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Exploring socio-cultural determinants of health inequities: Experiences of Dalit population in Dhaka City, Bangladesh

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4 1 **Exploring sociocultural determinants of health inequities: Experiences of**
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7 2 ***Dalit* population in Dhaka City, Bangladesh**
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10 3 **Short Title: Socio-cultural determinants of health inequities: Dalit population,**
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13 4 **Bangladesh**
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18 ABSTRACT

19 **Objectives:** In recent years Bangladesh has made remarkable advances in health outcomes;
20 however, the benefits of these gains are unequally shared amongst citizens and population
21 groups. Among others, Dalits (*jaat* sweepers), a marginalised traditional working community,
22 have relatively poor access to healthcare services. This study sought to explore the socio-political
23 and cultural factors associated with health inequalities among Dalits in an urban setting.

24 **Design:** An exploratory qualitative study design was adopted. The acquired data was analysed
25 using an iterative approach which incorporated deductive and inductive methods in identifying
26 codes and themes.

27 **Settings:** This study was conducted in two sweeper communities in Dhaka city.

28 **Participants:** Participants were Dalit men and women (fourteen in-depth interviews, mean
29 age±SD 30±10; and five focus group discussions), and the community leaders and NGO workers
30 (seven key informant interviews).

31 **Results:** The health status of members of these Dalit groups is determined by an array of social,
32 economic and political factors. As Dalits (untouchables) are typically considered to fall outside
33 the caste-based social structure and existing vulnerabilities are embedded and reinforced by this
34 identity. Dalits' experience of precarious access to healthcare or poor healthcare is an important
35 manifestation of these inequalities and has implications for the economic and social life of Dalit
36 populations living together in geographically constrained spaces.

37 **Conclusions:** The provision of clinical healthcare services alone is insufficient to mitigate the
38 negative effects of discriminations and to improve the health status of Dalits. A better

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3 39 understanding of the precise influences of socio-cultural determinants of health inequalities is
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5 40 needed, together with the identification of the strategies and programmes needed to address these
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8 41 determinants with the aim of developing more inclusive health service delivery systems.
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11 42 **Key Words:** Bangladesh; caste; Dalit; qualitative method; sociocultural determinants; health
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13 43 inequalities; social exclusion; untouchability
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16 44 **Strengths and limitations of this study**

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19 45 • This study used the ‘Commission on Social Determinants of Health Conceptual
20
21 46 Framework’ proposed by the World Health Organization (WHO) which allow us to
22
23 47 investigate how a set of social, cultural, economic and political elements interact and play
24
25
26 48 a determining role in shaping Dalits’ health status.
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28 49 • To the best of our knowledge this is the first study that comprehensively explains how
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30
31 50 socio-cultural and political elements are interconnected and produces, sustain, and
32
33 51 reinforce health inequality among the Dalit population in Bangladesh.
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35 52 • To analyse the qualitative data we used an iterative approach which blended deductive
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37 53 and inductive methods to identify and generate codes and themes.
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40 54 • The main limitation is that the sample size is unavoidably small; therefore, the
41
42 55 generalizability of the findings to other areas might be limited due to the contextual
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44 56 characteristics. Nonetheless, considering the data collected, we believe that this study
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47 57 provides an in-depth understanding of the determinants of health inequalities among Dalit
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49 58 population in Bangladesh.
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60 BACKGROUND

61 In recent years Bangladesh has achieved remarkable progress in terms of health targets, with
62 declining maternal and neonatal mortality rates, increased immunisation coverage, greater life
63 expectancy at birth, and increased vitamin A supplementation^{1;2}. However, these advances are
64 experienced unequally across the population, often leaving behind individuals and communities
65 that are economically marginalised and socially excluded. Improved health services, especially
66 those provided by the state, are not yet effectively distributed to all individuals and groups, and
67 frequently fail to reach ethnic minorities, people living in remote areas, extremely poor
68 individuals, slum and pavement dwellers, and other marginalised groups³. This paper focuses on
69 analysing the healthcare barriers experienced by one marginalised group, the Dalits, the
70 untouchables.

71 Bob et al.²⁵ explain that the word 'Dalit' comes from the Marathi language and means
72 suppressed, 'broken up', downtrodden or oppressed, and the term was first used by Dr B. R.
73 Ambedkar during the late period of British colonial rule. The Dalits of Bangladesh are a
74 marginalised group whose identity is often characterised by the manual and low-status nature of
75 their occupations. This social positioning is strongly associated with their ancestral occupations,
76 which were typically considered unclean and impure. In the 1872 census conducted in Bengal,
77 the majority of Dalits were referred to by the term *Chandala*, a Sanskrit word for someone who
78 deals with the disposal of corpses, a Hindu outcaste. In 2017 they are often called *Harijan*, a
79 term coined by Mahatma Gandhi meaning 'children of God', or more commonly referred to by
80 their occupation, family descent, ethnicity, or derogatory terms. The dalits often engage in
81 sweeping activities, such as cleaning latrines, removing rubbish, skinning cattle, and sweeping

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3 82 streets and houses. They scavenge in Bangladesh's cities and towns, and are designated as
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5 83 'untouchable' within the caste system of the Indian subcontinent ^{4,5}.

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8 84 Healthcare issues of the Dalit in Bangladesh remain largely neglected in the national
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10 85 government's development agenda ^{6,7}, despite its strong constitutional commitment to 'not
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12 86 discriminate against any citizen on grounds only of religion, race, caste, sex or place of birth'
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14 87 (The Bangladesh Constitution of 1972, Article 28 (1). While no precise official statistics are
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16 88 available regarding the number of Dalits, various sources estimate the population at around 5.5
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18 89 million ⁸, approximately 3-4% of Bangladesh's total population. The lack of official data on this
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20 90 population group indicates the lack of political will to recognise Dalits and the existence of these
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22 91 communities in Bangladesh.

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27 92 Prior studies indicate that health inequalities are determined by broader societal factors, such as
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29 93 socio-economic position, housing conditions, working environment, poverty, access to and
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31 94 control of resources, education, and employment ⁹⁻¹³. A firm understanding of sociocultural
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33 95 determinants of health inequalities, and also of the factors which restrict access to health
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35 96 services, is critical to improving the health outcomes of marginalised communities, ¹⁴. Several
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37 97 studies in Bangladesh have highlighted the socio-economic issues and discrimination
38
39 98 encountered by the Dalit population; however, the socio-political and cultural factors that
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41 99 contribute to generating severe health inequalities remain largely unexplored.

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47 100 This present study explores the political, social, economic, and cultural determinants of health
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49 101 inequalities experienced by the majority of the Dalit population. We examine how caste-based
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51 102 positions generate and reinforce social stratification in society, and determine health inequities
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53 103 within two Dalit population groups in Bangladesh. We argue that health inequalities need to be

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3 104 viewed from a holistic perspective, keeping in mind the intersecting social, political and
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5 105 structural forces.
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8 9 106 **MATERIALS AND METHODS**

10 11 12 107 **Conceptual Framework**

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15 108 Our inquiry was shaped by the ‘Commission on Social Determinants of Health (CSDH)
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17 109 Conceptual Framework’ proposed by the World Health Organization (WHO) in 2010¹⁵. This
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19
20 110 framework offers a dynamic analytical configuration of the key social institutions and political
21
22 111 structures that affect and shape the health of a population. It explains health status as a social
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24 112 phenomenon that is produced, configured and sustained through a complex and dynamic
25
26 113 interplay of a set of context-embedded factors. Importantly, it also emphasises the need to
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28 114 distinguish the mechanisms that generate and reproduce social hierarchies and their multiple
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30 115 manifestations. The conceptual framework includes three interactive levels of dynamic
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32 116 influences: the wider socio-political context, individual socio-economic position, and
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34 117 intermediary socio-economic influences.
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39 118 **Fig 1** Commission on Social Determinants of Health (CSDH) Conceptual Framework [adapted from the
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41 119 WHO (2010)] [to be placed]

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46 121 The first level, the socio-political context, focuses on the social relationships within a society
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48 122 which organise and configure hierarchies and social stratification by defining individual
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50 123 positions and roles. This includes the labour market, the educational system, and political
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52 124 institutions. The second level considers individual or groups of individuals’ positionality in the
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54 125 relation to these macro-structures and mechanisms. It understands individual socio-economic
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3 126 position as a function of the degree of exposure to health risks and vulnerabilities that result in
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5 127 differential health outcomes for an individual and/or a population. Key structured individual
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8 128 socio-economic elements include income, education, occupation, level of knowledge and
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10 129 information. Combined with structural elements, the individual socio-economic context
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12 130 'structural determinant' is constructed. Thus structural determinants are rooted in socio-
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15 131 economic institutions, policies and political context that construct, reinforce, and maintain social
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17 132 hierarchies in various social systems, institutions, policies and sociocultural values.

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20 133 The intermediary socio-economic context refers to a circumstance whereby an individual and/or
21
22 134 group have a distinct experience of materials, behavioural options, psychological supports, and
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24 135 healthcare facilities that consecutively shape specific determinants of health status (intermediary
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26 136 determinants). Therefore, this framework summarises and synthesises the view that social
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28 137 determinants of health inequality are constructed, functioning, and sustained through the act of
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30 138 long causal interceding factors (Figure 1).

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35 139 Although other frameworks have been developed to understand the social determinants of health,
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37 140 we found this conceptual framework particularly useful for exploring the dynamic relationships
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39 141 between social structures and political determinants of health inequalities. Several contemporary
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41 142 models, for example the psychosocial, social production of diseases/political economy of health,
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43 143 and the eco-social models, tend to explain disease distribution rather than focusing on the
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45 144 mechanism of disease causation¹⁶⁻¹⁹. Therefore, in contrast to the WHO model, these
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47 145 frameworks leave contextual and socio-political aspects of health inequalities largely
48
49 146 unexplored. The results presented in this paper are provided together with an exploration of the
50
51 147 socio-economic settings following the CSDH Conceptual Framework.

148 **Study Population and Settings**

149 This study was conducted in two sweeper communities in Dhaka city: the *Agargoan* Public
150 Works Department (PWD) Sweeper Colony, which is located adjacent to Dhaka Orthopaedic
151 Hospital, and the Ganaktuli sweeper colony located in the city's Hazaribough area. Commonly,
152 the sweepers in Agargoan and Ganakatuli are known as *Telegu* and *Kanpuri*, respectively. There
153 are no official statistics providing precise population figures for these colonies, although
154 secondary sources indicate that each includes approximately 1,000 families⁸.

155 **Sampling Strategy**

156 Between August and October 2014 the first author conducted interviews and focus group
157 discussions (FGDs, henceforth) with members of these Dalit *colonies*. We purposefully selected
158 the study participants to address specific research objectives, and following the inclusion criteria,
159 we included people aged 18 years and above and those who voluntarily agreed to participate.
160 Using several data collection tools we achieved maximum variation within the sample, collecting
161 data from participants with various backgrounds, e.g. household members, community leaders,
162 and members of non-governmental organisations (NGOs, henceforth)²⁰.

163 We conducted 14 in-depth interviews (IDIs, henceforth) with household members from the Dalit
164 community who had sought healthcare in different public and private facilities. We invited
165 individuals to open group discussions on health status and health-seeking behaviour, and invited
166 those individuals who showed a proactive interest in the study for interviews (IDIs, FGDs). The
167 context in which the research was conducted required a high degree of iteration and flexibility in
168 order to build coherence and maximise the validity of the data collected. For example, a subtype

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3 169 of purposive sampling known as snowballing or chain sampling ²¹ was used to select individuals
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5 170 who had experienced discrimination of a specific nature or means.
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8 171 We also conducted seven key informant interviews (KIIs, henceforth) with community and
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10 172 religious leaders, and also NGO worker, in order to better understand the exclusion process
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12 173 experienced by Dalits in these specific locations. Finally, we conducted five FGDs to help
13
14 174 understand communal perceptions and attitudes regarding entitlement to access basic public
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16 175 services. In addition, the authors used participant observations and informal conversations with
17
18 176 some non-Dalit (converted Muslim) individuals who lived in the area to further understand the
19
20 177 dynamics at play. Many of these informants operated small businesses (e.g. tea stall, plastic
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22 178 shop, video game shop etc.) within and around the sweeper colonies. Finally, we re-visited the
23
24 179 participant groups to triangulate the emerging themes and cross-check the accuracy of the data
25
26 180 collected. The data collection process ceased when the authors reached a suitable understanding
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28 181 of the key specific historical, socio-cultural belief systems influencing the process of
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30 182 discrimination, marginalisation and stigmatisation ^{22;23}.
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37 **Data Collection Procedure**

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40 184 In order to gather information in a semi-structured and systematic manner, we developed an
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42 185 interview schedule. This document was used to guide conversations around key dimensions
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44 186 relevant to our research questions and objectives, including socio-economic, demographic, and
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46 187 political issues that impact upon health conditions among the Dalit population and/or individuals.
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48 188 Interviews were semi-structured in order to create a friendly rapport with respondents and leave
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50 189 sufficient space for other themes to emerge. Open-ended questions were used to explore the
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52 190 socio-political and economic factors affect their health services. For example, we wanted to learn
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191 more about participants' healthcare-seeking behaviours, experiences when attempting to access
192 healthcare facilities, health information, and interactions with healthcare workers.

193 We conducted all except one of the interviews and FDGs in Bengali, a language spoken by the
194 researchers (first author) and most of the participants, while an interpreter was used to interview
195 elderly Dalit men and women who only spoke Telegu and Hindi. On average, IDIs lasted 45 to
196 60 minutes and FDGs between 90 and 120 minutes. After obtaining the participants' consent,
197 IDIs and FGDs were electronically recorded, before being transcribed verbatim and subsequently
198 translated into English. In some cases, several follow-up visits were made to obtain missing
199 information, as well as to enable further probing of some issues. In addition, the authors took
200 detailed field notes during the conversations.

201 **Data Analysis**

202 To analyse the qualitative data we used an iterative approach which blended deductive and
203 inductive methods to identify and generate codes and themes. Initially, a deductive approach was
204 used through the use of interview guides, which provided a primary template for the framework
205 of data coding. The researchers independently read and reread a few transcripts and identified
206 codes which were incorporated into the coding framework in an inductive form which mirrored
207 the ideas, perceptions, practices, and concepts, concentrating on the health and health services of
208 the participants. After coding all of the interviews we looked for clusters of several codes, which
209 were termed 'themes' or 'concepts'. Focusing on rigour-related criteria in qualitative research,
210 such as credibility, transferability, dependability and conformability, a consensus was established
211 by resolving coding differences after discussions among the research team. Throughout the
212 analysis, systematically examined meaningful statements were assigned to the relevant code, and

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3 213 the relationship between the themes was then examined²⁴. The analysis process was adequately
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5 214 accomplished by the team of researchers, who have different educational backgrounds and
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7 215 training, through regular collaboration and discussions, self-reflexivity, and triangulation of
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9 216 method and context (field sites), ensuring that no one researcher's view was predominant.
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13 217 **Patient and Public Involvement**

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16 218 In this study we did not involve any patient. However, we purposefully selected men, women
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18 219 community leaders, and NGO workers in the interview. We entered the community, built rapport
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20 220 and invited the participants for the interview following a pre-set inclusion criteria such as people
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22 221 aged 18 years and above, voluntary participation, and pro-activeness to join in the group
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24 222 discussion. We used an iterative approach which incorporated deductive and inductive methods
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26 223 in framing research questions and identifying codes and themes.
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30 224 **Ethical Considerations**

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34 225 The study protocol was approved and ethical approval was obtained from the 'ethics review
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36 226 committee' at Dhaka University, Bangladesh. Written informed consent was taken and
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38 227 documented via audio recording. Before obtaining consent the research objectives were
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40 228 explained, together with the importance of the study, confidentiality rules, possible harms and
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42 229 benefits, and the participants' right to withdraw from the interviews at any stage during the
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44 230 conversation. Personal and households information, including age, sex, education, occupation,
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46 231 marital status, family composition and religion, was collected; however, the confidentiality of the
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48 232 personal identification of all participants was strictly maintained, with these details only being
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50 233 used by the researchers. Data was analysed using the participant identification (ID) number only
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52 234 and these ID number were removed prior to reporting the findings.
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235 RESULTS

236 Characteristics of the Participants

237 We firstly describe the socio-demographic characteristics of the participants before presenting
 238 our results. Table 1 shows the characteristics of the study participants, who ranged in age
 239 between 22 and 64, and had a mean age of 30 (SD±10) years. More than half of the participants
 240 (9 out of 14) had received no formal schooling, which is far below the national level of over
 241 60%. Overall, participants had received a mean of 2.9 (SD±1.3) years of schooling, and only
 242 three had received any education above the primary level.

243 **Table 1 Socio-demographic backgrounds of the in-depth interview participants (*n* = 14)**

Characteristics	Study Area		Combined
	Agargoan	Ganaktuli	
Age in years (mean ±SD)	27±8	3±9	30±10
Education			
1–5 years (<i>n</i>)	1	2	3
6–10 years (<i>n</i>)	0	2	2
No formal schooling (<i>n</i>)	5	4	9
Schooling in years (mean ± SD)	2.6±1.2	3.4±1.4	2.9±1.3
Occupation (<i>n</i>)			
Cleaning	3	5	8
Housewife	2	1	3
Others	1	2	3
Sex (<i>n</i>)			
Male	4	4	8
Female	2	4	6
Marital Status (<i>n</i>)			
Married	4	5	9
Unmarried	2	2	4
Divorced	0	1	1
Family Type (<i>n</i>)			
Extended	4	6	10
Nuclear	2	2	4
Religion (<i>n</i>)			
Hindu	5	8	13

Converted Christian	1	0	1
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244 The majority of the participants were engaged in cleaning activities for Dhaka City Corporation
 245 and private organisations, while the remainder were employed in household activities, as day
 246 labourers, or in garment factories. More than half of the participants (10 out of 14) lived with
 247 their extended family, and almost all (13 out of 14) were Hindu, with just one participant having
 248 converted to Christianity.

249 Table 2 presents the key demographic characteristics of the FGD participants. Five FGDs were
 250 conducted: (I) among 6 Agargoan Dalit men (mean age 28, SD \pm 8 years), (II) among 7
 251 Agargoan Dalit women (mean age 32, SD \pm 7 years), (III) among 6 Ganaktuli Dalit men (mean
 252 age 39, SD \pm 7 years), (IV) among 8 female Ganaktuli Dalit women (mean age 24, SD \pm 5
 253 years) and (V) among 9 Ganaktuli Dalit men (mean age 35 ,SD \pm 6 years).

254 **Table 2 Socio-demographic backgrounds of participants in the focus group discussions ($n = 36$)**

Focus group discussion	Age of the participants in years (mean \pm SD)	Location	Number of Participants	Gender
I	28 \pm 8	Agargoan	6	Male
II	32 \pm 7	Agargoan	7	Female
III	39 \pm 7	Ganaktuli	6	Male
IV	24 \pm 5	Ganaktuli	8	Female
V	35 \pm 6	Ganaktuli	9	Male

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 256 The dominant recurring themes were organised into categories reflecting the majority of
 257 interactive elements of the ‘social determinants of health’ framework (i.e. socio-economic and
 258 political context [including governance, macroeconomic policies, social and public policies,

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3 259 culture and societal values untouchability, caste-based discrimination, and social exclusion]
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5 260 socio-economic position and intermediary determinants).
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8 9 261 **Space and Power**

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11 262 In an attempt to contextualise our findings within the wider socio-economic and political context,
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13 263 this section starts by providing a brief overview of the political history of the Dalit population.
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15 264 Accounts of the socio-political and economic dimensions of Dalit livelihoods helps in
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17 265 understanding structural determinants of their health.
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21 266 In Bangladesh, the majority of untouchable Hindu Dalits are descended from Indian origins. In
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23 267 Bangladesh, as in India and Nepal, untouchable Hindus belong to the lowest social position at
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25 268 the base of the *Varna* system ⁵. During the reign of the Mughals, Dhaka was established as the
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27 269 commercial capital of the Bengal Subah by *Subahdar* (viceroy) Islam Khan in 1608. As the city
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29 270 grew to become one of the wealthiest and most prosperous cities in the South Asian region, the
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31 271 Mughal administrator appointed sweepers to maintain sanitation and cleaning activities ⁴. In the
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33 272 1620s there was a large-scale migration of Dalit from India to Dhaka, which was precipitated by
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35 273 massacres by Burmese pirates in 1624-26: they were required to remove dead bodies from the
36
37 274 city ⁷. It is commonly believed that a large number of Dalits were brought to the city by British
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39 275 colonial administrators after Dhaka gained municipality status, to provide menial services ⁷.
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41 276 During the period of British colonial rule (1757-1947), Dalits (Telugu-speaking and Kanpuri
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43 277 sweepers) were brought to East Bengal (now Bangladesh) from the Indian states of Uttar
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45 278 Pradesh, Bihar, Andhra Pradesh and many other areas, including Bhagalpur, Motihari, Baliha,
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47 279 Patna, Maddarapur, Uriya, Gourakpur and Chapra ^{4,25}. As the English administration rapidly
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3 280 developed townships and local municipalities, these populations were moved to meet the
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5 281 increasing need for sanitation workers.
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8 282 The social position and status of Dalits are associated with their ancestral occupations, which
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10 283 were regarded as impure. Dalits are mostly employed by public and private organisations for
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12 284 sweeping activities, cleaning latrines, removing filth, skinning cattle, sweeping streets and
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14 285 houses. Despite the lack of official data on the economic condition of Dalits, some secondary
15
16 286 sources claim that Dalits are engaged in low-paid manual work under severe discriminatory
17
18 287 terms ²⁵, and consequently earn much less than national average, with one source claiming that
19
20 288 their income lies between BDT 3000-5000 (considering BDT78=US\$1) while the national
21
22 289 average is BDT 7203 ²⁵. Processes of occupational discrimination and unfair payment contribute
23
24 290 to excluding the population from secure and safe dwellings. Dalit populations usually reside in
25
26 291 unhygienic environments characterised by poor quality, insufficient and irregular water,
27
28 292 electricity and gas provision. Overcrowded dwellings, narrow walkways, inadequate basic
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30 293 facilities, such as toilets and water taps, represent significant everyday challenges that become
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32 294 causes of further stigmatisation and marginalisation. Dalit populations often have to rely for
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34 295 access to these services on middlemen and informal brokers, called *mastan* (local thugs); they
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36 296 often rely on violence and illegal deals to negotiate access to resources. The interlacing of social
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38 297 structures and political processes shape the Dalits' common everyday experiences of poverty and
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40 298 constitute their shared identity.
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48 299 The material circumstances of the Dalit group in Dhaka city were identified as major
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50 300 intermediary determinants of their health status. Data from all this study's sources (e.g. IDIs,
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52 301 FGDs and KIIs) reported poor living conditions, their concentration in government-established
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54 302 ghettos, or so-called 'colonies', and their highly unsafe housing characterised by poor drainage,
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3 303 sanitation and water supply. Houses in government colonies had brick walls and corrugated iron
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5 304 sheet roofs, while those in private slums were constructed from bamboo, tin, and wood. The
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8 305 sweeper ghettos were very overcrowded, with most respondents reporting that one small room
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10 306 housed 6–10 family members spanning three generations. The environment was also highly
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12 307 polluted, leading to extremely unsafe living conditions.

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15 308 Sweeper ghettos also reported extremely unhygienic and inadequate sanitation conditions.
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17 309 Bacteria, parasites, and disease vectors breed faster when sanitation and drainage systems are
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20 310 poor and when warmer and wetter conditions are prevalent all year round. Such poor living
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22 311 conditions are likely to increase the incidence of vector-borne/water-borne diseases and
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24 312 infections. For example, diarrhoea and respiratory infections, such as pneumonia, were
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26
27 313 commonly reported as the most frequent diseases among children aged less than five years old.
28
29 314 In addition, malaria, dengue fever, and *kala-azar* (visceral leishmaniasis) were reported to be
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31 315 prevalent among all age groups.

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35 316 The wider socio-political context influences the effects of these material circumstances and has
36
37 317 multiple behavioural implications. The data collected from KIIs, IDIs and FDGs clearly indicates
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39 318 that health policies largely ignore the specific needs of Dalits. For example, policies concerning
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42 319 housing, the labour market and land emerged as restricting factors for health. Over centuries,
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44 320 Dalit populations have been allocated space in designated colonies, and Dalit families have
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46 321 shared very small living spaces from generation to generation. Data from all the sources reflected
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48 322 that, despite the potential for promoting basic housing facilities within the government owned
49
50 323 land, effective initiatives were never taken due to the lack of policy support. The respondents
51
52 324 related that government policy favoured congregating Dalits in such designated colonies, rather

1
2
3 325 than facilitating actions for housing supply and availability, and improving quality. One
4
5 326 participant reported:

8 327 *“Government policy has never allowed any action that facilitates housing facilities*
9
10 328 *for Dalit. They are living like this in colonies for generation; but, neither own nor*
11
12 329 *improve its quality.”* (A key informant in Ganaktuli)

16 330 Although the government has issued policy statements and strategies for the redistribution of
17
18 331 non-agriculture and agricultural *khas* land (government-owned fallow land) to landless people
19
20 332 since the early 1980s, Dalits have not been considered as a potential beneficiary group.
21
22 333 Therefore, the scope for improving health outcomes through facilitating housing conditions for
23
24 334 Dalits in allocated *khas* land is constrained by government land policy. One respondent stated:

28 335 *“Landlessness is the first and foremost problem that impacts overall wellbeing of*
29
30 336 *Dalit. Dalit living condition is out of description. But it can be improved through*
31
32 337 *distributing of khas land to Dalit as it is provided to landless people. But, it is a*
33
34 338 *matter of fact that Dalit cannot fill in the inclusion criteria set by the policy.”* (A key
35
36 339 informant in Agargoan)

40 340 Furthermore, the participants, especially the community leaders and NGO workers, believed that
41
42 341 the lack of government interventions restricted the potential for improving living conditions,
43
44 342 which also affected the health status of the population.

48 343 **Education and Labour**

51 344 An individual's place in a given society can be described by the concept of 'social position', as
52
53 345 proposed by Evans et al.²⁶, which is generated and maintained under a broader social context.
54
55 346 The social position of an individual is dynamically created by a number of elements, such as

1
2
3 347 caste, religion or gender, which transmit intergenerational discriminations and inequalities.
4
5 348 Similar to what Evans et al. argue, when interviewing the participants we found that Dalits'
6
7 349 health can be seen as an outcome that is generated from social position, whereby an individual
8
9 350 and/or group are unable to fully participate in society because of their socio-cultural identity. The
10
11 351 socio-economic context has shaped Dalits' engagement with educational institutions; Dalits face
12
13 352 discrimination and are often deprived of education through various means. Our data found that
14
15 353 less than 30% of Dalits had received formal schooling, compared to more than 65% of the
16
17 354 national population. This figure tended to be even lower outside Dhaka city, as one respondent
18
19 355 reported:

20
21
22
23
24 356 *"In Dhaka city you will find higher number of Dalit who have schooling especially in*
25
26 357 *younger generation. But, the figure will drastically fall if you consider among the*
27
28 358 *whole number of Dalit across the country."* (A Dalit activist and key informant from
29
30 359 Ganaktuli)

31
32
33
34 360 Respondents reported that their children faced discrimination by educational institutions, for
35
36 361 example being denied admission to private schools, rejection and teasing by teachers or students.
37
38 362 The school enrolment of Dalit girls was also decreased due to the practice of child marriage,
39
40 363 which subsequently affected sexual and reproductive health. The very low literacy rate among
41
42 364 Dalits resulted in little or no access to health information. One of the key informants said:

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44
45
46 365 *"Education is vital for improving health and general well-being. When an individual*
47
48 366 *lacks education, he/she eventually will be in a worse position to negotiate access to*
49
50 367 *services and information such as nutrition. Low literacy amongst the Dalit, in turn,*
51
52 368 *affects their health and overall well-being negatively."* (A key informant in
53
54 369 Ganaktuli)

1
2
3 370 The participants further reported that the low level of education nurtured significant information
4
5 371 asymmetries, which cause health-related misinformation, and limited occupational and income-
6
7 372 earning opportunities. Participants reported that, due to their being excluded from mainstream
8
9 373 society, Dalits were perceived to have poor levels of infant and child feeding, breastfeeding
10
11 374 practices, immunisation take-up, and personal and family hygiene, with an unhealthy
12
13 375 consumption of tobacco and alcohol, etc. One participant stated that:
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15

16
17 376 *“I have little or no educational background. It might diminish my understanding*
18
19 377 *whether and what extend things such as smoking bad for health? ...what and how*
20
21 378 *infant and young child should be fed? ...what are good practices for washing*
22
23 379 *hands.”* (A 56-year-old woman in Ganaktuli)
24
25
26

27 380 The data also revealed that little and/or no education narrows the occupational opportunities, and
28
29 381 subsequently results in low incomes. In addition to poor educational quality, Dalit occupational
30
31 382 opportunities are determined by other factors such as caste-based identities and heredity, and
32
33 383 together with poor education this reduces their chance of improving their health status.
34
35
36

37 384 The data analysis also showed how the wider structural determinants interact with and influence
38
39 385 the social positioning of Dalits and their material circumstances. We found that the labour
40
41 386 market both dynamically excludes and adversely includes Dalits by restricting their social and
42
43 387 occupational mobility. The data gathered from community participants and key informants
44
45 388 strongly suggests that Dalit ancestral occupations have limited their skill sets and continue to
46
47 389 force them to expose themselves to high health risks and to rely on very low wages.
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52 390 Exposure to a toxic physical environment whilst at work was commonly reported in the
53
54 391 interviews and group discussions. Dalits are traditionally linked to their ancestral occupations,
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1
2
3 392 which were passed down from generation to generation. Consequently, the majority of Dalits are
4
5 393 engaged in sweeping and cleaning activities, manually handling waste material and garbage
6
7 394 whilst using no personal protective equipment. This exposes them to large amounts of dust, bio-
8
9
10 395 aerosols, volatile organic matter, airborne particulates, bacteria, noise, and ergonomic stress.
11
12 396 Multiple participants reported that sweepers frequently experience infections. As one participant
13
14
15 397 explained:

16
17 398 *“Dalit always carry health risk with them at workplaces as they are dealing with*
18
19 399 *very serious issues such as dumping garbage or removing dirt. But, they do not use*
20
21 400 *protective equipment. [...] They are more likely than non-Dalit to experience*
22
23 401 *physical injuries or develop infections.”* (A 29-year-old cleaner in Agargoan)

24
25
26
27 402 Similarly, another participant noted:

28
29
30 403 *“Dalit sweepers don’t take any dust protective measure; therefore, they inhale it... I*
31
32 404 *witnessed my colleagues develop respiratory infections and other airborne*
33
34 405 *diseases.”* (A street sweeper in Ganaktuli)

35
36
37
38 406 Nonetheless, Dalit participants were not inclined to look for alternative occupations, as they said
39
40 407 there was no scope for them to work outside of these historical, marginalised social spaces.
41
42 408 Participants were highly aware of their role in the history of the country, and explained that they
43
44 409 would face significant resistance if they tried to access occupations that did not conform to their
45
46 410 low social and political status. Occupation-based discrimination, lingering poverty, and social
47
48 411 stigmatisation reduced their opportunities to participate in the labour market on equal terms (in
49
50 412 relation to non-Dalits) and to engage with activities that were not considered ‘impure’. One FGD
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1
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3 413 participant talked about how the lack of skills combined with long-established social norms
4
5 414 strongly discourage Dalits from engaging differently with the labour market:
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7

8 415 *“We are traditionally engaged in sweeping, as my ancestors did. I have no other skill*
9
10 416 *except this. How can I do [anything else], for example, pulling a rickshaw or running*
11
12 417 *a business? Similarly, people will not come and take a cup of tea if I operate a tea*
13
14 418 *stall.”* (A 37 year old cleaner in Agargoan)
15
16
17

18 419 This particular barrier is becoming increasingly problematic, as over 70% of the respondents
19
20 420 reported that their access to sweeping jobs had become highly insecure and precarious; although
21
22 421 initially the nature of their recruitment in sweeping activities was permanent, Dalits had more
23
24 422 recently had to compete for their occupation with non-traditional Muslim sweepers. Although the
25
26 423 city corporation’s sweeper recruitment policy states that the Dalit are given a quota, the
27
28 424 authorities have not adhered to this system in recent years. The frequent recruitment of non-
29
30 425 traditional sweepers by different government and non-government organisations has
31
32 426 considerably narrowed Dalits’ employment options, leading to financial hardship:
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37 427 *“Some proportion of sweeping is reserved in government offices. However, non-Dalit*
38
39 428 *sweepers are getting these jobs through bribes to political leaders and government*
40
41 429 *officials. Where will we go for work? We will likely have to resort to unsocial and*
42
43 430 *illegal activities to survive if this situation is not improved.”* (A housewife in
44
45 431 Agargoan)
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49 432 The lack of a sufficient and regular income limited Dalit participants’ capacity to afford basic
50
51 433 necessities, including food, healthcare (particularly from private facilities), and education fees.
52
53 434 Their average monthly household income ranged from BDT 5850 to 8970 (considering
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3 435 BDT78=US\$1), which was insufficient to buy three nutritious meals per day for an extended
4
5 436 family.

9 437 **Politics and Relationships**

10
11 438 Our data has identified a set of social and political factors in the given political and governance
12
13 439 system that impact upon the Dalit health status through stratifying individual positions on the
14
15 440 basis of hierarchies of power and prestige, and access to resources. Due to their weak socio-
16
17 441 economic position, caste-based identity and discrimination, Dalits in the studied areas generally
18
19 442 have a weak power of participation in political processes, both at the national and community
20
21 443 level. One of the participants from Ganaktuli reported:

22
23 444 *“Our sweeping identity shapes our world – our work, our rights, our opportunities,*
24
25 445 *our limitations, it shapes everything. Hundreds of years we are living a confined life*
26
27 446 *in a sense that the mainstream society maintains a greater distance as we belong to*
28
29 447 *such a low caste. Where are we? ...In education, in health, in politics? ...nowhere.”*

30
31 448 (add details)

32
33 449 The lack of political participation generated by a lack of consideration and discrimination by
34
35 450 other powerful groups limited Dalits’ opportunity to voice their needs and impeded their capacity
36
37 451 to exercise other constitutional and human rights. Making a direct connection between political
38
39 452 engagement and health, one participant voiced:

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41 453 *“To my knowledge, no one from the Dalit community has appeared as a candidate in*
42
43 454 *any election at national or community level. Even, they are likely to be less*
44
45 455 *concerned about this. Such an absence in political process diminishes our capacity*
46
47 456 *to protect communal interest concerning health.”* (A 34-year-old Dalit in Agargoan)

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3 457 Data from interviews with key informants and group discussants indicated that factors relating to
4
5 458 macroeconomic policies influenced the health of Dalits. Macro level policies were considered to
6
7
8 459 be having a negative impact on their health status and health seeking capacity, and public
9
10 460 allocations for social protection and healthcare schemes continued to exclude people living in
11
12 461 urban settings. One of the key informants reflected on the situation:

14
15 462 *“Government policy only provides safety-net support for poor in the rural setting.*
16
17 463 *However, the Dalit are concentrated on the metropolitans and small township.*
18
19
20 464 *...therefore are not eligible for that.”* (A key informant in Agargoan)

21
22
23 465 This policy significantly affected Dalits’ capacity to seek and afford treatment in settings where
24
25 466 they were exposed to regular health shocks and hazards. For example, in the existing health
26
27 467 policy, two-thirds of healthcare costs are financed via an out-of-pocket mechanism ²⁷, and the
28
29 468 urban poor experience limited or no healthcare support. Participants reported that having no
30
31 469 social protection schemes meant that they had to rely on considerable out-of-pocket healthcare
32
33 470 expenditure in order to access healthcare from both public and private facilities. The low
34
35 471 income-earning capacity of Dalits interacted directly with their individual socio-economic
36
37 472 condition, particularly for those suffering from chronic health conditions that required prolonged
38
39 473 and continuous care and medication. The inability to afford treatment was frequently reported as
40
41 474 an important barrier to better health by respondents suffering from cardiac issues, diabetes and
42
43
44 475 renal disease due to out-of-pocket costs. One of them said:

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47
48 476 *“I have been suffering from diabetes for the past years. The doctor prescribed*
49
50 477 *several drugs that I imperatively need to continue taking to control my sugar levels. I*
51
52 478 *cannot afford such drug for rest of my life [...] you will never expect to get diabetic*
53
54 479 *drug free of cost.”* (A street sweeper in Ganaktuli)

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2
3 480 Some participants highlighted the heavy reliance on expensive private health service providers as
4
5 481 a significant determinant of bad health. They indicated that an individual's health status tended
6
7 482 to deteriorate when they needed to access healthcare services from a local private institution. A
8
9 483 key informant in Ganaktuli explained that local private healthcare facilities generally tended to
10
11 484 be better equipped than local government facilities, and increasingly played a 'vital role in
12
13 485 healthcare services delivery.' However, he noted:

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15
16
17 486 *"If the problem is not mil and, you must seek consultant at private facilities this*
18
19 487 *involves huge expenses that are most likely beyond the capacity of Dalit. ...I found*
20
21 488 *few individual who have been suffering from chronic disease but fail to take care*
22
23 489 *from private clinic due to the cost incurred."* (A key informant in Ganaktuli)

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27 490 Beyond the costs incurred by care, participants also identified the behaviour of healthcare
28
29 491 professionals in public and private facilities as barriers to their accessing better health.
30
31 492 Respondents shared experiences of entrenched stigmatisation and discrimination that hampered
32
33 493 their willingness and motivation to see a doctor, thereby generating a process of self-exclusion
34
35 494 from these facilities.

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37
38
39 495 The social positioning of the Dalit identity generates considerable caste-based discrimination,
40
41 496 enhancing exclusion, broadening inequalities, and restricting them from accessing healthcare.
42
43 497 Dalit people, considered untouchable due to their traditional employment that brings them into
44
45 498 contact with human excreta, dirt, garbage, bad odours, dead bodies, and other elements, are
46
47 499 defined by others by their impurity. One participant described how mainstream society perceives
48
49 500 the Dalit, and the following quote denotes how societal perceptions have been internalised by
50
51 501 Dalits themselves:

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2
3 502 *“We are methar [a Bangla colloquial term signifying degradation, disgust], nothing*
4
5 503 *more than that. Our position can be nowhere else but at the bottom of the society.”*

6
7
8 504 (A 34-year-old scavenger in Agargoan)

9
10
11 505 These socio-economic mechanisms and Dalits’ relational social positioning interact with other
12
13 506 factors to create psychosocial factors which determine their health status. Due to social
14
15 507 discrimination and exclusion, Dalit often lose their self-worth and experience depression and
16
17 508 shame. Such feelings in turn lead to social isolation and further narrow individual and/or
18
19 509 community participation in health programmes. The participants further stated that Dalits could
20
21 510 not fully participate in community-based health programmes focusing on child and maternal
22
23 511 health, the promotion of nutrition, immunisation, sanitation and hygiene. One participant
24
25 512 explained the situation as follows:

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29
30 513 *“Dalit are social excluded and discriminated in many ways. Due to such*
31
32 514 *discrimination and exclusion, they might lose self-esteem to be open-minded in*
33
34 515 *participation of community-led health programmes.”* (A 34-year-old cleaner in
35
36 516 Agargoan)

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39
40 517 Stigmatising behaviours and discriminatory attitudes against the Dalits are also reproduced by
41
42 518 healthcare workers. Most respondents reported that healthcare workers were more likely to
43
44 519 consider their health problems to be less serious than those of non-Dalits in order to limit the
45
46 520 amount of time spent with them and their exposure to ‘impurity’. In small townships and
47
48 521 localities outside Dhaka city, for example in primary level healthcare facilities where Dalits are
49
50 522 easily identified by locals, they reported being more likely to face such discriminatory attitudes
51
52 523 from healthcare workers. Multiple participants echoed the following experience of visiting a
53
54 524 health facility:

1
2
3 525 *“Sometimes we do not disclose our identity to avoid neglect and unpleasant*
4
5 526 *situation. ... I can tell you a tragic story about the hospital admission of a Dalit*
6
7 527 *woman. She was denied to get hospital admission and was kept laying on the floor of*
8
9 528 *the balcony as being a Dalit. Meanwhile, she developed additional problems —*
10
11 529 *common cold, fever and breathing difficulties in such a cold weather. Later, we put*
12
13 530 *the issue forward and the hospital authority admitted her and provided a bed.” (A*
14
15 531 *51-year-old Dalit rights activist in Ganaktuli)*

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19
20 532 Several participants described a lack of attention from healthcare workers, and difficulties in
21
22 533 obtaining adequate information regarding their health problems and required treatments. The
23
24 534 following excerpt reflects this situation:

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26
27 535 *“Doctors/nurses are unwilling to discuss details regarding any health information or*
28
29 536 *health intervention in the facilities. They just provide minimal medicine and maintain*
30
31 537 *indifference when asked about a health-related problem.” (A 55-year-old leather*
32
33 538 *worker in Ganaktuli)*

34
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37 539 Such negligent and discriminatory behaviour on the part of healthcare providers made Dalits
38
39 540 hesitant to participate in health promotion activities to enhance their own health, and even
40
41 541 influenced their decisions to delay seeking treatment for infectious diseases. One of the key
42
43 542 informants explained how the socio-political position of the Dalit community impacted upon the
44
45 543 care-seeking behaviour of Dalits:

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48
49 544 *“The Dalit live as a minority within the mainstream. All aspects of their lives – such*
50
51 545 *as profession, access to services, rights and obligations, decisions, and so on – are*

1
2
3 546 *determined and ascribed by these social and political contexts.”* (A NGO worker in
4
5 547 Ganaktuli)

8 548 Denied access to formal and informal safety nets, this marginalisation is reinforced by
9
10 549 idiosyncratic forms of discrimination based on class, gender, physical ability and age in
11
12 550 particular. Under-nutrition of low-income (often extreme poor) adolescent girls, pregnant
13
14 551 mothers and elderly widows was found to be particularly severe. Health inequalities experienced
15
16 552 by Dalits were also influenced by the manner in which policies are developed and translated into
17
18 553 practice. One key informant stated:

21
22
23 554 *“The state did not consider that context-specific healthcare provision might be*
24
25 555 *effective for providing services to this kind of disadvantaged group of people. We*
26
27 556 *need the formulation of policies that cover the delivery of health services to the Dalit*
28
29 557 *and other groups of people who are in an unfavourable position to seek care.”* (A
30
31 558 Dalit rights activist in Agargoan)

34
35 559 In addition, some respondents reported that the impact of Dalits’ social positioning generated
36
37 560 biological factors that negatively affected their health. Many respondents claimed that male
38
39 561 Dalits were likely to consume high quantities of low-quality alcohol and tobacco, noting that this
40
41 562 behaviour can be explained by the difficult occupations and psycho-social pressure they
42
43 563 experienced. Exposure to bad odours, dirt and dead organisms can induce vomiting and appetite
44
45 564 loss, and according to some respondents consuming alcohol and cigarettes mitigated the negative
46
47 565 psychological and physical effects of this type of work. Historically, Dalits have been
48
49 566 characterised by such depictions and so this is not new; it is beyond the scope of this research to
50
51 567 assess the veracity of such claims. However, what is noteworthy is how such claims serve to
52
53 568 further stigmatise members of this population group, who according to some respondents, are

1
2
3 569 *“habituated to consume alcohol and tobacco products”* as they believe it is *“a habit rooted in*
4
5 570 *their occupational roles and psychosocial identity”* (A 23-year-old scavenger in Agargoan). Our
6
7 571 data suggests that Dalit children living in marginalised settlements suffer from stigmatisation and
8
9 572 are therefore constrained in their physical mobility and social interactions. Although it was not
10
11 573 possible to measure the physical growth of children due to the nature of this study, participants
12
13 574 reported that children, particularly those aged under 5 years, were likely to be undernourished.
14
15 575 Poverty, low health information and awareness, and physical environment were reported as the
16
17 576 most likely causal factors for such poor physical and social development of young children.
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22 577 As a response to the hostile wider socio-political context and challenging material circumstances,
23
24 578 traditional health practices and rituals are widely practised within the Dalit community.
25
26 579 Religious beliefs and spirituality influence their health status and attitudes towards seeking
27
28 580 treatment. It was found that low-income Dalits adhering to strict religious beliefs were more
29
30 581 likely to rely on faith-based healing for sexual and reproductive health, pregnancy care, and
31
32 582 infant and child feeding practices.
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37 583 **DISCUSSION**

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41 584 To the best of our knowledge this is the first study aimed at understanding the socio-cultural and
42
43 585 economic determinants of health inequalities in the Dalit population in Bangladesh, and it applies
44
45 586 the CSDH Conceptual Framework developed by the WHO. Our analysis suggested that the
46
47 587 mechanisms of social and economic discrimination that result in severe health inequalities for
48
49 588 Dalits are supported and reinforced by an array of interconnected structural factors, including
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51 589 geographic marginalisation, poor living conditions, low formal education, little political
52
53 590 representation, poor access to resources, limited labour market engagement, and stigmatisation.
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3 591 Stigmatisation was found to be pervasive, and to directly shape relational and material
4
5 592 determinants of health.
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9 593 Dalits' occupation-based identity determines their ability to interact with non-Dalits and with the
10
11 594 state, and their stigmatisation as an impure, unhygienic, uneducated population group reinforces
12
13 595 these processes and worsens their material and psychosocial circumstances. These are identified
14
15 596 as significant intermediary determinants of their health status within this specific urban context
16
17 597 ²⁸. Our findings confirm that health inequalities are rooted in the social process, whereby
18
19 598 structural, contextual, and interpersonal factors intersect and influence each other ²⁹⁻³¹ and build
20
21 599 on these to show how pervasive identity-based discrimination perpetuates the causes and effects
22
23 600 of health inequalities.
24
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26
27

28 601 Untouchability and caste-based discrimination perpetuate an exclusionary process that results in
29
30 602 this population belonging to a lower caste status with limited or no access to or participation in
31
32 603 healthcare services or health seeking behaviours, and has been similarly noted by studies
33
34 604 conducted in Indian societies ³²⁻³⁶. Broadly, these socio-culturally constructed exclusionary
35
36 605 processes restrict Dalits' economic, political, social and cultural participation, which in turn
37
38 606 negatively impacts upon their health and well-being at the individual, communal, regional, and
39
40 607 global levels. These observations are also in line with a prior report of the Social Exclusion
41
42 608 Knowledge Network (SEKN) to the World Health Commission on Social Determinants of
43
44 609 Health, which stated that sociocultural exclusion is a dynamic and multi-dimensional process
45
46 610 driven by unequal power relations ^{30;33;37}.
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51
52 611 Our results also highlight power differentials between Dalit individuals and healthcare
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54 612 professionals, which enhance health inequities and further victimise Dalits, and are in line with
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2
3 613 the results of another study in India ³⁸. These power differentials further repress the social,
4
5 614 political, and economic participation of Dalits, leading to the unequal and unjust distribution of
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7
8 615 resources and access to services. Overall, sociocultural exclusionary processes generate,
9
10 616 preserve, and reproduce inequalities regarding participating in, accessing, and utilising health
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12 617 services, which perpetuate intergenerational deprivation and discrimination. Other studies have
13
14
15 618 demonstrated that caste-based exclusion, deprivation, and discrimination have been practised on
16
17 619 the Indian subcontinent for thousands of years ^{4,38}.

20 620 The socio-economic and political context, together with macro-policies, facilitate the
21
22 621 exclusionary process whereby Dalit people have limited opportunities for livelihood
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24
25 622 development and to improve their economic condition, consequently reducing their income
26
27 623 opportunities and trapping them in poverty. In many cases this trap is sustained and enhanced
28
29 624 through intergenerational transmission. Income is strongly associated with health and influences
30
31
32 625 a range of material circumstances that directly impact health. Economic exclusion also
33
34 626 determines access to and utilisation of health services, while economic marginalisation appears
35
36 627 to limit the provision of healthcare, health-seeking behaviours, and access to other basic services
37
38 628 provided by members of society and the state ^{26,39}. In addition, social and public policies narrow
39
40
41 629 healthcare utilisation and healthcare-seeking, e.g. catastrophic out-of-pocket costs and the
42
43 630 shrunken delivery of healthcare by public health facilities. The literature shows that over the
44
45 631 recent years out-of-pocket costs are gradually increasing due to the steady expansion of private
46
47 632 healthcare services ^{27,40} and this affects healthcare seeking and utilisation. The wider structural
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49
50 633 factors facilitate the Dalits' compromised material circumstances, unhealthy lifestyle, and social
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52 634 isolation. As noted by other studies ⁴¹⁻⁴³, our findings show that poor living and working
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55 635 conditions, limited healthcare access and support, poor state of water and sanitation, habit of

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3 636 tobacco consumption, stress, and isolation from health services, negatively impact upon health
4
5 637 status and healthcare seeking. A lower social background was observed by Dubey ⁴⁴ to
6
7 638 contribute to weakening social networks that perpetuate poor healthcare access and healthcare
8
9 639 seeking. Furthermore, the health system itself influences the health of Dalits as it presents Dalits
10
11 640 with greater financial costs when accessing or seeking healthcare, as noted other studies ^{27;45}.
12
13 641 Moreover, access to and acceptance by healthcare providers is determined by the social position
14
15 642 of individuals and groups; Dalits' low social position restricts their access to healthcare
16
17 643 professionals, as had been previously reported in many regions across the world ^{42;46;47}. Our
18
19 644 findings suggest that the health status of the Dalit community is not shaped solely by clinical
20
21 645 issues but also by a range of sociocultural determinants, as proposed in several other studies ^{48;49}.
22
23 646 For disadvantaged, marginalised, and socio-culturally excluded individuals or groups like Dalits,
24
25 647 health outcome improvement is closely linked to public policies and actions that address socio-
26
27 648 cultural determinants of health inequities, with the government playing a central role ⁵⁰.

649 **LIMITATIONS OF THE STUDY**

650 The results of this study are based on data collected from the Dalit population in Dhaka City;
651 therefore, the results may not be transferable to other settings, for example a small Bangladeshi
652 town. Nonetheless, considering the data collected, we believe that this study provides an in-depth
653 understanding of a set of social, cultural, economic and political factors that strongly determine
654 the health outcomes of Dalits.

655 **CONCLUSIONS AND IMPLICATION FOR THE STUDY**

656 Although this subject has previously been sporadically discussed in newspaper reports, NGO
657 reports and media reports, this paper is one of the first qualitative studies to explore a vast array

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3 658 of factors that determine health inequalities in urban Dalit populations in Bangladesh. This study
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5 659 is expected to contribute to knowledge by investigating how these elements interact and play a
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7 660 determining role in shaping Dalits' health status. This study supports the view that Dalit health
8
9 661 inequalities are largely affected by a wide range of socio-cultural factors which can be observed
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11 662 in societies across many regions of South Asia.
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15 663 Importantly, we argue for the need to recognise the significant intermediary effects of everyday
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17 664 discrimination and stigmatisation, perpetuated by socio-economic structures, on educational
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19 665 achievement, political participation, occupations and health behaviours. Dalits' social and
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21 666 political history shapes their social position in society today by limiting their power relative to
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23 667 non-Dalits in key social structures, including the labour market and health institutions. These
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25 668 mechanisms enhance exclusionary processes through mutually reinforcing sets of socio-cultural
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27 669 and economic dynamics, and these generate, sustain, deepen, reinforce and reproduce
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29 670 inequalities in the health of Dalit populations. Therefore, it is unlikely that the health status of
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31 671 Dalit populations will be improved through the better clinical performance of existing healthcare
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33 672 providers alone. Recognition of the hostility of existing institutions and addressing entrenched
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35 673 exclusionary processes (including self-exclusion) and adverse inclusion is needed, together with
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37 674 research on the potential benefits of developing state-initiated social protection schemes focusing
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39 675 on deepening the social inclusion agenda.
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679 **Abbreviations**

680 BDT: Bangladesh Taka; CSDH: Commission on Social Determinants of Health; FGD: Focus
681 Group Discussions; IDI: In-depth Interviews; KII: Key Informant Interviews; NGO: Non-
682 governmental Organisations; PWD: Public Works Department; SEKN: Social Exclusion
683 Knowledge Network; WHO: World Health Organization; USD: United State Dollar;

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691 **Availability of data and materials**

692 As we informed the participants during the consent process that data would only be shared
693 within the research team, then the data cannot be made available publicly. However, we shared
694 the interview and discussion guidelines under ‘additional supporting files.’ Interested parties may
695 contact Mr. Md. Shahin Chowdhury (anthro.du@yahoo.com), Senior Administrative Assistant,
696 Department of Anthropology, Dhaka University, for further inquiries in this regard.

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3 697 **Author contributions**
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7 698 AK (ashraful262@yahoo.com) conceptualized the study, participated in data collection and
8
9 699 analysis, and prepared the first draft of the manuscript. MRLM (mathilde.maitrot@hotmail.fr)
10
11 700 reviewed and edited manuscript. AA (israabd@gmail.com) guided the data collection and
12
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14 701 analysis. All authors read and approved the final version of the manuscript.
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17 702 **Competing Interest**
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21 703 The authors declare that they have no conflicts of interest.
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24 704 **Consent for publication**
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27 705 Participants provided consent to publish their quotes anonymously or using pseudonyms.
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707 Reference List

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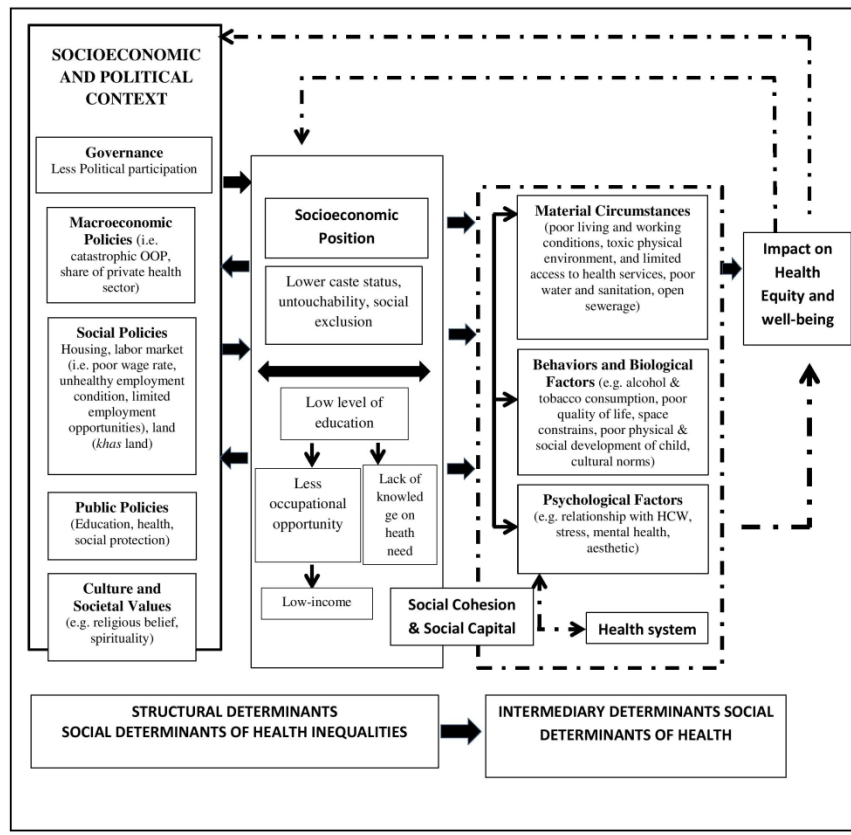
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Qualitative exploration of socio-cultural determinants of health inequities of Dalit population in Bangladesh

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Keywords:	caste, Dalit, qualitative method, sociocultural determinants, health inequalities, untouchability

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4 population in Bangladesh

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7 3 **Short Title: Socio-cultural determinants of health inequities: Dalit population,**
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9 4 **Bangladesh**

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18 ABSTRACT

19 **Objectives:** In recent years Bangladesh has made remarkable advances in health outcomes;
20 however, the benefits of these gains are unequally shared amongst citizens and population
21 groups. Among others, Dalits (*jaat* sweepers), a marginalised traditional working community,
22 have relatively poor access to healthcare services. This study sought to explore the socio-political
23 and cultural factors associated with health inequalities among Dalits in an urban setting.

24 **Design:** An exploratory qualitative study design was adopted. The acquired data was analysed
25 using an iterative approach which incorporated deductive and inductive methods in identifying
26 codes and themes.

27 **Settings:** This study was conducted in two sweeper communities in Dhaka city.

28 **Participants:** Participants were Dalit men and women (fourteen in-depth interviews, mean
29 age±SD 30±10; and five focus group discussions), and the community leaders and NGO workers
30 (seven key informant interviews).

31 **Results:** The health status of members of these Dalit groups is determined by an array of social,
32 economic and political factors. Dalits (untouchables) are typically considered to fall outside the
33 caste-based social structure and existing vulnerabilities are embedded and reinforced by this
34 identity. Dalits' experience of precarious access to healthcare or poor healthcare is an important
35 manifestation of these inequalities and has implications for the economic and social life of Dalit
36 populations living together in geographically constrained spaces.

37 **Conclusions:** The provision of clinical healthcare services alone is insufficient to mitigate the
38 negative effects of discriminations and to improve the health status of Dalits. A better

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3 39 understanding of the precise influences of socio-cultural determinants of health inequalities is
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5 40 needed, together with the identification of the strategies and programmes needed to address these
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8 41 determinants with the aim of developing more inclusive health service delivery systems.
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11 42 **Key Words:** Bangladesh; caste; Dalit; qualitative method; sociocultural determinants; health
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13 43 inequalities; social exclusion; untouchability
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16 44 **Strengths and limitations of this study**

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19 45 • This study used the ‘Commission on Social Determinants of Health Conceptual
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21 46 Framework’ proposed by the World Health Organization (WHO) which allow us to
22
23 47 investigate how a set of social, cultural, economic and political elements interact and play
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25
26 48 a determining role in shaping Dalits’ health status.
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28 49 • To the best of our knowledge this is the first study that comprehensively examines how
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30 50 socio-cultural and political elements are interconnected, and how they produce, sustain,
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32 51 and reinforce health inequality among the Dalit population in Bangladesh.
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35 52 • To analyse the qualitative data we used an iterative approach which blended deductive
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37 53 and inductive methods to identify and generate codes and themes.
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40 54 • The main limitation is that the sample size is unavoidably small; therefore, the
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42 55 generalizability of the findings to other areas might be limited due to the contextual
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44 56 characteristics. Nonetheless, considering the data collected, we believe that this study
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46 57 provides an in-depth understanding of the determinants of health inequalities among Dalit
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48 58 population in Bangladesh.
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60 BACKGROUND

61 In recent years Bangladesh has achieved remarkable progress in terms of health targets, with
62 declining maternal and neonatal mortality rates, increased immunisation coverage, greater life
63 expectancy at birth, and increased vitamin A supplementation^{1;2}. However, these advances are
64 experienced unequally across the population, often leaving behind individuals and communities
65 that are economically marginalised and socially excluded. Improved health services, especially
66 those provided by the state, are not yet effectively distributed to all individuals and groups, and
67 frequently fail to reach ethnic minorities, people living in remote areas, extremely poor
68 individuals, slum and pavement dwellers, and other marginalised groups³. This paper focuses on
69 analysing the healthcare barriers experienced by one marginalised group, the Dalits, the
70 untouchables.

71 Bob et al.²⁵ explain that the word 'Dalit' comes from the Marathi language and means
72 suppressed, 'broken up', downtrodden or oppressed, and the term was first used by Dr B. R.
73 Ambedkar during the late period of British colonial rule. The Dalits of Bangladesh are a
74 marginalised group whose identity is often characterised by the manual and low-status nature of
75 their occupations. This identity and social status are strongly associated with their ancestral
76 occupations, which were typically considered unclean and impure. In the 1872 census conducted
77 in Bengal, the majority of Dalits were referred to by the term *Chandala*, a Sanskrit word for
78 someone who deals with the disposal of corpses, a Hindu outcaste. In 2017 they are often called
79 *Harijan*, a term coined by Mahatma Gandhi meaning 'children of God', or more commonly
80 referred to by their occupation, family descent, ethnicity, or derogatory terms. The dalits often
81 engage in sweeping activities, such as cleaning latrines, removing rubbish, skinning cattle, and

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3 82 sweeping streets and houses. They scavenge in Bangladesh's cities and towns, and are
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5 83 designated as 'untouchable' within the caste system of the Indian subcontinent ^{4,5}.

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8 84 Healthcare issues of the Dalit population in Bangladesh remain largely neglected in the national
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10 85 government's development agenda ^{6,7}, despite its strong constitutional commitment to 'not
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12 86 discriminate against any citizen on grounds only of religion, race, caste, sex or place of birth'
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14 87 (The Bangladesh Constitution of 1972, Article 28 (1). Nationally representative survey data on
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16 88 Dalit health inequality is unavailable. As Nagorik Uddyog (Bangladesh Dalit and Excluded
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18 89 Rights Movement) notes:

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23 90 *"Health surveys and research programmes undertaken with respect to the 'public health*
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25 91 *situation' in the country do not pay special attention to the child and maternal health*
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27 92 *conditions in the colonies and settlements where Dalit communities live. Because of this*
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29 93 *non-attention to their specific health situation, their suffering and specific requirements*
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31 94 *to access non-discriminatory and affordable health care remain unreported and*
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33 95 *unattended to.*"⁸

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38 96 A few available studies substantiate that Dalits' health outcomes are poor. Chowdhury reported
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40 97 that Dalit are generally afflicted by skin diseases, diarrhea, tuberculosis, pneumonia at a higher
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42 98 level than the non-Dalit population ⁹. Islam et al. ¹⁰ reported that water-borne disease are highly
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44 99 prevalent among Dalit population as water and sanitation facilities is scarce in the slum— with
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46 100 reports of nearly 12,000 Dalit sharing two water points in Dhaka, and nearly 58% of Dalit have
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48 101 no access to sanitary latrine ⁹. A study conducted outside the capital city, found that in a Dalit
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50 102 community in Jessore city around half of pre-school children were suffering from chronic
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52 103 stunted (58%) and underweight (45%), while nationally the corresponding figure is 36% and
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3 104 33%^{11;12}. While no precise official statistics are available regarding the number of Dalits,
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5 105 various sources estimate the population at around 5.5 million¹³, approximately 3-4% of
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7 106 Bangladesh's total population. The lack of official data on this population group indicates the
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10 107 lack of political will to recognise Dalits and the existence of these communities in Bangladesh.

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13 108 Prior studies indicate that health inequalities are determined by broader societal factors, such as
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15 109 socio-economic position, housing conditions, working environment, poverty, access to and
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17 110 control of resources, education, and employment¹⁴⁻¹⁸. A firm understanding of sociocultural
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19 111 determinants of health inequalities, and also of the factors which restrict access to health
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21 112 services, is critical to improving the health outcomes of marginalised communities,¹⁹. Several
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23 113 studies in Bangladesh have highlighted the socio-economic issues and discrimination
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25 114 encountered by the Dalit population; however, the socio-political and cultural factors that
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27 115 contribute to generating severe health inequalities remain largely unexplored.

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32 116 This present study therefore explores the political, social, economic, and cultural determinants of
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34 117 health inequalities experienced by the majority of the Dalit population. We examine how caste-
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36 118 based positions generate and reinforce social stratification in society, and determine health
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38 119 inequities within two Dalit population groups in Bangladesh. We argue that health inequalities
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40 120 need to be viewed from a holistic perspective, keeping in mind the intersecting social, political
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42 121 and structural factors.

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52 53 54 55 124 **MATERIALS AND METHODS**

125 **Conceptual Framework**

126 Our research was shaped by the ‘Commission on Social Determinants of Health (CSDH)
127 Conceptual Framework’ proposed by the World Health Organization (WHO) in 2010²⁰. This
128 framework offers a dynamic analytical configuration of the key social institutions and political
129 structures that affect and shape the health of a population. It explains health status as a social
130 phenomenon that is produced, configured and sustained through a complex and dynamic
131 interplay of a set of context-embedded factors. Importantly, it also emphasises the need to
132 distinguish the mechanisms that generate and reproduce social hierarchies and their multiple
133 manifestations. The conceptual framework includes three interactive levels of dynamic
134 influences: the wider socio-political context, individual socio-economic position, and
135 intermediary socio-economic influences.

136 **Fig 1** Commission on Social Determinants of Health (CSDH) Conceptual Framework [adapted from the
137 WHO (2010)] [to be placed]

138
139 The first level, the socio-political context, focuses on the social relationships within a society
140 which organise and configure hierarchies and social stratification by defining individual
141 positions and roles. This includes the labour market, the educational system, and political
142 institutions. The second level considers individual or groups of individuals’ positionality in
143 relation to these macro-structures and mechanisms. It understands individual socio-economic
144 position as a function of the degree of exposure to health risks and vulnerabilities that result in
145 differential health outcomes for an individual and/or a population. Key individual socio-
146 economic characteristics include income, education, occupation, level of knowledge and
147 information. Combined with structural elements, these form what is referred to as ‘structural

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3 148 determinant'. Thus structural determinants shape patterns of access to resources (for example
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5 149 here, health services) and are rooted in socio-economic institutions, policies and political context
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8 150 that construct, reinforce, and maintain social hierarchies in various social systems, institutions,
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10 151 policies and sociocultural values.

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13 152 The intermediary socio-economic context refers to a circumstance whereby an individual and/or
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15 153 group have a distinct experience of materials, behavioural options, psychological supports, and
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18 154 healthcare facilities that consecutively shape specific determinants of health status (intermediary
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20 155 determinants). Therefore, this framework summarises and synthesises the view that social
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22 156 determinants of health inequality are constructed, functioning, and sustained through the act of
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25 157 long causal interceding factors (Figure 1).

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28 158 Although other frameworks have been developed to understand the social determinants of health,
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30 159 we found this conceptual framework particularly useful for exploring the dynamic relationships
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32 160 between social structures and political determinants of health inequalities. Several contemporary
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35 161 models, for example the psychosocial, social production of diseases/political economy of health,
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37 162 and the eco-social models, tend to explain disease distribution rather than focusing on the
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39 163 mechanism of disease causation²¹⁻²⁴. Therefore, in contrast to the WHO model, these
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42 164 frameworks leave contextual and socio-political aspects of health inequalities largely
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44 165 unexplored. The results presented in this paper are provided together with an exploration of the
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46 166 socio-economic settings following the CSDH Conceptual Framework.

47 48 49 167 **Study Population and Settings**

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52 168 This study was conducted in two sweeper communities in Dhaka city: the *Agargaon* Public
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55 169 Works Department (PWD) Sweeper Colony, which is located adjacent to Dhaka Orthopaedic
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3 170 Hospital, and the Ganaktuli sweeper colony located in the city's Hazaribagh area. Commonly,
4
5 171 the sweepers in Agargaon and Ganakatuli are known as *Telegu* and *Kanpuri*, respectively. There
6
7
8 172 are no official statistics providing precise population figures for these colonies, although
9
10 173 secondary sources indicate that each includes approximately 1,000 families¹³.

13 174 **Sampling Strategy**

16 175 Between August and October 2014 the first author conducted interviews and focus group
17
18 176 discussions (FGDs, henceforth) with members of these Dalit *colonies*. We applied an inclusion
19
20
21 177 criterion—that participants were aged 18 and above and volunteered to participate—and
22
23 178 purposively recruited the study participants to address the research objectives. In this process, we
24
25 179 invited individuals who showed a proactive interest to share their experiences, opinions, and
26
27
28 180 time. Using several data collection tools we achieved maximum variation within the sample,
29
30 181 purposefully collecting data from participants with various backgrounds, e.g. differing in terms
31
32 182 of age, occupation, gender, position within the household, status within the community (leaders),
33
34 183 and members of non-governmental organisations (NGOs, henceforth)²⁵.

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37
38 184 We conducted 14 in-depth interviews (IDIs, henceforth) with household members from the Dalit
39
40 185 community who had sought healthcare in different public and private facilities. We invited
41
42 186 individuals to open group discussions on health status and health-seeking behaviour, and invited
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44
45 187 those individuals who showed a proactive interest in the study for interviews (IDIs, FGDs). The
46
47 188 context in which the research was conducted required a high degree of iteration and flexibility in
48
49 189 order to build coherence and maximise the validity of the data collected. For example, as part of
50
51 190 the sampling strategy, a subtype of purposive sampling known as snowballing or chain sampling

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3 191 ²⁶ was used to select individuals who had experienced discrimination of a specific nature or
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5 192 means.

6
7
8 193 We also conducted seven key informant interviews (KIIs, henceforth) with community and
9
10 194 religious leaders, and also NGO worker, in order to better understand the exclusion process
11
12 195 experienced by Dalits in these specific locations. Finally, we conducted five FGDs to help
13
14 196 understand communal perceptions and attitudes regarding entitlement to access basic public
15
16 197 services. We have selected the key informant on the basis two criteria—who have rich
17
18 198 information about the Dalit health aspect, and willing to participate in the interview voluntarily.
19
20 199 In case of selecting FGDs participant we considered age, gender, occupation, and volunteer
21
22 200 participation. In addition, the authors used participant observations and informal conversations
23
24 201 with some non-Dalit (converted Muslim) individuals who lived in the area to further understand
25
26 202 the dynamics at play. Many of these informants operated small businesses (e.g. tea stall, plastic
27
28 203 shop, video game shop etc.) within and around the sweeper colonies. Finally, we re-visited the
29
30 204 participant groups to triangulate the emerging themes and cross-check the accuracy of the data
31
32 205 collected. The data collection process ceased when the authors reached a suitable understanding
33
34 206 of the key specific historical, socio-cultural belief systems influencing the process of
35
36 207 discrimination, marginalisation and stigmatisation ^{27;28}.

37 38 39 40 41 42 43 44 208 **Data Collection Procedure**

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46
47 209 In order to gather information in a semi-structured and systematic manner, we developed an
48
49 210 interview schedule. This document was used to guide conversations around key dimensions
50
51 211 relevant to our research questions and objectives, including socio-economic, demographic, and
52
53 212 political issues that impact upon health conditions among the Dalit population and/or individuals.
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3 213 Interviews were semi-structured in order to create a friendly rapport with respondents and leave
4
5 214 sufficient space for other themes to emerge. Open-ended questions were used to explore the
6
7 215 socio-political and economic factors affect their health services. For example, we wanted to learn
8
9 216 more about participants' healthcare-seeking behaviours, experiences when attempting to access
10
11 217 healthcare facilities, health information, and interactions with healthcare workers.

12
13
14
15 218 We conducted all except one of the interviews and FDGs in Bengali, a language spoken by the
16
17 219 researchers (first author) and most of the participants, while an interpreter was used to interview
18
19 220 elderly Dalit men and women who only spoke Telegu and Hindi. On average, IDIs lasted 45 to
20
21 221 60 minutes and FDGs between 90 and 120 minutes. After obtaining the participants' consent,
22
23 222 IDIs and FDGs were electronically recorded, before being transcribed verbatim and subsequently
24
25 223 translated into English. In some cases, several follow-up visits were made to obtain missing
26
27 224 information, as well as to enable further probing of some issues. In addition, the authors took
28
29 225 detailed field notes during the conversations.

30 31 32 33 34 35 226 **Data Analysis**

36
37 227 To analyse the qualitative data we used an iterative approach which blended deductive and
38
39 228 inductive methods to identify and generate codes and themes. Initially, a deductive approach was
40
41 229 used through the use of interview guides, which provided a primary template for the framework
42
43 230 of data coding. The researchers independently read and reread a few transcripts and identified
44
45 231 codes which were incorporated into the coding framework in an inductive form which mirrored
46
47 232 the ideas, perceptions, practices, and concepts, concentrating on the health and health services of
48
49 233 the participants. After coding all of the interviews we looked for clusters of several codes, which
50
51 234 were termed 'themes' or 'concepts'. Focusing on rigour-related criteria in qualitative research,
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3 235 such as credibility, transferability, dependability and conformability, a consensus was established
4
5 236 by resolving coding differences after discussions among the research team. Throughout the
6
7 237 analysis, systematically examined meaningful statements were assigned to the relevant code, and
8
9 238 the relationship between the themes was then examined²⁹. The analysis process was adequately
10
11 239 accomplished by the team of researchers, who have different educational backgrounds and
12
13 240 training, through regular collaboration and discussions, self-reflexivity, and triangulation of
14
15 241 method and context (field sites), ensuring that no one researcher's view was predominant.
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20 242 **Patient and Public Involvement**

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23 243 In this study we did not involve any patients. However, we purposefully selected men, women
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25 244 community leaders, and NGO workers for the interviews. We entered the community, built
26
27 245 rapport and invited the participants for the interview following a pre-set inclusion criteria such as
28
29 246 people aged 18 years and above, voluntary participation, and pro-activeness to join in the group
30
31 247 discussion. We used an iterative approach which incorporated deductive and inductive methods
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33 248 in framing research questions and identifying codes and themes.
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38 249 **Ethical Considerations**

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40
41 250 The study protocol was approved and ethical approval was obtained from the 'ethics review
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43 251 committee' at Dhaka University, Bangladesh. Written informed consent was taken and
44
45 252 documented via audio recording. Before obtaining consent the research objectives were
46
47 253 explained, together with the importance of the study, confidentiality rules, possible harms and
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49 254 benefits, and the participants' right to withdraw from the interviews at any stage during the
50
51 255 conversation. Personal and households information, including age, sex, education, occupation,
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53 256 marital status, family composition and religion, was collected; however, the confidentiality of the
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257 personal identification of all participants was strictly maintained, with these details only being
 258 used by the researchers. Data was analysed using the participant identification (ID) number only
 259 and these ID number were removed prior to reporting the findings.

260 RESULTS

261 Characteristics of the Participants

262 We firstly describe the socio-demographic characteristics of the participants before presenting
 263 our results. Table 1 shows the characteristics of the study participants, who ranged in age
 264 between 22 and 64, and had a mean age of 30 (SD±10) years. More than half of the participants
 265 (9 out of 14) had received no formal schooling, which is far below the national level of over
 266 60%. Overall, participants had received a mean of 2.9 (SD±1.3) years of schooling, and only
 267 three had received any education above the primary level.

268 **Table 1 Socio-demographic backgrounds of the in-depth interview participants (*n* = 14)**

Characteristics	Study Area		Combined
	Agargaon	Ganaktuli	
Age in years (mean ±SD)	27±8	3±9	30±10
Education			
1–5 years (<i>n</i>)	1	2	3
6–10 years (<i>n</i>)	0	2	2
No formal schooling (<i>n</i>)	5	4	9
Schooling in years (mean ± SD)	2.6±1.2	3.4±1.4	2.9±1.3
Occupation (<i>n</i>)			
Cleaning	3	5	8
Housewife	2	1	3
Others	1	2	3
Sex (<i>n</i>)			
Male	4	4	8
Female	2	4	6
Marital Status (<i>n</i>)			
Married	4	5	9

Unmarried	2	2	4
Divorced	0	1	1
Family Type (n)			
Extended	4	6	10
Nuclear	2	2	4
Religion (n)			
Hindu	5	8	13
Converted Christian	1	0	1

269 The majority of the participants were engaged in cleaning activities for Dhaka City Corporation
 270 and private organisations, while the remainder were employed in household activities, as day
 271 labourers, or in garment factories. More than half of the participants (10 out of 14) lived with
 272 their extended family, and almost all (13 out of 14) were Hindu, with just one participant having
 273 converted to Christianity.

274 Table 2 presents the key demographic characteristics of the FGD participants. Five FGDs were
 275 conducted: (I) among 6 Agargaon Dalit men (mean age 28, SD \pm 8 years), (II) among 7
 276 Agargaon Dalit women (mean age 32, SD \pm 7 years), (III) among 6 Ganaktuli Dalit men (mean
 277 age 39, SD \pm 7 years), (IV) among 8 female Ganaktuli Dalit women (mean age 24, SD \pm 5
 278 years) and (V) among 9 Ganaktuli Dalit men (mean age 35, SD \pm 6 years).

279 **Table 2 Socio-demographic backgrounds of participants in the focus group discussions (n = 36)**

Focus group discussion	Age of the participants in years (mean \pm SD)	Location	Number of Participants	Gender
I	28 \pm 8	Agargaon	6	Male
II	32 \pm 7	Agargaon	7	Female
III	39 \pm 7	Ganaktuli	6	Male
IV	24 \pm 5	Ganaktuli	8	Female
V	35 \pm 6	Ganaktuli	9	Male

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3 281 The dominant recurring themes were organised into categories reflecting the majority of
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5 282 interactive elements of the ‘social determinants of health’ framework (i.e. socio-economic and
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7 283 political context [including governance, macroeconomic policies, social and public policies,
8
9 284 culture and societal values untouchability, caste-based discrimination, and social exclusion]
10
11 285 socio-economic position and intermediary determinants).

15 286 **Space and Power**

17
18 287 In an attempt to contextualise our findings within the wider socio-economic and political context,
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20 288 this section starts by providing a brief overview of the political history of the Dalit population.
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22 289 Accounts of the socio-political and economic dimensions of Dalit livelihoods helps in
23
24 290 understanding structural determinants of their health.

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28 291 In Bangladesh, the majority of untouchable Hindu Dalits have Indian origins. In Bangladesh, as
29
30 292 in India and Nepal, untouchable Hindus belong to the lowest social position at the base of the
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32 293 *Varna* system ⁵. During the reign of the Mughals, Dhaka was established as the commercial
33
34 294 capital of the Bengal Subah by *Subahdar* (viceroy) Islam Khan in 1608. As the city grew to
35
36 295 become one of the wealthiest and most prosperous cities in the South Asian region, the Mughal
37
38 296 administrator appointed sweepers to maintain sanitation and cleaning activities ⁴. In the 1620s
39
40 297 there was a large-scale migration of Dalit from India to Dhaka, which was precipitated by
41
42 298 massacres by Burmese pirates in 1624-26: they were required to remove dead bodies from the
43
44 299 city ⁷. It is commonly believed that a large number of Dalits were brought to the city by British
45
46 300 colonial administrators after Dhaka gained municipality status, to provide menial services ⁷.
47
48 301 During the period of British colonial rule (1757-1947), Dalits (Telugu-speaking and Kanpuri
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50 302 sweepers) were brought to East Bengal (now Bangladesh) from the Indian states of Uttar
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3 303 Pradesh, Bihar, Andhra Pradesh and many other areas, including Bhagalpur, Motihari, Baliha,
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5 304 Patna, Maddapurpur, Uriya, Gourakpur and Chapra ^{4;9}. As the English administration rapidly
6
7
8 305 developed townships and local municipalities, these populations were moved to meet the
9
10 306 increasing need for sanitation workers.

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12
13 307 The social position and status of Dalits are associated with their ancestral occupations, which
14
15 308 were regarded as impure. Dalits are mostly employed by public and private organisations for
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17
18 309 sweeping activities, cleaning latrines, removing filth, skinning cattle, sweeping streets and
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20 310 houses. Despite the lack of official data on the economic condition of Dalits, some secondary
21
22 311 sources claim that Dalits are engaged in low-paid manual work under severe discriminatory
23
24 312 terms ⁹, and consequently earn much less than national average, with one source claiming that
25
26 313 their income lies between BDT 3000-5000 (considering BDT78=US\$1) while the national
27
28 314 average is BDT 7203 ⁹. Processes of occupational discrimination and unfair payment contribute
29
30 315 to excluding the population from secure and safe dwellings. Dalit populations usually reside in
31
32 316 unhygienic environments characterised by poor quality, insufficient and irregular water,
33
34 317 electricity and gas provision. Overcrowded dwellings, narrow walkways, inadequate basic
35
36 318 facilities, such as toilets and water taps, represent significant everyday challenges that become
37
38 319 causes of further stigmatisation and marginalisation. Dalit populations often have to rely for
39
40 320 access to these services on middlemen and informal brokers, called *mastan* (local thugs); they
41
42 321 often rely on violence and illegal deals to negotiate access to resources. The interlacing of social
43
44 322 structures and political processes shape the Dalits' common everyday experiences of poverty and
45
46 323 constitute their shared identity.

47
48 324 The material circumstances of the Dalit group in Dhaka city were identified as major
49
50 325 intermediary determinants of their health status. Data from all this study's sources (e.g. IDIs,

1
2
3 326 FGDs and KIIs) reported poor living conditions, their concentration in government-established
4
5 327 slums, or so-called ‘colonies’, and their highly unsafe housing characterised by poor drainage,
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7 328 sanitation and water supply. Houses in government colonies had brick walls and corrugated iron
8
9 329 sheet roofs, while those in private slums were constructed from bamboo, tin, and wood. The
10
11 330 sweeper slums were very overcrowded, with most respondents reporting that one small room
12
13 331 housed 6–10 family members spanning three generations. The environment was also highly
14
15 332 polluted, leading to extremely unsafe living conditions.
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20 333 Sweeper slums also reported extremely unhygienic and inadequate sanitation conditions ¹⁰.
21
22 334 Bacteria, parasites, and disease vectors breed faster when sanitation and drainage systems are
23
24 335 poor and when warmer and wetter conditions are prevalent all year round. Such poor living
25
26 336 conditions are likely to increase the incidence of vector-borne/water-borne diseases and
27
28 337 infections^{9 30}. For example, diarrhoea and respiratory infections, such as pneumonia, were
29
30 338 commonly reported as the most frequent diseases among children aged less than five years old ⁹.
31
32 339 In addition, malaria, dengue fever, and *kala-azar* (visceral leishmaniasis) were reported to be
33
34 340 prevalent among all age groups.
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39 341 The wider socio-political context influences the effects of these material circumstances and has
40
41 342 multiple behavioural implications. The data collected from KIIs, IDIs and FDGs clearly indicates
42
43 343 that health policies largely ignore the specific needs of Dalits. For example, policies concerning
44
45 344 housing, the labour market and land emerged as restricting factors for health. Over centuries,
46
47 345 Dalit populations have been allocated space in designated colonies, and Dalit families have
48
49 346 shared very small living spaces from generation to generation. Data from all the sources reflected
50
51 347 that, despite the potential for promoting basic housing facilities within the government owned
52
53 348 land, effective initiatives were never taken due to the lack of policy support. The respondents
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3 349 related that government policy favoured congregating Dalits in such designated colonies, rather
4
5 350 than facilitating actions for housing supply and availability, and improving quality. One
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7
8 351 participant reported:

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10 352 *“Government policy has never allowed any action that facilitates housing facilities*
11
12 353 *for Dalit. They are living like this in colonies for generation; but, neither own nor*
13
14
15 354 *improve its quality.”* (A key informant in Ganaktuli)

16
17
18 355 Although the government has issued policy statements and strategies for the redistribution of
19
20 356 non-agriculture and agricultural *khas* land (government-owned fallow land) to landless people
21
22 357 since the early 1980s, Dalits have not been considered as a potential beneficiary group. More
23
24 358 than half of the participant reported that Dalits lack political power to influence the policy
25
26 359 aspects in this regard. One of the participants stated

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29
30 360 *You will see very minimal or no action taken from the govt. to solve the housing problem*
31
32 361 *of Dalit. I understand govt. can take necessary initiatives easily but it does not take so.*
33
34 362 *Why? I believe, Dalit has no power to influence govt. policy aspects. (A 46-year-old male*
35
36 363 *in Ganaktuli)*

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40 364 Therefore, the scope for improving health outcomes through facilitating housing conditions for
41
42 365 Dalits in allocated *khas* land is constrained by government land policy. One respondent stated:

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45 366 *“Landlessness is the first and foremost problem that impacts the overall wellbeing of*
46
47 367 *Dalit. Dalit living conditions are beyond description. But it can be improved through*
48
49 368 *distributing khas land to Dalit as it is provided to landless people. But, it is a matter*
50
51 369 *of fact that Dalit cannot fill in the inclusion criteria set by the policy.”* (A key
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53 370 informant in Agargaon)

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3 371 Furthermore, the participants, especially the community leaders and NGO workers, believed that
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5 372 the lack of government interventions restricted the potential for improving living conditions,
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8 373 which also affected the health status of the population.
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10 11 374 **Education and Labour**

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14 375 An individual's place in a given society can be described by the concept of 'social position', as
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16 376 proposed by Evans et al.³¹, which is generated and maintained under a broader social context.
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18 377 The social position of an individual is dynamically created by a number of elements, such as
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20
21 378 caste, religion or gender, which transmit intergenerational discriminations and inequalities.
22
23 379 Similar to what Evans et al. argue, when interviewing the participants we found that Dalits'
24
25 380 health can be seen as an outcome that is generated from social position, whereby an individual
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27
28 381 and/or group are unable to fully participate in society because of their socio-cultural identity. The
29
30 382 socio-economic context has shaped Dalits' engagement with educational institutions; Dalits face
31
32 383 discrimination and are often deprived of education through various means. Our data found that
33
34 384 less than 30% of Dalits had received formal schooling, compared to more than 65% of the
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36
37 385 national population. This figure tends to be even lower outside Dhaka city, as one respondent
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39 386 reported:

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41
42 387 *"In Dhaka city you will find higher number of Dalit who have schooling especially*
43
44 388 *among the younger generation. But, the figure will drastically fall if you consider*
45
46 389 *among the whole number of Dalit across the country."* (A Dalit activist and key
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48
49 390 informant from Ganaktuli)

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52 391 Respondents reported that their children faced discrimination by educational institutions, for
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54 392 example being denied admission to private schools, rejection and teasing by teachers or students.
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3 393 The school enrolment of Dalit girls has also decreased due to the practice of child marriage,
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5 394 which subsequently affected sexual and reproductive health. The very low literacy rate among
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8 395 Dalits resulted in little or no access to health information. One of the key informants reported:

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10 396 *“Education is vital for improving health and general well-being. When an individual*
11
12 397 *lacks education, he/she eventually will be in a worse position to negotiate access to*
13
14
15 398 *services and information such as nutrition. Low literacy amongst the Dalit, in turn,*
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17 399 *affects their health and overall well-being negatively.”* (A key informant in
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19
20 400 Ganaktuli)

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22
23 401 The participants further reported that the low level of education nurtured significant information
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25 402 asymmetries, which cause health-related misinformation, and limited occupational and income-
26
27 403 earning opportunities. Participants reported that, due to their being excluded from mainstream
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30 404 society, Dalits were perceived to have poor levels of infant and child feeding, breastfeeding
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32 405 practices, immunisation take-up, and personal and family hygiene, with an unhealthy
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34 406 consumption of tobacco and alcohol, etc. One participant stated that:

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37 407 *“I have little or no educational background. It might diminish my understanding of*
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39 408 *things like whether and what extent things such as smoking bad for health? ...what*
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41 409 *and how infant and young child should be fed? ...what are good practices for*
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44 410 *washing hands?”* (A 56-year-old woman in Ganaktuli)

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46
47 411 The data also revealed that little and/or no education narrows the occupational opportunities, and
48
49 412 subsequently results in low incomes. In addition to poor educational quality, Dalit occupational
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51 413 opportunities are determined by other factors such as caste-based identities and heredity, and
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54 414 together with poor education this reduces their chance of improving their health status.

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3 415 The data analysis also showed how the wider structural determinants interact with and influence
4
5 416 the status of Dalits and their material circumstances. We found that the labour market both
6
7 417 dynamically excludes and adversely includes Dalits by restricting their social and occupational
8
9 418 mobility. The data gathered from community participants and key informants strongly suggests
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11 419 that Dalit ancestral occupations have limited their skill sets and continue to force them to expose
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13 420 themselves to high health risks and to rely on very low wages.
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18 421 Exposure to a toxic physical environment whilst at work was commonly reported in the
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20 422 interviews and group discussions. Dalits are traditionally linked to their ancestral occupations,
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22 423 which were passed down from generation to generation. Consequently, the majority of Dalits are
23
24 424 engaged in sweeping and cleaning activities, manually handling waste material and garbage
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26 425 whilst using no personal protective equipment. This exposes them to large amounts of dust, bio-
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28 426 aerosols, volatile organic matter, airborne particulates, bacteria, noise, and ergonomic stress.
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30 427 Multiple participants reported that sweepers frequently experience infections. As one participant
31
32 428 explained:
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36 429 *“Dalit always carry health risk with them at workplaces as they are dealing with*
37
38 430 *very serious issues such as dumping garbage or removing dirt. But, they do not use*
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40 431 *protective equipment. [...] We are more likely than non-Dalit to experience physical*
41
42 432 *injuries or develop infections.”* (A 29-year-old cleaner in Agargaon)
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47 433 Similarly, another participant noted:
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49 434 *“Dalit sweepers don’t take any dust protective measure; therefore, they inhale it... I*
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51 435 *witnessed my colleagues develop respiratory infections and other airborne*
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53 436 *diseases.”* (A street sweeper in Ganaktuli)
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3 437 Nonetheless, Dalit participants were not inclined to look for alternative occupations, as they said
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5 438 there was no scope for them to work outside of these historical, marginalised social spaces.
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7 439 Participants were highly aware of their role in the history of the country, and explained that they
8
9 440 would face significant resistance if they tried to access occupations that did not conform to their
10
11 441 low social and political status. Occupation-based discrimination, lingering poverty, and social
12
13 442 stigmatisation reduced their opportunities to participate in the labour market on equal terms (in
14
15 443 relation to non-Dalits) and to engage with activities that were not considered ‘impure’. One FGD
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17 444 participant talked about how the lack of skills combined with long-established social norms
18
19 445 strongly discourage Dalits from engaging differently with the labour market:
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24 446 *“We are traditionally engaged in sweeping, as my ancestors did. I have no other skill*
25
26 447 *except this. How can I do [anything else], for example, pulling a rickshaw or running*
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28 448 *a business? Similarly, people will not come and take a cup of tea if I operate a tea*
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30 449 *stall.”* (A 37 year old cleaner in Agargaon)
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34 450 This particular barrier is becoming increasingly problematic, as over 70% of the respondents
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36 451 reported that their access to sweeping jobs had become highly insecure and precarious; although
37
38 452 initially the nature of their recruitment in sweeping activities was permanent, Dalits had more
39
40 453 recently had to compete for their occupation with non-traditional Muslim sweepers. Although the
41
42 454 city corporation’s sweeper recruitment policy states that the Dalit are given a quota, the
43
44 455 authorities have not adhered to this system in recent years. The frequent recruitment of non-
45
46 456 traditional sweepers by different government and non-government organisations has
47
48 457 considerably narrowed Dalits’ employment options, leading to financial hardship:
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53 458 *“Some proportion of sweeping is reserved in government offices. However, non-Dalit*
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55 459 *sweepers are getting these jobs through bribes to political leaders and government*
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3 460 *officials. Where will we go for work? We will likely have to resort to unsocial and*
4
5 461 *illegal activities to survive if this situation is not improved.”* (A housewife in
6
7 462 Agargaon)

9
10
11 463 The lack of a sufficient and regular income limited Dalit participants’ capacity to afford basic
12
13 464 necessities, including food, healthcare (particularly from private facilities), and education fees.
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15 465 Their average monthly household income ranged from BDT 5850 to 8970 (considering
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17 466 BDT78=US\$1), which was insufficient to buy three nutritious meals per day for an extended
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20 467 family.

21 22 23 468 **Politics and Relationships**

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26 469 Our data has identified a set of social and political factors in the given political and governance
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28 470 system that impact upon the Dalit health status through stratifying individual positions on the
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30 471 basis of hierarchies of power and prestige, and access to resources. Due to their weak socio-
31
32 472 economic position, caste-based identity and discrimination, Dalits in the studied areas generally
33
34 473 have a weak power of participation in political processes, both at the national and community
35
36 474 level. One of the participants from Ganaktuli reported:

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40 475 *“Our sweeping identity shapes our world – our work, our rights, our opportunities,*
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42 476 *our limitations, it shapes everything. Hundreds of years we are living a confined life*
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44 477 *in a sense that the mainstream society maintains a greater distance as we belong to*
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46 478 *such a low caste. Where are we? ...In education, in health, in politics? ...nowhere.”*
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48
49 479 (add details)

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53 480 The lack of political participation generated by a lack of consideration and discrimination by
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55 481 other powerful groups limited Dalits’ opportunity to voice their needs and impeded their capacity

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3 482 to exercise other constitutional and human rights. Making a direct connection between political
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5 483 engagement and health, one participant voiced:

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8 484 *“To my knowledge, no one from the Dalit community has appeared as a candidate in*
9
10 485 *any election at national or community level. Even, they are likely to be less*
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12 486 *concerned about this. Such an absence in political process diminishes our capacity*
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14 487 *to protect communal interest concerning health.”* (A 34-year-old Dalit in Agargaon)

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18 488 Data from interviews with key informants and group discussants indicated that factors relating to
19
20 489 macroeconomic policies influenced the health of Dalits. Macro level policies were considered to
21
22 490 be having a negative impact on their health status and health seeking capacity, and public
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24 491 allocations for social protection and healthcare schemes continued to exclude people living in
25
26 492 urban settings. One of the key informants reflected on the situation:

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29
30 493 *“Government policy only provides safety-net support for poor in the rural setting.*
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32 494 *However, the Dalit are concentrated on the big cities and smaller towns. ...therefore*
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34 495 *we are not eligible for that.”* (A key informant in Agargaon)

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37
38 496 This policy significantly affected Dalits' capacity to seek and afford treatment in settings where
39
40 497 they were exposed to regular health shocks and hazards. For example, in the existing health
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42 498 policy, two-thirds of healthcare costs are financed via an out-of-pocket mechanism ³², and the
43
44 499 urban poor experience limited or no healthcare support. Participants reported that having no
45
46 500 social protection schemes meant that they had to rely on considerable out-of-pocket healthcare
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48 501 expenditure in order to access healthcare from both public and private facilities. The low
49
50 502 income-earning capacity of Dalits interacted directly with their individual socio-economic
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52 503 condition, particularly for those suffering from chronic health conditions that required prolonged

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3 504 and continuous care and medication. The inability to afford treatment was frequently reported as
4
5 505 an important barrier to better health by respondents suffering from cardiac issues, diabetes and
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7
8 506 renal disease due to out-of-pocket costs. One of them said:

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10 507 *“I have been suffering from diabetes for the past years. The doctor prescribed*
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12 508 *several drugs that I imperatively need to continue taking to control my sugar levels. I*
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14
15 509 *cannot afford such drug for rest of my life [...] you will never expect to get diabetic*
16
17 510 *drug free of cost.”* (A street sweeper in Ganaktuli)

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20 511 Some participants highlighted the heavy reliance on expensive private health service providers as
21
22 512 a significant determinant of bad health. They indicated that an individual’s health status tended
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24
25 513 to deteriorate when they needed to access healthcare services from a local private institution. A
26
27 514 key informant in Ganaktuli explained that local private healthcare facilities generally tended to
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29
30 515 be better equipped than local government facilities, and increasingly played a ‘vital role in
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32 516 healthcare services delivery.’ However, he noted:

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34
35 517 *“If the problem is not minimal and, you must seek consultant at private facilities this*
36
37 518 *involves huge expenses that are most likely beyond the capacity of Dalit. ...I know a*
38
39 519 *few individual who have been suffering from chronic disease but fail to take care*
40
41 520 *from private clinic due to the cost incurred.”* (A key informant in Ganaktuli)

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45 521 Beyond the costs incurred by care, participants also identified the behaviour of healthcare
46
47 522 professionals in public and private facilities as barriers to their accessing better health.
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49 523 Respondents shared experiences of entrenched stigmatisation and discrimination that hampered
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51 524 their willingness and motivation to see a doctor, thereby generating a process of self-exclusion
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54 525 from these facilities.

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3 526 The Dalit identity generates considerable caste-based discrimination, enhancing exclusion,
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5 527 broadening inequalities, and restricting them from accessing healthcare. Dalit people, considered
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7 528 untouchable due to their traditional employment that brings them into contact with human
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9 529 excreta, dirt, garbage, bad odours, dead bodies, and other elements, are defined by others by their
10
11 530 impurity. One participant described how mainstream society perceives the Dalit, and the
12
13 531 following quote denotes how societal perceptions have been internalised by Dalits themselves:
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16
17 532 *“We are methar [a Bangla colloquial term signifying degradation, disgust], nothing*
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19 533 *more than that. Our position can be nowhere else but at the bottom of the society.”*

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21
22 534 (A 34-year-old scavenger in Agargaon)
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24

25 535 These socio-economic mechanisms and Dalits’ identity interact with other factors to create
26
27 536 psychosocial factors that determine their health status. Due to social discrimination and
28
29 537 exclusion, Dalit often lose their self-worth and experience depression and shame. Such feelings
30
31 538 in turn lead to social isolation and further narrow individual and/or community participation in
32
33 539 health programmes. The participants further stated that Dalits could not fully participate in
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35 540 community-based health programmes focusing on child and maternal health, the promotion of
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37 541 nutrition, immunisation, sanitation and hygiene. One participant explained the situation as
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39 542 follows:
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44 543 *“Dalit are social excluded and discriminated in many ways. Due to such*
45
46 544 *discrimination and exclusion, they might lose self-esteem to be open-minded in*
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48 545 *participation of community-led health programmes.”* (A 34-year-old cleaner in
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50 546 Agargaon)
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3 547 Prejudices against the Dalits are also reproduced by healthcare workers. Most respondents
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5 548 reported that healthcare workers were more likely to consider their health problems to be less
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7 549 serious than those of non-Dalits in order to limit the amount of time spent with them and their
8
9 550 exposure to ‘impurity’. In small townships and localities outside Dhaka city, for example in
10
11 551 primary level healthcare facilities where Dalits are easily identified by locals, they reported being
12
13 552 more likely to face such prejudice and discrimination from healthcare workers. Multiple
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15 553 participants echoed the following experience of visiting a health facility:
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20 554 *“Sometimes we do not disclose our identity to avoid neglect and unpleasant*
21
22 555 *situations. ... I can tell you a tragic story about the hospital admission of a Dalit*
23
24 556 *woman. She was denied to get hospital admission and was kept lying on the floor of*
25
26 557 *the balcony because she was a Dalit. Meanwhile, she developed additional problems*
27
28 558 *— common cold, fever and breathing difficulties in such cold weather. Only later,*
29
30 559 *when we put the issue forward the hospital authority admitted her and provided a*
31
32 560 *bed.”* (A 51-year-old Dalit rights activist in Ganaktuli)
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37 561 Several participants described a lack of attention from healthcare workers, and difficulties in
38
39 562 obtaining adequate information regarding their health problems and required treatments. The
40
41 563 following excerpt reflects this situation:
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44 564 *“Doctors/nurses are unwilling to discuss details regarding any health information or*
45
46 565 *health intervention in the facilities. They just provide minimal medicine and maintain*
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48 566 *indifference when asked about a health-related problem.”* (A 55-year-old leather
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50 567 worker in Ganaktuli)
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3 568 Such negligent and discriminatory behaviour on the part of healthcare providers made Dalits
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5 569 hesitant to participate in health promotion activities to enhance their own health, and even
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7 570 influenced their decisions to delay seeking treatment for infectious diseases. One of the key
8
9 571 informants explained how the socio-political position of the Dalit community impacted upon the
10
11 572 care-seeking behaviour of Dalits:
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15 573 *“The Dalit live as a minority within the mainstream. All aspects of their lives – such*
16
17 574 *as profession, access to services, rights and obligations, decisions, and so on – are*
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19 575 *determined and ascribed by these social and political contexts.”* (A NGO worker in
20
21 Ganaktuli)
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25 577 Denied access to formal and informal safety nets, this marginalisation is reinforced by
26
27 578 idiosyncratic forms of discrimination based on class, gender, physical ability and age in
28
29 579 particular. Under-nutrition of low-income (often extreme poor) adolescent girls, pregnant
30
31 580 mothers and elderly widows was found to be particularly severe. Health inequalities experienced
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33 581 by Dalits were also influenced by the manner in which policies are developed and translated into
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35 582 practice. One key informant stated:
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39 583 *“The state did not consider that context-specific healthcare provision might be*
40
41 584 *effective for providing services to this kind of disadvantaged group of people. We*
42
43 585 *need the formulation of policies that cover the delivery of health services to the Dalit*
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45 586 *and other groups of people who are in an unfavourable position to seek care.”* (A
46
47 587 Dalit rights activist in Agargaon)
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51
52 588 In addition, some respondents reported that being a Dalit was associated with behaviours that
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54 589 negatively affected their health. Many respondents claimed that male Dalits were likely to
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3 590 consume high quantities of low-quality alcohol and tobacco, noting that this behaviour can be
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5 591 explained by the difficult occupations and psycho-social pressure they experienced. Exposure to
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8 592 bad odours, dirt and dead organisms can induce vomiting and appetite loss, and according to
9
10 593 some respondents consuming alcohol and cigarettes mitigated the negative psychological and
11
12 594 physical effects of this type of work. Historically, Dalits have been characterised by such
13
14 595 depictions and so this is not new; it is beyond the scope of this research to assess the veracity of
15
16 596 such claims. However, what is noteworthy is how such claims serve to further stigmatise
17
18 597 members of this population group, who according to some respondents, are “*habituated to*
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20 598 *consume alcohol and tobacco products*” as they believe it is “*a habit rooted in their*
21
22 599 *occupational roles and psychosocial identity*” (A 23-year-old scavenger in Agargaon). Our data
23
24 600 suggests that Dalit children living in marginalised settlements suffer from stigmatisation and are
25
26 601 therefore constrained in their physical mobility and social interactions. Although it was not
27
28 602 possible to measure the physical growth of children due to the nature of this study, participants
29
30 603 reported that children, particularly those aged under 5 years, were likely to be undernourished.
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32 604 Poverty, low health information and awareness, and physical environment were reported as the
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34 605 most likely causal factors for such poor physical and social development of young children.
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41 606 As a response to the hostile wider socio-political context and challenging material circumstances,
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43 607 traditional health practices and rituals are widely practised within the Dalit community.
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45 608 Religious beliefs and spirituality influence their health status and attitudes towards seeking
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47 609 treatment. It was for example found that low-income Dalits adhering to strict religious beliefs
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49 610 were more likely to rely on faith-based healing for sexual and reproductive health, pregnancy
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51 611 care, and infant and child feeding practices.
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55 612 **DISCUSSION**

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3 613 To the best of our knowledge this is the first study aimed at understanding the socio-cultural and
4
5 614 economic determinants of health inequalities in the Dalit population in Bangladesh, and it applies
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7 615 the CSDH Conceptual Framework developed by the WHO. Our analysis suggested that the
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9 616 mechanisms of social and economic discrimination that result in severe health inequalities (as
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11 617 claimed by the participants) for Dalits are supported and reinforced by an array of interconnected
12
13 618 structural factors, including geographic marginalisation, poor living conditions, low formal
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15 619 education, little political representation, poor access to resources, limited labour market
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17 620 engagement, and stigmatisation. Stigmatisation was found to be pervasive, and to directly shape
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19 621 relational and structural determinants of health.
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24 622 Dalits' occupation-based identity determines their ability to interact with non-Dalits and with the
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26 623 state, and their stigmatisation as an impure, unhygienic, uneducated population group reinforces
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28 624 these processes and worsens their material and psychosocial circumstances. These are identified
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30 625 as significant intermediary determinants of their health status within this specific urban context
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32 626 ³³. Our findings confirm that health inequalities are rooted in the social process, whereby
33
34 627 structural, contextual, and interpersonal factors intersect and influence each other ³⁴⁻³⁶ and build
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36 628 on these to show how pervasive identity-based discrimination perpetuates the causes and effects
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38 629 of health inequalities.
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44 630 Untouchability and caste-based discrimination perpetuate an exclusionary process that results in
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46 631 this population belonging to a lower caste status with limited or no access to or participation in
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48 632 healthcare services or health seeking behaviours, and has been similarly noted by studies
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50 633 conducted in Indian societies ³⁷⁻⁴¹. Broadly, these socio-culturally constructed exclusionary
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52 634 processes restrict Dalits' economic, political, social and cultural participation, which in turn
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54 635 negatively impacts upon their health and well-being at the individual, communal, regional, and
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3 636 global levels. These observations are also in line with a prior report of the Social Exclusion
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5 637 Knowledge Network (SEKN) to the World Health Commission on Social Determinants of
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7 638 Health, which stated that sociocultural exclusion is a dynamic and multi-dimensional process
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9 639 driven by unequal power relations^{35;38;42}.

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13 640 Our results also highlight power differentials between Dalit individuals and healthcare
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15 641 professionals, which enhance health inequities and further victimise Dalits, and are in line with
16
17 642 the results of another study in India⁴³. These power differentials further repress the social,
18
19 643 political, and economic participation of Dalits, leading to the unequal and unjust distribution of
20
21 644 resources and access to services. Overall, sociocultural exclusionary processes generate,
22
23 645 preserve, and reproduce inequalities regarding participating in, accessing, and utilising health
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25 646 services, which perpetuate intergenerational deprivation and discrimination. Other studies have
26
27 647 demonstrated that caste-based exclusion, deprivation, and discrimination have been practised on
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29 648 the Indian subcontinent for thousands of years^{4;43}.

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35 649 The socio-economic and political context, together with macro-policies, facilitate the
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37 650 exclusionary process whereby Dalit people have limited opportunities for livelihood
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39 651 development and to improve their economic condition, consequently reducing their income
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41 652 opportunities and trapping them in poverty. This trap is sustained and enhanced through
42
43 653 intergenerational transmission. Income is strongly associated with health and influences a range
44
45 654 of material circumstances that directly impact health. Economic exclusion also determines access
46
47 655 to and utilisation of health services, while economic marginalisation appears to limit the
48
49 656 provision of healthcare, health-seeking behaviours, and access to other basic services provided
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51 657 by members of society and the state^{31;44}. In addition, social and public policies narrow
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53 658 healthcare utilisation and healthcare-seeking, e.g. catastrophic out-of-pocket costs and the
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3 659 shrunken delivery of healthcare by public health facilities. The literature shows that over the
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5 660 recent years out-of-pocket costs are gradually increasing due to the steady expansion of private
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7 661 healthcare services ^{32;45} and this affects healthcare seeking and utilisation. The wider structural
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9 662 factors facilitate the Dalits' compromised material circumstances, unhealthy lifestyle, and social
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11 663 isolation. As noted by other studies ^{30;46;47}, our findings show that poor living and working
12
13 664 conditions, limited healthcare access and support, poor state of water and sanitation, habit of
14
15 665 tobacco consumption, stress, and isolation from health services, negatively impact upon health
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17 666 status and healthcare seeking. A lower social background was observed by Dubey ⁴⁸ to
18
19 667 contribute to weakening social networks that perpetuate poor healthcare access and healthcare
20
21 668 seeking. Furthermore, the health system itself influences the health of Dalits as it presents Dalits
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23 669 with greater financial costs when accessing or seeking healthcare, as noted in other studies ^{32;49}.
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25 670 Moreover, access to and acceptance by healthcare providers is determined by the social position
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27 671 of individuals and groups; Dalits' low social position restricts their access to healthcare
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29 672 professionals, as had been previously reported in many regions across the world ^{46;50;51}. Our
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31 673 findings suggest that the health status of the Dalit community is not shaped solely by clinical
32
33 674 issues but also by a range of sociocultural determinants, as proposed in several other studies ^{10;52}.
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35 675 For disadvantaged, marginalised, and socio-culturally excluded individuals or groups like Dalits,
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37 676 health outcome improvement is closely linked to public policies and actions that address socio-
38
39 677 cultural determinants of health inequities, with the government playing a central role ⁵³.

678 **LIMITATIONS OF THE STUDY**

679 The results of this study are based on data collected from the Dalit population in Dhaka City;
680 therefore, the results may not be transferable to other settings, for example a small Bangladeshi
681 town. Nonetheless, considering the data collected, we believe that this study provides an in-depth

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3 682 understanding of a set of social, cultural, economic and political factors that strongly determine
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5 683 the health outcomes of Dalits.
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8 9 684 **CONCLUSIONS AND IMPLICATION FOR THE STUDY**

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12 685 Although this subject has previously been sporadically discussed in newspaper reports, NGO
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14 686 reports and media reports, this paper is one of the first qualitative studies to explore a vast array
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16
17 687 of factors that determine health inequalities in urban Dalit populations in Bangladesh. This study
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19 688 is expected to contribute to knowledge by investigating how these elements interact and play a
20
21 689 determining role in shaping Dalits' health status. This study supports the view that Dalit health
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23 690 inequalities are largely affected by a wide range of socio-cultural factors which can be observed
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25 691 in societies across many regions of South Asia.
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29 692 Importantly, we argue for the need to recognise the significant intermediary effects of everyday
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31 693 discrimination and stigmatisation, perpetuated by socio-economic structures, on educational
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33 694 achievement, political participation, occupations and health behaviours. Dalits' social and
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35 695 political history shapes their social position in society today by limiting their power relative to
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37 696 non-Dalits in key social structures, including the labour market and health institutions. These
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39 697 mechanisms enhance exclusionary processes through mutually reinforcing sets of socio-cultural
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41 698 and economic dynamics, and these generate, sustain, deepen, reinforce and reproduce
42
43 699 inequalities in the health of Dalit populations. Therefore, it is unlikely that the health status of
44
45 700 Dalit populations will be improved through the better clinical performance of existing healthcare
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47 701 providers alone. Recognition of the hostility of existing institutions and addressing entrenched
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49 702 exclusionary processes (including self-exclusion) and adverse inclusion is needed, together with
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3 703 research on the potential benefits of developing state-initiated social protection schemes focusing
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5 704 on deepening the social inclusion agenda.
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27 710 **Abbreviations**
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31 711 BDT: Bangladesh Taka; CSDH: Commission on Social Determinants of Health; FGD: Focus
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33 712 Group Discussions; IDI: In-depth Interviews; KII: Key Informant Interviews; NGO: Non-
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35 713 governmental Organisations; PWD: Public Works Department; SEKN: Social Exclusion
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37 714 Knowledge Network; WHO: World Health Organization; USD: United State Dollar;
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722 **Availability of data and materials**

723 As we informed the participants during the consent process that data would only be shared
724 within the research team, then the data cannot be made available publicly. However, we shared
725 the interview and discussion guidelines under 'additional supporting files.' Interested parties may
726 contact Mr. Md. Shahin Chowdhury (anthro.du@yahoo.com), Senior Administrative Assistant,
727 Department of Anthropology, Dhaka University, for further inquiries in this regard.

728 **Author contributions**

729 AK (ashraful.icddrb@gmail.com) conceptualized the study, participated in data collection and
730 analysis, and prepared the first draft of the manuscript. MRLM (mathilde.maitrot@york.ac.uk)
731 reviewed and edited the manuscript. AA (israabd@gmail.com) guided the data collection and
732 analysis. All authors read and approved the final version of the manuscript.

733 **Competing Interest**

1
2
3 734 The authors declare that they have no conflicts of interest.
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6 735 **Consent for publication**
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10 736 Participants provided consent to publish their quotes anonymously or using pseudonyms.
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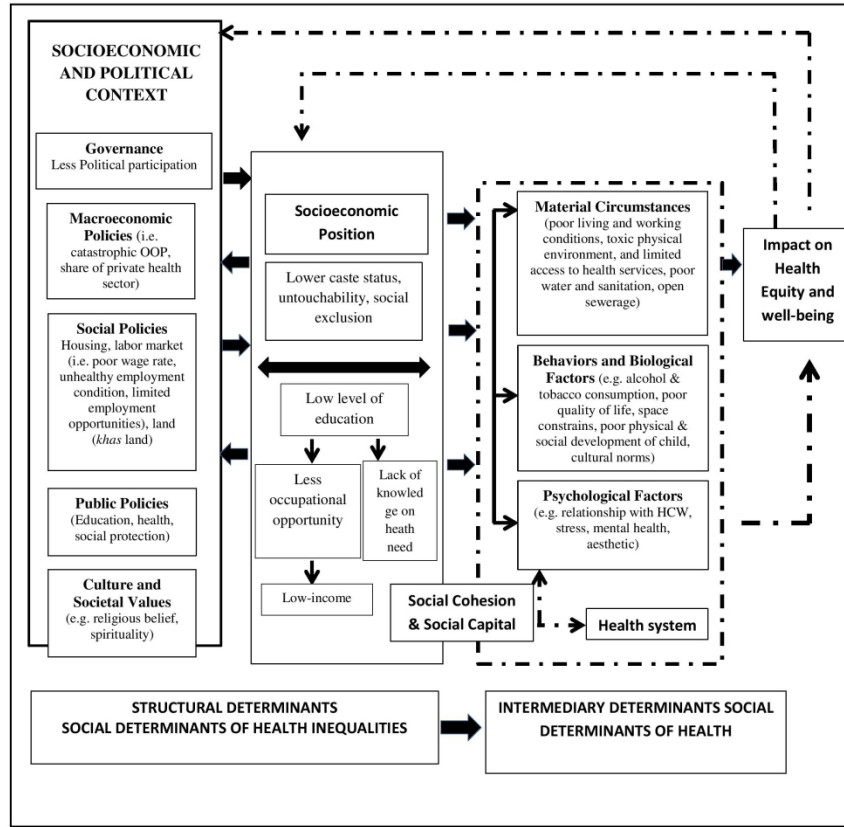
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Standards for Reporting Qualitative Research (SRQR)*

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<p>Title - Qualitative exploration of socio-cultural determinants of health inequities of Dalit population in Bangladesh</p>	
<p>Abstract Dalits (<i>jaat</i> sweepers), a marginalised traditional working community, have relatively poor access to healthcare services. This study sought to explore the socio-political and cultural factors associated with health inequalities among Dalits in an urban setting. An exploratory qualitative study design was adopted. The acquired data was analysed using an iterative approach which incorporated deductive and inductive methods in identifying codes and themes. This study was conducted in two sweeper communities in Dhaka city. Participants were Dalit men and women (fourteen in-depth interviews, mean age±SD 30±10; and five focus group discussions), and the community leaders and NGO workers (seven key informant interviews). Dalits (untouchables) are typically considered to fall outside the caste-based social structure and existing vulnerabilities are embedded and reinforced by this identity. Dalits' experience of precarious access to healthcare or poor healthcare is an important manifestation of these inequalities and has implications for the economic and social life of Dalit populations living together in geographically constrained spaces. A better understanding of the precise influences of socio-cultural determinants of health inequalities is needed, together with the identification of the strategies and programmes needed to address these determinants with the aim of developing more inclusive health service delivery systems.</p>	

Introduction

<p>Problem formulation – In recent years Bangladesh has achieved remarkable progress in terms of health targets. However, these advances are experienced unequally across the population, often leaving behind individuals and communities that are economically marginalised and socially excluded. Improved health services, especially those provided by the state, are not yet effectively distributed to all individuals and groups, and frequently fail to reach ethnic minorities, people living in remote areas, extremely poor individuals, slum and pavement dwellers, and other marginalised groups. Several studies in Bangladesh have highlighted the socio-economic issues and discrimination encountered by the Dalit population; however, the socio-political and cultural factors that contribute to generating severe health inequalities remain largely unexplored.</p>	
<p>Purpose or research question – To explore the political, social, economic, and cultural determinants of health inequalities experienced by the majority of the Dalit population.</p>	

Methods

<p>Qualitative approach and research paradigm – We adopted a qualitative approach (phenomenological). ‘Commission on Social Determinants of Health (CSDH) Conceptual Framework’ proposed by the World Health Organization (WHO) in 2010 guided our analysis.</p>	
<p>Researcher characteristics and reflexivity – Three researchers graduated in anthropology and public health conducted interviews, performed analysis, report the finding. The researchers have a vast experience in qualitative research. We adhered to the trustworthiness by applying four principles—credibility, transferability, conformability, and dependability. We used inter-coder or synchronic reliability that refers to the amount of agreement between independent coders of the data. We measured the agreement during the analysis when the researchers’ coded same interviews independently. We furthermore performed triangulation between methods, and participants.”</p>	
<p>Context – This study was conducted in two sweeper communities in Dhaka city: the <i>Agargaon</i> Public Works Department (PWD) Sweeper Colony, and the Ganaktuli sweeper colony located in the city’s Hazaribagh area. Commonly, the sweepers in Agargaon and Ganakatuli are known as <i>Telegu</i> and <i>Kanpuri</i>, respectively. There are no official statistics providing precise population figures for these colonies, although secondary sources indicate that each includes approximately 1,000 families</p>	
<p>Sampling strategy - Using several data collection tools we achieved maximum variation within the sample, purposefully collecting data from participants with various backgrounds, e.g. differing in terms of age, occupation, gender, position within the household, status within the community (leaders), and members of non-governmental organisations (NGOs, henceforth)</p>	
<p>Ethical issues pertaining to human subjects- The study protocol was approved and ethical approval was obtained from the ‘ethics review committee’ at Dhaka University, Bangladesh. Written informed consent was taken and documented via audio recording. Before obtaining consent the research objectives were explained, together with the importance of the study, confidentiality rules, possible harms and benefits, and the participants’ right to withdraw from the interviews at any stage during the conversation. Confidentiality of the personal identification of all participants was strictly maintained, with these details only being used by the researchers. Data was analysed using the participant identification (ID) number only and these ID number were removed prior to reporting the findings.</p>	
<p>Data collection methods - Qualitative data was collected using 14 in-depth interviews with Dalit men and women, 5 focus group discussions with people from the Dalit community, and 7 key informant interviews. The acquired data was analysed using an iterative approach which incorporated deductive and inductive methods in identifying codes and themes.</p>	
<p>Data collection instruments and technologies – We used three data collection tools—in-depth interview (IDI), focus group discussion (FGD), and key informant interview (KII). We maintained maximum variation within the sample as we used purposive sampling to select the participants on the basis of key variables including age, gender and occupation.</p>	

1 2 3	Units of study – Socio demographic and contextual characteristics were explained to provide a deeper understanding of the phenomena. Individual health seeking experience was described accordingly.	
4 5 6 7	Data processing - The analysis process was adequately accomplished by the team of researchers, who have different educational backgrounds and training, through regular collaboration and discussions, self-reflexivity, and triangulation of method and context (field sites), ensuring that no one researcher’s view was predominant.	
8 9 10 11 12 13 14 15 16 17	Data analysis - To analyse the qualitative data we used an iterative approach which blended deductive and inductive methods to identify and generate codes and themes. Initially, a deductive approach was used through the use of interview guides, which provided a primary template for the framework of data coding. The researchers independently read and reread a few transcripts and identified codes which were incorporated into the coding framework in an inductive form which mirrored the ideas, perceptions, practices, and concepts, concentrating on the health and health services of the participants. After coding all of the interviews we looked for clusters of several codes, which were termed ‘themes’ or ‘concepts’.	
18 19 20 21 22 23 24	Techniques to enhance trustworthiness - “In this study, we adhered to the trustworthiness by applying four principles—credibility, transferability, conformability, and dependability. We used inter-coder or synchronic reliability that refers to the amount of agreement between independent coders of the data. We measured the agreement during the analysis when the researchers’ coded same interviews independently. We furthermore performed triangulation between methods, and participants.”	

Results/findings

25 26 27 28 29 30 31 32 33 34 35 36 37	Synthesis and interpretation - The health status of members of these Dalit groups is determined by an array of social, economic and political factors. As Dalits (untouchables) are typically considered to fall outside the caste-based social structure and existing vulnerabilities are embedded and reinforced by this identity. Dalits’ experience of precarious access to healthcare or poor healthcare is an important manifestation of these inequalities and has implications for the economic and social life of Dalit populations living together in geographically constrained spaces.	
38 39 40 41	Links to empirical data – quotes were used in the result sections where it suits best.	

Discussion

42 43 44 45 46 47 48 49 50	Integration with prior work, implications, transferability, and contribution(s) to the field - The provision of clinical healthcare services alone is insufficient to mitigate the negative effects of discriminations and to improve the health status of Dalits. A better understanding of the precise influences of socio-cultural determinants of health inequalities is needed, together with the identification of the strategies and programmes needed to address these determinants with the aim of developing more inclusive health service delivery systems.	
51 52 53 54 55 56 57	Limitations - The results of this study are based on data collected from the Dalit population in Dhaka City; therefore, the results may not be transferable to other settings, for example a small Bangladeshi town. Nonetheless, considering the data collected, we believe that this study provides an in-depth understanding of a set of social, cultural, economic and political factors that strongly determine the health outcomes of Dalits.	

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Qualitative exploration of socio-cultural determinants of health inequities of Dalit population in Dhaka City, Bangladesh

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Keywords:	caste, Dalit, qualitative method, sociocultural determinants, health inequalities, untouchability

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3 1 Qualitative exploration of socio-cultural determinants of health inequities of Dalit
4 population in Dhaka City, Bangladesh
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7 3 **Short Title: Socio-cultural determinants of health inequities: Dalit population,**
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9 4 **Bangladesh**
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16 ABSTRACT

17 **Objectives:** In recent years Bangladesh has made remarkable advances in health outcomes;
18 however, the benefits of these gains are unequally shared amongst citizens and population
19 groups. Dalits (*jaat* sweepers), a marginalised traditional working community, have relatively
20 poor access to healthcare services. This study sought to explore the socio-political and cultural
21 factors associated with health inequalities among Dalits in an urban setting.

22 **Design:** An exploratory qualitative study design was adopted. The acquired data was analysed
23 using an iterative approach which incorporated deductive and inductive methods in identifying
24 codes and themes.

25 **Settings:** This study was conducted in two sweeper communities in Dhaka city.

26 **Participants:** Participants were Dalit men and women (fourteen in-depth interviews, mean
27 age \pm SD 30 \pm 10; and five focus group discussions), and the community leaders and NGO workers
28 (seven key informant interviews).

29 **Results:** The health status of members of these Dalit groups is determined by an array of social,
30 economic and political factors. Dalits (untouchables) are typically considered to fall outside the
31 caste-based social structure and existing vulnerabilities are embedded and reinforced by this
32 identity. Dalits' experience of precarious access to healthcare or poor healthcare is an important
33 manifestation of these inequalities and has implications for the economic and social life of Dalit
34 populations living together in geographically constrained spaces.

35 **Conclusions:** The provision of clinical healthcare services alone is insufficient to mitigate the
36 negative effects of discriminations and to improve the health status of Dalits. A better

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3 37 understanding of the precise influences of socio-cultural determinants of health inequalities is
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5 38 needed, together with the identification of the strategies and programmes needed to address these
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8 39 determinants with the aim of developing more inclusive health service delivery systems.
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11 40 **Key Words:** Bangladesh; caste; Dalit; qualitative method; sociocultural determinants; health
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13 41 inequalities; social exclusion; untouchability
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16 42 **Strengths and limitations of this study**

- 19 43 • This study used the ‘Commission on Social Determinants of Health Conceptual
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21 44 Framework’ proposed by the World Health Organization (WHO) which allow us to
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23 45 investigate how a set of social, cultural, economic and political elements interact and play
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26 46 a determining role in shaping Dalits’ health status.
- 28 47 • To the best of our knowledge this is the first study that comprehensively examines how
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30 48 socio-cultural and political elements are interconnected, and how they produce, sustain,
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32 49 and reinforce health inequality among the Dalit population in Bangladesh.
- 35 50 • To analyse the qualitative data we used an iterative approach which blended deductive
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37 51 and inductive methods to identify and generate codes and themes.
- 40 52 • The main limitation is that the sample size is unavoidably small; therefore, the
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42 53 generalizability of the findings to other areas might be limited due to the contextual
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44 54 characteristics. Nonetheless, considering the data collected, we believe that this study
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46 55 provides an in-depth understanding of the determinants of health inequalities among Dalit
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48 56 population in Bangladesh.
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58 BACKGROUND

59 In recent years Bangladesh has achieved remarkable progress in terms of health targets, with
60 declining maternal and neonatal mortality rates, increased immunisation coverage, greater life
61 expectancy at birth, and increased vitamin A supplementation^{1;2}. However, these advances are
62 experienced unequally across the population, often leaving behind individuals and communities
63 that are economically marginalised and socially excluded. Improved health services, especially
64 those provided by the state, are not yet effectively distributed to all individuals and groups, and
65 frequently fail to reach ethnic minorities, people living in remote areas, extremely poor
66 individuals, slum and pavement dwellers, and other marginalised groups³. This paper focuses on
67 analysing the healthcare barriers experienced by one marginalised group, the Dalits, the
68 untouchables.

69 Bob et al.⁴ explain that the word 'Dalit' comes from the Marathi language and means
70 suppressed, 'broken up', downtrodden or oppressed, and the term was first used by Dr B. R.
71 Ambedkar during the late period of British colonial rule. The Dalits of Bangladesh are a
72 marginalised group whose identity is often characterised by the manual and low-status nature of
73 their occupations. This identity and social status are strongly associated with their ancestral
74 occupations, which were typically considered unclean and impure. In the 1872 census conducted
75 in Bengal, the majority of Dalits were referred to by the term *Chandala*, a Sanskrit word for
76 someone who deals with the disposal of corpses, a Hindu outcaste. In 2017 they are often called
77 *Harijan*, a term coined by Mahatma Gandhi meaning 'children of God', or more commonly
78 referred to by their occupation, family descent, ethnicity, or derogatory terms. The dalits often
79 engage in sweeping activities, such as cleaning latrines, removing rubbish, skinning cattle, and

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3 80 sweeping streets and houses. They scavenge in Bangladesh's cities and towns, and are
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5 81 designated as 'untouchable' within the caste system of the Indian subcontinent^{5,6}.

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8 82 Healthcare issues of the Dalit population in Bangladesh remain largely neglected in the national
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11 83 government's development agenda^{7,8}, despite its strong constitutional commitment to 'not
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13 84 discriminate against any citizen on grounds only of religion, race, caste, sex or place of birth'
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15 85 (The Bangladesh Constitution of 1972, Article 28 (1). Although available literature⁹⁻¹¹ (i.e.
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17 86 Bangladesh Demographic and Health Survey, Bangladesh Urban Health Survey) does not
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19 87 present nationally representative demographic and survey data to demonstrate how extend the
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21 88 healthcare access, and health and nutritional outcomes differ statistically between Dalit and other
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23 89 non-Dalit population in Dhaka city, some study reports indicate that Dalit have poor health
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25 90 outcome across the population in slum and other settings¹²⁻¹⁵. For example, Nagorik Uddyog
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27 91 (Bangladesh Dalit and Excluded Rights Movement) notes:

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32 92 *"Health surveys and research programmes undertaken with respect to the 'public health*
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34 93 *situation' in the country do not pay special attention to the child and maternal health*
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36 94 *conditions in the colonies and settlements where Dalit communities live. Because of this*
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38 95 *non-attention to their specific health situation, their suffering and specific requirements*
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40 96 *to access non-discriminatory and affordable health care remain unreported and*
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42 97 *unattended to."*¹⁵

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47 98 . Chowdhury reported that Dalit are generally afflicted by skin diseases, diarrhea, tuberculosis,
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49 99 pneumonia at a higher level than the non-Dalit population¹³. Islam et al.¹⁴ reported that water-
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51 100 borne disease are highly prevalent among Dalit population as water and sanitation facilities is
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53 101 scarce in the slum— with reports of nearly 12,000 Dalit sharing two water points in Dhaka, and

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3 102 nearly 58% of Dalit have no access to sanitary latrine¹³. A study conducted outside the capital
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5 103 city, found that in a Dalit community in Jessore city around half of pre-school children were
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7 104 suffering from chronic stunted (58%) and underweight (45%), while nationally the
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9 105 corresponding figure is 36% and 33%^{12;16}. While no precise official statistics are available
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11 106 regarding the number of Dalits, various sources estimate the population at around 5.5 million¹⁷,
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13 107 approximately 3-4% of Bangladesh's total population. The lack of official data on this
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15 108 population group indicates the lack of political will to recognise Dalits and the existence of these
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17 109 communities in Bangladesh.
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22 110 Prior studies indicate that health inequalities are determined by broader societal factors, such as
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24 111 socio-economic position, housing conditions, working environment, poverty, access to and
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26 112 control of resources, education, and employment¹⁸⁻²². A firm understanding of sociocultural
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28 113 determinants of health inequalities, and also of the factors which restrict access to health
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30 114 services, is critical to improving the health outcomes of marginalised communities,²³. Several
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32 115 studies in Bangladesh have highlighted the socio-economic issues and discrimination
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34 116 encountered by the Dalit population; however, the socio-political and cultural factors that
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36 117 contribute to generating severe health inequalities remain largely unexplored.
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41 118 This present study therefore explores the political, social, economic, and cultural determinants of
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43 119 health inequalities experienced by the majority of the Dalit population. We examine how caste-
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45 120 based positions generate and reinforce social stratification in society, and determine health
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47 121 inequities within two Dalit population groups in Bangladesh. We argue that health inequalities
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49 122 need to be viewed from a holistic perspective, keeping in mind the intersecting social, political
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51 123 and structural factors.
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126 MATERIALS AND METHODS

127 Conceptual Framework

128 Our research was shaped by the ‘Commission on Social Determinants of Health (CSDH)
129 Conceptual Framework’ proposed by the World Health Organization (WHO) in 2010²⁴. This
130 framework offers a dynamic analytical configuration of the key social institutions and political
131 structures that affect and shape the health of a population. It explains health status as a social
132 phenomenon that is produced, configured and sustained through a complex and dynamic
133 interplay of a set of context-embedded factors. Importantly, it also emphasises the need to
134 distinguish the mechanisms that generate and reproduce social hierarchies and their multiple
135 manifestations. The conceptual framework includes three interactive levels of dynamic
136 influences: the wider socio-political context, individual socio-economic position, and
137 intermediary socio-economic influences.

138 **Fig 1** Commission on Social Determinants of Health (CSDH) Conceptual Framework [adapted from the
139 WHO (2010)] [to be placed]

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141 The first level, the socio-political context, focuses on the social relationships within a society
142 which organise and configure hierarchies and social stratification by defining individual
143 positions and roles. This includes the labour market, the educational system, and political
144 institutions. The second level considers individual or groups of individuals’ positionality in

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3 145 relation to these macro-structures and mechanisms. It understands individual socio-economic
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5 146 position as a function of the degree of exposure to health risks and vulnerabilities that result in
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7 147 differential health outcomes for an individual and/or a population. Key individual socio-
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9 148 economic characteristics include income, education, occupation, level of knowledge and
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11 149 information. Combined with structural elements, these form what is referred to as 'structural
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13 150 determinant'. Thus structural determinants shape patterns of access to resources (for example
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15 151 here, health services) and are rooted in socio-economic institutions, policies and political context
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17 152 that construct, reinforce, and maintain social hierarchies in various social systems, institutions,
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19 153 policies and sociocultural values.
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25 154 The intermediary socio-economic context refers to a circumstance whereby an individual and/or
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27 155 group have a distinct experience of materials, behavioural options, psychological supports, and
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29 156 healthcare facilities that consecutively shape specific determinants of health status (intermediary
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31 157 determinants). Therefore, this framework summarises and synthesises the view that social
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33 158 determinants of health inequality are constructed, functioning, and sustained through the act of
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35 159 long causal interceding factors (Figure 1).
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39 160 Although other frameworks have been developed to understand the social determinants of health,
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41 161 we found this conceptual framework particularly useful for exploring the dynamic relationships
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43 162 between social structures and political determinants of health inequalities. Several contemporary
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45 163 models, for example the psychosocial, social production of diseases/political economy of health,
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47 164 and the eco-social models, tend to explain disease distribution rather than focusing on the
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49 165 mechanism of disease causation ²⁵⁻²⁸. Therefore, in contrast to the WHO model, these
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51 166 frameworks leave contextual and socio-political aspects of health inequalities largely
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3 167 unexplored. The results presented in this paper are provided together with an exploration of the
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5 168 socio-economic settings following the CSDH Conceptual Framework.
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8 9 169 **Study Population and Settings**

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11 170 This study was conducted in two sweeper communities in Dhaka city: the *Agargaon* Public
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13 171 Works Department (PWD) Sweeper Colony, which is located adjacent to Dhaka Orthopaedic
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15 172 Hospital, and the Ganaktuli sweeper colony located in the city's Hazaribagh area. Commonly,
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17 173 the sweepers in Agargaon and Ganakatuli are known as *Telegu* and *Kanpuri*, respectively. There
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19 174 are no official statistics providing precise population figures for these colonies, although
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21 175 secondary sources indicate that each includes approximately 1,000 families¹⁷.
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26 176 **Sampling Strategy**

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29 177 Between August and October 2014 the first author conducted interviews and focus group
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31 178 discussions (FGDs, henceforth) with members of these Dalit *colonies*. We applied an inclusion
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33 179 criterion—that participants were aged 18 and above and volunteered to participate—and
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35 180 purposively recruited the study participants to address the research objectives. In this process, we
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37 181 invited individuals who showed a proactive interest to share their experiences, opinions, and
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39 182 time. Using several data collection tools, we purposefully collected data from participants with
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41 183 various backgrounds (e.g. different age groups, occupations, genders, position within the
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43 184 households, status within the community [leaders], and members of non-governmental
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45 185 organisations [NGOs], henceforth). In this process, we achieved maximum variation among the
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47 186 participants..²⁹.
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53 187 We conducted 14 in-depth interviews (IDIs, henceforth) with household members from the Dalit
54
55 188 community who had sought healthcare in different public and private facilities. We invited
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3 189 individuals to open group discussions on health status and health-seeking behaviour, and invited
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5 190 those individuals who showed a proactive interest in the study for interviews (IDIs, FGDs). The
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7
8 191 context in which the research was conducted required a high degree of iteration and flexibility in
9
10 192 order to build coherence and maximise the validity of the data collected. For example, as part of
11
12 193 the sampling strategy, a subtype of purposive sampling known as snowballing or chain sampling
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14 194 ³⁰ was used to select individuals who had experienced discrimination of a specific nature or
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16
17 195 means.

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19
20 196 We also conducted seven key informant interviews (KIIs, henceforth) with community and
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22 197 religious leaders, and also NGO worker, in order to better understand the exclusion process
23
24 198 experienced by Dalits in these specific locations. Finally, we conducted five FGDs to help
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26
27 199 understand communal perceptions and attitudes regarding entitlement to access basic public
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29 200 services. We have selected the key informant on the basis two criteria—information depth (who
30
31 201 have rich/depth information about the Dalit health aspect), and voluntary participation (who are
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33 202 willing to participate in the interview voluntarily). In case of selecting FGDs participant we
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35
36 203 considered age, gender, occupation, and volunteer participation. In addition, the authors used
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38 204 participant observations and informal conversations with some non-Dalit (converted Muslim)
39
40 205 individuals who lived in the area to further understand the dynamics at play. Many of these
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43 206 informants operated small businesses (e.g. tea stall, plastic shop, video game shop etc.) within
44
45 207 and around the sweeper colonies. Finally, we re-visited the participant groups to triangulate the
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47
48 208 emerging themes and cross-check the accuracy of the data collected. The data collection process
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50 209 ceased when the authors reached a suitable understanding of the key specific historical, socio-
51
52 210 cultural belief systems influencing the process of discrimination, marginalisation and
53
54 211 stigmatisation ^{31;32}.

212 **Data Collection Procedure**

213 In order to gather information in a semi-structured and systematic manner, we developed an
214 interview schedule. This document was used to guide conversations around key dimensions
215 relevant to our research questions and objectives, including socio-economic, demographic, and
216 political issues that impact upon health conditions among the Dalit population and/or individuals.
217 Interviews were semi-structured in order to create a friendly rapport with respondents and leave
218 sufficient space for other themes to emerge. Open-ended questions were used to explore the
219 socio-political and economic factors affect their health services. For example, we wanted to learn
220 more about participants' healthcare-seeking behaviours, experiences when attempting to access
221 healthcare facilities, health information, and interactions with healthcare workers.

222 We conducted all except one of the interviews and FDGs in Bengali, a language spoken by the
223 researchers (first author) and most of the participants, while an interpreter was used to interview
224 elderly Dalit men and women who only spoke Telegu and Hindi. On average, IDIs lasted 45 to
225 60 minutes and FDGs between 90 and 120 minutes. After obtaining the participants' consent,
226 IDIs and FDGs were electronically recorded, before being transcribed verbatim and subsequently
227 translated into English. In some cases, several follow-up visits were made to obtain missing
228 information, as well as to enable further probing of some issues. In addition, the authors took
229 detailed field notes during the conversations.

230 **Data Analysis**

231 To analyse the qualitative data we used an iterative approach which blended deductive and
232 inductive methods to identify and generate codes and themes. Initially, a deductive approach was
233 used through the use of interview guides, which provided a primary template for the framework

1
2
3 234 of data coding. The researchers independently read and reread a few transcripts and identified
4
5 235 codes which were incorporated into the coding framework in an inductive form which mirrored
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7
8 236 the ideas, perceptions, practices, and concepts, concentrating on the health and health services of
9
10 237 the participants. After coding all of the interviews we looked for clusters of several codes, which
11
12 238 were termed ‘themes’ or ‘concepts’. Focusing on rigour-related criteria in qualitative research,
13
14 239 such as credibility, transferability, dependability and conformability, a consensus was established
15
16 240 by resolving coding differences after discussions among the research team. Throughout the
17
18
19 241 analysis, systematically examined meaningful statements were assigned to the relevant code, and
20
21 242 the relationship between the themes was then examined³³. The analysis process was adequately
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23
24 243 accomplished by the team of researchers, who have different educational backgrounds and
25
26 244 training, through regular collaboration and discussions, self-reflexivity, and triangulation of
27
28 245 method and context (field sites), ensuring that no one researcher’s view was predominant.

246 **Patient and Public Involvement**

247 In this study we did not involve any patients. However, we purposefully selected men, women
248 community leaders, and NGO workers for the interviews. We entered the community, built
249 rapport and invited the participants for the interview following a pre-set inclusion criteria such as
250 people aged 18 years and above, voluntary participation, and pro-activeness to join in the group
251 discussion. We used an iterative approach which incorporated deductive and inductive methods
252 in framing research questions and identifying codes and themes.

253 **Ethical Considerations**

254 The study protocol was approved and ethical approval was obtained from the ‘ethics review
255 committee’ at Dhaka University, Bangladesh. Written informed consent was taken and

documented via audio recording. Before obtaining consent the research objectives were explained, together with the importance of the study, confidentiality rules, possible harms and benefits, and the participants' right to withdraw from the interviews at any stage during the conversation. Personal and households information, including age, sex, education, occupation, marital status, family composition and religion, was collected; however, the confidentiality of the personal identification of all participants was strictly maintained, with these details only being used by the researchers. Data was analysed using the participant identification (ID) number only and these ID number were removed prior to reporting the findings.

RESULTS

Characteristics of the Participants

We firstly describe the socio-demographic characteristics of the participants before presenting our results. Table 1 shows the characteristics of the study participants, who ranged in age between 22 and 64, and had a mean age of 30 (SD±10) years. More than half of the participants (9 out of 14) had received no formal schooling, which is far below the national level of over 60%. Overall, participants had received a mean of 2.9 (SD±1.3) years of schooling, and only three had received any education above the primary level.

Table 1 Socio-demographic backgrounds of the in-depth interview participants (n = 14)

Characteristics	Study Area		Combined
	Agargaon	Ganaktuli	
Age in years (mean ±SD)	27±8	3±9	30±10
Education			
1–5 years (<i>n</i>)	1	2	3
6–10 years (<i>n</i>)	0	2	2
No formal schooling (<i>n</i>)	5	4	9
Schooling in years (mean ± SD)	2.6±1.2	3.4±1.4	2.9±1.3

Occupation (<i>n</i>)			
Cleaning	3	5	8
Housewife	2	1	3
Others	1	2	3
Sex (<i>n</i>)			
Male	4	4	8
Female	2	4	6
Marital Status (<i>n</i>)			
Married	4	5	9
Unmarried	2	2	4
Divorced	0	1	1
Family Type (<i>n</i>)			
Extended	4	6	10
Nuclear	2	2	4
Religion (<i>n</i>)			
Hindu	5	8	13
Converted Christian	1	0	1

273 The majority of the participants were engaged in cleaning activities for Dhaka City Corporation
 274 and private organisations, while the remainder were employed in household activities, as day
 275 labourers, or in garment factories. More than half of the participants (10 out of 14) lived with
 276 their extended family, and almost all (13 out of 14) were Hindu, with just one participant having
 277 converted to Christianity.

278 Table 2 presents the key demographic characteristics of the FGD participants. Five FGDs were
 279 conducted: (I) among 6 Agargaon Dalit men (mean age 28, SD \pm 8 years), (II) among 7
 280 Agargaon Dalit women (mean age 32, SD \pm 7 years), (III) among 6 Ganaktuli Dalit men (mean
 281 age 39, SD \pm 7 years), (IV) among 8 female Ganaktuli Dalit women (mean age 24, SD \pm 5
 282 years) and (V) among 9 Ganaktuli Dalit men (mean age 35, SD \pm 6 years).

283 **Table 2 Socio-demographic backgrounds of participants in the focus group discussions (*n* = 36)**

Focus group discussion	Age of the participants in years (mean \pm SD)	Location	Number of Participants	Gender
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I	28±8	Agargaon	6	Male
II	32±7	Agargaon	7	Female
III	39±7	Ganaktuli	6	Male
IV	24±5	Ganaktuli	8	Female
V	35±6	Ganaktuli	9	Male

284

285 The dominant recurring themes were organised into categories reflecting the majority of
 286 interactive elements of the 'social determinants of health' framework (i.e. socio-economic and
 287 political context [including governance, macroeconomic policies, social and public policies,
 288 culture and societal values untouchability, caste-based discrimination, and social exclusion]
 289 socio-economic position and intermediary determinants).

290 **Space and Power**

291 In an attempt to contextualise our findings within the wider socio-economic and political context,
 292 this section starts by providing a brief overview of the political history of the Dalit population.
 293 Accounts of the socio-political and economic dimensions of Dalit livelihoods helps in
 294 understanding structural determinants of their health.

295 In Bangladesh, the majority of untouchable Hindu Dalits have Indian origins. In Bangladesh, as
 296 in India and Nepal, untouchable Hindus belong to the lowest social position at the base of the
 297 *Varna* system ⁶. During the reign of the Mughals, Dhaka was established as the commercial
 298 capital of the Bengal Subah by *Subahdar* (viceroy) Islam Khan in 1608. As the city grew to
 299 become one of the wealthiest and most prosperous cities in the South Asian region, the Mughal
 300 administrator appointed sweepers to maintain sanitation and cleaning activities ⁵. In the 1620s
 301 there was a large-scale migration of Dalit from India to Dhaka, which was precipitated by
 302 massacres by Burmese pirates in 1624-26: they were required to remove dead bodies from the

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2
3 303 city⁸. It is commonly believed that a large number of Dalits were brought to the city by British
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5 304 colonial administrators after Dhaka gained municipality status, to provide menial services⁸.
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8 305 During the period of British colonial rule (1757-1947), Dalits (Telegu-speaking and Kanpuri
9
10 306 sweepers) were brought to East Bengal (now Bangladesh) from the Indian states of Uttar
11
12 307 Pradesh, Bihar, Andhra Pradesh and many other areas, including Bhagalpur, Motihari, Baliha,
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14 308 Patna, Maddaparpur, Uriya, Gourakpur and Chapra^{5;13}. As the English administration rapidly
15
16
17 309 developed townships and local municipalities, these populations were moved to meet the
18
19 310 increasing need for sanitation workers.

21
22 311 The social position and status of Dalits are associated with their ancestral occupations, which
23
24 312 were regarded as impure. Dalits are mostly employed by public and private organisations for
25
26
27 313 sweeping activities, cleaning latrines, removing filth, skinning cattle, sweeping streets and
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29 314 houses. Despite the lack of official data on the economic condition of Dalits, some secondary
30
31 315 sources claim that Dalits are engaged in low-paid manual work under severe discriminatory
32
33 316 terms¹³, and consequently earn much less than national average, with one source claiming that
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35
36 317 their income lies between BDT 3000-5000 (considering BDT78=US\$1) while the national
37
38 318 average is BDT 7203¹³. Processes of occupational discrimination and unfair payment contribute
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40
41 319 to excluding the population from secure and safe dwellings. Dalit populations usually reside in
42
43 320 unhygienic environments characterised by poor quality, insufficient and irregular water,
44
45 321 electricity and gas provision. Overcrowded dwellings, narrow walkways, inadequate basic
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47 322 facilities, such as toilets and water taps, represent significant everyday challenges that become
48
49 323 causes of further stigmatisation and marginalisation. Dalit populations often have to rely for
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51 324 access to these services on middlemen and informal brokers, called *mastan* (local thugs); they
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54 325 often rely on violence and illegal deals to negotiate access to resources. The interlacing of social

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3 326 structures and political processes shape the Dalits' common everyday experiences of poverty and
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5 327 constitute their shared identity.
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9 328 The material circumstances of the Dalit group in Dhaka city were identified as major
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11 329 intermediary determinants of their health status. Data from all this study's sources (e.g. IDIs,
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13 330 FGDs and KIIs) reported poor living conditions, their concentration in government-established
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15 331 slums, or so-called 'colonies', and their highly unsafe housing characterised by poor drainage,
16
17 332 sanitation and water supply. Houses in government colonies had brick walls and corrugated iron
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19 333 sheet roofs, while those in private slums were constructed from bamboo, tin, and wood. The
20
21 334 sweeper slums were very overcrowded, with most respondents reporting that one small room
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23 335 housed 6–10 family members spanning three generations. The environment was also highly
24
25 336 polluted, leading to extremely unsafe living conditions.
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30 337 Sweeper slums also reported extremely unhygienic and inadequate sanitation conditions ¹⁴.
31
32 338 Bacteria, parasites, and disease vectors breed faster when sanitation and drainage systems are
33
34 339 poor and when warmer and wetter conditions are prevalent all year round. Such poor living
35
36 340 conditions are likely to increase the incidence of vector-borne/water-borne diseases and
37
38 341 infections^{13 34}. For example, diarrhoea and respiratory infections, such as pneumonia, were
39
40 342 commonly reported as the most frequent diseases among children aged less than five years old ¹³.
41
42 343 In addition, malaria, dengue fever, and *kala-azar* (visceral leishmaniasis) were reported to be
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44 344 prevalent among all age groups.
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50 345 The wider socio-political context influences the effects of these material circumstances and has
51
52 346 multiple behavioural implications. The data collected from KIIs, IDIs and FDGs clearly indicates
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54 347 that health policies largely ignore the specific needs of Dalits. For example, policies concerning
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3 348 housing, the labour market and land emerged as restricting factors for health. Over centuries,
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5 349 Dalit populations have been allocated space in designated colonies, and Dalit families have
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8 350 shared very small living spaces from generation to generation. Data from all the sources reflected
9
10 351 that, despite the potential for promoting basic housing facilities within the government owned
11
12 352 land, effective initiatives were never taken due to the lack of policy support. The respondents
13
14 353 related that government policy favoured congregating Dalits in such designated colonies, rather
15
16 354 than facilitating actions for housing supply and availability, and improving quality. One
17
18 355 participant reported:

21
22 356 *“Government policy has never allowed any action that facilitates housing facilities*
23
24 357 *for Dalit. They are living like this in colonies for generation; but, neither own nor*
25
26 358 *improve its quality.”* (A key informant in Ganaktuli)

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30 359 Although the government has issued policy statements and strategies for the redistribution of
31
32 360 non-agriculture and agricultural *khas* land (government-owned fallow land) to landless people
33
34 361 since the early 1980s, Dalits have not been considered as a potential beneficiary group. More
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36 362 than half of the participant reported that Dalits lack political power to influence the policy
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38 363 aspects in this regard. One of the participants stated

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41 364 *You will see very minimal or no action taken from the govt. to solve the housing problem*
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43 365 *of Dalit. I understand govt. can take necessary initiatives easily but it does not take so.*
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45 366 *Why? I believe, Dalit has no power to influence govt. policy aspects. (A 46-year-old male*
46
47 367 *in Ganaktuli)*

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51 368 Therefore, the scope for improving health outcomes through facilitating housing conditions for
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53 369 Dalits in allocated *khas* land is constrained by government land policy. One respondent stated:

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3 370 *“Landlessness is the first and foremost problem that impacts the overall wellbeing of*
4
5 371 *Dalit. Dalit living conditions are beyond description. But it can be improved through*
6
7 372 *distributing khas land to Dalit as it is provided to landless people. But, it is a matter*
8
9 373 *of fact that Dalit cannot fill in the inclusion criteria set by the policy.”* (A key
10
11 informant in Agargaon)
12 374

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15 375 Furthermore, the participants, especially the community leaders and NGO workers, believed that
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17 376 the lack of government interventions restricted the potential for improving living conditions,
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19 377 which also affected the health status of the population.
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23 378 **Education and Labour**

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26 379 An individual’s place in a given society can be described by the concept of ‘social position’, as
27
28 380 proposed by Evans et al.³⁵, which is generated and maintained under a broader social context.
29
30 381 The social position of an individual is dynamically created by a number of elements, such as
31
32 382 caste, religion or gender, which transmit intergenerational discriminations and inequalities.
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34 383 Similar to what Evans et al. argue, when interviewing the participants we found that Dalits’
35
36 384 health can be seen as an outcome that is generated from social position, whereby an individual
37
38 385 and/or group are unable to fully participate in society because of their socio-cultural identity. The
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40 386 socio-economic context has shaped Dalits’ engagement with educational institutions; Dalits face
41
42 387 discrimination and are often deprived of education through various means. Our data found that
43
44 388 less than 30% of Dalits had received formal schooling, compared to more than 65% of the
45
46 389 national population. This figure tends to be even lower outside Dhaka city, as one respondent
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48 390 reported:
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3 391 *“In Dhaka city you will find higher number of Dalit who have schooling especially*
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5 392 *among the younger generation. But, the figure will drastically fall if you consider*
6
7 393 *among the whole number of Dalit across the country.”* (A Dalit activist and key
9
10 394 informant from Ganaktuli)

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12
13 395 Respondents reported that their children faced discrimination by educational institutions, for
14
15 396 example being denied admission to private schools, rejection and teasing by teachers or students.
16
17 397 The school enrolment of Dalit girls has also decreased due to the practice of child marriage,
18
19 398 which subsequently affected sexual and reproductive health. The very low literacy rate among
20
21 399 Dalits resulted in little or no access to health information. One of the key informants reported:

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25 400 *“Education is vital for improving health and general well-being. When an individual*
26
27 401 *lacks education, he/she eventually will be in a worse position to negotiate access to*
28
29 402 *services and information such as nutrition. Low literacy amongst the Dalit, in turn,*
30
31 403 *affects their health and overall well-being negatively.”* (A key informant in
32
33 404 Ganaktuli)

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36
37 405 The participants further reported that the low level of education nurtured significant information
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39 406 asymmetries, which cause health-related misinformation, and limited occupational and income-
40
41 407 earning opportunities. Participants reported that, due to their being excluded from mainstream
42
43 408 society, Dalits were perceived to have poor levels of infant and child feeding, breastfeeding
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45 409 practices, immunisation take-up, and personal and family hygiene, with an unhealthy
46
47 410 consumption of tobacco and alcohol, etc. One participant stated that:

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51 411 *“I have little or no educational background. It might diminish my understanding of*
52
53 412 *things like whether and what extent things such as smoking bad for health? ...what*

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3 413 *and how infant and young child should be fed? ...what are good practices for*
4
5 414 *washing hands?” (A 56-year-old woman in Ganaktuli)*
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9 415 The data also revealed that little and/or no education narrows the occupational opportunities, and
10
11 416 subsequently results in low incomes. In addition to poor educational quality, Dalit occupational
12
13 417 opportunities are determined by other factors such as caste-based identities and heredity, and
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15 418 together with poor education this reduces their chance of improving their health status.
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19 419 The data analysis also showed how the wider structural determinants interact with and influence
20
21 420 the status of Dalits and their material circumstances. We found that the labour market both
22
23 421 dynamically excludes and adversely includes Dalits by restricting their social and occupational
24
25 422 mobility. The data gathered from community participants and key informants strongly suggests
26
27 423 that Dalit ancestral occupations have limited their skill sets and continue to force them to expose
28
29 424 themselves to high health risks and to rely on very low wages.
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33 425 Exposure to a toxic physical environment whilst at work was commonly reported in the
34
35 426 interviews and group discussions. Dalits are traditionally linked to their ancestral occupations,
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37 427 which were passed down from generation to generation. Consequently, the majority of Dalits are
38
39 428 engaged in sweeping and cleaning activities, manually handling waste material and garbage
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41 429 whilst using no personal protective equipment. This exposes them to large amounts of dust, bio-
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43 430 aerosols, volatile organic matter, airborne particulates, bacteria, noise, and ergonomic stress.
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45 431 Multiple participants reported that sweepers frequently experience infections. As one participant
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47 432 explained:
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52 433 *“Dalit always carry health risk with them at workplaces as they are dealing with*
53
54 434 *very serious issues such as dumping garbage or removing dirt. But, they do not use*
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3 435 *protective equipment. [...] We are more likely than non-Dalit to experience physical*
4
5 436 *injuries or develop infections.” (A 29-year-old cleaner in Agargaon)*
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9 437 Similarly, another participant noted:

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11 438 *“Dalit sweepers don’t take any dust protective measure; therefore, they inhale it... I*
12
13 439 *witnessed my colleagues develop respiratory infections and other airborne*
14
15 440 *diseases.” (A street sweeper in Ganaktuli)*
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19 441 Nonetheless, Dalit participants were not inclined to look for alternative occupations, as they said
20
21 442 there was no scope for them to work outside of these historical, marginalised social spaces.
22
23 443 Participants were highly aware of their role in the history of the country, and explained that they
24
25 444 would face significant resistance if they tried to access occupations that did not conform to their
26
27 445 low social and political status. Occupation-based discrimination, lingering poverty, and social
28
29 446 stigmatisation reduced their opportunities to participate in the labour market on equal terms (in
30
31 447 relation to non-Dalits) and to engage with activities that were not considered ‘impure’. One FGD
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33 448 participant talked about how the lack of skills combined with long-established social norms
34
35 449 strongly discourage Dalits from engaging differently with the labour market:
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39
40 450 *“We are traditionally engaged in sweeping, as my ancestors did. I have no other skill*
41
42 451 *except this. How can I do [anything else], for example, pulling a rickshaw or running*
43
44 452 *a business? Similarly, people will not come and take a cup of tea if I operate a tea*
45
46 453 *stall.” (A 37 year old cleaner in Agargaon)*
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50 454 This particular barrier is becoming increasingly problematic, as over 70% of the respondents
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52 455 reported that their access to sweeping jobs had become highly insecure and precarious; although
53
54 456 initially the nature of their recruitment in sweeping activities was permanent, Dalits had more
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3 457 recently had to compete for their occupation with non-traditional Muslim sweepers. Although the
4
5 458 city corporation's sweeper recruitment policy states that the Dalit are given a quota, the
6
7 459 authorities have not adhered to this system in recent years. The frequent recruitment of non-
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9
10 460 traditional sweepers by different government and non-government organisations has
11
12 461 considerably narrowed Dalits' employment options, leading to financial hardship:

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14
15 462 *“Some proportion of sweeping is reserved in government offices. However, non-Dalit*
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17 463 *sweepers are getting these jobs through bribes to political leaders and government*
18
19 464 *officials. Where will we go for work? We will likely have to resort to unsocial and*
20
21 465 *illegal activities to survive if this situation is not improved.”* (A housewife in
22
23 466 Agargaon)

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25
26
27 467 The lack of a sufficient and regular income limited Dalit participants' capacity to afford basic
28
29 468 necessities, including food, healthcare (particularly from private facilities), and education fees.
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31 469 Their average monthly household income ranged from BDT 5850 to 8970 (considering
32
33 470 BDT78=US\$1), which was insufficient to buy three nutritious meals per day for an extended
34
35 471 family.

40 472 **Politics and Relationships**

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43 473 Our data has identified a set of social and political factors in the given political and governance
44
45 474 system that impact upon the Dalit health status through stratifying individual positions on the
46
47 475 basis of hierarchies of power and prestige, and access to resources. Due to their weak socio-
48
49 476 economic position, caste-based identity and discrimination, Dalits in the studied areas generally
50
51 477 have a weak power of participation in political processes, both at the national and community
52
53 478 level. One of the participants from Ganaktuli reported:

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3 479 *“Our sweeping identity shapes our world – our work, our rights, our opportunities,*
4
5 480 *our limitations, it shapes everything. Hundreds of years we are living a confined life*
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7 481 *in a sense that the mainstream society maintains a greater distance as we belong to*
8
9 482 *such a low caste. Where are we? ...In education, in health, in politics? ...nowhere.”*

10
11
12 483 (add details)

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15 484 The lack of political participation generated by a lack of consideration and discrimination by
16
17 485 other powerful groups limited Dalits’ opportunity to voice their needs and impeded their capacity
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19 486 to exercise other constitutional and human rights. Making a direct connection between political
20
21 487 engagement and health, one participant voiced:

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24
25 488 *“To my knowledge, no one from the Dalit community has appeared as a candidate in*
26
27 489 *any election at national or community level. Even, they are likely to be less*
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29 490 *concerned about this. Such an absence in political process diminishes our capacity*
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31 491 *to protect communal interest concerning health.”* (A 34-year-old Dalit in Agargaon)

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35 492 Data from interviews with key informants and group discussants indicated that factors relating to
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37 493 macroeconomic policies influenced the health of Dalits. Macro level policies were considered to
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39 494 be having a negative impact on their health status and health seeking capacity, and public
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41 495 allocations for social protection and healthcare schemes continued to exclude people living in
42
43 496 urban settings. One of the key informants reflected on the situation:

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47 497 *“Government policy only provides safety-net support for poor in the rural setting.*
48
49 498 *However, the Dalit are concentrated on the big cities and smaller towns. ...therefore*
50
51 499 *we are not eligible for that.”* (A key informant in Agargaon)

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2
3 500 This policy significantly affected Dalits' capacity to seek and afford treatment in settings where
4
5 501 they were exposed to regular health shocks and hazards. For example, in the existing health
6
7 502 policy, two-thirds of healthcare costs are financed via an out-of-pocket mechanism ³⁶, and the
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9
10 503 urban poor experience limited or no healthcare support. Participants reported that having no
11
12 504 social protection schemes meant that they had to rely on considerable out-of-pocket healthcare
13
14 505 expenditure in order to access healthcare from both public and private facilities. The low
15
16 506 income-earning capacity of Dalits interacted directly with their individual socio-economic
17
18 507 condition, particularly for those suffering from chronic health conditions that required prolonged
19
20 508 and continuous care and medication. The inability to afford treatment was frequently reported as
21
22 509 an important barrier to better health by respondents suffering from cardiac issues, diabetes and
23
24 510 renal disease due to out-of-pocket costs. One of them said:

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29 511 *"I have been suffering from diabetes for the past years. The doctor prescribed*
30
31 512 *several drugs that I imperatively need to continue taking to control my sugar levels. I*
32
33 513 *cannot afford such drug for rest of my life [...] you will never expect to get diabetic*
34
35 514 *drug free of cost."* (A street sweeper in Ganaktuli)

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39 515 Some participants highlighted the heavy reliance on expensive private health service providers as
40
41 516 a significant determinant of bad health. They indicated that an individual's health status tended
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43 517 to deteriorate when they needed to access healthcare services from a local private institution. A
44
45 518 key informant in Ganaktuli explained that local private healthcare facilities generally tended to
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47 519 be better equipped than local government facilities, and increasingly played a 'vital role in
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49 520 healthcare services delivery.' However, he noted:

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53 521 *"If the problem is not minimal and, you must seek consultant at private facilities this*
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55 522 *involves huge expenses that are most likely beyond the capacity of Dalit. ...I know a*

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3 523 *few individual who have been suffering from chronic disease but fail to take care*
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5 524 *from private clinic due to the cost incurred.” (A key informant in Ganaktuli)*
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8 525 Beyond the costs incurred by care, participants also identified the behaviour of healthcare
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10 526 professionals in public and private facilities as barriers to their accessing better health.
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12 527 Respondents shared experiences of entrenched stigmatisation and discrimination that hampered
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14 528 their willingness and motivation to see a doctor, thereby generating a process of self-exclusion
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16 529 from these facilities.
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21 530 The Dalit identity generates considerable caste-based discrimination, enhancing exclusion,
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23 531 broadening inequalities, and restricting them from accessing healthcare. Dalit people, considered
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25 532 untouchable due to their traditional employment that brings them into contact with human
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27 533 excreta, dirt, garbage, bad odours, dead bodies, and other elements, are defined by others by their
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29 534 impurity. One participant described how mainstream society perceives the Dalit, and the
30
31 535 following quote denotes how societal perceptions have been internalised by Dalits themselves:
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35 536 *“We are methar [a Bangla colloquial term signifying degradation, disgust], nothing*
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37 537 *more than that. Our position can be nowhere else but at the bottom of the society.”*
38
39 538 (A 34-year-old scavenger in Agargaon)
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43 539 These socio-economic mechanisms and Dalits' identity interact with other factors to create
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45 540 psychosocial factors that determine their health status. Due to social discrimination and
46
47 541 exclusion, Dalit often lose their self-worth and experience depression and shame. Such feelings
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49 542 in turn lead to social isolation and further narrow individual and/or community participation in
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51 543 health programmes. The participants further stated that Dalits could not fully participate in
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53 544 community-based health programmes focusing on child and maternal health, the promotion of
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3 545 nutrition, immunisation, sanitation and hygiene. One participant explained the situation as
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5 546 follows:

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8 547 *“Dalit are social excluded and discriminated in many ways. Due to such*
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10 548 *discrimination and exclusion, they might lose self-esteem to be open-minded in*
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12 549 *participation of community-led health programmes.”* (A 34-year-old cleaner in
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14
15 550 Agargaon)

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18 551 Prejudices against the Dalits are also reproduced by healthcare workers. Most respondents
19
20 552 reported that healthcare workers were more likely to consider their health problems to be less
21
22 553 serious than those of non-Dalits in order to limit the amount of time spent with them and their
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24 554 exposure to ‘impurity’. In small townships and localities outside Dhaka city, for example in
25
26 555 primary level healthcare facilities where Dalits are easily identified by locals, they reported being
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28 556 more likely to face such prejudice and discrimination from healthcare workers. Multiple
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30 557 participants echoed the following experience of visiting a health facility:

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35 558 *“Sometimes we do not disclose our identity to avoid neglect and unpleasant*
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37 559 *situations. ... I can tell you a tragic story about the hospital admission of a Dalit*
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39 560 *woman. She was denied to get hospital admission and was kept lying on the floor of*
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41 561 *the balcony because she was a Dalit. Meanwhile, she developed additional problems*
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43 562 *— common cold, fever and breathing difficulties in such cold weather. Only later,*
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45 563 *when we put the issue forward the hospital authority admitted her and provided a*
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47 564 *bed.”* (A 51-year-old Dalit rights activist in Ganaktuli)
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3 565 Several participants described a lack of attention from healthcare workers, and difficulties in
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5 566 obtaining adequate information regarding their health problems and required treatments. The
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7
8 567 following excerpt reflects this situation:
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10 568 *“Doctors/nurses are unwilling to discuss details regarding any health information or*
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12 569 *health intervention in the facilities. They just provide minimal medicine and maintain*
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15 570 *indifference when asked about a health-related problem.”* (A 55-year-old leather
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17 571 worker in Ganaktuli)
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21 572 Such negligent and discriminatory behaviour on the part of healthcare providers made Dalits
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23 573 hesitant to participate in health promotion activities to enhance their own health, and even
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25 574 influenced their decisions to delay seeking treatment for infectious diseases. One of the key
26
27 575 informants explained how the socio-political position of the Dalit community impacted upon the
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29
30 576 care-seeking behaviour of Dalits:
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32 577 *“The Dalit live as a minority within the mainstream. All aspects of their lives – such*
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34 578 *as profession, access to services, rights and obligations, decisions, and so on – are*
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37 579 *determined and ascribed by these social and political contexts.”* (A NGO worker in
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39 580 Ganaktuli)
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43 581 Denied access to formal and informal safety nets, this marginalisation is reinforced by
44
45 582 idiosyncratic forms of discrimination based on class, gender, physical ability and age in
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47 583 particular. Under-nutrition of low-income (often extreme poor) adolescent girls, pregnant
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49 584 mothers and elderly widows was found to be particularly severe. Health inequalities experienced
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52 585 by Dalits were also influenced by the manner in which policies are developed and translated into
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54 586 practice. One key informant stated:
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3 587 *“The state did not consider that context-specific healthcare provision might be*
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5 588 *effective for providing services to this kind of disadvantaged group of people. We*
6
7 589 *need the formulation of policies that cover the delivery of health services to the Dalit*
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9 590 *and other groups of people who are in an unfavourable position to seek care.”* (A
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12 591 Dalit rights activist in Agargaon)

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14
15 592 In addition, some respondents reported that being a Dalit was associated with behaviours that
16
17 593 negatively affected their health. Many respondents claimed that male Dalits were likely to
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19 594 consume high quantities of low-quality alcohol and tobacco, noting that this behaviour can be
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21 595 explained by the difficult occupations and psycho-social pressure they experienced. Exposure to
22
23 596 bad odours, dirt and dead organisms can induce vomiting and appetite loss, and according to
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25 597 some respondents consuming alcohol and cigarettes mitigated the negative psychological and
26
27 598 physical effects of this type of work. Historically, Dalits have been characterised by such
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29 599 depictions and so this is not new; it is beyond the scope of this research to assess the veracity of
30
31 600 such claims. However, what is noteworthy is how such claims serve to further stigmatise
32
33 601 members of this population group, who according to some respondents, are *“habituated to*
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35 602 *consume alcohol and tobacco products”* as they believe it is *“a habit rooted in their*
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37 603 *occupational roles and psychosocial identity”* (A 23-year-old scavenger in Agargaon). Our data
38
39 604 suggests that Dalit children living in marginalised settlements suffer from stigmatisation and are
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41 605 therefore constrained in their physical mobility and social interactions. Although it was not
42
43 606 possible to measure the physical growth of children due to the nature of this study, participants
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45 607 reported that children, particularly those aged under 5 years, were likely to be undernourished.
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47 608 Poverty, low health information and awareness, and physical environment were reported as the
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49 609 most likely causal factors for such poor physical and social development of young children.
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3 610 As a response to the hostile wider socio-political context and challenging material circumstances,
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5 611 traditional health practices and rituals are widely practised within the Dalit community.
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7 612 Religious beliefs and spirituality influence their health status and attitudes towards seeking
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9 613 treatment. It was for example found that low-income Dalits adhering to strict religious beliefs
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11 614 were more likely to rely on faith-based healing for sexual and reproductive health, pregnancy
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13 615 care, and infant and child feeding practices.
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18 616 **DISCUSSION**

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21 617 To the best of our knowledge this is the first study aimed at understanding the socio-cultural and
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23 618 economic determinants of health inequalities in the Dalit population in Bangladesh, and it applies
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25 619 the CSDH Conceptual Framework developed by the WHO. Our analysis suggested that the
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27 620 mechanisms of social and economic discrimination that result in severe health inequalities (as
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29 621 claimed by the participants) for Dalits are supported and reinforced by an array of interconnected
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31 622 structural factors, including geographic marginalisation, poor living conditions, low formal
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33 623 education, little political representation, poor access to resources, limited labour market
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35 624 engagement, and stigmatisation. Stigmatisation was found to be pervasive, and to directly shape
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37 625 relational and structural determinants of health.
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43 626 Dalits' occupation-based identity determines their ability to interact with non-Dalits and with the
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45 627 state, and their stigmatisation as an impure, unhygienic, uneducated population group reinforces
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47 628 these processes and worsens their material and psychosocial circumstances. These are identified
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49 629 as significant intermediary determinants of their health status within this specific urban context
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51 630³⁷. Our findings confirm that health inequalities are rooted in the social process, whereby
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53 631 structural, contextual, and interpersonal factors intersect and influence each other³⁸⁻⁴⁰ and build
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3 632 on these to show how pervasive identity-based discrimination perpetuates the causes and effects
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5 633 of health inequalities.

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8 634 Untouchability and caste-based discrimination perpetuate an exclusionary process that results in
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10 635 this population belonging to a lower caste status with limited or no access to or participation in
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12 636 healthcare services or health seeking behaviours, and has been similarly noted by studies
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14 637 conducted in Indian societies⁴¹⁻⁴⁵. Broadly, these socio-culturally constructed exclusionary
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16 638 processes restrict Dalits' economic, political, social and cultural participation, which in turn
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18 639 negatively impacts upon their health and well-being at the individual, communal, regional, and
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20 640 global levels. These observations are also in line with a prior report of the Social Exclusion
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22 641 Knowledge Network (SEKN) to the World Health Commission on Social Determinants of
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24 642 Health, which stated that sociocultural exclusion is a dynamic and multi-dimensional process
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26 643 driven by unequal power relations^{39;42;46}.

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29 644 Our results also highlight power differentials between Dalit individuals and healthcare
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31 645 professionals, which enhance health inequities and further victimise Dalits, and are in line with
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33 646 the results of another study in India⁴⁷. These power differentials further repress the social,
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35 647 political, and economic participation of Dalits, leading to the unequal and unjust distribution of
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37 648 resources and access to services. Overall, sociocultural exclusionary processes generate,
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39 649 preserve, and reproduce inequalities regarding participating in, accessing, and utilising health
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41 650 services, which perpetuate intergenerational deprivation and discrimination. Other studies have
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43 651 demonstrated that caste-based exclusion, deprivation, and discrimination have been practised on
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45 652 the Indian subcontinent for thousands of years^{5;47}.

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3 653 The socio-economic and political context, together with macro-policies, facilitate the
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5 654 exclusionary process whereby Dalit people have limited opportunities for livelihood
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7 655 development and to improve their economic condition, consequently reducing their income
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9 656 opportunities and trapping them in poverty. This trap is sustained and enhanced through
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11 657 intergenerational transmission. Income is strongly associated with health and influences a range
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13 658 of material circumstances that directly impact health. Economic exclusion also determines access
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15 659 to and utilisation of health services, while economic marginalisation appears to limit the
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17 660 provision of healthcare, health-seeking behaviours, and access to other basic services provided
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19 661 by members of society and the state ^{35;48}. In addition, social and public policies narrow
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21 662 healthcare utilisation and healthcare-seeking, e.g. catastrophic out-of-pocket costs and the
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23 663 shrunken delivery of healthcare by public health facilities. The literature shows that over the
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25 664 recent years out-of-pocket costs are gradually increasing due to the steady expansion of private
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27 665 healthcare services ^{36;49} and this affects healthcare seeking and utilisation. The wider structural
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29 666 factors facilitate the Dalits' compromised material circumstances, unhealthy lifestyle, and social
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31 667 isolation. As noted by other studies ^{34;50;51}, our findings show that poor living and working
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33 668 conditions, limited healthcare access and support, poor state of water and sanitation, habit of
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35 669 tobacco consumption, stress, and isolation from health services, negatively impact upon health
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37 670 status and healthcare seeking. A lower social background was observed by Dubey ⁵² to
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39 671 contribute to weakening social networks that perpetuate poor healthcare access and healthcare
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41 672 seeking. Furthermore, the health system itself influences the health of Dalits as it presents Dalits
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43 673 with greater financial costs when accessing or seeking healthcare, as noted in other studies ^{36;53}.
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45 674 Moreover, access to and acceptance by healthcare providers is determined by the social position
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47 675 of individuals and groups; Dalits' low social position restricts their access to healthcare
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3 676 professionals, as had been previously reported in many regions across the world ^{50;54;55}. Our
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5 677 findings suggest that the health status of the Dalit community is not shaped solely by clinical
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7 678 issues but also by a range of sociocultural determinants, as proposed in several other studies ^{14;56}.
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10 679 For disadvantaged, marginalised, and socio-culturally excluded individuals or groups like Dalits,
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12 680 health outcome improvement is closely linked to public policies and actions that address socio-
13
14 681 cultural determinants of health inequities, with the government playing a central role ⁵⁷.

18 682 **LIMITATIONS OF THE STUDY**

21 683 We think the limitations of this study warrant comments. Firstly, due to unavailability (we
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23 684 approached some other groups to participate in the interviews but they could not participate
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25 685 because either they had other commitments in the study time or did not show interest to
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27 686 participate), and resource and time limitation, this study did not include the entire groups and/or
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29 687 stakeholders, such as state officials, employers of Dalit population, government healthcare
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31 688 providers, which might have provided alternative source of information to adhere greater level of
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33 689 trustworthiness. However, we maintained a greater level of trustworthiness by applying four
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35 690 principles—credibility, transferability, conformability, and dependability. Furthermore, inter-
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37 691 coder or synchronic reliability referring the amount of agreement between independent coders of
38
39 692 the data, and triangulation between methods, and participants were used to avoid biases in this
40
41 693 study. Secondly, some participants might have been dominating in the group discussions which
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43 694 caused other participants to feel comfortable sharing their own opinions and experiences
44
45 695 honestly. However, this limitation was mitigated by the experienced facilitators who built good
46
47 696 rapports and enable each person's voice to be heard by elaborating, clarifying, agreeing or
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49 697 disagreeing, querying, explaining of the topic of discussion. Thirdly, the qualitative strand of this
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51 698 study was geographically limited to an urban setting (Dhaka city); therefore, the results may not
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3 699 easily be transferable across populations and places; for example, a small Bangladeshi town.
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5 700 Nonetheless, considering the data collected, we believe that this study provides an in-depth
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7 701 understanding of a set of social, cultural, economic and political factors that strongly determine
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9 702 the health outcomes of Dalits population.
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13 703 **CONCLUSIONS AND IMPLICATION FOR THE STUDY**

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17 704 Although this subject has previously been sporadically discussed in newspaper reports, NGO
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19 705 reports and media reports, this paper is one of the first qualitative studies to explore a vast array
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21 706 of factors that determine health inequalities in urban Dalit populations in Bangladesh. This study
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23 707 is expected to contribute to knowledge by investigating how these elements interact and play a
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25 708 determining role in shaping Dalits' health status. This study supports the view that Dalit health
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27 709 inequalities are largely affected by a wide range of socio-cultural factors which can be observed
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29 710 in societies across many regions of South Asia.
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34 711 Importantly, we argue for the need to recognise the significant intermediary effects of everyday
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36 712 discrimination and stigmatisation, perpetuated by socio-economic structures, on educational
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38 713 achievement, political participation, occupations and health behaviours. Dalits' social and
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40 714 political history shapes their social position in society today by limiting their power relative to
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42 715 non-Dalits in key social structures, including the labour market and health institutions. These
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44 716 mechanisms enhance exclusionary processes through mutually reinforcing sets of socio-cultural
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46 717 and economic dynamics, and these generate, sustain, deepen, reinforce and reproduce
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48 718 inequalities in the health of Dalit populations. Therefore, it is unlikely that the health status of
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50 719 Dalit populations will be improved through the better clinical performance of existing healthcare
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52 720 providers alone. Recognition of the hostility of existing institutions and addressing entrenched
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3 721 exclusionary processes (including self-exclusion) and adverse inclusion is needed, together with
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5 722 research on the potential benefits of developing state-initiated social protection schemes focusing
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8 723 on deepening the social inclusion agenda.
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29 **Abbreviations**
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33 730 BDT: Bangladesh Taka; CSDH: Commission on Social Determinants of Health; FGD: Focus
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35 731 Group Discussions; IDI: In-depth Interviews; KII: Key Informant Interviews; NGO: Non-
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37 732 governmental Organisations; PWD: Public Works Department; SEKN: Social Exclusion
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39 733 Knowledge Network; WHO: World Health Organization; USD: United State Dollar;
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741 **Availability of data and materials**

742 As we informed the participants during the consent process that data would only be shared
743 within the research team, then the data cannot be made available publicly. However, we shared
744 the interview and discussion guidelines under ‘additional supporting files.’ Interested parties may
745 contact Mr. Md. Shahin Chowdhury (anthro.du@yahoo.com), Senior Administrative Assistant,
746 Department of Anthropology, Dhaka University, for further inquiries in this regard.

747 **Author contributions**

748 AK (ashraful.icddrb@gmail.com) conceptualized the study, participated in data collection and
749 analysis, and prepared the first draft of the manuscript. MRLM (mathilde.maitrot@york.ac.uk)
750 reviewed and edited the manuscript. AA (israabd@gmail.com) guided the data collection and
751 analysis. All authors read and approved the final version of the manuscript.

752 **Competing Interest**

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753 The authors declare that they have no conflicts of interest.

754 **Consent for publication**

755 Participants provided consent to publish their quotes anonymously or using pseudonyms.

756

For peer review only

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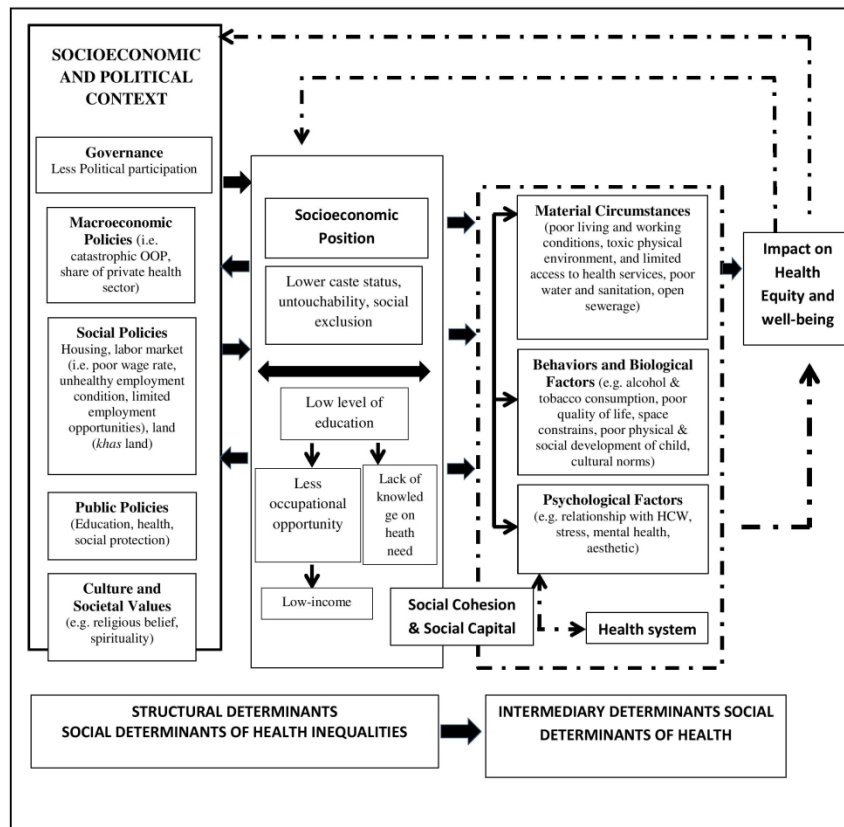
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Standards for Reporting Qualitative Research (SRQR)*

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<p>Title - Qualitative exploration of socio-cultural determinants of health inequities of Dalit population in Bangladesh</p>	
<p>Abstract</p> <p>Dalits (<i>jaat</i> sweepers), a marginalised traditional working community, have relatively poor access to healthcare services. This study sought to explore the socio-political and cultural factors associated with health inequalities among Dalits in an urban setting.</p> <p>An exploratory qualitative study design was adopted. The acquired data was analysed using an iterative approach which incorporated deductive and inductive methods in identifying codes and themes.</p> <p>This study was conducted in two sweeper communities in Dhaka city. Participants were Dalit men and women (fourteen in-depth interviews, mean age±SD 30±10; and five focus group discussions), and the community leaders and NGO workers (seven key informant interviews).</p> <p>Dalits (untouchables) are typically considered to fall outside the caste-based social structure and existing vulnerabilities are embedded and reinforced by this identity. Dalits' experience of precarious access to healthcare or poor healthcare is an important manifestation of these inequalities and has implications for the economic and social life of Dalit populations living together in geographically constrained spaces.</p> <p>A better understanding of the precise influences of socio-cultural determinants of health inequalities is needed, together with the identification of the strategies and programmes needed to address these determinants with the aim of developing more inclusive health service delivery systems.</p>	

Introduction

<p>Problem formulation – In recent years Bangladesh has achieved remarkable progress in terms of health targets. However, these advances are experienced unequally across the population, often leaving behind individuals and communities that are economically marginalised and socially excluded. Improved health services, especially those provided by the state, are not yet effectively distributed to all individuals and groups, and frequently fail to reach ethnic minorities, people living in remote areas, extremely poor individuals, slum and pavement dwellers, and other marginalised groups. Several studies in Bangladesh have highlighted the socio-economic issues and discrimination encountered by the Dalit population; however, the socio-political and cultural factors that contribute to generating severe health inequalities remain largely unexplored.</p>	
<p>Purpose or research question – To explore the political, social, economic, and cultural determinants of health inequalities experienced by the majority of the Dalit population.</p>	

Methods

<p>Qualitative approach and research paradigm – We adopted a qualitative approach (phenomenological). ‘Commission on Social Determinants of Health (CSDH) Conceptual Framework’ proposed by the World Health Organization (WHO) in 2010 guided our analysis.</p>	
<p>Researcher characteristics and reflexivity – Three researchers graduated in anthropology and public health conducted interviews, performed analysis, report the finding. The researchers have a vast experience in qualitative research. We adhered to the trustworthiness by applying four principles—credibility, transferability, conformability, and dependability. We used inter-coder or synchronic reliability that refers to the amount of agreement between independent coders of the data. We measured the agreement during the analysis when the researchers’ coded same interviews independently. We furthermore performed triangulation between methods, and participants.”</p>	
<p>Context – This study was conducted in two sweeper communities in Dhaka city: the <i>Agargaon</i> Public Works Department (PWD) Sweeper Colony, and the Ganaktuli sweeper colony located in the city’s Hazaribagh area. Commonly, the sweepers in Agargaon and Ganakatuli are known as <i>Telegu</i> and <i>Kanpuri</i>, respectively. There are no official statistics providing precise population figures for these colonies, although secondary sources indicate that each includes approximately 1,000 families</p>	
<p>Sampling strategy - Using several data collection tools we achieved maximum variation within the sample, purposefully collecting data from participants with various backgrounds, e.g. differing in terms of age, occupation, gender, position within the household, status within the community (leaders), and members of non-governmental organisations (NGOs, henceforth)</p>	
<p>Ethical issues pertaining to human subjects- The study protocol was approved and ethical approval was obtained from the ‘ethics review committee’ at Dhaka University, Bangladesh. Written informed consent was taken and documented via audio recording. Before obtaining consent the research objectives were explained, together with the importance of the study, confidentiality rules, possible harms and benefits, and the participants’ right to withdraw from the interviews at any stage during the conversation. Confidentiality of the personal identification of all participants was strictly maintained, with these details only being used by the researchers. Data was analysed using the participant identification (ID) number only and these ID number were removed prior to reporting the findings.</p>	
<p>Data collection methods - Qualitative data was collected using 14 in-depth interviews with Dalit men and women, 5 focus group discussions with people from the Dalit community, and 7 key informant interviews. The acquired data was analysed using an iterative approach which incorporated deductive and inductive methods in identifying codes and themes.</p>	
<p>Data collection instruments and technologies – We used three data collection tools—in-depth interview (IDI), focus group discussion (FGD), and key informant interview (KII). We maintained maximum variation within the sample as we used purposive sampling to select the participants on the basis of key variables including age, gender and occupation.</p>	

1	Units of study – Socio demographic and contextual characteristics were explained to provide a deeper understanding of the phenomena. Individual health seeking experience was described accordingly.	
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4	Data processing - The analysis process was adequately accomplished by the team of researchers, who have different educational backgrounds and training, through regular collaboration and discussions, self-reflexivity, and triangulation of method and context (field sites), ensuring that no one researcher’s view was predominant.	
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8	Data analysis - To analyse the qualitative data we used an iterative approach which blended deductive and inductive methods to identify and generate codes and themes. Initially, a deductive approach was used through the use of interview guides, which provided a primary template for the framework of data coding. The researchers independently read and reread a few transcripts and identified codes which were incorporated into the coding framework in an inductive form which mirrored the ideas, perceptions, practices, and concepts, concentrating on the health and health services of the participants. After coding all of the interviews we looked for clusters of several codes, which were termed ‘themes’ or ‘concepts’.	
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18	Techniques to enhance trustworthiness - “In this study, we adhered to the trustworthiness by applying four principles—credibility, transferability, conformability, and dependability. We used inter-coder or synchronic reliability that refers to the amount of agreement between independent coders of the data. We measured the agreement during the analysis when the researchers’ coded same interviews independently. We furthermore performed triangulation between methods, and participants.”	
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Results/findings

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29	Synthesis and interpretation - The health status of members of these Dalit groups is determined by an array of social, economic and political factors. As Dalits (untouchables) are typically considered to fall outside the caste-based social structure and existing vulnerabilities are embedded and reinforced by this identity. Dalits’ experience of precarious access to healthcare or poor healthcare is an important manifestation of these inequalities and has implications for the economic and social life of Dalit populations living together in geographically constrained spaces.	
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38	Links to empirical data – quotes were used in the result sections where it suits best.	
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Discussion

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44	Integration with prior work, implications, transferability, and contribution(s) to the field - The provision of clinical healthcare services alone is insufficient to mitigate the negative effects of discriminations and to improve the health status of Dalits. A better understanding of the precise influences of socio-cultural determinants of health inequalities is needed, together with the identification of the strategies and programmes needed to address these determinants with the aim of developing more inclusive health service delivery systems.	
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51	Limitations - The results of this study are based on data collected from the Dalit population in Dhaka City; therefore, the results may not be transferable to other settings, for example a small Bangladeshi town. Nonetheless, considering the data collected, we believe that this study provides an in-depth understanding of a set of social, cultural, economic and political factors that strongly determine the health outcomes of Dalits.	
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Other

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Funding - This study received no funding from any sources.	

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Qualitative exploration of socio-cultural determinants of health inequities of Dalit population in Dhaka City, Bangladesh

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3 1 Qualitative exploration of socio-cultural determinants of health inequities of Dalit
4 population in Dhaka City, Bangladesh
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7 3 **Short Title: Socio-cultural determinants of health inequities: Dalit population,**
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9 4 **Bangladesh**
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26 ABSTRACT

27 **Objectives:** In recent years Bangladesh has made remarkable advances in health outcomes;
28 however, the benefits of these gains are unequally shared amongst citizens and population
29 groups. Dalits (*jaat* sweepers), a marginalised traditional working community, have relatively
30 poor access to healthcare services. This study sought to explore the socio-political and cultural
31 factors associated with health inequalities among Dalits in an urban setting.

32 **Design:** An exploratory qualitative study design was adopted. Fourteen in-depth interviews, five
33 focus group discussions, and seven key informant interviews were conducted. The acquired data
34 was analysed using an iterative approach which incorporated deductive and inductive methods in
35 identifying codes and themes.

36 **Settings:** This study was conducted in two sweeper communities in Dhaka city.

37 **Participants:** Participants were Dalit men and women (in-depth interviews, mean age \pm SD
38 30 \pm 10; and focus group discussions), and the community leaders and NGO workers (key
39 informant interviews).

40 **Results:** The health status of members of these Dalit groups is determined by an array of social,
41 economic and political factors. Dalits (untouchables) are typically considered to fall outside the
42 caste-based social structure and existing vulnerabilities are embedded and reinforced by this
43 identity. Dalits' experience of precarious access to healthcare or poor healthcare is an important
44 manifestation of these inequalities and has implications for the economic and social life of Dalit
45 populations living together in geographically constrained spaces.

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3 46 **Conclusions:** The provision of clinical healthcare services alone is insufficient to mitigate the
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5 47 negative effects of discriminations and to improve the health status of Dalits. A better
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7 48 understanding of the precise influences of socio-cultural determinants of health inequalities is
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9 49 needed, together with the identification of the strategies and programmes needed to address these
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11 50 determinants with the aim of developing more inclusive health service delivery systems.
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15 51 **Key Words:** Bangladesh; caste; Dalit; qualitative method; sociocultural determinants; health
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17 52 inequalities; social exclusion; untouchability
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21 53 **Strengths and limitations of this study**

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23 54 • This study used the ‘Commission on Social Determinants of Health Conceptual
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25 55 Framework’ proposed by the World Health Organization (WHO) which allow us to
26
27 56 investigate how a set of social, cultural, economic and political elements interact and play
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29 57 a determining role in shaping Dalits’ health status.
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31 58 • To the best of our knowledge this is the first study that comprehensively examines how
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33 59 socio-cultural and political elements are interconnected, and how they produce, sustain,
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35 60 and reinforce health inequality among the Dalit population in Bangladesh.
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37 61 • To analyse the qualitative data we used an iterative approach which blended deductive
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39 62 and inductive methods to identify and generate codes and themes.
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41 63 • The main limitation is that the sample size is unavoidably small; therefore, the
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43 64 generalizability of the findings to other areas might be limited due to the contextual
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45 65 characteristics. Nonetheless, considering the data collected, we believe that this study
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47 66 provides an in-depth understanding of the determinants of health inequalities among Dalit
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69 BACKGROUND

70 In recent years Bangladesh has achieved remarkable progress in terms of health targets, with
71 declining maternal and neonatal mortality rates, increased immunisation coverage, greater life
72 expectancy at birth, and increased vitamin A supplementation ^{1;2}. However, these advances are
73 experienced unequally across the population, often leaving behind individuals and communities
74 that are economically marginalised and socially excluded. Improved health services, especially
75 those provided by the state, are not yet effectively distributed to all individuals and groups, and
76 frequently fail to reach ethnic minorities, people living in remote areas, extremely poor
77 individuals, slum and pavement dwellers, and other marginalised groups ³. This paper focuses on
78 analysing the healthcare barriers experienced by one marginalised group, the Dalits, the
79 untouchables.

80 Bob et al. ⁴ explain that the word 'Dalit' comes from the Marathi language and means
81 suppressed, 'broken up', downtrodden or oppressed, and the term was first used by Dr B. R.
82 Ambedkar during the late period of British colonial rule. The Dalits of Bangladesh are a
83 marginalised group whose identity is often characterised by the manual and low-status nature of
84 their occupations. This identity and social status are strongly associated with their ancestral
85 occupations, which were typically considered unclean and impure. In the 1872 census conducted
86 in Bengal, the majority of Dalits were referred to by the term *Chandala*, a Sanskrit word for
87 someone who deals with the disposal of corpses, a Hindu outcaste. In 2017 they are often called
88 *Harijan*, a term coined by Mahatma Gandhi meaning 'children of God', or more commonly
89 referred to by their occupation, family descent, ethnicity, or derogatory terms. The dalits often
90 engage in sweeping activities, such as cleaning latrines, removing rubbish, skinning cattle, and

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3 91 sweeping streets and houses. They scavenge in Bangladesh's cities and towns, and are
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5 92 designated as 'untouchable' within the caste system of the Indian subcontinent ^{5,6}.

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8 93 Healthcare issues of the Dalit population in Bangladesh remain largely neglected in the national
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10 94 government's development agenda ^{7,8}, despite its strong constitutional commitment to 'not
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12 95 discriminate against any citizen on grounds only of religion, race, caste, sex or place of birth'
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14 96 (The Bangladesh Constitution of 1972, Article 28 (1). Although available literature ⁹⁻¹¹ (i.e.
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16 97 Bangladesh Demographic and Health Survey, Bangladesh Urban Health Survey) does not
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18 98 present nationally representative demographic and survey data to demonstrate how extensively
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20 99 the healthcare access, and health and nutritional outcomes differ statistically between Dalit and
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22 100 other non-Dalit population in Dhaka city, some study reports indicate that Dalit have poor health
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24 101 outcome across the population in slum and other settings ¹²⁻¹⁵. For example, Nagorik Uddyog
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26 102 (Bangladesh Dalit and Excluded Rights Movement) notes:

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32 103 *"Health surveys and research programmes undertaken with respect to the 'public health*
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34 104 *situation' in the country do not pay special attention to the child and maternal health*
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36 105 *conditions in the colonies and settlements where Dalit communities live. Because of this*
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38 106 *non-attention to their specific health situation, their suffering and specific requirements*
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40 107 *to access non-discriminatory and affordable health care remain unreported and*
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42 108 *unattended to."*¹⁵

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47 109 . Chowdhury reported that Dalit are generally afflicted by skin diseases, diarrhea, tuberculosis,
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49 110 pneumonia at a higher level than the non-Dalit population ¹³. Islam et al. ¹⁴ reported that water-
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51 111 borne disease are highly prevalent among Dalit population as water and sanitation facilities is
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53 112 scarce in the slum— with reports of nearly 12,000 Dalit sharing two water points in Dhaka, and

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3 113 nearly 58% of Dalit have no access to sanitary latrine ¹³. A study conducted outside the capital
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5 114 city, found that in a Dalit community in Jessore city around half of pre-school children were
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7 115 suffering from chronic stunted (58%) and underweight (45%), while nationally the
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9 116 corresponding figure is 36% and 33% ^{12;16}. While no precise official statistics are available
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11 117 regarding the number of Dalits, various sources estimate the population at around 5.5 million ¹⁷,
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13 118 approximately 3-4% of Bangladesh's total population. The lack of official data on this
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15 119 population group indicates the lack of political will to recognise Dalits and the existence of these
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17 120 communities in Bangladesh.

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22 121 Prior studies indicate that health inequalities are determined by broader societal factors, such as
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24 122 socio-economic position, housing conditions, working environment, poverty, access to and
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26 123 control of resources, education, and employment ¹⁸⁻²². A firm understanding of sociocultural
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28 124 determinants of health inequalities, and also of the factors which restrict access to health
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30 125 services, is critical to improving the health outcomes of marginalised communities, ²³. Several
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32 126 studies in Bangladesh have highlighted the socio-economic issues and discrimination
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34 127 encountered by the Dalit population; however, the socio-political and cultural factors that
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36 128 contribute to generating severe health inequalities remain largely unexplored.

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42 129 This present study therefore explores the political, social, economic, and cultural determinants of
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44 130 health inequalities experienced by the majority of the Dalit population. We examine how caste-
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46 131 based positions generate and reinforce social stratification in society, and determine health
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48 132 inequities within two Dalit population groups in Bangladesh. We argue that health inequalities
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50 133 need to be viewed from a holistic perspective, keeping in mind the intersecting social, political
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52 134 and structural factors.

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137 MATERIALS AND METHODS

138 Conceptual Framework

139 Our research was shaped by the ‘Commission on Social Determinants of Health (CSDH)
140 Conceptual Framework’ proposed by the World Health Organization (WHO) in 2010²⁴. This
141 framework offers a dynamic analytical configuration of the key social institutions and political
142 structures that affect and shape the health of a population. It explains health status as a social
143 phenomenon that is produced, configured and sustained through a complex and dynamic
144 interplay of a set of context-embedded factors. Importantly, it also emphasises the need to
145 distinguish the mechanisms that generate and reproduce social hierarchies and their multiple
146 manifestations. The conceptual framework includes three interactive levels of dynamic
147 influences: the wider socio-political context, individual socio-economic position, and
148 intermediary socio-economic influences.

149 **Fig 1** Commission on Social Determinants of Health (CSDH) Conceptual Framework [adapted from the
150 WHO (2010)] [to be placed]

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152 The first level, the socio-political context, focuses on the social relationships within a society
153 which organise and configure hierarchies and social stratification by defining individual
154 positions and roles. This includes the labour market, the educational system, and political
155 institutions. The second level considers individual or groups of individuals’ positionality in

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3 156 relation to these macro-structures and mechanisms. It understands individual socio-economic
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5 157 position as a function of the degree of exposure to health risks and vulnerabilities that result in
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7 158 differential health outcomes for an individual and/or a population. Key individual socio-
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9 159 economic characteristics include income, education, occupation, level of knowledge and
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11 160 information. Combined with structural elements, these form what is referred to as 'structural
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13 161 determinant'. Thus structural determinants shape patterns of access to resources (for example
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15 162 here, health services) and are rooted in socio-economic institutions, policies and political context
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17 163 that construct, reinforce, and maintain social hierarchies in various social systems, institutions,
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19 164 policies and sociocultural values.
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25 165 The intermediary socio-economic context refers to a circumstance whereby an individual and/or
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27 166 group have a distinct experience of materials, behavioural options, psychological supports, and
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29 167 healthcare facilities that consecutively shape specific determinants of health status (intermediary
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31 168 determinants). Therefore, this framework summarises and synthesises the view that social
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33 169 determinants of health inequality are constructed, functioning, and sustained through the act of
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35 170 long causal interceding factors (Figure 1).
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39 171 Although other frameworks have been developed to understand the social determinants of health,
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41 172 we found this conceptual framework particularly useful for exploring the dynamic relationships
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43 173 between social structures and political determinants of health inequalities. Several contemporary
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45 174 models, for example the psychosocial, social production of diseases/political economy of health,
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47 175 and the eco-social models, tend to explain disease distribution rather than focusing on the
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49 176 mechanism of disease causation ²⁵⁻²⁸. Therefore, in contrast to the WHO model, these
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51 177 frameworks leave contextual and socio-political aspects of health inequalities largely
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2
3 178 unexplored. The results presented in this paper are provided together with an exploration of the
4
5 179 socio-economic settings following the CSDH Conceptual Framework.
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8 9 180 **Study Population and Settings**

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11 181 This study was conducted in two sweeper communities in Dhaka city: the *Agargaon* Public
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13 182 Works Department (PWD) Sweeper Colony, which is located adjacent to Dhaka Orthopaedic
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15 183 Hospital, and the Ganaktuli sweeper colony located in the city's Hazaribagh area. Commonly,
16
17 184 the sweepers in Agargaon and Ganakatuli are known as *Telegu* and *Kanpuri*, respectively. There
18
19 185 are no official statistics providing precise population figures for these colonies, although
20
21 186 secondary sources indicate that each includes approximately 1,000 families ¹⁷.
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26 187 **Sampling Strategy**

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29 188 Between August and October 2014 the first author conducted interviews and focus group
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31 189 discussions (FGDs, henceforth) with members of these Dalit *colonies*. We applied an inclusion
32
33 190 criterion—that participants were aged 18 and above and volunteered to participate—and
34
35 191 purposively recruited the study participants to address the research objectives. In this process, we
36
37 192 invited individuals who showed a proactive interest to share their experiences, opinions, and
38
39 193 time. Using several data collection tools, we purposefully collected data from participants with
40
41 194 various backgrounds (e.g. different age groups, occupations, genders, position within the
42
43 195 households, status within the community [leaders], and members of non-governmental
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45 196 organisations [NGOs], henceforth). In this process, we achieved maximum variation among the
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47 197 participants.. ²⁹.
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53 198 We conducted 14 in-depth interviews (IDIs, henceforth) with household members from the Dalit
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55 199 community who had sought healthcare in different public and private facilities. We invited
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3 200 individuals to open group discussions on health status and health-seeking behaviour, and invited
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5 201 those individuals who showed a proactive interest in the study for interviews (IDIs, FGDs). The
6
7 202 context in which the research was conducted required a high degree of iteration and flexibility in
8
9 203 order to build coherence and maximise the validity of the data collected. For example, as part of
10
11 204 the sampling strategy, a subtype of purposive sampling known as snowballing or chain sampling
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13 205 ³⁰ was used to select individuals who had experienced discrimination of a specific nature or
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15 206 means.

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19
20 207 We also conducted seven key informant interviews (KIIs, henceforth) with community and
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22 208 religious leaders, and also NGO workers, in order to better understand the exclusion process
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24 209 experienced by Dalits in these specific locations. Finally, we conducted five FGDs to help
25
26 210 understand communal perceptions and attitudes regarding entitlement to access basic public
27
28 211 services. We have selected the key informants on the basis two criteria—information depth (who
29
30 212 have rich/depth information about the Dalit health aspect), and voluntary participation (who are
31
32 213 willing to participate in the interview voluntarily). In case of selecting FGDs participant we
33
34 214 considered age, gender, occupation, and volunteer participation. In addition, the authors used
35
36 215 participant observations and informal conversations with some non-Dalit (converted Muslim)
37
38 216 individuals who lived in the area to further understand the dynamics at play. Many of these
39
40 217 informants operated small businesses (e.g. tea stall, plastic shop, video game shop etc.) within
41
42 218 and around the sweeper colonies. Finally, we re-visited the participant groups to triangulate the
43
44 219 emerging themes and cross-check the accuracy of the data collected. The data collection process
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46 220 ceased when the authors reached a suitable understanding of the key specific historical, socio-
47
48 221 cultural belief systems influencing the process of discrimination, marginalisation and
49
50 222 stigmatisation ^{31,32}.

223 **Data Collection Procedure**

224 In order to gather information in a semi-structured and systematic manner, we developed an
225 interview schedule. This document was used to guide conversations around key dimensions
226 relevant to our research questions and objectives, including socio-economic, demographic, and
227 political issues that impact upon health conditions among the Dalit population and/or individuals.
228 Interviews were semi-structured in order to create a friendly rapport with respondents and leave
229 sufficient space for other themes to emerge. Open-ended questions were used to explore the
230 socio-political and economic factors affecting their health services. For example, we wanted to
231 learn more about participants' healthcare-seeking behaviours, experiences when attempting to
232 access healthcare facilities, health information, and interactions with healthcare workers.

233 We conducted all except one of the interviews and FDGs in Bengali, a language spoken by the
234 researchers (first author) and most of the participants, while an interpreter was used to interview
235 elderly Dalit men and women who only spoke Telegu and Hindi. On average, IDIs lasted 45 to
236 60 minutes and FDGs between 90 and 120 minutes. After obtaining the participants' consent,
237 IDIs and FDGs were electronically recorded, before being transcribed verbatim and subsequently
238 translated into English. In some cases, several follow-up visits were made to obtain missing
239 information, as well as to enable further probing of some issues. In addition, the authors took
240 detailed field notes during the conversations.

241 **Data Analysis**

242 To analyse the qualitative data we used an iterative approach which blended deductive and
243 inductive methods to identify and generate codes and themes. Initially, a deductive approach was
244 used through the use of interview guides, which provided a primary template for the framework

1
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3 245 of data coding. The researchers independently read and reread a few transcripts and identified
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5 246 codes which were incorporated into the coding framework in an inductive form which mirrored
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8 247 the ideas, perceptions, practices, and concepts, concentrating on the health and health services of
9
10 248 the participants. After coding all of the interviews we looked for clusters of several codes, which
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12 249 were termed ‘themes’ or ‘concepts’. Focusing on rigour-related criteria in qualitative research,
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14
15 250 such as credibility, transferability, dependability and conformability, a consensus was established
16
17 251 by resolving coding differences after discussions among the research team. Throughout the
18
19 252 analysis, systematically examined meaningful statements were assigned to the relevant code, and
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21 253 the relationship between the themes was then examined³³. The analysis process was adequately
22
23
24 254 accomplished by the team of researchers, who have different educational backgrounds and
25
26 255 training, through regular collaboration and discussions, self-reflexivity, and triangulation of
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28 256 method and context (field sites), ensuring that no one researcher’s view was predominant.
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31 **Patient and Public Involvement**

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35 258 In this study we did not involve any patients. The participants were not directly involved in the
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37 259 design and conception of the study. However, we have plans to disseminate the results of this
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40 260 study with the study participants.
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43 **Ethical Considerations**

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46 262 The study protocol was approved and ethical approval was obtained from the ‘ethics review
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48 263 committee’ at Dhaka University, Bangladesh. Written informed consent was taken and
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50 264 documented via audio recording. Before obtaining consent the research objectives were
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53 265 explained, together with the importance of the study, confidentiality rules, possible harms and
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55 266 benefits, and the participants’ right to withdraw from the interviews at any stage during the
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267 conversation. Personal and households information, including age, sex, education, occupation,
 268 marital status, family composition and religion, was collected; however, the confidentiality of the
 269 personal identification of all participants was strictly maintained, with these details only being
 270 used by the researchers. Data was analysed using the participant identification (ID) number only
 271 and these ID number were removed prior to reporting the findings.

272 RESULTS

273 Characteristics of the Participants

274 We firstly describe the socio-demographic characteristics of the participants before presenting
 275 our results. Table 1 shows the characteristics of the study participants, who ranged in age
 276 between 22 and 64, and had a mean age of 30 (SD±10) years. More than half of the participants
 277 (9 out of 14) had received no formal schooling, which is far below the national level of over
 278 60%. Overall, participants had received a mean of 2.9 (SD±1.3) years of schooling, and only
 279 three had received any education above the primary level.

280 **Table 1 Socio-demographic backgrounds of the in-depth interview participants (*n* = 14)**

Characteristics	Study Area		Combined
	Agargaon	Ganaktuli	
Age in years (mean ±SD)	27±8	3±9	30±10
Education			
1–5 years (<i>n</i>)	1	2	3
6–10 years (<i>n</i>)	0	2	2
No formal schooling (<i>n</i>)	5	4	9
Schooling in years (mean ± SD)	2.6±1.2	3.4±1.4	2.9±1.3
Occupation (<i>n</i>)			
Cleaning	3	5	8
Housewife	2	1	3
Others	1	2	3
Sex (<i>n</i>)			

Male	4	4	8
Female	2	4	6
Marital Status (n)			
Married	4	5	9
Unmarried	2	2	4
Divorced	0	1	1
Family Type (n)			
Extended	4	6	10
Nuclear	2	2	4
Religion (n)			
Hindu	5	8	13
Converted Christian	1	0	1

281 The majority of the participants were engaged in cleaning activities for Dhaka City Corporation
 282 and private organisations, while the remainder were employed in household activities, as day
 283 labourers, or in garment factories. More than half of the participants (10 out of 14) lived with
 284 their extended family, and almost all (13 out of 14) were Hindu, with just one participant having
 285 converted to Christianity.

286 Table 2 presents the key demographic characteristics of the FGD participants. Five FGDs were
 287 conducted: (I) among 6 Agargaon Dalit men (mean age 28, SD \pm 8 years), (II) among 7
 288 Agargaon Dalit women (mean age 32, SD \pm 7 years), (III) among 6 Ganaktuli Dalit men (mean
 289 age 39, SD \pm 7 years), (IV) among 8 female Ganaktuli Dalit women (mean age 24, SD \pm 5
 290 years) and (V) among 9 Ganaktuli Dalit men (mean age 35, SD \pm 6 years).

291 **Table 2 Socio-demographic backgrounds of participants in the focus group discussions (n = 36)**

Focus group discussion	Age of the participants in years (mean \pm SD)	Location	Number of Participants	Gender
I	28 \pm 8	Agargaon	6	Male
II	32 \pm 7	Agargaon	7	Female
III	39 \pm 7	Ganaktuli	6	Male
IV	24 \pm 5	Ganaktuli	8	Female

V	35±6	Ganaktuli	9	Male
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293 The dominant recurring themes were organised into categories reflecting the majority of
 294 interactive elements of the ‘social determinants of health’ framework (i.e. socio-economic and
 295 political context [including governance, macroeconomic policies, social and public policies,
 296 culture and societal values untouchability, caste-based discrimination, and social exclusion]
 297 socio-economic position and intermediary determinants).

298 **Space and Power**

299 In an attempt to contextualise our findings within the wider socio-economic and political context,
 300 this section starts by providing a brief overview of the political history of the Dalit population.
 301 Accounts of the socio-political and economic dimensions of Dalit livelihoods helps in
 302 understanding structural determinants of their health.

303 In Bangladesh, the majority of untouchable Hindu Dalits have Indian origins. In Bangladesh, as
 304 in India and Nepal, untouchable Hindus belong to the lowest social position at the base of the
 305 *Varna* system ⁶. During the reign of the Mughals, Dhaka was established as the commercial
 306 capital of the Bengal Subah by *Subahdar* (viceroy) Islam Khan in 1608. As the city grew to
 307 become one of the wealthiest and most prosperous cities in the South Asian region, the Mughal
 308 administrator appointed sweepers to maintain sanitation and cleaning activities ⁵. In the 1620s
 309 there was a large-scale migration of Dalit from India to Dhaka, which was precipitated by
 310 massacres by Burmese pirates in 1624-26: they were required to remove dead bodies from the
 311 city ⁸. It is commonly believed that a large number of Dalits were brought to the city by British
 312 colonial administrators after Dhaka gained municipality status, to provide menial services ⁸.

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3 313 During the period of British colonial rule (1757-1947), Dalits (Telegu-speaking and Kanpuri
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5 314 sweepers) were brought to East Bengal (now Bangladesh) from the Indian states of Uttar
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7 315 Pradesh, Bihar, Andhra Pradesh and many other areas, including Bhagalpur, Motihari, Baliha,
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9 316 Patna, Maddaparpur, Uriya, Gourakpur and Chapra ^{5;13}. As the English administration rapidly
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11 317 developed townships and local municipalities, these populations were moved to meet the
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13 318 increasing need for sanitation workers.
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18 319 The social position and status of Dalits are associated with their ancestral occupations, which
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20 320 were regarded as impure. Dalits are mostly employed by public and private organisations for
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22 321 sweeping activities, cleaning latrines, removing filth, skinning cattle, sweeping streets and
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24 322 houses. Despite the lack of official data on the economic condition of Dalits, some secondary
25
26 323 sources claim that Dalits are engaged in low-paid manual work under severe discriminatory
27
28 324 terms ¹³, and consequently earn much less than national average, with one source claiming that
29
30 325 their income lies between BDT 3000-5000 (considering BDT78=US\$1) while the national
31
32 326 average is BDT 7203 ¹³. Processes of occupational discrimination and unfair payment contribute
33
34 327 to excluding the population from secure and safe dwellings. Dalit populations usually reside in
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36 328 unhygienic environments characterised by poor quality, insufficient and irregular water,
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38 329 electricity and gas provision. Overcrowded dwellings, narrow walkways, inadequate basic
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40 330 facilities, such as toilets and water taps, represent significant everyday challenges that become
41
42 331 causes of further stigmatisation and marginalisation. Dalit populations often have to rely for
43
44 332 access to these services on middlemen and informal brokers, called *mastan* (local thugs); they
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46 333 often rely on violence and illegal deals to negotiate access to resources. The interlacing of social
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48 334 structures and political processes shape the Dalits' common everyday experiences of poverty and
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50 335 constitute their shared identity.
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3 336 The material circumstances of the Dalit group in Dhaka city were identified as major
4
5 337 intermediary determinants of their health status. Data from all this study's sources (e.g. IDIs,
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7 338 FGDs and KIIs) reported poor living conditions, their concentration in government-established
8
9 339 slums, or so-called 'colonies', and their highly unsafe housing characterised by poor drainage,
10
11 340 sanitation and water supply. Houses in government colonies had brick walls and corrugated iron
12
13 341 sheet roofs, while those in private slums were constructed from bamboo, tin, and wood. The
14
15 342 sweeper slums were very overcrowded, with most respondents reporting that one small room
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17 343 housed 6–10 family members spanning three generations. The environment was also highly
18
19 344 polluted, leading to extremely unsafe living conditions.

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25 345 Sweeper slums also reported extremely unhygienic and inadequate sanitation conditions ¹⁴.
26
27 346 Bacteria, parasites, and disease vectors breed faster when sanitation and drainage systems are
28
29 347 poor and when warmer and wetter conditions are prevalent all year round. Such poor living
30
31 348 conditions are likely to increase the incidence of vector-borne/water-borne diseases and
32
33 349 infections^{13 34}. For example, diarrhoea and respiratory infections, such as pneumonia, were
34
35 350 commonly reported as the most frequent diseases among children aged less than five years old ¹³.
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37
38
39 351 In addition, malaria, dengue fever, and *kala-azar* (visceral leishmaniasis) were reported to be
40
41 352 prevalent among all age groups.

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44 353 The wider socio-political context influences the effects of these material circumstances and has
45
46 354 multiple behavioural implications. The data collected from KIIs, IDIs and FDGs clearly indicates
47
48 355 that health policies largely ignore the specific needs of Dalits. For example, policies concerning
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50 356 housing, the labour market and land emerged as restricting factors for health. Over centuries,
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52 357 Dalit populations have been allocated space in designated colonies, and Dalit families have
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54 358 shared very small living spaces from generation to generation. Data from all the sources reflected

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3 359 that, despite the potential for promoting basic housing facilities within the government owned
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5 360 land, effective initiatives were never taken due to the lack of policy support. The respondents
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8 361 related that government policy favoured congregating Dalits in such designated colonies, rather
9
10 362 than facilitating actions for housing supply and availability, and improving quality. One
11
12 363 participant reported:

15 364 *“Government policy has never allowed any action that facilitates housing facilities*
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17 365 *for Dalit. They are living like this in colonies for generations; but, neither own nor*
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19
20 366 *improve its quality.”* (A key informant in Ganaktuli)

23 367 Although the government has issued policy statements and strategies for the redistribution of
24
25 368 non-agriculture and agricultural *khas* land (government-owned fallow land) to landless people
26
27 369 since the early 1980s, Dalits have not been considered as a potential beneficiary group. More
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29
30 370 than half of the participant reported that Dalits lack political power to influence the policy
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32 371 aspects in this regard. One of the participants stated

35 372 *You will see very minimal or no action taken from the govt. to solve the housing problem*
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37 373 *of Dalit. I understand govt. can take necessary initiatives easily but it does not take so.*
38
39 374 *Why? I believe, Dalit has no power to influence govt. policy aspects. (A 46-year-old male*
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41
42 375 *in Ganaktuli)*

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45 376 Therefore, the scope for improving health outcomes through facilitating housing conditions for
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47 377 Dalits in allocated *khas* land is constrained by government land policy. One respondent stated:

49 378 *“Landlessness is the first and foremost problem that impacts the overall wellbeing of*
50
51 379 *Dalit. Dalit living conditions are beyond description. But it can be improved through*
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53
54 380 *distributing khas land to Dalit as it is provided to landless people. But, it is a matter*

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2
3 381 *of fact that Dalit cannot fill in the inclusion criteria set by the policy.”* (A key
4
5 382 informant in Agargaon)
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9 383 Furthermore, the participants, especially the community leaders and NGO workers, believed that
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11 384 the lack of government interventions restricted the potential for improving living conditions,
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13 385 which also affected the health status of the population.
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16 386 **Education and Labour**

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19 387 An individual’s place in a given society can be described by the concept of ‘social position’, as
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21 388 proposed by Evans et al. ³⁵, which is generated and maintained under a broader social context.
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23 389 The social position of an individual is dynamically created by a number of elements, such as
24
25 390 caste, religion or gender, which transmit intergenerational discriminations and inequalities.
26
27 391 Similar to what Evans et al. argue, when interviewing the participants we found that Dalits’
28
29 392 health can be seen as an outcome that is generated from social position, whereby an individual
30
31 393 and/or group are unable to fully participate in society because of their socio-cultural identity. The
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33 394 socio-economic context has shaped Dalits’ engagement with educational institutions; Dalits face
34
35 395 discrimination and are often deprived of education through various means. Our data found that
36
37 396 less than 30% of Dalits had received formal schooling, compared to more than 65% of the
38
39 397 national population. This figure tends to be even lower outside Dhaka city, as one respondent
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41 398 reported:
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47 399 *“In Dhaka city you will find higher number of Dalit who have schooling especially*
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49 400 *among the younger generation. But, the figure will drastically fall if you consider*
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51 401 *among the whole number of Dalit across the country.”* (A Dalit activist and key
52
53 402 informant from Ganaktuli)
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3 403 Respondents reported that their children faced discrimination by educational institutions, for
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5 404 example being denied admission to private schools, rejection and teasing by teachers or students.
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8 405 The school enrolment of Dalit girls has also decreased due to the practice of child marriage,
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10 406 which subsequently affected sexual and reproductive health. The very low literacy rate among
11
12 407 Dalits resulted in little or no access to health information. One of the key informants reported:

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15 408 *“Education is vital for improving health and general well-being. When an individual*
16
17 409 *lacks education, he/she eventually will be in a worse position to negotiate access to*
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19
20 410 *services and information such as nutrition. Low literacy amongst the Dalit, in turn,*
21
22 411 *affects their health and overall well-being negatively.”* (A key informant in
23
24 412 Ganaktuli)

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26
27 413 The participants further reported that the low level of education nurtured significant information
28
29 414 asymmetries, which cause health-related misinformation, and limited occupational and income-
30
31 415 earning opportunities. Participants reported that, due to their being excluded from mainstream
32
33 416 society, Dalits were perceived to have poor levels of infant and child feeding, breastfeeding
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35 417 practices, immunisation take-up, and personal and family hygiene, with an unhealthy
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37 418 consumption of tobacco and alcohol, etc. One participant stated that:

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42 419 *“I have little or no educational background. It might diminish my understanding of*
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44 420 *things like whether and what extent things such as smoking bad for health? ...what*
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46 421 *and how infant and young child should be fed? ...what are good practices for*
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48 422 *washing hands?”* (A 56-year-old woman in Ganaktuli)

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51 423 The data also revealed that little and/or no education narrows the occupational opportunities, and
52
53 424 subsequently results in low incomes. In addition to poor educational quality, Dalit occupational

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3 425 opportunities are determined by other factors such as caste-based identities and heredity, and
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5 426 together with poor education this reduces their chance of improving their health status.
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8 427 The data analysis also showed how the wider structural determinants interact with and influence
9
10 428 the status of Dalits and their material circumstances. We found that the labour market both
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12 429 dynamically excludes and adversely includes Dalits by restricting their social and occupational
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14 430 mobility. The data gathered from community participants and key informants strongly suggests
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16 431 that Dalit ancestral occupations have limited their skill sets and continue to force them to expose
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18 432 themselves to high health risks and to rely on very low wages.
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23 433 Exposure to a toxic physical environment whilst at work was commonly reported in the
24
25 434 interviews and group discussions. Dalits are traditionally linked to their ancestral occupations,
26
27 435 which were passed down from generation to generation. Consequently, the majority of Dalits are
28
29 436 engaged in sweeping and cleaning activities, manually handling waste material and garbage
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31 437 whilst using no personal protective equipment. This exposes them to large amounts of dust, bio-
32
33 438 aerosols, volatile organic matter, airborne particulates, bacteria, noise, and ergonomic stress.
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35 439 Multiple participants reported that sweepers frequently experience infections. As one participant
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37 440 explained:
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42 441 *“Dalit always carry health risk with them at workplaces as they are dealing with*
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44 442 *very serious issues such as dumping garbage or removing dirt. But, they do not use*
45
46 443 *protective equipment. [...] We are more likely than non-Dalit to experience physical*
47
48 444 *injuries or develop infections.”* (A 29-year-old cleaner in Agargaon)
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52 445 Similarly, another participant noted:
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3 446 *“Dalit sweepers don’t take any dust protective measure; therefore, they inhale it... I*
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5 447 *witnessed my colleagues develop respiratory infections and other airborne*
6
7 448 *diseases.”* (A street sweeper in Ganaktuli)

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11 449 Nonetheless, Dalit participants were not inclined to look for alternative occupations, as they said
12
13 450 there was no scope for them to work outside of these historical, marginalised social spaces.
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15 451 Participants were highly aware of their role in the history of the country, and explained that they
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17 452 would face significant resistance if they tried to access occupations that did not conform to their
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19
20 453 low social and political status. Occupation-based discrimination, lingering poverty, and social
21
22 454 stigmatisation reduced their opportunities to participate in the labour market on equal terms (in
23
24 455 relation to non-Dalits) and to engage with activities that were not considered ‘impure’. One FGD
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26
27 456 participant talked about how the lack of skills combined with long-established social norms
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29 457 strongly discourage Dalits from engaging differently with the labour market:

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32 458 *“We are traditionally engaged in sweeping, as my ancestors did. I have no other skill*
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34 459 *except this. How can I do [anything else], for example, pulling a rickshaw or running*
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36 460 *a business? Similarly, people will not come and take a cup of tea if I operate a tea*
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38 461 *stall.”* (A 37 year old cleaner in Agargaon)

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42 462 This particular barrier is becoming increasingly problematic, as over 70% of the respondents
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44 463 reported that their access to sweeping jobs had become highly insecure and precarious; although
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46 464 initially the nature of their recruitment in sweeping activities was permanent, Dalits had more
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48 465 recently had to compete for their occupation with non-traditional Muslim sweepers. Although the
49
50 466 city corporation’s sweeper recruitment policy states that the Dalit are given a quota, the
51
52 467 authorities have not adhered to this system in recent years. The frequent recruitment of non-

1
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3 468 traditional sweepers by different government and non-government organisations has
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5 469 considerably narrowed Dalits' employment options, leading to financial hardship:
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8 470 *“Some proportion of sweeping is reserved in government offices. However, non-Dalit*
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10 471 *sweepers are getting these jobs through bribes to political leaders and government*
11
12 472 *officials. Where will we go for work? We will likely have to resort to unsocial and*
13
14 473 *illegal activities to survive if this situation is not improved.”* (A housewife in
15
16 474 Agargaon)
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20 475 The lack of a sufficient and regular income limited Dalit participants' capacity to afford basic
21
22 476 necessities, including food, healthcare (particularly from private facilities), and education fees.
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24 477 Their average monthly household income ranged from BDT 5850 to 8970 (considering
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26 478 BDT78=US\$1), which was insufficient to buy three nutritious meals per day for an extended
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28 479 family.
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32 33 480 **Politics and Relationships** 34 35

36 481 Our data has identified a set of social and political factors in the given political and governance
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38 482 system that impact upon the Dalit health status through stratifying individual positions on the
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40 483 basis of hierarchies of power and prestige, and access to resources. Due to their weak socio-
41
42 484 economic position, caste-based identity and discrimination, Dalits in the studied areas generally
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44 485 have a weak power of participation in political processes, both at the national and community
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46 486 level. One of the participants from Ganaktuli reported:
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3 487 *“Our sweeping identity shapes our world – our work, our rights, our opportunities,*
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5 488 *our limitations, it shapes everything. Hundreds of years we are living a confined life*
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7 489 *in a sense that the mainstream society maintains a greater distance as we belong to*
8
9 490 *such a low caste. Where are we? ...In education, in health, in politics? ...nowhere.”*

10
11
12 491 (add details)

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14
15 492 The lack of political participation generated by a lack of consideration and discrimination by
16
17 493 other powerful groups limited Dalits’ opportunity to voice their needs and impeded their capacity
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19 494 to exercise other constitutional and human rights. Making a direct connection between political
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21 495 engagement and health, one participant voiced:

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25 496 *“To my knowledge, no one from the Dalit community has appeared as a candidate in*
26
27 497 *any election at national or community level. Even, they are likely to be less*
28
29 498 *concerned about this. Such an absence in political process diminishes our capacity*
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31 499 *to protect communal interest concerning health.”* (A 34-year-old Dalit in Agargaon)

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35 500 Data from interviews with key informants and group discussants indicated that factors relating to
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37 501 macroeconomic policies influenced the health of Dalits. Macro level policies were considered to
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39 502 be having a negative impact on their health status and health seeking capacity, and public
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41 503 allocations for social protection and healthcare schemes continued to exclude people living in
42
43 504 urban settings. One of the key informants reflected on the situation:

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46
47 505 *“Government policy only provides safety-net support for poor in the rural setting.*
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49 506 *However, the Dalit are concentrated on the big cities and smaller towns. ...therefore*
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51 507 *we are not eligible for that.”* (A key informant in Agargaon)

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3 508 This policy significantly affected Dalits' capacity to seek and afford treatment in settings where
4
5 509 they were exposed to regular health shocks and hazards. For example, in the existing health
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7 510 policy, two-thirds of healthcare costs are financed via an out-of-pocket mechanism ³⁶, and the
8
9 511 urban poor experience limited or no healthcare support. Participants reported that having no
10
11 512 social protection schemes meant that they had to rely on considerable out-of-pocket healthcare
12
13 513 expenditure in order to access healthcare from both public and private facilities. The low
14
15 514 income-earning capacity of Dalits interacted directly with their individual socio-economic
16
17 515 condition, particularly for those suffering from chronic health conditions that required prolonged
18
19 516 and continuous care and medication. The inability to afford treatment was frequently reported as
20
21 517 an important barrier to better health by respondents suffering from cardiac issues, diabetes and
22
23 518 renal disease due to out-of-pocket costs. One of them said:

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25
26 519 *"I have been suffering from diabetes for the past years. The doctor prescribed*
27
28 520 *several drugs that I imperatively need to continue taking to control my sugar levels. I*
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30 521 *cannot afford such drug for rest of my life [...] you will never expect to get diabetic*
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32 522 *drug free of cost."* (A street sweeper in Ganaktuli)

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39 523 Some participants highlighted the heavy reliance on expensive private health service providers as
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41 524 a significant determinant of bad health. They indicated that an individual's health status tended
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43 525 to deteriorate when they needed to access healthcare services from a local private institution. A
44
45 526 key informant in Ganaktuli explained that local private healthcare facilities generally tended to
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47 527 be better equipped than local government facilities, and increasingly played a 'vital role in
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49 528 healthcare services delivery.' However, he noted:

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53 529 *"If the problem is not minimal and, you must seek consultant at private facilities this*
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55 530 *involves huge expenses that are most likely beyond the capacity of Dalit. ...I know a*

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3 531 *few individuals who have been suffering from chronic disease but fail to take care*
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5 532 *from private clinics due to the cost incurred.”* (A key informant in Ganaktuli)
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9 533 Beyond the costs incurred by care, participants also identified the behaviour of healthcare
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11 534 professionals in public and private facilities as barriers to their accessing better health.
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13 535 Respondents shared experiences of entrenched stigmatisation and discrimination that hampered
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15 536 their willingness and motivation to see a doctor, thereby generating a process of self-exclusion
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17 537 from these facilities.
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21 538 The Dalit identity generates considerable caste-based discrimination, enhancing exclusion,
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23 539 broadening inequalities, and restricting them from accessing healthcare. Dalit people, considered
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25 540 untouchable due to their traditional employment that brings them into contact with human
26
27 541 excreta, dirt, garbage, bad odours, dead bodies, and other elements, are defined by others by their
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29 542 impurity. One participant described how mainstream society perceives the Dalit, and the
30
31 543 following quote denotes how societal perceptions have been internalised by Dalits themselves:
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35 544 *“We are methar [a Bangla colloquial term signifying degradation, disgust], nothing*
36
37 545 *more than that. Our position can be nowhere else but at the bottom of the society.”*
38
39 546 (A 34-year-old scavenger in Agargaon)
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43 547 These socio-economic mechanisms and Dalits' identity interact with other factors to create
44
45 548 psychosocial factors that determine their health status. Due to social discrimination and
46
47 549 exclusion, Dalit often lose their self-worth and experience depression and shame. Such feelings
48
49 550 in turn lead to social isolation and further narrow individual and/or community participation in
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51 551 health programmes. The participants further stated that Dalits could not fully participate in
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53 552 community-based health programmes focusing on child and maternal health, the promotion of
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3 553 nutrition, immunisation, sanitation and hygiene. One participant explained the situation as
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5 554 follows:

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8 555 *“Dalit are social excluded and discriminated in many ways. Due to such*
9
10 556 *discrimination and exclusion, they might lose self-esteem to be open-minded in*
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12 557 *participation of community-led health programmes.”* (A 34-year-old cleaner in
13
14 558 Agargaon)

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18 559 Prejudices against the Dalits are also reproduced by healthcare workers. Most respondents
19
20 560 reported that healthcare workers were more likely to consider their health problems to be less
21
22 561 serious than those of non-Dalits in order to limit the amount of time spent with them and their
23
24 562 exposure to ‘impurity’. In small townships and localities outside Dhaka city, for example in
25
26 563 primary level healthcare facilities where Dalits are easily identified by locals, they reported being
27
28 564 more likely to face such prejudice and discrimination from healthcare workers. Multiple
29
30 565 participants echoed the following experience of visiting a health facility:

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35 566 *“Sometimes we do not disclose our identity to avoid neglect and unpleasant*
36
37 567 *situations. ... I can tell you a tragic story about the hospital admission of a Dalit*
38
39 568 *woman. She was denied to get hospital admission and was kept lying on the floor of*
40
41 569 *the balcony because she was a Dalit. Meanwhile, she developed additional problems*
42
43 570 *— common cold, fever and breathing difficulties in such cold weather. Only later,*
44
45 571 *when we put the issue forward the hospital authority admitted her and provided a*
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47 572 *bed.”* (A 51-year-old Dalit rights activist in Ganaktuli)
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3 573 Several participants described a lack of attention from healthcare workers, and difficulties in
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5 574 obtaining adequate information regarding their health problems and required treatments. The
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7
8 575 following excerpt reflects this situation:

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10 576 *“Doctors/nurses are unwilling to discuss details regarding any health information or*
11
12 577 *health intervention in the facilities. They just provide minimal medicine and maintain*
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14
15 578 *indifference when asked about a health-related problem.”* (A 55-year-old leather
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17 579 worker in Ganaktuli)

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20 580 Such negligent and discriminatory behaviour on the part of healthcare providers made Dalits
21
22 581 hesitant to participate in health promotion activities to enhance their own health, and even
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24 582 influenced their decisions to delay seeking treatment for infectious diseases. One of the key
25
26 583 informants explained how the socio-political position of the Dalit community impacted upon the
27
28 584 care-seeking behaviour of Dalits:

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31 585 *“The Dalit live as a minority within the mainstream. All aspects of their lives – such*
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33 586 *as profession, access to services, rights and obligations, decisions, and so on – are*
34
35 587 *determined and ascribed by these social and political contexts.”* (A NGO worker in
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37 588 Ganaktuli)

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40 589 Denied access to formal and informal safety nets, this marginalisation is reinforced by
41
42 590 idiosyncratic forms of discrimination based on class, gender, physical ability and age in
43
44 591 particular. Under-nutrition of low-income (often extreme poor) adolescent girls, pregnant
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46 592 mothers and elderly widows was found to be particularly severe. Health inequalities experienced
47
48 593 by Dalits were also influenced by the manner in which policies are developed and translated into
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50 594 practice. One key informant stated:

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3 595 *“The state did not consider that context-specific healthcare provision might be*
4
5 596 *effective for providing services to this kind of disadvantaged group of people. We*
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7
8 597 *need the formulation of policies that cover the delivery of health services to the Dalit*
9
10 598 *and other groups of people who are in an unfavourable position to seek care.” (A*
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12 599 *Dalit rights activist in Agargaon)*

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14
15 600 In addition, some respondents reported that being a Dalit was associated with behaviours that
16
17 601 negatively affected their health. Many respondents claimed that male Dalits were likely to
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19
20 602 consume high quantities of low-quality alcohol and tobacco, noting that this behaviour can be
21
22 603 explained by the difficult occupations and psycho-social pressure they experienced. Exposure to
23
24 604 bad odours, dirt and dead organisms can induce vomiting and appetite loss, and according to
25
26 605 some respondents consuming alcohol and cigarettes mitigated the negative psychological and
27
28 606 physical effects of this type of work. Historically, Dalits have been characterised by such
29
30 607 depictions and so this is not new; it is beyond the scope of this research to assess the veracity of
31
32 608 such claims. However, what is noteworthy is how such claims serve to further stigmatise
33
34 609 members of this population group, who according to some respondents, are *“habituated to*
35
36 610 *consume alcohol and tobacco products”* as they believe it is *“a habit rooted in their*
37
38 611 *occupational roles and psychosocial identity”* (A 23-year-old scavenger in Agargaon). Our data
39
40 612 suggests that Dalit children living in marginalised settlements suffer from stigmatisation and are
41
42 613 therefore constrained in their physical mobility and social interactions. Although it was not
43
44 614 possible to measure the physical growth of children due to the nature of this study, participants
45
46 615 reported that children, particularly those aged under 5 years, were likely to be undernourished.
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48 616 Poverty, low health information and awareness, and physical environment were reported as the
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50 617 most likely causal factors for such poor physical and social development of young children.
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3 618 As a response to the hostile wider socio-political context and challenging material circumstances,
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5 619 traditional health practices and rituals are widely practised within the Dalit community.
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7 620 Religious beliefs and spirituality influence their health status and attitudes towards seeking
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9 621 treatment. It was for example found that low-income Dalits adhering to strict religious beliefs
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11 622 were more likely to rely on faith-based healing for sexual and reproductive health, pregnancy
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13 623 care, and infant and child feeding practices.
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18 624 **DISCUSSION**

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21 625 To the best of our knowledge this is the first study aimed at understanding the socio-cultural and
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23 626 economic determinants of health inequalities in the Dalit population in Bangladesh, and it applies
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25 627 the CSDH Conceptual Framework developed by the WHO. Our analysis suggested that the
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27 628 mechanisms of social and economic discrimination that result in severe health inequalities (as
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29 629 claimed by the participants) for Dalits are supported and reinforced by an array of interconnected
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31 630 structural factors, including geographic marginalisation, poor living conditions, low formal
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33 631 education, little political representation, poor access to resources, limited labour market
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35 632 engagement, and stigmatisation. Stigmatisation was found to be pervasive, and to directly shape
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37 633 relational and structural determinants of health.
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43 634 Dalits' occupation-based identity determines their ability to interact with non-Dalits and with the
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45 635 state, and their stigmatisation as an impure, unhygienic, uneducated population group reinforces
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47 636 these processes and worsens their material and psychosocial circumstances. These are identified
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49 637 as significant intermediary determinants of their health status within this specific urban context
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51 638 ³⁷. Our findings confirm that health inequalities are rooted in the social process, whereby
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53 639 structural, contextual, and interpersonal factors intersect and influence each other ³⁸⁻⁴⁰ and build
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3 640 on these to show how pervasive identity-based discrimination perpetuates the causes and effects
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5 641 of health inequalities.

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8 642 Untouchability and caste-based discrimination perpetuate an exclusionary process that results in
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10 643 this population belonging to a lower caste status with limited or no access to or participation in
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12 644 healthcare services or health seeking behaviours, and has been similarly noted by studies
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14 645 conducted in Indian societies ⁴¹⁻⁴⁵. Broadly, these socio-culturally constructed exclusionary
15
16 646 processes restrict Dalits' economic, political, social and cultural participation, which in turn
17
18 647 negatively impacts upon their health and well-being at the individual, communal, regional, and
19
20 648 global levels. These observations are also in line with a prior report of the Social Exclusion
21
22 649 Knowledge Network (SEKN) to the World Health Commission on Social Determinants of
23
24 650 Health, which stated that sociocultural exclusion is a dynamic and multi-dimensional process
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26 651 driven by unequal power relations ^{39;42;46}.

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29 652 Our results also highlight power differentials between Dalit individuals and healthcare
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31 653 professionals, which enhance health inequities and further victimise Dalits, and are in line with
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33 654 the results of another study in India ⁴⁷. These power differentials further repress the social,
34
35 655 political, and economic participation of Dalits, leading to the unequal and unjust distribution of
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37 656 resources and access to services. Overall, sociocultural exclusionary processes generate,
38
39 657 preserve, and reproduce inequalities regarding participating in, accessing, and utilising health
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41 658 services, which perpetuate intergenerational deprivation and discrimination. Other studies have
42
43 659 demonstrated that caste-based exclusion, deprivation, and discrimination have been practised on
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45 660 the Indian subcontinent for thousands of years ^{5;47}.

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3 661 The socio-economic and political context, together with macro-policies, facilitate the
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5 662 exclusionary process whereby Dalit people have limited opportunities for livelihood
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7 663 development and to improve their economic condition, consequently reducing their income
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9 664 opportunities and trapping them in poverty. This trap is sustained and enhanced through
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11 665 intergenerational transmission. Income is strongly associated with health and influences a range
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13 666 of material circumstances that directly impact health. Economic exclusion also determines access
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15 667 to and utilisation of health services, while economic marginalisation appears to limit the
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17 668 provision of healthcare, health-seeking behaviours, and access to other basic services provided
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19 669 by members of society and the state ^{35;48}. In addition, social and public policies narrow
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21 670 healthcare utilisation and healthcare-seeking, e.g. catastrophic out-of-pocket costs and the
22
23 671 shrunken delivery of healthcare by public health facilities. The literature shows that over the
24
25 672 recent years out-of-pocket costs are gradually increasing due to the steady expansion of private
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27 673 healthcare services ^{36;49} and this affects healthcare seeking and utilisation. The wider structural
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29 674 factors facilitate the Dalits' compromised material circumstances, unhealthy lifestyle, and social
30
31 675 isolation. As noted by other studies ^{34;50;51}, our findings show that poor living and working
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33 676 conditions, limited healthcare access and support, poor state of water and sanitation, habit of
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35 677 tobacco consumption, stress, and isolation from health services, negatively impact upon health
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37 678 status and healthcare seeking. A lower social background was observed by Dubey ⁵² to
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39 679 contribute to weakening social networks that perpetuate poor healthcare access and healthcare
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41 680 seeking. Furthermore, the health system itself influences the health of Dalits as it presents Dalits
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43 681 with greater financial costs when accessing or seeking healthcare, as noted in other studies ^{36;53}.
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45 682 Moreover, access to and acceptance by healthcare providers is determined by the social position
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47 683 of individuals and groups; Dalits' low social position restricts their access to healthcare
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3 684 professionals, as had been previously reported in many regions across the world ^{50;54;55}. Our
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5 685 findings suggest that the health status of the Dalit community is not shaped solely by clinical
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7 686 issues but also by a range of sociocultural determinants, as proposed in several other studies ^{14;56}.
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10 687 For disadvantaged, marginalised, and socio-culturally excluded individuals or groups like Dalits,
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12 688 health outcome improvement is closely linked to public policies and actions that address socio-
13
14 689 cultural determinants of health inequities, with the government playing a central role ⁵⁷.

18 690 **LIMITATIONS OF THE STUDY**

21 691 We think the limitations of this study warrant comments. Firstly, due to unavailability (we
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23 692 approached some other groups to participate in the interviews but they could not participate
24
25 693 because either they had other commitments in the study time or did not show interest to
26
27 694 participate), and resource and time limitation, this study did not include the entire groups and/or
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29 695 stakeholders, such as state officials, employers of Dalit population, government healthcare
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31 696 providers, which might have provided alternative source of information to obtain greater level of
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33 697 trustworthiness. However, we maintained a greater level of trustworthiness by applying four
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35 698 principles—credibility, transferability, conformability, and dependability. Furthermore, inter-
36
37 699 coder or synchronic reliability referring the amount of agreement between independent coders of
38
39 700 the data, and triangulation between methods, and participants were used to avoid biases in this
40
41 701 study. Secondly, some participants might have been dominating in the group discussions which
42
43 702 caused other participants to feel uncomfortable sharing their own opinions and experiences
44
45 703 honestly. However, this limitation was mitigated by the experienced facilitators who built good
46
47 704 rapports and enable each person's voice to be heard by elaborating, clarifying, agreeing or
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49 705 disagreeing, querying, explaining of the topic of discussion. Thirdly, the qualitative strand of this
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51 706 study was geographically limited to an urban setting (Dhaka city); therefore, the results may not
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3 707 easily be transferable across populations and places; for example, a small Bangladeshi town.
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5 708 Nonetheless, considering the data collected, we believe that this study provides an in-depth
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7 709 understanding of a set of social, cultural, economic and political factors that strongly determine
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9 710 the health outcomes of Dalits population.
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13 711 **CONCLUSIONS AND IMPLICATION FOR THE STUDY**

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17 712 Although this subject has previously been sporadically discussed in newspaper reports, NGO
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19 713 reports and media reports, this paper is one of the first qualitative studies to explore a vast array
20
21 714 of factors that determine health inequalities in urban Dalit populations in Bangladesh. This study
22
23 715 is expected to contribute to knowledge by investigating how these elements interact and play a
24
25 716 determining role in shaping Dalits' health status. This study supports the view that Dalit health
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27 717 inequalities are largely affected by a wide range of socio-cultural factors which can be observed
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29 718 in societies across many regions of South Asia.
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34 719 Importantly, we argue for the need to recognise the significant intermediary effects of everyday
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36 720 discrimination and stigmatisation, perpetuated by socio-economic structures, on educational
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38 721 achievement, political participation, occupations and health behaviours. Dalits' social and
39
40 722 political history shapes their social position in society today by limiting their power relative to
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42 723 non-Dalits in key social structures, including the labour market and health institutions. These
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44 724 mechanisms enhance exclusionary processes through mutually reinforcing sets of socio-cultural
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46 725 and economic dynamics, and these generate, sustain, deepen, reinforce and reproduce
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48 726 inequalities in the health of Dalit populations. Therefore, it is unlikely that the health status of
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50 727 Dalit populations will be improved through the better clinical performance of existing healthcare
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52 728 providers alone. Recognition of the hostility of existing institutions and addressing entrenched
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3 729 exclusionary processes (including self-exclusion) and adverse inclusion is needed, together with
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5 730 research on the potential benefits of developing state-initiated social protection schemes focusing
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8 731 on deepening the social inclusion agenda.
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30 737 **Abbreviations**
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33 738 BDT: Bangladesh Taka; CSDH: Commission on Social Determinants of Health; FGD: Focus
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35 739 Group Discussions; IDI: In-depth Interviews; KII: Key Informant Interviews; NGO: Non-
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37 740 governmental Organisations; PWD: Public Works Department; SEKN: Social Exclusion
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39 741 Knowledge Network; WHO: World Health Organization; USD: United State Dollar;
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749 **Availability of data and materials**

750 As we informed the participants during the consent process that data would only be shared
751 within the research team, then the data cannot be made available publicly. However, we shared
752 the interview and discussion guidelines under 'additional supporting files.' Interested parties may
753 contact Mr. Md. Shahin Chowdhury (anthro.du@yahoo.com), Senior Administrative Assistant,
754 Department of Anthropology, Dhaka University, for further inquiries in this regard.

755 **Author contributions**

756 AK, AA, and BC conceptualized the study. AK, MRLM, and NF performed analysis. AK,
757 developed interview guidelines, interviewed participants, transcribed and translated interviews.
758 AK, AA, NF, and MRLM drafted the initial manuscript with substantial support from BC. All
759 authors substantially contributed to critically revising further version of the manuscript.

760 **Competing Interest**

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761 The authors declare that they have no conflicts of interest.

762 **Consent for publication**

763 Participants provided consent to publish their quotes anonymously or using pseudonyms.

764

For peer review only

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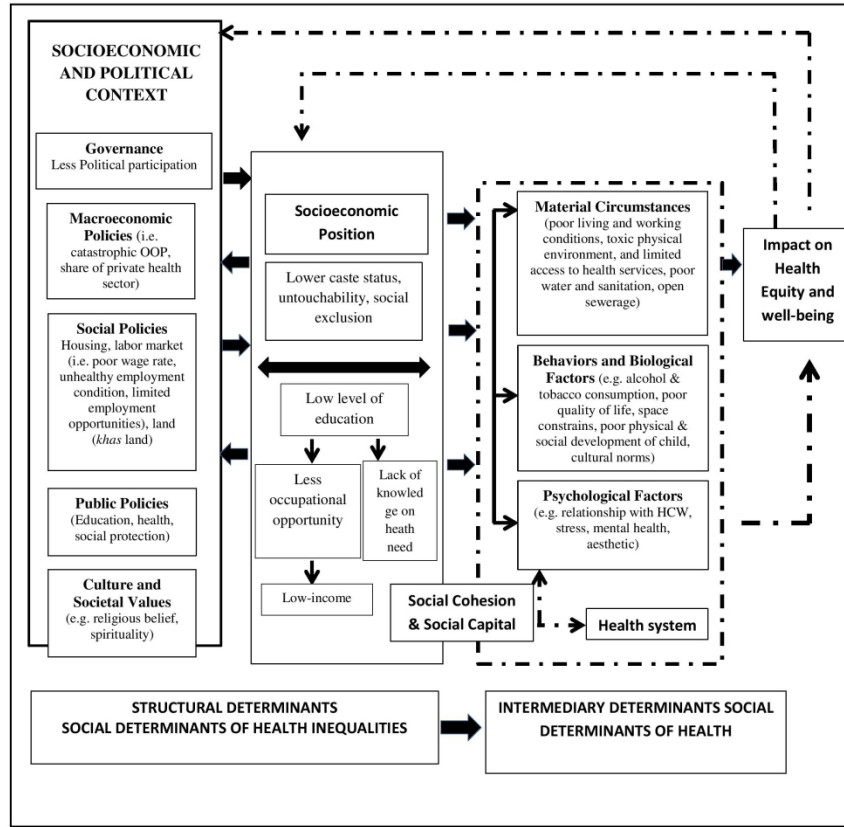
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Standards for Reporting Qualitative Research (SRQR)*

	Page/line no(s).
<p>Title - Qualitative exploration of socio-cultural determinants of health inequities of Dalit population in Bangladesh</p>	<u>1</u>
<p>Abstract</p> <p>Dalits (<i>jaat</i> sweepers), a marginalised traditional working community, have relatively poor access to healthcare services. This study sought to explore the socio-political and cultural factors associated with health inequalities among Dalits in an urban setting.</p> <p>An exploratory qualitative study design was adopted. The acquired data was analysed using an iterative approach which incorporated deductive and inductive methods in identifying codes and themes.</p> <p>This study was conducted in two sweeper communities in Dhaka city. Participants were Dalit men and women (fourteen in-depth interviews, mean age±SD 30±10; and five focus group discussions), and the community leaders and NGO workers (seven key informant interviews).</p> <p>Dalits (untouchables) are typically considered to fall outside the caste-based social structure and existing vulnerabilities are embedded and reinforced by this identity. Dalits' experience of precarious access to healthcare or poor healthcare is an important manifestation of these inequalities and has implications for the economic and social life of Dalit populations living together in geographically constrained spaces.</p> <p>A better understanding of the precise influences of socio-cultural determinants of health inequalities is needed, together with the identification of the strategies and programmes needed to address these determinants with the aim of developing more inclusive health service delivery systems.</p>	<u>2-3</u>

Introduction

<p>Problem formulation – In recent years Bangladesh has achieved remarkable progress in terms of health targets. However, these advances are experienced unequally across the population, often leaving behind individuals and communities that are economically marginalised and socially excluded. Improved health services, especially those provided by the state, are not yet effectively distributed to all individuals and groups, and frequently fail to reach ethnic minorities, people living in remote areas, extremely poor individuals, slum and pavement dwellers, and other marginalised groups. Several studies in Bangladesh have highlighted the socio-economic issues and discrimination encountered by the Dalit population; however, the socio-political and cultural factors that contribute to generating severe health inequalities remain largely unexplored.</p>	<u>3</u>
<p>Purpose or research question – To explore the political, social, economic, and cultural determinants of health inequalities experienced by the majority of the Dalit population.</p>	<u>7</u>

Methods

<p>Qualitative approach and research paradigm – We adopted a qualitative approach (phenomenological). ‘Commission on Social Determinants of Health (CSDH) Conceptual Framework’ proposed by the World Health Organization (WHO) in 2010 guided our analysis.</p>	<p><u>8</u></p>
<p>Researcher characteristics and reflexivity – Three researchers graduated in anthropology and public health conducted interviews, performed analysis, report the finding. The researchers have a vast experience in qualitative research. We adhered obtain to the trustworthiness by applying four principles—credibility, transferability, conformability, and dependability. We used inter-coder or synchronic reliability that refers to the amount of agreement between independent coders of the data. We measured the agreement during the analysis when the researchers’ coded same interviews independently. We furthermore performed triangulation between methods, and participants.²²</p>	<p><u>n/a</u></p>
<p>Context – This study was conducted in two sweeper communities in Dhaka city: the <i>Agargaon</i> Public Works Department (PWD) Sweeper Colony, and the Ganaktuli sweeper colony located in the city’s Hazaribagh area. Commonly, the sweepers in Agargaon and Ganakatuli are known as <i>Telegu</i> and <i>Kanpuri</i>, respectively. There are no official statistics providing precise population figures for these colonies, although secondary sources indicate that each includes approximately 1,000 families</p>	<p><u>10</u></p>
<p>Sampling strategy - Using several data collection tools we achieved maximum variation within the sample, purposefully collecting data from participants with various backgrounds, e.g. differing in terms of age, occupation, gender, position within the household, status within the community (leaders), and members of non-governmental organisations (NGOs, henceforth)</p>	<p><u>10</u></p>
<p>Ethical issues pertaining to human subjects- The study protocol was approved and ethical approval was obtained from the ‘ethics review committee’ at Dhaka University, Bangladesh. Written informed consent was taken and documented via audio recording. Before obtaining consent the research objectives were explained, together with the importance of the study, confidentiality rules, possible harms and benefits, and the participants’ right to withdraw from the interviews at any stage during the conversation. Confidentiality of the personal identification of all participants was strictly maintained, with these details only being used by the researchers. Data was analysed using the participant identification (ID) number only and these ID number were removed prior to reporting the findings.</p>	<p><u>14</u></p>
<p>Data collection methods - Qualitative data was collected using 14 in-depth interviews with Dalit men and women, 5 focus group discussions with people from the Dalit community, and 7 key informant interviews. The acquired data was analysed using an iterative approach which incorporated deductive and inductive methods in identifying codes and themes.</p>	
<p>Data collection instruments and technologies – We used three data collection tools—in-depth interview (IDI), focus group discussion (FGD), and key informant interview (KII). We maintained maximum variation within the sample as we used purposive sampling to select the participants on the basis of key variables including age, gender and occupation.</p>	<p><u>n/a</u></p>

1 2 3	Units of study – Socio demographic and contextual characteristics were explained to provide a deeper understanding of the phenomena. Individual health seeking experience was described accordingly.	n/a
4 5 6 7	Data processing - The analysis process was adequately accomplished by the team of researchers, who have different educational backgrounds and training, through regular collaboration and discussions, self-reflexivity, and triangulation of method and context (field sites), ensuring that no one researcher’s view was predominant.	n/a
8 9 10 11 12 13 14 15 16 17	Data analysis - To analyse the qualitative data we used an iterative approach which blended deductive and inductive methods to identify and generate codes and themes. Initially, a deductive approach was used through the use of interview guides, which provided a primary template for the framework of data coding. The researchers independently read and reread a few transcripts and identified codes which were incorporated into the coding framework in an inductive form which mirrored the ideas, perceptions, practices, and concepts, concentrating on the health and health services of the participants. After coding all of the interviews we looked for clusters of several codes, which were termed ‘themes’ or ‘concepts’.	12/13
18 19 20 21 22 23 24 25	Techniques to enhance trustworthiness - “In this study, we adhered to the trustworthiness by applying four principles—credibility, transferability, conformability, and dependability. We used inter-coder or synchronic reliability that refers to the amount of agreement between independent coders of the data. We measured the agreement during the analysis when the researchers’ coded same interviews independently. We furthermore performed triangulation between methods, and participants.”	

Results/findings

26 27 28 29 30 31 32 33 34 35 36 37	Synthesis and interpretation - The health status of members of these Dalit groups is determined by an array of social, economic and political factors. As Dalits (untouchables) are typically considered to fall outside the caste-based social structure and existing vulnerabilities are embedded and reinforced by this identity. Dalits’ experience of precarious access to healthcare or poor healthcare is an important manifestation of these inequalities and has implications for the economic and social life of Dalit populations living together in geographically constrained spaces.	n/a
38 39 40 41	Links to empirical data – quotes were used in the result sections where it suits best.	n/a

Discussion

42 43 44 45 46 47 48 49 50	Integration with prior work, implications, transferability, and contribution(s) to the field - The provision of clinical healthcare services alone is insufficient to mitigate the negative effects of discriminations and to improve the health status of Dalits. A better understanding of the precise influences of socio-cultural determinants of health inequalities is needed, together with the identification of the strategies and programmes needed to address these determinants with the aim of developing more inclusive health service delivery systems.	n/a
51 52 53 54 55 56 57	Limitations - The results of this study are based on data collected from the Dalit population in Dhaka City; therefore, the results may not be transferable to other settings, for example a small Bangladeshi town. Nonetheless, considering the data collected, we believe that this study provides an in-depth understanding of a set of social, cultural, economic and political factors that strongly determine the health outcomes of Dalits.	34

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Other

Conflicts of interest - The authors declare that they have no conflicts of interest.	<u>37</u>
Funding - This study received no funding from any sources.	<u>37</u>

For peer review only