated many social programs like awareness building, legal services, education, health & sanitation, promoting of life-skills, trainings, human rights education, and advocacy through financial support of different donors.

Three NGOs (i.e., BRAC, COAST Trust and Grameen Bank) operated microcredit in South Dhurung Fishing Village from 1994, 2000 and 2006 respectively. As of September 2020, its loan outstanding is Taka 949, 295/-. Household survey shows that 50% respondents of this fishing village are out of loan support. They are neglected and overlooked by devel-

opment organization because of extreme poverty. However, BRAC provided non-formal primary education for children from 1994 to 2000. COAST Trust supported for Income Generating Activities (IGAs) in a limited scale; and humanitarian aid after cyclone Roanu in 2016. FRIENDSHIP established a Satellite Clinic in 2013 mainly for awareness building.

Internet facilities (i.e., payment based on use) are available in both fishing communities at initiative of private sector. Sangu Gas Plant constructed one three-storied building as a cyclone shelter, school cum health center in 2011 at North Salimpur Fishing Village from Corporate Social Responsibility (CSR) fund.

3.1.1. Education

Household survey reveals that 42% and 74% respondents of North Salimpur and South Dhurung Fishing Villages are illiterate respectively. CODEC (DANIDA-initiated Bangladeshi NGO) started development work in 1985 from seven *Jaladas* villages including North Salimpur. DANIDA financed CODEC to start its work. Financial support of DANIDA ended in 2012. But CODEC continued education program in this village on its own fund. Approximately, 1,020 children completed education (Pre-primary to Class Five) from those schools. As of 26 August 2020, total student of CODEC-run school is 133 (Boys- 69 and Girls- 64). Education program also arranges different cultural events like day observation, art competition, debate, drama, songs, wall painting, sports and others. Guardian Forum and School Management Committee from fishing village play an important role in this favor. One fisherman described education. According to him:

> Our father did not know about importance of education. We were also illiterate. We got opportunity to complete adult literacy program. Now many of us are able to read and write. CODEC established schools for ensuring education of children. It provides a good basement and quality of education to admit in secondary schools, colleges, universities and vocational institutions. The government should continue, in long-run, this school under their management by considering density and educational needs of children in fishing village.

Another young fisherman highlighted in this subject:

> Fishing profession of *Jaladas* will be, somehow, disappeared due to big investment of lured businessmen in fishing sector. They are musclemen and illegally fishing in our territories. We do not have financial capacities to compete with them. Thus, we emphasize education for our children. Education will be one of the ways for sustainable employment and economic emancipation of our next generations.

CODEC is only NGO which is working for socio-economic and political empowerment of this *Jaladas* community since 1985. Initially, this organization emphasized an education program. One female participant recounted:

> CODEC first started development work from this village. Now it is working with underprivileged people of other coastal districts in Bangladesh. But this organization does not forget its roots. It provides scholarship to disadvantaged students to continue education in universities. CODEC also reimburses a portion of profits from microcredit program among financially insolvent and meritorious students under organizational social responsibility.

Household survey proves that, in North Salimpur Fishing Village, enrollment of children at Primary School Level is cent percent. There are 12 clubs of youth members in fishing village. One fisherman said:

> Educated youths contribute to expand the light of education among their peer and junior groups through books and material distribution by their own initiative. We are pride of them.

People of South Dhurung village are involved with fishing for eight to nine generations. The author finds that majority of children (under five years) are playing and moving in village without clothes. A few of them have very worn and torn clothes. In some cases, parents do not know about the grade where their children read. Respondent takes assistance from child to provide class related information. Though primary education is compulsory in Bangladesh, the author identifies that enrollment of children in Primary School Level is 96.39%. A fisherman told:

> BRAC NGO implemented Pre-Primary Education for our children (04 to 06 years) from 1994 to 2000. It helped children to enroll in primary school. Approximately, 240 children completed Non-Formal Primary Education from BRAC-led learning center.

In matching with above dialogue, one female participant voiced:

> Children show great interests for going to school. They can interact with other kids and participate in sports and cultural events. Children like school than home because it provides a clean environment, playground and offers better opportunity to grow. Unawareness of parents especially father and economic hardships of family disrupt hopes of children to obtain education.

Majority (64.71%) of dropped out children from Primary and High School are engaged with different jobs; mostly hazardous. For example; they work as a day labor of building construction, grille and machinery workshops, helper of vehicles, fishing, garments factories, motorized rickshaw-driving, carpentry, tea-stall, sewing and salon. Economic hardship, malnutrition of children, opportunity cost, unawareness of parents, long-time (approximately nine months of each year) absenteeism of father in family, many duties of girls in family, and lack of social security are major causes of dropout from schools. One fisherman raised important issue about education. He explained:

> It is a general practice in Bangladesh to pay Taka 500,000/- to 700,000/- as a bribe for getting one normal public job. Nepotism and favoritism by power-structure (bureaucrats and influential political leaders) are required for a job. Obtaining a private job is also tough and too much unsecured. A very few youths from our village completed higher education but did not get a suitable job. Higher education does not give guarantee for employment of youths.

Early marriage particularly of girls is a serious issue in South Dhurung Fishing Village. It is one of the main bottlenecks for transforming human capital, herein, socio-economic and political empowerment of women. The household survey shows that 10 girls (below 18 years) were married-off within last two years (based on September 2020) which is very alarming. These girls were excluded during calculation of household members. It is identified that daughters are considered to be burden; the sooner they are given to marriage the better for parents. As daughter reaches adolescence many social nuisances threaten her parents. Extreme poverty and lack of awareness & education of parents are also major causes of early marriage. Dowry is another problem in this fishing village. One female participant mentioned:

> For the parents, dowry is a means to purchase a better groom for their daughter and to secure happiness for her future. Without a formidable dowry she faces possible physical and mental aggravation in the hands of her in-laws and their family. Honda, cash (Taka 300,000/- to 500,000/-), gold jewelry (23 to 46 grams), furniture, blankets, mattress, electronic goods, kitchen utensils, pots and pans are frequently custom as a dowry.

3.1.2. Training and Skills

One fisherman of North Salimpur Fishing Village said:

> Our peoples' organization advocated with 'Department of Youth Development' in Sitakunda Upazila (sub-district) for training of youths. Roughly, 60 youths of our village received trainings on driving, sewing and poultry. CODEC arranged training for people of fishing community especially on Savings and Credits, Management of Village Organization (VO), Leadership Development, Legal Awareness, Community-Driven Advocacy, Sanitation, and Disaster Management.

It is recognized that UNICEF provided financial and technical supports for employment of adolescents in 1999. Carpentry, electrical and tailoring were major areas of skill development for adolescents. UNESCO established Community Resource Centre (CRC) and Community Learning Centre (CLC) in North Salimpur Fishing Village from 2006 to 2009 for education of young women and adolescent girls. Other donor agencies also worked for socio-

economic improvement of this fishing village. For example, Stromme Foundation-Norway assisted to implement one year '*Shonglap* (Dialogue) Program' from 2010 to 2012 for adolescent girls. A total of 225 adolescent girls completed *Shonglap* package. One female respondent particularized:

> I was a member of *Shonglap* center in 2011. One animator (female) conducted session comprising 20 to 25 adolescent girls. The session mainly focused on our personal cleanliness, nutritional education, health risks, reproductive health, menstruation management, HIV/AIDS, water-borne diseases, early marriage, dowry, domestic violence, and sexual harassment. It provided training on basic operations of computer, handicrafts, sewing, parlor, etc.

Skill development supports and trainings from the government are very limited in South Dhurung Fishing Village. It is noted that Upazilla (sub-district) based Youth Development Department arranged two batches training (half-day long) in 2017 on duck rearing. Total 80 participants (female- 40 and male- 40) attended in training. In last five years, no other training has been provided for dwellers of fishing village. One female participant supplemented:

> Attention of NGOs for our development is also limited. But we are indebted to one NGO i.e., COAST Trust. This organization provided income generating trainings in 2010 particularly on handicrafts and sewing, net mending, and goat rearing for females. It provided humanitarian supports in 2016 after cyclone Roanu.

3.1.3. Health and Nutrition

Extension workers of local health department monthly visit in North Salimpur Fishing Village. All children are vaccinated (e.g., BCG, Pentavalent, PCV, OPV, IPV and MR). Females are much aware about family planning because of advice from NGO workers (female), counseling from health workers, availability and knowledge of contraceptive methods, and culture-sensitive message by different actors through electronic media. One female participant said:

> Female of childbearing age, from 15 to 49 years, has easy access to vaccination (i.e., Tetanus Toxoid). Majority of girls are habituated to use sanitary napkin in menstruation time.

Household survey indicates that 11 children born during last three years (i.e., from August 2020). Seven of them were born in Private Clinic, Government Medical College, and NGO-led hospital. Regarding this finding, another female participant supplemented:

> We are aware of safe birth of a child and maternal mortality. We are also conscious about family planning. Regrettably, few families cannot go hospital and private clinic because of insufficient money.

In South Dhurung Fishing Village, all children are under vaccination coverage. Health workers advise them about family planning. But most of them are not aware. Their husbands are not interested to follow methods of contraceptive. In addition, skin disease is a common problem due to salinity. Adolescent girls and females severely face problem during menstruations due to a lack of fresh water in winter season. Household survey identifies; 18 children born within last three years (i.e., from September 2020). Out of them, 15 children were born at home by Unskilled Birth Attendant (UBA). One female participant lamentably told:

> Distance of Upazila Health Complex from our village is only eight kilometers. But vehicles are totally inconvenient for one pregnant woman. Generally, no vehicle is available after 10:30 P.M. Though child delivery and maternal care in Government Health Complex are cost free but we ought to buy necessary medicines from private pharmacy. Staffs of Health Complex have connection and financial transaction with vested middlemen.

3.2. Socio-Economic Transformations

3.2.1. Employment

Household survey in North Salimpur Fishing Village reveals that, out of 528 households, head of 408 households is fisherman. Basically, forefathers of all were fishermen. There are two reasons to give up fishing occupation of 120 households. Head of 85 households left fishing profession because of very low financial benefit via fishing, torturing by

sea pirates, and a lack of financial capital. Other household obtained better income opportunities because of higher education, migration at abroad and engagement with businesses. Majority of migrants work for fishing particularly in Libya and Middle-East. It is apparent that 62% of respondents are fishermen for full-time. 38% of respondents are involved in fishing during *hilsa* season (i.e., Mid-June to End-September) only. Proportion of full-time fishing is steadily decreasing caused by decline of fish at their catchment areas.

It is revealed that father of 94% respondents was fisherman in South Dhurung Fishing Village; and caught fish by country boat with sails & oars. Now a days, 60% of respondents work as a fishing labor in the big size mechanized-fishing boat; which is operated by entrepreneur. One fishing labor of big boat added:

> I work as fishing labor in a big boat. Many of us are fishing labors. We are appointed verbally. *Bahaddar* (proprietor of a mechanized boat who generally operates for fishing in mid-sea) or his representative pays Taka 115,000/- to 140,000/- each labor for nine months. Wage is fixed based on many factors like age, physical strength, trust, fishing skill, and demand & supply of labor. Usually, we have to stay nine months (continuously) at mid-sea for fishing.

Another fishing labor of big boat is also narrated about employment in fishing village. According to him:

> Occupation of *Jaladas* sharply disappears because of capital penetration by businessmen. *Jaladas* are pushed out of own traditional occupation; and turn into bonded slavery. No one is really concern about plight and terrible conditions of fishing labors.

Women and girls of this village migrate to Chittagong City to work in garments factory. They do not have technical skill. Existing women of this village are very interested to engage with Income Generating Activities (IGAs) like grocery, duck-rearing, handicrafts, dairy, dry-fish processing and cow-fattening. But they are deprived to maximize potentialities due to a lack of support.

3.2.2. Monthly Income

Income is one of key indicators of economic progress. **Table 3** represents monthly household income of two fishing villages.

3.2.3. Conditions of House

Condition (wall) of houses in two fishing villages is shown in **Table 4**. In South Dhurung Fishing Village, condition of houses is more deteriorated than a slum. In common cases, rooms are badly ventilated, wet, dark, small, infested by bedbugs. Even 13 to 14 family members comprising grandmother & grandfather live in small house; and have trouble to maintain privacy.

Income of 20% households in North Salimpur Fishing Village is calculated by adding the income of other earning member(s). Those earning members are employed in different jobs; such as school teacher, computer operator, beauty parlor, private service, grocer, electrician, fishing labor; working abroad, ship-breaking site and salon. On the other hand, in South Dhurung Fishing Village, income of fishing labor in big size mechanized-fishing boat is almost fixed for nine months. It is substantial to note that income of 44% households is counted by comprising the income of other earning member(s). Those earning members are employed mostly in child labor, fishing, and female works in garments factories. Household income of this village is comparatively lower due to unemployment of human resources in diversified jobs.

Table 3. Monthly Household Income of Two Fishing Villages.

In Taka	North Salimpur(%); N = 50	South Dhurung(%); N = 50	National*(%)
	Total(%)	Total(%)	
<1,500	-	-	4.47
1,500–2,499	2	2	2.81
2,500–3,999	4	14	5.04
4,000–5,999	26	12	9.32
6,000–7,999	30	8	11.49
8,000–9,999	14	40	11.30
10,000–14,999	10	20	21.62

Table 3. *Cont.*

In Taka	North Salimpur(%); N = 50	South Dhurung(%); N = 50	National*(%)
	Total(%)	Total(%)	
15,000–19,999	8	4	12.84
20,000–29,999	6	-	12.01
30,000–34,999	-	-	2.58
35,000 and up	-	-	6.52
Total	100	100	100

Note: * HIES-2016.

Table 4. Types of Houses.

Types	North Salimpur(%); N = 50	South Dhurung(%); N = 50	National(%)
	Total(%)	Total(%)	
Brick/Cement	10	16*	30.51
CIS/Wood	52	10	49.37
Mud/Brick/Wood	-	12	11
Fence/Straw/Bamboo/Leaves	38	62	8.81
Others	-	-	0.31
Total	100	100	100

Note: * Constructed by Bangladesh Navy.

3.2.4. Drinking Water, Sanitary Latrine and Electricity

In North Salimpur Fishing Village, 56% households have shallow tube-well. Members of 98% households use sanitary latrine (i.e., water-sealed). Each family has electricity. Moreover, 82% households have dish-line connection and television. There is one small pond in South Dhurung Fishing Village. People have to depend on six deep tube-wells for drinking water, washing cloths and baths. Layer of groundwater is usually reduced during winter. They face extreme problem with water particularly the women and adolescent girls. It is identified that latrine of 24% households is non-sanitary. There is no electricity in village. Survey reveals that 32% households use solar panel; having costs Taka 25,000/-. The solar panel has capacity to operate one small fan and three bulbs (i.e., 25 watts of one bulb). One female told:

> We do not have electricity because we live on a remote island. But we are lagging behind to use sanitary latrine because of unawareness. In addition, our people especially youths are not well educated and skilled in advocating with local government to claim sanitary latrine (i.e., water-sealed) and tube-wells.

3.2.5. Fishing Assets

Boats of North Salimpur Fishing Village were caravel-planked in solid wood. They installed small engine (i.e., 06 Horse-Power, H.P.) in traditional country boats since 1990. Mechanized boat was faster; and thus, fish were fresher during landed. One fisherman told:

> Now many fishers use Fiberglass Engine-Boat (i.e., from 16 H.P. to 22 H.P.). In contrast, commercial fishing boats use high-powered engine i.e., from 300 H.P. to 350 H.P. They rampantly destroy fishery resources and only want profits. Commercial entrepreneurs never consider ecological damages and our economic difficulties.

Research findings show that value of fishing assets of respondents has decreased comparing with their father (e.g., present value criteria; and recall-method) in North Salimpur Fishing Village. Father of respondents had fishing assets of Taka 13,395,000/- and 82% of them had own fishing assets. Respondents have fishing assets of Taka 11,255,000/- and 72% of them have own fishing assets. Value of fishing assets and its ownership pattern have slightly decreased.

It is observed, nowadays, physical labor for fishing is subjugated in asset list mostly rather than boats and nets at South Dhurung Fishing Village. According to present value

criteria and recall-method; father of respondents had fishing assets of Taka 5,705,000/- and 60% of them had own fishing assets. In contrast, respondents have fishing assets of Taka 2,015,000/- and 22% of them have own fishing assets. Value of fishing assets and its ownership have dramatically declined because of forcing out from traditional occupation to fishing labor in big boats.

3.2.6. Fish Marketing

The roads, growth centers and communication from North Salimpur Fishing Village are quite good. It is nearer to Chittagong City. Fishers mention that they sell their catches under auction process on embankment. They have full freedom to sell to any trader. Fishers usually sell fish on embankment during peak season to save time and energy. One old fisherman expressed:

> Once we were enchained by trap of middlemen. Our educated youths collectively raised voice against tyrants through social mobilization. Now we are united and have liberty to sell fish according to our choice.

It is found that the communication system from South Dhurung Fishing Village is very difficult because of its remoteness and its geographical vulnerabilities. One fisherman of South Dhurung described their role in fish marketing. According to him:

> Total 12 to 15 Muslim *Paikers* (i.e., middlemen who make advance payment against the supply of fish, mostly representatives of wholesaler) of locality buy catches on embankment. Regrettably, they mentally pressurize Hindu fishers, sometimes physically assault, for selling catches at cheap price. Religious marginalization is a fact of denial from real price. We do not have leadership capacity to protest against such miscreants.

3.2.7. Self-Help Group

Microcredit operation by NGOs has role to establish association among poor people especially women in North Salimpur Fishing Village. One female claimed:

> We did not know how to operate a bank transaction. Village Organization (VO), comprising 20–25 women, of microcredit played key part to organize us. We discussed many social issues like demerits of early marriage, dowry, domestic violence; education of children, health & sanitation beyond financial issues. Now a total of 30 women of our village formed one *samity* (association) in 2016 by giving subscription Taka 10/- daily. It is functioning as a self-help group. We disburse loans among ourselves at 5% interest. Silently, it is an impact of human capital development by NGO.

3.2.8. Social Alliance and Networking

Educated representatives of North Salimpur Fishing Village liaise with policymakers to amend clauses of fishery acts. One fisherman recounted:

> Representatives of 38 Hindu fishing villages established *Upakulio Jele Unnoyon* Foundation (Foundation for development of coastal Hindu fisherfolk) in 2017. One learned leader of our village is General Secretary of this organization. This organization helps sub-district fisheries office to prepare genuine list of fishermen, ensuring support (86 kilograms rice grains) from government for fisherman during 65-day fishing ban, trainings, social safety net supports, etc. Erudite humans serve for community people.

In South Dhurung Fishing Village, social networking and devoted to own caste enhance securing of jobs for youths in big fishing boats; and for girls and females at garments factories in Chittagong City.

3.2.9. Claiming Rights and Entitlements

Manusher Jonno Foundation (MJF), Bangladesh implemented one project- 'Protection and Promotion of Rights of Marginalized Coastal Fisherfolk Communities' in 2007–2010. DFID funded to implement that project in five coastal districts including North Salimpur Fishing Village. It mainly advocated for amendment of fisheries laws through stakeholder consultations and submission of recommendations from grassroots to Ministry of Fisheries and Livestock (MoFL), and building an alliance among fishermen. That

donor-driven project also advocated with MoFL to prepare electronic database and Identity Card for fisherman. One fisherman remarked:

> As a result, DoF issued Identity Card for fisherman. This card is very useful for legal identification of genuine fisherman. We receive 86 kilograms rice grains from government on the basis of this Identity Card. Our educated youths voluntarily worked in that project.

Members of South Dhurung Fishing Village had been oppressed by surrounded some Muslims since long. One aged fisherman raised grievances regarding this thematic area. According to him:

> Vested Muslims psychologically and physically torture us due to our religious minority and chronic poverty. Actually, we are socio-politically weak to confront with those criminals. Local government usually deprive us from Vulnerable Group Feeding (VGF) and other social safety nets schemes.

3.2.10. Bargaining Power

Powerlessness is one of the significant symptoms of poverty. One fisherman of North Salimpur Fishing Village expressed:

> Once Muslims avoided us and did not sit in the same tea stall. Low caste identity was the major reason for such negligence. Owners of tea stall kept different cups for us. At present, such an event is only a story. Many aspects have changed over times. Now our sons and daughters are progressively being educated.

Bargaining capacity of fishermen living in North Salimpur has moderately increased. Fisherfolk establish relationship with duty bearers and claiming rights. They have freedom to sell fish as per their choice. Members of South Dhurung fishing families had been oppressed by some vested Muslims since long. One female participant raised grievances in this issue. According to her:

> Our lands were encroached by Muslims. They have confined the freedom of ours and severely interfere in our inner matters and decision-making. Our temples were attacked several times. Our religious minority and emergence of Islamic fundamentalists put us in helpless condition.

3.3. Comparison between Two Fishing Villages

The findings reveal that NGO-led interventions increase education and awareness, leadership development, training and skills, access to health facilities in North Salimpur Fishing Village; then, it directly and indirectly contributes in the areas of employment, income, housing, drinking water, sanitation, fish marketing, self-help group, social alliance and networking, claiming rights & entitlements, and bargaining power. In sum, quality of lives and livelihoods among people of North Salimpur is comparatively improved than South Dhurung Fishing Village.

Human development theory urges for effective engagement of multiple actors for improving abilities, knowledge, skill, personal talent, behavior, and effort among human beings. Unfortunately, functions of government departments, development agencies, private sector and other contributing actors were not effective in remote coastal pocket, hereby, South Dhurung Fishing Village for improving human capital. For example, Sangu Gas Plant constructed a three-storied building in North Salimpur Fishing Village in 2011 under Corporate Social Responsibility (CSR) fund. That building is used as a cyclone shelter, school cum health center. Such CSR initiative from private sector is completely absent in South Dhurung Fishing Village.

Well-being theory comprises multiple elements within and across the broad categories of emotion, behavior, cognition, and relationships. People of South Dhurung Fishing Village are being oppressed by few vested Muslims since long. They become helpless and voiceless. Their capabilities and potentialities have been ruined due to social exclusion. In addition, most of fishers were pushed out of traditional fishing and employed as fishing labor, like bounded slavery, in big fishing boat of commercial entrepreneurs. They become psychologically weak to switch occupation because of nine-month continuous fishing at mid-sea; and limited set of skills.

By and large, institutional supports are not proactive in Bangladesh. People of North Salimpur Fishing Village

especially educated youths started and continued policy and practice level advocacy for provisions & claiming rights. In this case, one DANIDA-supported NGO, hereby, CODEC supported them. In contract, people of South Dhurung Fishing Village were not capacitated for advocating with duty bearers to obtain their entitlements.

3.4. Answer of Research Questions

Results of this study provide qualitative and quantitative information mostly descriptive, and explanatory approximated. Based on facts and figures, **Table 5** summarizes answer of research questions.

Table 5. Summary of Findings for Research Questions.

Research Question	Summary of Findings
1) What are major driving forces to promote human capital in these communities?	State-led initiative was remarkable for vaccination of all children in underprivileged communities. Reducing child mortality is a milestone of human capital promotion. Roles of an NGO are commendably progressive for awareness building, education, leadership development and relative-standards improvement in one fishing village hereby North Salimpur due to in-depth concentration and committed approach. Contributions of donor agencies, media and private sector have played role for promoting human capital in aforesaid fishing village. Capital expansionists bring illbeing for fishery resources and small-scale fishers of both study villages. Conditions of human capital are deplorable in South Dhurung Fishing Village due to a lack of initiatives by respective actors.
2) What are socio-economic transformations in these communities due to human capital?	Differentiated socio-economic transformations due to capital inflows have been identified in two study villages. This study finds that inherent characteristics and a number of actors especially the Government of Bangladesh (GoB), the private sector, donor-funded NGOs, and others played vital roles for such socio-economic transformations. DANIDA-supported one NGO operated education program for children and adult of North Salimpur Fishing Village. In addition, various capacity building trainings and supports like legal awareness, access to justice, organization management and leadership development, advocacy, life skills, reproductive health, nutrition, community-led sanitation, disaster risk reduction, savings & credits, and schemes of income generating activities were provided to people of fishing village. Majority of fishing households (82%) have dish-line connection with television. They are linked with information. One private company constructed a three-storied building in 2011 for using as cyclone shelter, school and health unit. Supported multiple capitals particularly human capital keep them at progressive level of respective social development indicators. Penetration of capitals in South Dhurung Fishing Village is very low. They are somehow overlooked by the state, international development agency, private sector and other parties. Conditions of health, sanitation, potable water, and other relative-standards are deplorable. Issues of child development are seriously ignored mainly because of remoteness and slim access of required services. Dropout from school, child marriage, child labor, and abject poverty are major reasons for lagging behind in human development. *Jaladas* of this village are living in cohort; and oppressed by some vested Muslims. They are neglected and living within many social taboo and superstitions.

4. Discussion

On the basis of study objective; findings are critically explained to find out homogeneousness & discordant with past studies and incorporation of theories through operationalized mode. Human capital theory remarkably emphasizes for investment in education for well-being. Bangladesh Bureau of Educational Information and Statistics (BANBEIS, 2017)[57] revealed that dropout rate of learners from Primary School was 18.85% and 37.81% from High School in Bangladesh. Existing study shows that rate of dropout is 15.56 from Primary School and 28.57 from High School in North Salimpur Fishing Village. Unfortunately, in South Dhurung Fishing Village, dropout rate from Primary School is 43.10 which alarming and higher than national average (18.85%). Present study evidences that investment of donors, through NGO, especially in Education Program (i.e., for adult and children) had role to increase awareness and insight among people of North Salimpur Fishing Village. Adult literacy program confidently influences in attitude of granddads; and transform to parents of kids for education. This study also discovers that though economic growth of fishermen does not commendably enhance but social status of theirs has improved due to brightness of education. From policy perspective, it is found that implementation of National Education Policy- 2010[58] is weak in remote-island due to a lack of concentration by the Government of Bangladesh (GoB) and international development agencies. Similarly,

Liyanagunawardena and Williams (2021) identified that education in remote coastal areas of Sri Lanka is lower due to inattention of respective actors [59].

National Youth Policy- 2017 [60] of Bangladesh well-defined 'youth' as a person aged from 18 to 35 years. Total 33.79% family member of North Salimpur Fishing Village and 39.75% family member of South Dhurung Fishing Village are youths. Regrettably, a major portion of youths of South Dhurung are deprived of education, untrained and unskilled. Total 60 youths (female and male) of North Salimpur Fishing Village received training on poultry, driving, sewing, and nursery from Youth Development Department, Sitakunda Upazila. Government of Bangladesh (GoB) and international development agencies must penetrate essentials of human capital development for such downtrodden people (here, in South Dhurung Fishing Village). Dreams of Bangladesh to become a developed country by 2041 will only be on paper works else. Likewise, Uddin et al. (2021) urged to take special initiatives for training and skill development of hard-to-reach coastal communities aimed at sustainable livelihoods [61].

Infant mortality rate was higher in *Jaladas* village which was proved by Alam (1996) [15]; which indicated that Infant Mortality Rate (per 1,000) in one fishing village of Chittagong was 171 where national average (113.2). Government and NGO-led health services did not appropriately reach to doorsteps of fisherfolk. Fieldwork findings show that Community Clinic (CC) and Union Health and Family Welfare Center (UH&FWC) are situated at moderately far from both fishing villages. Providentially, health workers regularly come to the fishing village; and all children receive vaccines (e.g., BCG, Pentavalent, PCV, OPV, IPV and MR). It is a significant achievement due to state-led intervention. World Bank (WB, 2017) [62] revealed that Maternal Mortality Ratio (MMR) was 434 (per 100,000 live births) in 2000; and declines to 173 in 2017. Though national scenario is commendably progressive; but decease of mother for child delivery related complexities is a very awful matter in South Dhurung Fishing Village. Therefore, all contributing actors should concentrate on remote coastal island/pocket for reducing disparity.

Habib (1992) [63] summarized numbers of superstitions, prejudices and customs of *Jaladas* in Sitakunda sub-district, Chittagong. These are: 1) there is nothing wrong if a pregnant woman dies within five months of her pregnancy. But according to scriptural prescript, she is considered to be a sinner if she dies five months after her pregnancy. 2) Women believe that if a woman takes food before a man, they will be deserted by fortune. 3) If a man dies before receiving initiation from a preceptor, he will not be able to go to heaven. 4) A person who is drowned is a sinner. It happens so, because God is not pleased with him. It is considered as committing suicide. 5) It is a sin to take drinking water from a woman who has taken family planning measures. 6) If the wife leaves pond after bath without doing up the hair it does harm to the husband. 7) If the wife does not cover her head with *sari* at the time of her husband's departure for the sea it does harm to her husband. 8) If one does not put gold ornament on the nose it does harm to her husband. 9) It is also a sin to call husband by name. Existing study finds that superstitions and prejudices in North Salimpur Fishing Village have explicitly reduced because of education, awareness raising, and social mobility. It is distinguished by present study that most of villagers of South Dhurung hold the availability of fish in plenty in the sea, the safety of the fishermen in the sea in times of tempest, typhoon and thunderstorm and peace and tranquility in the village- everything depends on the chastity and purity of women on the shore. They are living with some superstitions due to a lack of proper education and mass awareness. Noteworthy, existing study proves that initiatives of human development in North Salimpur Fishing Village has contributed to combat against social taboos.

It is revealed that fishermen of North Salimpur Fishing Village shift from full-time to seasonal fishing. Total 60% respondents of South Dhurung Fishing Village are labor in big fishing boats. They become de facto waged labors where working conditions as like as brutal period of bonded slavery. Financial capital expansionists in mid-sea fishing are responsible for plights of these labors. Studies of Habib (1992) [63] and Alam (1996) [15] indicated that *Jaladas* had culture-led psychological barricade to switch from fishing profession. This study proves that mindset and inertia among youths of *Jaladas* villages have moderately transformed and they wish to do new job. Monthly income of majority households in both study villages (74% of North Salimpur and 98% of South Dhurung) is lower than national average (i.e., Taka 15,984/). Skill development opportunities among youths, higher education, low-categorized government service, pri-

vate job, and working abroad enhance household income in North Salimpur Fishing Village.

Housing conditions in South Dhurung Fishing Village are very miserable. From policy perspective, National Housing Policy- 2016[64] in Bangladesh recognized the 'housing' as human rights. This study finds that fishing families are deprived of enjoying the rights and living in hushed humanitarian crisis due to failure of state initiatives; therefore, immediately need supports from global humanitarian and development agencies. All households of North Salimpur Fishing Village use electricity. Total 82% of them have television and dish-line. Worth mentioning, 98% households in this village use sanitary latrine (water-sealed). It is an outstanding development in Bangladeshi context. Festinger (1954) proved the co-relation between income level and relative-standards in Social Comparison Theory[65]. Existing study disagrees with aforesaid theory. Study findings show that real income of families does not enhance but their relative-standard like sanitary latrine (water-sealed), connectivity with information flow, Android phone, television and dish-line, family planning, using of sanitary napkin, etc. have increased. Support of external players and awareness building particularly by NGO, education, electronic media, social mobility & mingling of youths with other communities have increased relative-standards. This study also finds a gloomy picture in South Dhurung Fishing Village. Still 24% households use unsafe and non-sanitary latrine. Total 68% households do not have a small solar panel. They live within some superstitions caused by lack of proper education & mass awareness; and lagging behind from information flows.

Scully (2004)[66] identified that microfinance was not appropriately reaching to real disadvantaged people in Bangladesh. In addition, Khan (2009)[67] claimed that some leading Microfinance Institutions (MFIs) avoid the poorest of poor to bring under loan services. Quotation from Scully (2004) and Khan (2009) is entirely similar to existing study findings in South Dhurung Fishing Village. MFIs intentionally avoid them due to extreme poverty and risk of repayment derived from incapabilities of people. Unfortunately, they have limited attention for improving capabilities of underprivileged fisherfolk. John and Sany (2019) revealed that 'Co-operative Federation for Fisheries Development, Kerala, India' becomes successful and worldwide renowned because of strong support from the government and empowering them for decision making; along with other enabling factors[68]. For North Salimpur Fishing Village, policy direction and government supports are needful for formation of effective cooperatives by marginalized fishermen.

Wu and Si (2018) narrated that social networking contributed to poverty reduction in China[69]. Correspondingly, existing study shows that social alliance and networking particularly leaded by educated people of North Salimpur Fishing Village played vital roles in reducing structural poverty and disparities. Social capital theory constructs the concept that social assets do not directly alleviate poverty; but contributes for human development and household resources. The conceptualization of this theory is fully proved in South Dhurung Fishing Village. Social networking ensures a job for youths in big fishing boats. Girls and females work in garments factories by applying the concept of this theory.

Bashir (2018) revealed that human capital development, capacity and advocacy for claiming rights & entitlements and responsive institutions are reciprocals. It effectively contributes to poverty reduction in developing countries[70]. Claim of Bashir (2018)[70] is similar with study findings in North Salimpur Fishing Village. Jentoft et al. (2011) revealed that poor fishers are defenseless and have no bargaining power[24]. Findings of existing study assure that bargaining power of people and fishermen in North Salimpur Fishing Village has moderately increased. Foreign employment, access to education, social mobility, affiliation with political party, and growing of relative-standards are key contributing factors to enhance bargaining power. Unfortunately, bargaining power and social dignity of fishermen in South Dhurung Fishing Village are limited due to extreme poverty, religious minority and oppressions by some vested Muslims since long. These adversative factors influence to put them in psychosocially weak position. Claiming of Jentoft et al. (2011)[24] is the same and also different for two study villages.

5. Conclusions

Donor-driven supports numerously improve human development especially in the areas of education, health and sanitation, awareness building, leadership development, and self-employment in one study village (e.g., North Salimpur Fishing Village). Systematic and analytical findings prove that investment by commercial entrepreneurs in fisheries sec-

tor, technological innovation, changing mode of production have pushed away *Jaladas* from their ancestral occupation. They become poorest of the poor particularly in South Dhurung Fishing Village. In South Dhurung Fishing Village, *Jaladas* are completely powerless due to social exclusion, lack of dignity, extreme poverty and oppression by Muslims. They are in trapped of structural poverty. However, people of North Salimpur Fishing Village obtain aroma of political affiliation. By using this affiliation and social mobility of youths, they access to social services and power exercises. But they still do not reach to political empowerment. Perspective Plan of Bangladesh- 2041 sets specific thematic areas; elimination of extreme poverty and minimization of absolute poverty at 3% or less are vital targets of this plan. This plan will only be a dream without proper inclusiveness of such lagging occupational groups. Present study does not only focuses on penetrated capitals; but also addresses lacking areas where entrance of different elements of capital is significantly needed. This is right time to bring the *Jaladas* into mainstream development and consider this issue from 'society as a whole' approach.

Author Contributions

Conceptualization, M.M.R. and P.S.J.S.; methodology, all authors; software, M.M.R.; validation, all authors; formal analysis, M.M.R.; investigation, A.A.; resources, P.S.J.S.; data curation, P.S.J.S.; writing—original draft preparation, M.M.R.; writing—review and editing, P.S.J.S.; visualization, P.S.J.S.; supervision, A.A.

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Institutional Review Board Statement

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Informed Consent Statement

Participants provided written consent for their data to be published in research paper.

Data Availability Statement

Data are available from the corresponding author upon reasonable request.

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Conflicts of Interest

The authors declare no conflict of interest.

Appendix A



Figure A1. Location of Study Villages in Bangladesh.
(*Source: http://geology.com/world/bangladeshvvvsatellite-image.shtml).*
Note: 1 = North Salimpur Fishing Village; 2 = South Dhurung Fishing Village.

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