

# Surviving and Coping with the Pandemic: Minority Dalit Groups in Northern Bangladesh

Matiur Rahman<sup>1</sup>

## Abstract

**Background:** The pandemic has aggravated inherent inequalities within the structures of society, whatever their location. Among such socio-economic inequalities, those based on caste – social groupings based on descent and associated with occupation – are the worst. In a world where humanity in general is threatened, the misery and sufferings of those whose humanity is questioned as a part of the customary practice of ‘untouchability’ know no bounds. This article focuses on the impact and survival strategies adopted by the Dalit groups in the northern part of Bangladesh.

**Objective:** The article aims to reveal the experience of Dalit groups in Bangladesh, whose stories of both suffering and resilience while restricted by social isolation and lockdown during the Covid-19 pandemic remain largely untold.

**Methods:** The study used a mixed-method approach. Quantitative analysis is based on 80 respondents to a semi-structured questionnaire distributed equally between *Rabidas* and *Patni* Dalit groups in northern Bangladesh. Qualitative analysis is based on data collected from 8 focus groups, 4 key informant interviews, 10 life experience case studies, and 2 in-depth interviews. Survey responses were analysed using SPSS software and a content analysis framework was used for qualitative data.

**Results:** Half of *Rabidas* community members in Saidpur continue to ply their traditional trade of repairing shoes and are locally known as *muchis* or cobblers; the vast majority of

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1 Matiur Rahman is a Senior Program Officer at Research Initiatives Bangladesh, Dhaka, Bangladesh, where he has worked in a variety of roles since 2002. He was recently elected Academic and Research Secretary, Anthropology Alumni Association, Rajshahi University, Bangladesh. He works on themes including Right to Information, Participatory Action Research, community-led development, ethnic issues, human rights and justice, community legal services, and climate change. He can be contacted at [rmdmatieur@gmail.com](mailto:rmdmatieur@gmail.com).

*Patni* respondents continue to make a living out of crafting traditional bamboo products. Both communities live hand-to-mouth and earn 100–500 BDT (1–5 euros) per day. During the lockdown period, no one was allowed to go outside and the earnings of many decreased to less than 50 BDT. Specifically, during the first lockdown, the income of 47.5 per cent of *Rabidas* respondents decreased from at least 100 BDT per day to less than 50 BDT per day, and 75 per cent of *Patni* respondents, all of whom had earned at least 150 before the lockdown, reported an income of 101–150 BDT per day. 62.5 per cent of *Rabidas* and 60 per cent of *Patni* respondents were limited to a weekly expenditure of 151–200 BDT, which is insufficient to fulfil a family's minimum requirements. Government funds and relief packages did not come their way. 75 per cent of *Rabidas* and 100 per cent of *Patnis* were unable to access humanitarian relief during the pandemic. Even though civil society members and some volunteer organisations helped them during the first lockdown, they were mostly absent during the second. After the first lockdown was relaxed, their earnings suffered because few people came to the market; all Bangladeshis were trying to save money. Consequently, *Rabidas* and *Patni* incomes decreased drastically even as the prices of all necessities hiked up. 72.5 per cent of families had shortages and 51.5 per cent faced difficulties in bearing the cost of treating other diseases. 66.2 per cent of families could not afford to put meat and fish on their plates, 57.5 per cent eliminated extra family expenditures, and 25 per cent bought less food, even after borrowing from relatives, accepting NGO loans and buying through credit at shops. Borrowing money from family and friends was not always an option, as nobody had a surplus. Lack of lobbying (97 %) was stated as the main cause of not getting the allocated amount of government support during this humanitarian crisis. They did, however, develop some coping mechanisms to survive.

Conclusion: An equitable and inclusive distribution system and a special corona package for the marginal Dalit groups can help *Rabidas* and *Patnis* recover from their damaged livelihood.

**Keywords:** Dalits, Pandemic, Food crisis, Emergency responses, Alternative coping strategies

## Introduction

The current global pandemic, Covid-19, is the twenty-first century's greatest threat to the progress of human societies. Novel corona, a variant of the corona family of viruses, causes SARS in the people it infects. The virus is transmitted chiefly via coughing or sneezing on people. With limited access to vaccines, most governments imposed lockdowns to curb the spread of the virus. Almost 4.3 million people have died out of 190 million cases identified in 220 countries and territories (WHO 2021).

Wuhan, the largest metropolitan area in China's Hubei province, reported the first clusters of unexplained low respiratory infections to the WHO country office on 31 December 2019. These symptomatic cases could be traced back to the beginning of December 2019 (Cascella et al. 2020; Sahin et al. 2020). Since the causative agent was not identified, these first cases were recorded as 'pneumonia of unknown aetiology.' After a thorough investigation of the intensive outbreak by the Chinese Centre for Disease Control and Prevention (CDC), the aetiology of the illness was recognised as pneumonia caused by a novel virus. The Chinese researchers coined the term '2019-nCov' (Zhu et al. 2020), later named 'severe acute respiratory syndrome coronavirus-2' by the International Committee on Taxonomy of Virus (Zu et al. 2020). On 11 February 2020, the WHO named the pneumonia 'coronavirus disease-19', and it is most commonly known as Covid-19 (Li et al. 2020; Waris et al. 2020; Rasheed et al. 2020).

Many major pandemics have occurred throughout history, and the crises associated with pandemics have had massively adverse impacts on health, economy and even national security worldwide (Qiu et al. 2017). It is known that pandemic-causing germs are as old as humanity itself. In the 14th century B.C., plague, smallpox, leprosy, malaria and cholera affected many parts of the world. The high number of deaths caused by some of these diseases resulted in serious economic and political damage to the affected societies (Yolum et al. 2012). The plague pandemic, which spread between 1346–1350 and has become known as the 'black death', is a commonly cited example of a historical pandemic. Still, its global spread is often neglected: this pandemic resulted in the deaths of 35 million people in China, in addition to 25 million deaths in Europe. This and all pandemics also had severe demographic consequences, affecting some regions and practitioners of some professions much more than others. The city of Florence lost 75 per cent of its population and even higher proportions of clergymen and physicians, who had a higher likelihood of contacting patients (Shaw et al. 2002).

The spread of epidemics or their consequences may vary from one society to the other. Human biology, social environment and lifestyles can affect the rate and level of spread, as well as the severity of a pandemic's consequences (Herring et al. 2007). It has been reported that raising awareness regarding the disease and taking personal and societal measures to counter a pandemic's spread are effective at minimising the negative impacts of the disease (Bostan et al. 2020). However, both panic about the disease and measures intended to eliminate the impacts of the virus disrupt communal life conditions as schools are closed and social peace is lost (Teo et al. 2005). In short, pandemics increase anxiety levels and avoidance behaviours, bringing social life to a standstill (Çırakoğlu et al. 2011).

Pandemic is not only about medicine; it is more associated with social issues, and labour losses are among the most severe socio-economic harms. Pandemics also damage national economies because resources that governments, NGOs, communities, families and individuals could have used for other developmental purposes are redirected toward the prevention and treatment of the disease (Şanlı et al. 2010). It is useful to address the social impacts of epidemic diseases on both macro and micro levels. On a macro level, the relationship between globalisation and health is important. The Covid-19 virus, first identified in China in December 2019, spread almost to the entire world within about two months (Ankaralı et al. 2020). It was far from the first: globalising travel patterns also have been associated with the rapid spread of Ebola, SARS, avian flu and swine flu. Many countries reallocated significant amounts of their budgets as they sought to protect their citizens against these diseases, sometimes causing economic crisis (Alu et al. 2019). While globalisation hastens the spread of disease, it has a positive effect in terms of the discovery and exchange of treatments (Hayran et al. 2007). The exchange of global data sets, collaboration among specialists and cooperation on developing new disease-preventing technologies are only possible through globalisation (Balta et al. 2020; Bostan et al. 2020).

One consequence of the Covid-19 pandemic, global economic depression, has already started. People have lost their jobs and market prices have risen, causing a double-edged cut into buying power. In Bangladesh, the current 5.2 per cent unemployment rate is projected to double. Sumner et al. (2020) confirm that global poverty could increase for the first time since 1990. This means that Covid-19 poses a real threat to the UN Sustainable Development Goals (SDGs) for ending poverty by 2030. Calculating the per capita contractions of household income or consumption, Sumner's team identified three scenarios – low (5 %), medium (10 %), and high (20 %) global decreases in income – and estimated their impact on the number of people who would fall below various

international poverty lines. In some regions, the adverse impacts of the Covid-19 pandemic could return poverty to levels similar to those recorded 30 years ago. Under the most extreme scenario, the number of people living in poverty could increase by 420–580 million, relative to the officially recorded figures for 2018 (Sumner et al. 2020). Political, economic, social, environmental and climatic conditions intersect to exacerbate the effects of Covid-19, particularly for the most vulnerable (North African Food Sovereignty Network 2020). Some predict that the number of people affected by food insecurity worldwide will double as a direct result of the pandemic (Welsh 2020; Bennett et al. 2020).

## Impact of the pandemic on Bangladesh

Bangladesh is facing multiple problems in this socio-economic condition. The country had quadrupled its per capita GNP in the previous 20 years, had just been upgraded to ‘middle income’ and was considered Asia’s rising economic star. The Covid-19 pandemic is the biggest threat to the country’s development process. The Bangladesh Bureau of Statistics (BBS) report for 2020 reveals that 68 per cent of people in Bangladesh were directly or indirectly affected by Covid-19, and income had decreased by 20 per cent (BBS 2020). Households were thus compelled to reduce their family-associated expenditures. Food intake was lowered by 52 per cent (BBS 2020). The national unemployment rate, 2.3 per cent in March 2020, increased to 22 per cent in July 2020, while the lockdown was in place. The country faced a cascade of effects: the pandemic led to a lockdown, which led to loss of income, which led to lowered nutrition intake, which led both to reduced ability to work and to a decline in individuals’ immune systems. Which leads back to the pandemic.

Research by the Power and Participation Research Centre (PPRC) and the BRAC Institute of Government and Development (BIGD) documents the impact of the pandemic in general. The income of 70 per cent of Bangladeshis decreased during the pandemic, to the extent that 89 per cent fell below the poverty line. 14 per cent of families had no food (Rahman 2020). The impact of the Covid-19 pandemic was acute for low-income people, who faced the biggest threat of their lives. A BRAC survey conducted between 31 March and 5 April 2020 found that 24 per cent of Bangladeshis live below the poverty line and 35 per cent were under the so-called ‘high poverty line, which is 60 per cent greater than the normal situation. Household income among this group fell by 75 per cent, from 14599 taka to 3742 taka. The report also noted that 72 per cent of people had either lost their work or decreased the number of hours worked. A WFP-BBS report found that 8.22 per cent of people in Dhaka pass their life with hunger and 9.23 per

cent of people pass the night with hunger (WFP-BBS 2020). Findings published by the Bangladesh Institute of Development Studies support these conclusions (BIDS 2020).

## Dalits and the caste system in Bangladesh

Bangladesh is a pluralistic society. In addition to the several Muslim communities that dominate the country, 8.2 per cent of the population is Hindu and about two-thirds of Hindus are Dalits, who often are called and treated as minorities within the Hindu caste system in Bangladesh. Although there are no official statistics, the Dalit population is estimated at 5.5 million (Chowdhury 2009). The Dalit community is not only a caste or a group of castes; it is also a population group that has been marginalised to the extreme, partly by religious sanctions and partly by social and economic deprivations. The word ‘Dalit’ literally means ‘deprived’. The Dalits are socially and economically deprived, and forced to work under abominable conditions at the lowest return for their labour. There are two types of Dalit ethnic groups in Bangladesh: Bengali Dalit and Non-Bengali Dalit. The former, who speak Bengali, include *Charmokar* (Cobbler), *Malakar* (Garland maker), *Kumar* (Potter), *Kai Putro*, *Koi-borto* (pig farmers) *Kolu*, *Kol*, *Kahar*, *Khourokar*, *Nikari* (traders), *Bauli*, *Bhagobania*, *Manata*, *Malo* (Fishermen), *Manual* (Honey collector), *Mahato*, *Rajo Das*, *Rajbongshi*, *Rana Karmokar*, *Roy*, *Shobdokar*, *Shobor*, *Sannasi*, *Hazra*, and others. Each of these communities is further sub-divided. The non-Bengali-speaking Dalit groups entered East Bengal before 1947 from Uttar Pradesh (UP), Andhra Pradesh, Rajasthan, Bihar, Orissa, and Madras, and continue to speak the languages of those states. Under British rule, they worked as cleaners, tea gardeners, jungle cleaners, and other cleaning jobs (Banglapedia 2021). One such community, *Patnis*, arrived from India and speak Bangla. Traditionally, they are makers of fishing and household wicker products. They also make boats and transport people and goods across rivers.

Caste systems and prejudice against so-called ‘untouchables’ are traditionally regarded as originating from Hindu scriptures, but these traditions and practices have also been adopted by sections of the Muslim majority in Bangladesh. Members of the Muslim ‘low castes’ increasingly refer to themselves as Dalits – the ‘downtrodden’ people – to emphasise the fact that they have been exploited, oppressed and excluded through generations (IDSN 2015).

With a few individual exceptions, Dalits live far below the World Bank-defined poverty line of US\$1.90 income per day. The living conditions of Dalits are characterised by extremely limited access to health services, education and employment. This condition was exacerbated with Covid-19 and associated social distancing through quarantines, lockdowns and curfews. Knock-on economic effects from market disruptions further hindered Dalits' ability to pursue their livelihoods through 'twin disasters' of reduced earnings and skyrocketing prices (Bennett 2020).

The multiple forms of discrimination experienced by the Dalit community in Bangladesh and state toleration of its active perpetuation violate fundamental human rights obligations (UNHRC 2009<sup>2</sup>). The unequal access to government services is common for Dalit groups in Bangladesh. Another important social issue is 'stigmatisation', which keeps them away from the services provided by the government to face the pandemic. Stigmatisation is the action of disgracing an individual in the eyes of the society by declaring that individual defective due to handicap, race, dependence or disease, and therefore 'risky' to the society (Goffman 1963; Bostan et al. 2020).

This study examines how two Dalit communities in the northern part of Bangladesh were affected by the Covid-19 pandemic, and documents both the internal mechanisms and strategies they followed in response and the effective forms of assistance they received. This assessment could help to improve their situation, as it presents the actual situation more clearly and thus provides both a foundation for establishing equitable policies and a reference point for future studies.

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2 The draft UN Principles and Guidelines for the effective elimination of discrimination based on work and descent were published by the Human Rights Council in an annex to a report (A/HRC/11/CRP.3) at its 11th session in May 2009. As an overarching principle, the draft establishes that all states, including Bangladesh, have a duty to make sincere efforts to dispel the prejudicial beliefs that constitute, support and reinforce discrimination based on work and descent, including notions of 'untouchability', pollution, and caste superiority or inferiority, as well as to prevent actions taken on the basis of such beliefs. The principles and guidelines suggest the specific measures to be implemented for the effective elimination of this form of discrimination, including all necessary constitutional, legislative, administrative, budgetary and judicial measures and appropriate forms of affirmative action and public education programmes to prevent, prohibit and provide redress for discrimination based on work and descent in both public and private spheres; and ensure that such measures are respected and implemented by all state authorities at all levels.

## Material and Methods

Empirical research was conducted to discover the pandemic survival and coping strategies used by the *Rabidas* and *Patni* Dalit communities in northern Bangladesh. The study used a mixed-method approach, with 80 respondents (distributed equally between *Rabidas* and *Patni* Dalit groups) to a semi-structured quantitative survey and 32 participants in the qualitative part, comprised of 8 focus group discussions, 4 key informant interviews, 10 life experience case studies and 2 in-depth interviews. Survey responses were analysed using SPSS software and a content analysis framework was used for qualitative data.

## Research population and sample

The research population consists of *Rabidas* and *Patni* Dalit people in northern Bangladesh. The people of the *Rabidas* community in Saidpur make their living from repairing shoes and are locally known as *muchis* (cobblers). In contrast, the *Patni* people make a living from crafting traditional bamboo products. Due to the Covid-19 pandemic – which is the subject of the study and is still ongoing in Bangladesh and around the world – legally imposed lockdowns, social isolation and social distancing have been enforced. Under these conditions, two community members were engaged, and data collection was carried out through participatory tools and techniques. The data collection process started on 3 May 2021 and ended on 30 May 2021. To maximise participation and diversified data, a well-planned sample distribution was designed, with age, gender and ethnic attributes of the participants considered. In practice, it was hard to reach the communities during the risky period, so convenience sampling was used.

## Quantitative data

Two kinds of quantitative data were collected: demographic characteristics of the respondents, and data related to respondent engagement with the *Covid-19 Pandemic Community Scale*. Respondents provided demographic information concerning profession, education level, gender, age, income, place of residence, contracting Covid-19, being tested, being infected and receiving treatment. The *Covid-19 Pandemic Community Scale* was drafted in accordance with the information about the pandemic, literature review, government-declared corona package, urgent humanitarian reliefs, coping strategies, and preliminary interviews held with the individuals in the society as well as the opinions of local municipal councillors, and community leaders in the field. After review by six community leaders, some questions were removed and some statements were



revised. Respondents were asked to engage with a total of 20 statements. Each of the eight focus group discussions included 3–5 participants selected on the basis of pre-determined attributes. The SPSS program was used for validity, reliability, frequency and significance tests of the Covid–19 Pandemic Community Scale. Factor analysis was conducted to assess the construction of validity of the items on the scale.

Table 1. Frequency Distribution of Demographic and Covid–19 scale Variables (20 June 2021)

VARIABLE	N	%	VARIABLE	N	%
<b>1 Family Type</b>			11–15 decimal		0
Joint Family	20	25	16–20 decimal		0
Nuclear Family	60	75	21–25 decimal		0
<b>2 Age</b>			26–30 decimal	1	1
≤18 years	0	0	≥30 decimal	0	0
19–29 years	15	19	<b>8 Occupation</b>		
30–39 years	24	30	Wage labour (non-farming)	2	2.5
40–49 years	20	25	Bamboo craft	40	50
≥ 50 Years	21	26	Cobbler	26	32.5
<b>3 Marital Status</b>			Fisher	1	1
Married	73	91	Woodcrafter	1	1
Unmarried	1	1	Garments labour	1	1
Separation	1	1	Small business	1	1
Widows	5	6	Middle business	1	1
<b>4 Gender</b>			Service (private salaried)	3	4
Men	57	71	Housewife	2	2.5
Women	23	29	Welding labour	2	2.5
<b>5 Educational Status</b>			<b>9 Perception**</b>		
Illiterate	64	80	One kind of virus	45	56
Literate	2	2.5	Curse of God	46	57.5
Primary	10	12.5	Transmitted to others	34	42.5
Secondary	3	4	Contaminated disease	34	42.5
More than secondary	1	1	Curse of nature	14	17.5
<b>6 Do you have land?</b>			Natural disaster	2	2.5
Yes	75	94	Consequence of different Sins	10	12.5
No	5	6			
<b>7 How much land? *</b>					
≤5 decimal	65	81			
6–10 decimal	14	17.5			

VARIABLE	N	%
<b>10 Corona tested in family</b>		
Yes	2	2.5
No	17	21
<b>Family member Corona-positive?</b>		
Yes	1	1
No	23	29
<b>11 Got vaccine for Covid-19?</b>		
Yes	0	0
No	80	100
<b>Tried to get vaccination?</b>		
Yes	2	2.5
No	78	97.5
<b>12 Symptom of Corona**</b>		
Cold cough	14	17.5
Fever	12	15
Pain at throne	4	5
Pain in body	4	5
Headache	9	11
Breathing problems	11	14
Pain in chest	3	4

VARIABLE	N	%
Tiredness	4	5
Loss of appetite	3	4
Cough (kashi)	10	12.5
<b>13 Precautions taken**</b>		
Drink heated water	26	32.5
Drink garlic water regularly	23	29
Drink garlic water irregularly	14	17.5
totka***	4	5
Jhar fuk***	6	7.5
Use hand sanitiser regularly	19	24
Use hand sanitiser irregularly	4	5
Use mask regularly	10	12.5
Use mask irregularly	45	56
Take doctor's advice	2	2.5
Take medicine from dispensary	2	2.5
Take homoeopathy medicine	5	6
Maintain social distance	36	45
Nothing had been done	3	4

\*One decimal equals 1/100 acre

\*\*Multiple responses

\*\*\*Traditional remedies

## Results and Discussion

When the data in Table 1 are examined, it is seen that the distribution of female and male participants is almost equal. Although 30 per cent are middle-aged (30–39 years), it is clear that all age groups are represented. Most live in a nuclear family, indicating that Dalit people prefer to live separately from their parental families. Most respondents are illiterate: 80 per cent do not know how to read and write. If we see the level of education, 12.5 per cent of respondents reported having attended primary school, and only 5 per cent had continued beyond this rudimentary level. None reported having graduated. *Patnis* do not have many educational opportunities and few of their children attend school. *Rabidas'* opportunities are better and the proportion of their children in school is satisfactory. The landholding data revealed that all are marginal and/or landless people. 94 per cent of

people have at least some land, but only one respondent owned more than 10 decimals or 0.1 acres.

Employment distribution data indicates that all *Patni* respondents continue to ply the community's traditional bamboo crafts. In contrast, members of the *Rabidas* community have diversified from the (still dominant) cobbler craft into non-farming wage labour, service, welding labour, fisherman, woodcraft and small business professionals. Two respondents are housewives. In general, the *Patni* live in relatively remote and rural areas, so they have few engagements with the global world. On the other hand, members of the *Rabidas* community live in cities and have a greater variety of work options to choose from.

The questionnaire probed indigenous perceptions about Covid-19. The results show that a slight majority (57.5 %) believe it is a curse of God. A variety of science-informed responses followed, led by 'it is a virus' (56 %). The proportion of respondents who attributed the pandemic with nature – curse of nature, natural disaster, or sins – is notable.

Only two participants reported that a family member had been tested for Covid-19, and only one reported a Covid-positive result. Two out of 80 participants tried to get a vaccine; both failed. Despite severely limited access to testing regimes, the results show that many corona symptoms were present in both communities. 17.5 per cent reported that they experienced colds and coughs, and 15 per cent said they had fever during the pandemic period, as well as throat pain (5 %), body pain (5 %), headache (11 %), breathing problems (14 %), chest pains (4 %), tiredness (5 %), appetite loss (4 %), and coughs not related to colds (12.5 %). All of these symptoms have been associated with Covid-19, but they were well-known before corona and may have been considered 'normal' by the respondents.

The results show that multiple cautious measures were followed by the participants of the panic of Covid-19 even though they were not reported as Covid-19. Moreover, out of fear, some participants followed folk measures even as they followed doctor-recommended precautions. 56 per cent of respondents used facemasks irregularly and 45 per cent of people maintained social distance while they went outside or to the market. Traditional healing systems were at the centre of the community's approach to novel corona. Hence, many drank hot water (32.5 %), hot water with garlic regularly (29 %) or irregularly (17.5 %), *totka*-mixing (quack recipes) of different spices and local materials (5 %) and *Jhar-fuk*

(traditional belief-based treatment that is often but not always religious in nature) (7.5 %) in their efforts to avoid the effects of the novel corona.

The frequency distribution of the impact of Covid-19 pandemic on income and expense is given in Table 2. The data is shown in the pandemic's four timeframes. In terms of income level, before the pandemic reached the *Rabidas* community, the average income was 200–300 BDT per day and ranged from 101–550. *Patni* income was almost identical, on average, but considerably less variegated. The income data shows the *Patni* community's weaker position in society; *Patnis* lived on the edge of life even before Covid-19 struck.

The first lockdown was miserable. Income fell dramatically. During this period the daily income of 47.5 per cent of *Rabidas* respondents decreased to 50 BDT or lower, and 17.5 per cent of people earned 50–100 BDT per day. The new normal time – the time of relaxation during the first lockdown – did not bring them happiness. The income did not increase satisfactorily: 30 per cent continued to earn 51–100 BDT. When asked why earnings had not increased, they said people feared what would come next. Fewer people came to the market for non-emergency work like repairing shoes or sandals. Everyone focussed on securing food for their family. The *Patni* community's experience was similar. The daily income of 75 per cent of *Patni* respondents was in the 101–150 BDT range during the first lockdown period. While nearly half reported earning 151–200 BDT in normal times, 25 per cent reported an income decrease to 51–100 BDT.

After the Indian Delta variant cases emerged, a second national lockdown was imposed from 4 April to 30 May 2021. Both communities fell into great trouble again. This time, the crisis was acute. The impact data shown in Table 2 reveals the cruelty of a Dalit's life. 62.5 per cent of *Rabidas* respondents were compelled to limit expenditures to less than 151–200 BDT a week during the first week of the lockdown. It was hard to feed the family. At the same time, 60 per cent of *Patni* people were limited to 151–200 in weekly expenditures.



		RABIDAS COMMUNITY (N = 40)						PATNI COMMUNITY (N = 40)										
		BEFORE PANDEMIC	1ST LOCKDOWN	NEW NORMAL	2ND LOCKDOWN	4.6	3.7	BEFORE PANDEMIC	1ST LOCKDOWN	NEW NORMAL	2ND LOCKDOWN	5.6	4.5					
<b>IMPACT ON EXPENSE AND LIVELIHOOD</b>																		
151-200 TK	1	2.5	25	62.5	7	17.5	9.7	10.5	6	15	24	60	5	12.5	7	17.5	10.5	9.0
201-250 TK	1	2.5	7	17.5	4	10	5	3.2	8	20	9	22.5	5	12.5	8	20	7.5	1.7
251-300	3	7.5	2	5	8	20	3.7	2.9	25	62.5	2	5	10	25	5	12.5	10.5	10.2
301-350 TK	1	2.5	1	2.5	9	22.5	4.2	3.9	1	2.5	1	2.5	10	25	7	17.5	4.7	4.5
351-400 TK	5	12.5	1	2.5	2	5	3	1.8	0	0	2	5	4	10	5	12.5	2.7	2.2
401-450 TK	6	15	1	2.5	2	5	3.3	2.2	0	0	2	5	2	5	5	12.5	2.2	2.0
451-500	5	12.5	1	2.5	3	7.5	2.7	1.7	0	0	0	0	2	5	1	2.5	0.7	0.9
500-550TK	10	25	0	0	2	5	5	4.3	0	0	0	0	2	5	2	5	1	1.1
600-650 TK	8	20	2	5	3	7.5	4.5	2.6	6	15	24	60	5	12.5	7	17.5	10.5	9.0

1st lockdown: 25 March – 30 May 2020  
 New normal: 31 May 2020 – 3 April 2021  
 2nd lockdown: 4 April – 30 May 2021

During the crisis, only 4 per cent of respondents, all city dwellers, received emergency relief. A 10 June 2020 research report published by BRAC Data Cell and Unnayan Somonnoy reveals that more than 110 million Bangladeshis, two-thirds of the population, were at economic and health risk. The report says income had fallen for 74 per cent of the country’s families and 34.8 per cent of families contained at least one person who had lost their job (BRAC 2020). Figure 1 shows that the pandemic’s effect on the *Rabidas* and *Patni* communities was even more severe. 80 per cent of respondents experienced a decrease in income, 72.5 per cent faced food shortage, more than 10 per cent lost their jobs/work or were displaced from their work, and 37.5 per cent lost clients along with other factors that directly impacted their lives. One important attribute of wellbeing is getting proper treatment for diseases. The novel Corona pandemic disrupted the ability of respondents and their families to get the treatments they needed for other diseases. More than 50 per cent of Dalits were unable to buy medicine or take family members to doctors. The data also shows that 60 per cent of respondents had increased their debt load, a condition that will be explored in greater detail below.

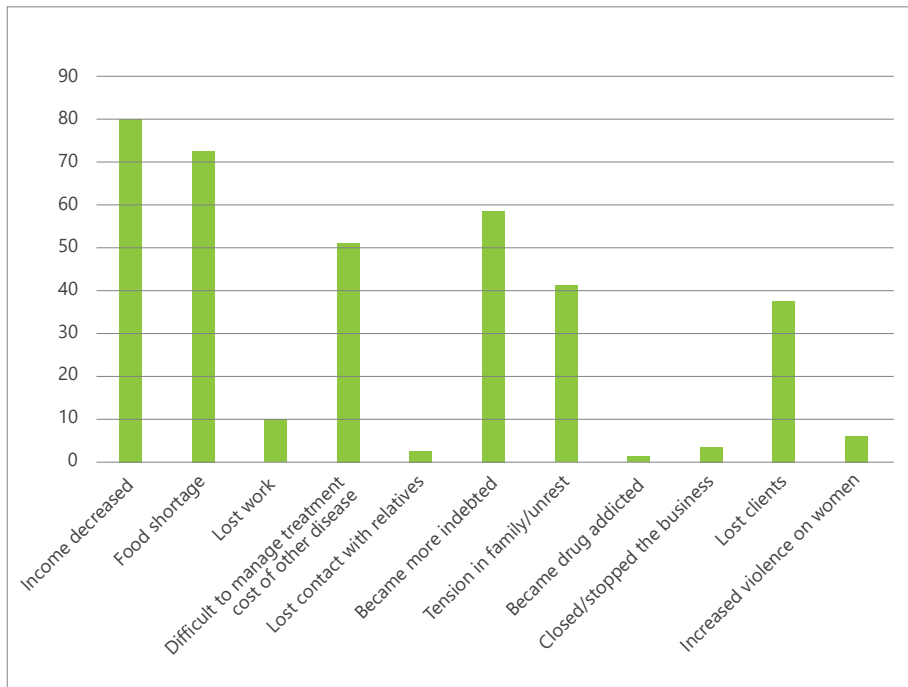
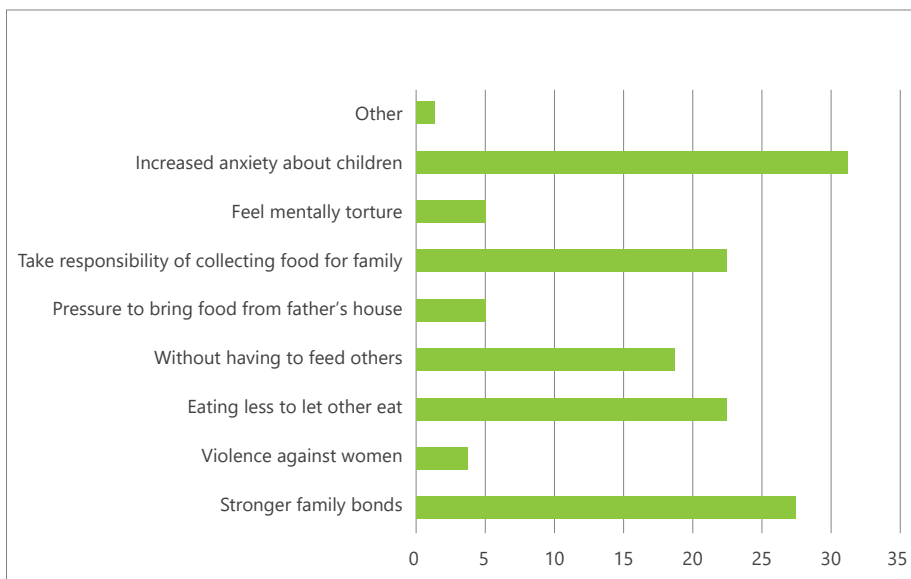


Figure 1. Impact of Covid-19 Pandemic on livelihood  
 \* Multiple responses

As shown in Figure 2, Dalit women were undergoing a harder struggle than men. Almost 32 per cent of women respondents felt increased pressure as they managed family resources. 22.5 per cent reported they ate less than other family members, and 22.5 per cent took responsibility for collecting food for the family, as the male income earner had lost work or income. 19 per cent of Dalit women experienced starvation during the pandemic, sacrificing their own wellbeing in favour of their families. Also 4 per cent of women experienced violence during the pandemic. The data shows that women bore the greater sacrifice during the pandemic. On the other hand, 27.5 per cent said their family bonds strengthened while men were compelled to stay at home during the lockdown. Mutual understanding grew as families faced the pandemic together.



*Figure 2. Women's challenges during the Covid-19 pandemic*  
 \* Multiple responses

Figure 3 shows the respondents' coping strategies. 66 per cent avoided meat and fish, 57.5 per cent curtailed family expenses and sacrificed personal expenditures. 25 per cent ate less, and an additional 25 per cent experienced starvation. 17.5 per cent took a loan from an NGO, 16.25 per cent took a loan from a moneylender, 7.5 per cent borrowed money from a local cooperative at a high interest rate. One woman tried to earn from sewing as an alternative income source. And almost 5 per cent were forced to sell things in their homes in order to buy the absolute necessities.



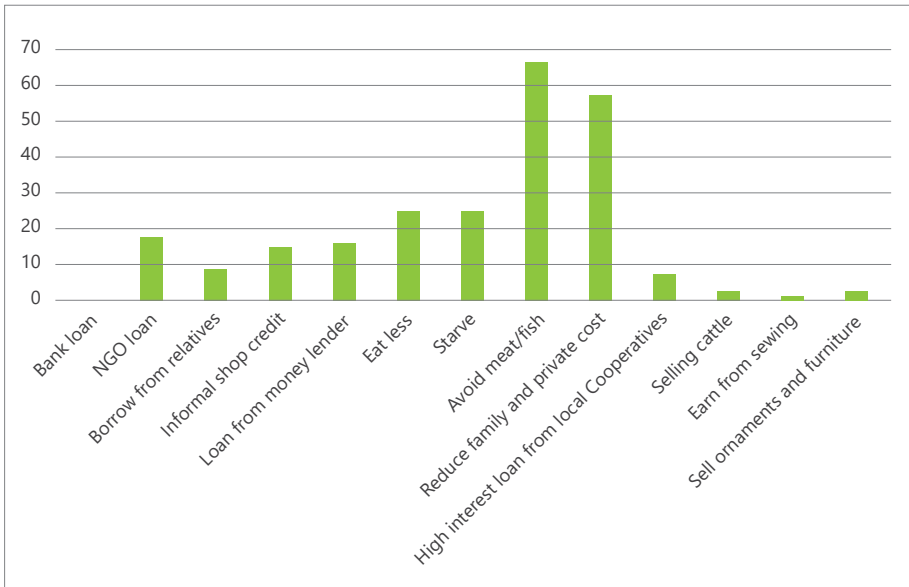


Figure 3. Covid-19 coping strategies  
\* Multiple responses

The data shows that neither the government nor the formal private banking sector provided any help to Dalits. One must be open to the likelihood that systematic discrimination is involved. Formal banks demand collateral in the form of tangible assets or property. They do not acknowledge the value of the kinds of assets Dalits possess.

### Discrimination and uneven humanitarian aid during a humanitarian crisis

I got some humanitarian aid, an Eid festival bonus from the prime minister, but they [Dalits] are not eligible for this aid.  
Councillor, Saidpur municipality, interviewee.

Table 3 shows state discrimination against Dalits in relief aid, even in times of humanitarian crisis. Fully 75 per cent of *Rabidas* respondents did not get the government-promised package, even though all of them were in food crisis during the pandemic. Among the 10 *Rabidas* (25 %) who got a corona aid package, the amount was very small and always in the form of rice grain: five got 500 BDT, two got 1000 BDT, and one each got 1500, 2000 or 2500 BDT during the 18-month course of the pandemic. The frequency

data shows that only 7 (17.5 %) received government relief. To some extent, others stepped in where the government failed. 80 per cent of respondents received humanitarian relief from NGOs and 62.5 per cent from personal relief, 32.5 per cent from neighbours and 7.5 per cent from other sources. This relief took diverse forms, and most family essentials were covered. They included rice grain (57.5 %), *dal* (pulses) (55 %), wheat flour (50 %), vegetables (50 %), edible oil (40 %), salt (35 %), clothes (2.5 %), health equipment (12.5 %) and masks (2.5 %). The data show that the non-governmental sector continues to dominate in the provision of humanitarian help for Dalit people. The respondents also gave opinions on why they did not get government assistance in this situation. These revealed their frustration with continued discrimination. As they are a minority group, they did not have the lobbying strength to influence the officials or local government representatives, 95 per cent of respondents (giving multiple responses) said they did not have enough lobbying power to get relief. Also, 97.5 per cent (giving multiple responses) said local government representatives took their ID cards but did not deliver the relief, 17.5 per cent did not know when relief was given, 97.5 per cent (multiple responses) reported that they did not communicate with the authorities, 12.5 per cent said a bribe was demanded to avail of a relief package, and 2.5 per cent deemed themselves unqualified for relief.

*Ami amader pouroshova theke 200 relief cards boraddo payesbi jonogoner moddhey bitoroner jonno. Kintu amar nirbachoni elakar jonogon relief cards powar ashai amar kashe 600 NID joma diyashe. Tahole ami ata kivabe manage korbo? Abong ei sholpo boraddey kivabe ami Rabidas community lok beshe nibo? I have got only 200 relief cards from our municipality, but I have received 600 NID cards [requests for relief] from citizens in my election catchment area, so how should I manage it, and how could I pick Rabidas people with these limited options?*

Councillor, Saidpur municipality, Key Informant.

The frequency data on the times of getting aid are important, because 100 per cent of *Rabidas* respondents got help at the time of lockdown but not during the other three time frames, so the Covid-19 pandemic hit them extra hard at those times. For example, when Lota Rani Das (all names are pseudonyms), a *Rabidas* housewife who participated in a focus group discussion, heard that the hard lockdown would be extended to 28 April 2021, she wailed, *morsho, hara ar bochmona, Eibar kabo relief desche na, ager bar pachunu,*

*kosto boi nai* (we are going to die, we are no more in the earth, no one is giving relief this time, but during first lockdown we got enough). She explained that the earnings of her husband, a van puller, decreased dramatically during the lockdown, when his daily intake was barely 150 taka. The family needed 2 kgs of rice and 750 grams of flour each day and that cost 120 BDT taka. Vegetables would cost 50 taka. He managed the family with great difficulty.

In contrast, the frequency data for the *Patni* community indicates a total disaster. No respondents, not even one, received any sort of corona package or relief elements. Not from the government, nor from the NGO sector. So the lockdown was just like an epidemic for them. When a local government member (Union Parishad member) was questioned, he said the government had provided tin sheds and tin fence houses to *Patni* families, so they are not eligible for corona relief packages. The participants reminded him during a group discussion that housing assistance is different from humanitarian emergency relief.

If we compare the data on getting aid in both communities, the geographical factor helped the *Rabidas* to draw the attention of NGOs and the private sector. They live in the town of Saidpur, while the *Patni* community lives in a relatively remote area of Taragonj Upazila, in Rangpur district. The community is smaller and more isolated – it is 13km away from Saidpur. They were less able to get the government's attention, but the focus group participants were sure that the government is responsible for protecting their lives.

Table 3. Frequency Distribution of Humanitarian Relief Aid and Discrimination Variables (20 June 2021)

Variable	RABIDAS COMMUNITY		PATNI COMMUNITY	
	N	%	N	%
<b>Received Govt. Corona package</b>				
Yes	10	25	0	0
No	30	75	40	100
Value of Package				
001–500 BDT	5	50	0	0
501–1000 BDT	2	20	0	0
1001–1500 BDT	1	10	0	0
1501–2000 BDT	1	10	0	0
2001–2500 BDT	1	10	0	0
<b>Humanitarian Relief received*</b>				
Non-govt./NGOs	32	80	0	0
Private/personal	25	62.5	0	0
Neighbour	13	32.5	0	0
Government relief	7	17.5	0	0
Others	3	7.5	0	0
<b>Relief got from Govt.</b>				
Rice grain	7	17.5	0	0
Dal	0	0	0	0
Atta	0	0	0	0
Vegetables	0	0	0	0
Oil (consumable)	0	0	0	0
Salt	0	0	0	0
Health equipment	0	0	0	0
Masks	0	0	0	0
Hand sanitiser	0	0	0	0
<b>Relief from non-Govt.*</b>				
Rice grain	23	57.5	0	0
Dal	22	55	0	0
Atta	20	50	0	0
Vegetables	20	50	0	0
Oil (consumable)	16	40	0	0
Salt	14	35	0	0
Health equipment	5	12.5	0	0
Clothes	1	2.5	0	0
Masks	1	2.5	0	0

Variable	RABIDAS COMMUNITY		PATNI COMMUNITY	
	N	%	N	%
<b>Why Government Relief not provided*</b>				
no lobbying	38	95	0	0
took ID card but did not get	39	97.5	0	0
does not know when relief gave	7	17.5	0	0
have not communicated	39	97.5	0	0
unable to give bribe	5	12.5	0	0
not suitable for getting relief	1	2.5	0	0
<b>Time getting package and relief</b>				
1st lockdown (25 March 2020 to 30 May 2020)	40	100	0	0
New normal (1 June 2020 to 3 April 2021)	0	0	0	0
2nd lockdown 4 April 2021 to 30 May 2021)	0	0	0	0

\* Multiple responses

## The moment of lockdown

In fact, the lockdown had a more devastating effect on the Dalit community than Covid-19 did. People who lived below the extreme poverty line were plunged into complete darkness due to their loss of income. They were not allowed to work. They had no savings. All too often, they could not meet their daily needs. The story of their lives is vividly reflected in the statements they made during focus group discussions, key informant interviews and in-depth interviews.

*Mui khasi'r mangsho kinibar paronai, 750 taka KG, 750 taka diay dui din amar shangshar cholbe. Sotti kotha Mui oi biya barite' e khashi'r mangsho khao, Mui shudhu broiler murgir mangsho kini, dudher shadh ghole mitai.*  
I couldn't buy mutton [because it costs] 750 taka per kg. 750 taka can cover all my household expenses for two days. The truth is, I can eat mutton only at a wedding party. I buy broiler chicken instead; I have to 'quench my thirst for milk with whey' [this idiomatic expression indicates that one must make do with cheaper alternatives when the original is too expensive].

Raju Das, a Rabidas man

*Ek bela ranna kore dui bela khayashi, tokhon ja jute tai khai ar na jutley kochur palka khaye din geshe. Je vat ranna kori seta baccha ra khai ar hara vater mar lobon diya khaya din par koreshi.* We cook one time and eat two times. We ate what was managed back then. If we could not manage, we ate edible root vegetables. The children ate rice and we ate the rice water with salt.

Kajol Rani Das, a Patni woman.

*Amra gorib manus, Amra lobon diya chira khaya thakte pari. Dui ekbar voya voya ami bazare giyachilam, kintu choukidar amake berk ore diyache. Ami coronar somoy kokhono mash-mangsho kinte pari nai.* We are poor people. We can survive on *chira* (flattened rice) and salt. I went to the bazaar a few times in fear and trepidation, but the *choukidar* (marketplace watchman) turned me away. I couldn't buy fish or meat during the time of corona.

Kajol Das, a Patni man.

*Ami coronar age amar basher kajer kacha mal hishabe bash kinechilam. Ami 12,000 taka porishodh koreshilam kintu bash kete barite ante pari nai. Pore ami bash kat te gele lokjon amake grame dhuktei den ni lockdown er karone. Ami khub ashubidhar moddhey shilam.* Before corona, I bought bamboo – the raw material for my bamboo crafts. I paid 12,000 taka, but I couldn't cut the bamboo and bring it home just then. Later when I went to do so, people didn't let me enter the village because of the lockdown. I was in great trouble...

Bisnu Das - a Patni man

*Amer meya er shoshur barite meya jamai jhogra hoyshilo. Amake Gaibandha te jaitte bolen. Ami shekhane sondhai poushai, kishu protibeshi lok amar jouyar tohay prokash kore den je ekjon bairer lok corona niya amader barite dukesho. Oh Vogoban! Choukider, union parishad er neta barite ashlo abong amake khujchilo. Ami khater nije lukiya shilam. Sara rat ami khub atongke shilam abong khub vore paya hete ami bari asheshilam.* My daughter and my son-in-law had been fighting. She lives with her in-laws. I was asked to go to their home in Gaibandha. I reached there in the evening. Some neighbours spread the word that an outsider, infected with

coronavirus, had entered the house. Dear God! The village chowkidar and the Union Parishad leader came over and searched for me. I hid under the bed. I spent the night in great fear and, very early next morning, I walked all the way back to my home.

Krisno Komol- a *Patni* man.

*Amar shoptabe 700–800 takar oushodh kinte hoi diabetes, blood pressure o annanno roger jonno. Ashara amar stri bapani, shas kosto o manoshik rogi, tar chikitsbar jonno aro 250–300 taka hoi. Lock down er shomoi ai nai, ghore khabar nai oushodh'o kinte pari nai. Sarker theke kono shohayota'o pai nai. Ebhabe cholle amra morai jabu.* Every week I buy medicines worth 700–800 taka – for diabetes, blood pressure and other diseases. My wife suffers from asthma and breathing difficulties. She has a mental health condition. I spend another 250–300 taka on her treatment. With no income during the lockdown, there was no food at home and no money to buy medicine. I didn't get any aid from the government. If it goes like this, we will die.

Manik Das, a *Rabidas* man

*Lock down e shob kishu bondhu, lock jon ber hote parshe na, ber holei police dabrani dichhey. Amar ghore khabar nai, ki korbo jiboner jhuki niye e dokan khuli, bhoya bhoya thaki. Tobe shobatke police dabrani dileo amader ke aboshho kishu boleni. Bazar bondhu, lokjon nai, ai rojgar o nai. 50 BDT ai korte pari na. Athocho protidin khub kom kore holeo amar 150 BDT khoroch Lage. Ki je kothin din geshe bole bujhano jabe na. Lock down er din kono din bhulbo na.* Everything was closed because of the lockdown; people couldn't come out. If they did, the police threatened them. I had no food at home. What could I do? Risking my life, I opened the shop every day and spent the days in fear. But although the police scolded everyone, they didn't give any information. The market was closed, with no people and no income. I could hardly earn 50 BDT, but my daily expenses amounted to 150 BDT at the very least. Such hard days they were, I cannot explain. I will never forget the days of the lockdown.

Srecharon Das, a *Rabidas* man

*Juta shelai kore kono mote pet chalai, ei shamoi amar stri pregnant chila, tar anek khoroch. Lock down e shob kishi bondho Shilo, kaj' o chilo na. Ami loan kore kheye pore bechesbi. Lock down emon ek porishiti je taka dhar pawya jai na, loan 'o pawya jai na.* I eke out a living repairing shoes. During this time, my wife was pregnant and had a lot of expenses. Everything was closed during the lockdown and there was no work. I survived by borrowing money. Lockdown created a situation where money could not be borrowed and loans could not be obtained.

Krisno Das, a *Rabidas* man

## Conclusions and Recommendations

In conclusion, Dalits are suffering more in this continuing world pandemic, due especially to the frequent lockdowns. In the absence of regular livelihoods, they exist hand-to-mouth. While this paper was being written, the second-wave Delta variant hit its peak throughout and a *fifth* hard lockdown was imposed to control the spread of this particular strain. In this situation, the Dalits are facing a very cruel and miserable time. In any kind of national or international crisis, the poor and underprivileged always suffer the most. Their issues are neglected by society and government, resulting in starvation, health and livelihood crises, and even deaths due to starvation or famine (Buheji et al. 2020). Dalits are oppressed and neglected in normal times, so getting help from the government during lockdown times is extra hard. Covid-19 lockdowns imposed mental stress on the public (Bodrud-Doz et al. 2020). The lockdown and the pandemic have created multiple crises in Dalit communities in Bangladesh. During this humanitarian crisis, discrimination and an inequitable distribution system prevented humanitarian assistance from reaching them.

The *Patnis* are totally neglected when it comes to getting humanitarian aid from both the government and the private sector. They also were overlooked when the government distributed corona incentive packages. Comparatively, *Rabidas* were in a better position, especially in the context of getting private and non-governmental assistance.

Our analysis indicates that the Covid-19 pandemic was a major challenge for Bangladesh's Dalit communities. The government took some positive initiatives, but these did not reach the Dalits. A special corona package for Dalit groups is therefore needed; the safety and security of Dalit lives depend on it. In addition, proper assessment, more inclusive



distribution, and better aid planning are required in order to ensure the provision of basic support to vulnerable Dalit groups.

## References

- Alu A. (2019) Küreselleşme ve Sağlık. *Sağlık ve Sosyal Refah Araştırmaları Dergisi* 1 (1) 1–9.
- Ankaralı, H., S. Ankaralı and N. Erarslan (2020) Covid–19, SARS-CoV2, Enfeksiyonu: Güncel Epidemiyolojik Analiz ve Hastalık Seyrinin Modellemesi. *Anadolu Kliniği Tıp Bilimleri Dergisi* 25 (1) 1–22.
- Bambra, C., R. Riordan, J. Ford and F. Matthews (2020) The Covid–19 pandemic and health inequalities. *Journal of Epidemiology and Community Health* 74 (11) 964–8.
- Banglapedia* (2021). Dalit Community.
- Bennett, Nathan J., et al. (2020) The Covid–19 pandemic, small-scale fisheries and coastal fishing communities. *Coastal Management* 48 (4) 336–47.
- Bostan, S., R. Erdem, Y.E. Öztürk, T. Kılıç T and A. Yılmaz (2020) The Effect of Covid–19 Pandemic on the Turkish Society. *Electronic Journal of General Medicine* 17 (6), em237.
- Buheji1, Mohamed, et al. (2020) The extent of Covid–19 pandemic socio-economic impact on global poverty: A global integrative multidisciplinary review. *American Journal of Economics* 10 (4) 213–24.
- Bulduklu, Y. and S. Karaçor (2017) Sağlık Hizmetlerinde Kriz İletişimi Ve Yeni Medya. *Atatürk İletişim Dergisi* (14) 296–79.
- Caley, P., D.J. Philp and K. McCracken (2008) Quantifying social distancing arising from pandemic influenza. *Journal of the Royal Society Interface* (23) 631–9.
- Cascella, M., M. Rajnik, A. Cuomo, S.C. Dulebohn and R. Di Napoli (2020) Features, evaluation and treatment of Coronavirus (Covid–19). *StatPearls Publishing*.

Chowdhury, I.U. (2009) Caste-based discrimination in South Asia: A study of Bangladesh. Indian Institute of Dalit Studies Working Paper Series, 3 (7).

Çirakoğlu, O.C. (2011) Domuz Gribi (H1N1) Salgınıyla İlişkili Algıların, Kaygı ve Kaçınma Düzeyi Değişkenleri Bağlamında İncelenmesi. *Türk Psikoloji Dergisi* 26 (67).

Darı A. (2017) Sosyal Medya ve Sağlık. *Araştırmalar Dergisi* 6 (18) 731–58.

Er, A.G. and S. Ünal (2020) 2019 Koronavirüs Salgını, Anlık Durum ve İlk İzlenimler. *Flora* 25:1–5.

Hayran, O. (2007) Küreselleşme ve Sağlık İlişkileri. *Sağlık Düşüncesi ve Tıp Kültürü Platformu*.

Herring, D.A. and L. Sattenspiel (2007). Social contexts, syndemics, and infectious disease in Northern aboriginal populations. *American Journal of Human Biology* 19 (2) 190–202.

International Dalit Solidarity Network (2015). Discrimination against Dalits in Bangladesh. IDSN Briefing Note.

Karcioğlu Ö. (2020) What is Coronavirus and how can we protect ourselves? *Phoenix Medical Journal* 2 (1) 66–71.

Labonté R. and T. Schrecker (2007) Globalization and social determinants of health: Introduction and methodological background (part 1 of 3). *Global Health* 3:5.

Li, H., S.M. Liu, X.H. Yu, S.L. Tang and C.K. Tang (2020) Coronavirus disease 2019 (Covid–19), Current status and future perspective. *International Journal of Antimicrobial Agents*.

Özden, K. and M. Özmat (2014) Salgın ve Kent: 1347 Veba Salgınının Avrupa'da Sosyal, Politik ve Ekonomik Sonuçları. *İdealkent* 5 (12) 60–87.

Peeri, N.C., et al. (2020) The SARS, MERS and Novel Coronavirus (Covid–19) epidemics, the newest and biggest global health threats: What lessons have we learned? *International Journal of Epidemiology* 1:1–10.

Peters, D.J. Community susceptibility and resiliency to Covid-19 across the rural-urban continuum in the United States. *Journal of Rural Health* 36 (3) 446-56.

Prem, K. Y. Liu Y, Russell TW, et al. (2020) The effect of control strategies that reduce social mixing on outcomes of the Covid-19 epidemic in Wuhan, China: A modelling study. *The Lancet*.

Qiu, W., S. Rutherford, A. Mao and C. Chu (2017) The Pandemic and its impacts. *Health, Culture and Society* (December) 1-11.

Rahman, H.Z, I. Matin, A. Rahman, et al. (2020) Covid-19 Livelihoods & Recovery Panel Survey. PPRC-BIGD.

Rahman, H.Z. (2020) Livelihoods, coping, and support during Covid-19 crisis. Dhaka: BRAC Institute for Governance and Development (BIGD).

Rahman, M.F: and H.A. Ruszczyk (2020) The Pandemic and Food Insecurity in Small Cities of the Global South: A Case Study of Noapara in Bangladesh. Dhaka: Power and Participation Research Center (PPRC).

Rahman, S. (2016) An ethnographic journey through the lives of urban Dalits in Bangladesh. PhD dissertation, Department of Anthropology Jahangirnagar University Savar, Dhaka-1342 (appolloju1@yahoo.com), HEKS/EPER, Bangladesh.

Rasheed, R., R. Asfra, J. Hajra, S. Faiza and Z. Asghar (2021) Socio-economic and environmental impacts of Covid-19 pandemic in Pakistan—an integrated analysis. *Environmental Science and Pollution Research* 28: 19926-19943.

Sahin, A.R., et al. (2020) 2019 novel coronavirus (Covid-19) outbreak: A review of the current literature. *Eurasian Journal of Medicine and Oncology* 4 (1) 1-7.

Şanlı, K. (2010) İnfluenza Virüsü ve Domuz Gribi. *Jinekoloji Obstretrik Pediatri Dergisi* 2 (1) 4-12.

Shaw, M., D. Dorling and R. Mitchell (2002) *Health, Place and Society*. London: Pearson Education Asia.

Teo, S.S.S., J.S. Nguyen-Van-Tam and R. Booy (2005) Influenza burden of illness, diagnosis, treatment, and prevention: What is the evidence in children and where are the gaps? *Archives of Disease in Childhood* 90:532–6.

Türkiye Psikiyatri Derneği (2020) Covid-19 ve Damgalama, Türkiye Psikiyatri Derneği, Ruhsal Travma ve Afet Çalışma Birimi.

UN Human Rights Council (2009) Draft principles & guidelines for the effective elimination of discrimination based on work and descent. Annex to report A/HRC/11/CRP.3.

WHO (2020a) Global spending on health: A world in transition.

Yolun M. (2012) İspanyol Gribinin Dünya ve Osmanlı Devleti Üzerindeki Etkileri. Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Tarih Anabilim Dalı, Yüksek Lisans Tezi, Adıyaman.

Zhou, P., et al. (2020) A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature* 579 (7798) 270–3.

Zu, Z.Y., et al. (2020) Coronavirus disease 2019 (Covid-19), A perspective from China. *Radiology* 296:2–E25.