Challenges to Data Collection: Digital Divide Causing Double Marginalization of the Bagri Community in Sindh, Pakistan

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Abstract: In the wake of the Covid-19 pandemic, we conducted qualitative research on the Bagri community in Pakistan's Sindh province. The Bagri community is considered an indigenous community in Pakistan's Sindh and Punjab provinces. They also live in some states in India. The community has been referred to as 'scheduled caste' in Pakistan's constitution. They speak Bagri language and practice Hinduism. Unfortunately, some Hindus and Muslims discriminate against the Bagri community and give them a wide berth and the community is seen as untouchable (Shah, 2007). Due to lockdowns caused by Covid 19, it has become difficult to access members of the community in order to collect data. Many of the members of the community have no digital literacy and the few who had mobile phones were contacted through mobile phone, but unfortunately voice quality of the interviews was not good and there was either network or noisy interruptions which made it difficult to understand what the interviewee was saying. Given this difficult situation, we used the strategy of using a friend of a friend to conduct the interviews on our behalf. However, even this solution faced challenges as the community was perceived as untouchable. In this way, the Bagri community was not only socially but also digitally marginalized. Therefore, this qualitative research will explore the digital and social challenges coresearchers faced during data collection, and we discuss how these challenges, were to some extent, surmounted.

Keywords: Bagri, Data Collection Challenges, Digital, Pakistan, Untouchable.

I. INTRODUCTION

This research takes place against the backdrop of a burgeoning body of scholarship on digital divide (Dong and Cao, 2021; Wang, Zhou, and Wang, 2021; Shakina, Parsakov, and Alsufiev, 2020; Hassan et al., 2019; Aydin, 2021; Azubuike, Adegboye, and Quadri, 2021; Jagathkar and Jain, 2020) in which researchers also seek to trace the intersections between the Covid 19 pandemic lockdowns and marginalization (Saini, 2020; Elias, Ben and Paradies, 2021; Kantamneni, 2020). In the wake of Covid-19, digital divide and double marginalization are understood as conditions under which collecting data from socially considered 'untouchable communities' becomes challenging and calls for solutions. On similar conceptual lines, this study locates the operations of double marginalization in the rapidly increasing digital divide in Pakistan's Sindh

province where the Bagri community faces discrimination (Shah, 2007). The research employs digital divide and double marginalization' as a conceptual framework for the analysis of data. Many scholars have used this conceptual framework in a wider range of contexts to investigate the operations of digital divide in relation to marginalization (Ye, and Yang, 2020; Hourcade, Bullock- Rest, and Schelhowe, 2010; Huxhold, Hees, and Webster, 2020; Alexander, 2017).

The concept of digital divide was popularized in the mid of 1990s by the National Telecommunications and Information Administration (NTIA) of the U.S. Department of Commerce when it published "Falling through the Net: A Survey of the 'Have Nots' in Rural and Urban America (1995). The survey report revealed that vulnerable communities in America had comparatively less opportunities of accessing modern information and communication technology as compared to the more affluent communities. The concept of digital divide has evolved. Currently, it refers to a gap between those who benefit from Information and Communication Technology and those who do not. Some people might have access to the modern communication technology but are unable to avail themselves of it due their lack of digital literacy. The gap is widened by educational level, racial belonging, and income level. Communities without higher income and higher education are more prone to being neglected due to digital divide. Within this conceptual lens, this study seeks to address how digital divide, as a social phenomenon, has turned into a form of social suppression, posing challenges to social contact, data collection, research development, forming an important part of the day-to-day discourses about racial discrimination, social distance, cultural gap of the people in the era of the Covid-19 pandemic.

In the context of this research, digital divide is conceptualized as a practice of double marginalization. Hence, placing digital divide and double marginalization at the heart of analysis, this study attempts to examine how digital divide produces social inequalities that affect the ways individuals can contribute to data collection and research development. We discuss how slow net and oftentimes, lack of access to digital devices, and lockdowns became hurdles to our research plans, and how collecting data became challenging. We argue that the Bagri community in Pakistan's Sindh province does not operate in a neutral social space; instead, it is doubly marginalized and negatively perceived. We conclude that collecting data from the Bagri community and publishing their status quo might bring about not only research development but also social advancement of the community.

In the following section, the Bagri community is contextualized within the sociocultural and socioeconomic landscape of Pakistan's Sindh province.

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A. Contextualizing the Bagri community within the social fabric of Sindh

The Bagri community was declared as one of the 'Scheduled Castes' by Government of Pakistan in 1956. The community belongs to the lower caste Hindus (Shah, 2007). According to some sources, the Bagris are an indigenous, Dravidian community of Sindh (see Tunio, 2014; Kumar, 2018). They are one of the most marginalized communities in Sindh and Pakistan and are perceived as untouchables. There are 306,000 Bagris currently living in Pakistan's Sindh and Punjab provinces, and most of them live in rural areas (ethnologue nd). They speak the Bagri language, practice Hinduism (Kumar, 2018) and has a culture which is different from that of the other communities living in Sindh. Tunio (2014) reported that the Bagris are discriminated in Sindh because they are associated with eating wild cats, porcupines, and lizards. Currently, many Bagris work either as bonded laborer or beg due to 95% illiteracy rate among them and lack of economic opportunities. The Bagris "are made to have residence in the outskirt of village as they are considered untouchable and polluted and other castes want to remain 'clean by keeping them at a distance'" (Shah, 2007: 34).

The word 'Bagri' has been derived from the word Bagh which means orchard. Since the Bagris work in orchards (Bagh), they are called 'Bagri'; it is also reported that since the Bagris hailed from India's Bagar tract, they are called 'Bagri (Kumar, 2018). The common perception about the Bagris is that they are not physically clean and live-in slums (Shah, 2007). The non-Bagri communities give them a wide berth and avoid developing social relationships with them (Shah, 2007). The non-Bagri communities use the word 'Bagri' to refer to a Bagri in a derogatory way.

Due to their social marginalization, we decided to conduct qualitative research on the Bagri community. However, the Covid-19-induced lockdown did not allow us to conduct face- to-face interviews. We tried collecting data using digital devices through the internet, but due to lack of access to the internet and digital illiteracy among the Bagris, we were not successful. We therefore invited digitally literate both Bagris and non-Bagris to conduct interviews of the digitally illiterate Bagris, especially Bagri women to help. However, many of the invitees refused due to the lockdown, gendered gap, and perhaps social discrimination. Evidently, these trends of discriminatory distancing and social divide during the pandemic are consistent with many parts of the world where vulnerable communities are facing multiplied marginalization. Elias, Ben and Paradies (2021) point out, "[These marginalizing processes] exacerbate existing patterns of discrimination and inequity, impacting especially those already facing intersecting social, economic and health vulnerabilities" (p. 783).

B. Digital divide, double marginalization, and challenges to data collection

Previous research studies have dealt with challenges to data collection, and marginalization of vulnerable communities during the pandemic

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(Walker, Bailey, Churchill, and Peckham, 2021; Rutten et al., 2021). Many researchers have demonstrated how digital divide turned into marginalization of vulnerable communities (Barry, 2013; Wamuyu, 2017).

In this study we focus on how the digital divide evolved into digital marginalization, how social distancing evolved into social discrimination, and how data collection from the vulnerable Bagri community became challenging. Vulnerable community is conceptualized as a group of people that is marginalized due to their identity, gender, culture, class, religion, caste, or some other factors (Webber-Ritchey, Simonovich, and Spurlark, 2020).

Untouchable communities are one of the most vulnerable groups; they are doubly marginalized due to limited access to the internet and modern digital gadgets. Smyth and McInerney (2013) advocate 'the notion advocacy ethnography' as a way of designing and conducting research on community marginalization. Research projects are often unsuccessful because the concerned researchers fail to address challenges related to planning, collecting, and interpreting data when it comes to marginalized communities (Potnis, Adkins, Cooke, and Babu, 2017).

Vulnerable communities are made more vulnerable during lockdowns like that caused by Covid 19. More recent research has focused on challenges to data collection during the pandemic (Pelagidis, and Kostika, 2020; Prommeger, Thatcher, Wiesche, and Krcmar, 2020). Deploying challenges to data collection as a thematic tool of analysis, these researchers examine the condition of social isolation and distancing to show how lockdowns, as a policy measure, has and is posing challenges to data collection. They state that the unavailability of data sources, and the pausing of face-to-face interviews and surveys have made it difficult to collect data. especially when it comes to collecting data from the socially considered 'untouchable communities.' Using social distancing as a theoretical lens, Rajadhyakhsa (2020) says the pandemic has reinvented the concept of 'untouchable'.

The Bagri community which was and is socially marginalized in Sindh has become even more marginalized in the wake of the digital divide and social distancing. The Covid-19 pandemic has doubled the marginalization process inflicted upon the Bagri community in Sindh.

II. Methodology

The study was designed to investigate how the pandemic caused double marginalization of the Bagri community in Sindh, and how collecting data from the community became challenging due to social distance, digital divide, and social discrimination against the community. The research sites were rural and urban areas of Sindh, a province of Pakistan. The study was conducted in May and June 2021. The study deployed research tools, such as an unstructured interview protocol and semi structured interviews through mobile recorders. The co-researchers of the study were both the Bagris and the non-Bagris from different districts

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of Sindh. The non-Bagris were chosen because the Bagris lived in their vicinity. A total of 15 coresearchers were recruited for the interviews. For collecting data, a probability sampling strategy was adopted as an innovative strategy which enabled us to interview some community members and some non- community members who had been associated with collecting data from the Bagris.

Mobile interviews lasted about 5 to 10 minutes. For exploring rich and detailed data, probes and prompts were tactically used to encourage the coresearchers to elaborate on a topic or theme. We also ensured that all the ethical protocols were considered and followed. The protocols included seeking consent from the coresearchers for use of their data in our research, and they were ensured of their confidentiality. In the data analysis phase, the audio-recorded interviews were transcribed and qualitatively analyzed using concepts of digital divide and double marginalization. For achieving rigor, other standards were also observed during data analysis, such as data organization, transcription, coding, and a review of codes to identify the emergent themes and patterns.

Coresearchers were mostly men with four women because it was much easier to access men than women. They were multilinguals, aged between 23 to 40. Their level of education varied, ranging from primary level to graduation (Table 1).

III. Findings

In this segment, the findings are discussed in four key themes: Lack of Neutral Coresearchers: A Challenge to Data Collection; Digital Divide Resulting in Double Marginalization during the Pandemic: A Challenge to Data Collection; Patriarchal Mindset: A Challenge to Data Collection; Overcoming Challenges to Data Collection: A Way towards Research Development.

A. Lack of Neutral Coresearchers: A Challenge to Data Collection

Coresearchers employed to collect data from the Bagri community need to be chosen carefully. They must be impartial and not have a negative view of the Bagri community. They should be known to the important people in the community so that these gatekeepers can give them access to the community. They should be both men and women. It is good if some of them are members of the community so that it can be easier to make inroads to the community. Moreover, they should be given training on conducting surveys and interviews of the community. However, when coresearchers are led by their partiality, this can affect validity of data as one of the coresearchers added, "Researchers should be free of class/caste bias because it is their job to conduct objective research. If researchers retain such bias, this may affect authenticity of research. Yes, data might be collected through a third person or a mobile application". (Refer Table 2).

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Table 1:
Coresearchers' Biographical Information

		Fieldworkers	Common People
Gender	Male	4	7
	Female	1	3
Language Background	Sindhi	-	6
	Seraiki	-	2
	Bagri	5	2
Educational Qualification	Bachelor	4	4
	Masters	1	6
	Above	-	-
District Of Residence	Larkana	–	6
	Ghotki	–	1
	Matiari	3	3
	Karachi	1	-
	Qambar-Shahdadkot	1	-
Fieldwork Experience with The Bagri Community	2-4 Years Overall.		

Table 2:
Coresearchers' Role and its Impacts on Data Collection and Research Development

Role	Impacts
1. **Discrimination against the community**	Affects research validity
2. **Taking sides**	Affects research objectivity
3. **Misrepresenting the community through negative lexicon**	Affects research results
4. **Impartial role**	Contributes to data collection and research development

We also exemplify in the following lines how the coresearchers take sides when collecting data from the Bagri community. This obsession with taking sides typifies 'the notion advocacy ethnography' (Smyth and McInerney, 2013) as a way of collecting data and conducting research on a vulnerable community. Similarly, a non-Bagri coresearcher suggested taking sides, rather than assuming an impartial role, "while collecting data from the Bagri community, researchers/data collectors have to decide whose side they are to take. Will they side with the discriminatory group of people? Or will they side with the vulnerable Bagri community?" This response clearly indicates that coresearchers need to take a side, which would affect research validity. In relation to this trend, Rutten et al. (2021) observe that lockdowns during the pandemic have affected ways of collecting data and conducting research.

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The coresearchers' bias is also manifested in the recurrent use of many negative lexicons that form the coresearchers' discourses about the Bagri community often resulting in discrimination against the community and posing challenges to data collection. The coresearchers usually deploy words and terminologies that typically characterize their biased views of the Bagri community. Here we list some of those words to substantiate this point:

...negatively, hurdles, criticize, narrowmindedness, bias, unwilling, not allow, obstacles, weak signals, deprived, pandemic, untouchables, suppressed, poverty, double marginalization dirty, cheap, ugly, caste, low digital literacy, uncomfortable, poor, lack digital awareness, problem to data collection, etc.

All these lexical items may be interpreted as an indication of how the coresearchers' partial views of the Bagri community not only pose challenges to social contact, but also clearly illustrate how collection of data from the Bagris has become a biased practice. Such negative terminology about the Bagri community, thus, can be witnessed in the coresearchers' responses. In addition to recurrent use of the negative lexicon, one may also view this as a demonstration of how such language use intertwines with core principles of lockdown, social distance, digital divide, and how such language use determines social perceptions towards the Bagri community. As George, Daniels, and Fioratou (2018: 1) observe, the negative perceptions and discrimination against vulnerable communities cause structural barriers "to service availability and accessibility" to the communities.

However, there was a non-Bagri coresearcher who suggested to collect data impartially. The coresearcher added,

"If a researcher is not directly involved in data collection, this may affect research validity. It is more advisable to employ a third person for data collection. The third person can help us overcome the social distance, and social gap and collect data objectively. The third person can bridge a gap between researchers and the community being researched. It is not advisable to rely on subjective assumptions or perceptions as tools for doing research. Those persons who are involved with the Bagri community can also help us in data collection".

B. *Digital Divide Resulting in Double Marginalization during the Pandemic: A Challenge to Data Collection*

To probe further, the coresearchers were questioned on how the digital divide during the pandemic affected the Bagri community, and how the divide posed challenges to collecting data from the community. Almost all the coresearchers responded that many among the Bagri community are not digitally aware. Given the multifaceted impacts of digital divide on the Bagri community as reflected, it is difficult to categorize or classify the impacts due to lack of research on the community. Digital illiteracy, on the one hand, the weak internet network, on the other hand, have brought about digital, social degradation of the Bagri community. Digital

illiteracy among the Bagris implies that the community lacks digital skills to use smartphones, sophisticated applications, and other gadgets for social communication and transmission of information. This situation has made it difficult for the coresearchers to contact the Bagris and collect data from them. A tabulated presentation shows what digital divide means for the coresearchers (see Table 2).

Here we present some extracts from the interviews to demonstrate the nature of challenges faced by the coresearchers while collecting data from the Bagri community. A Bagri coresearcher views digital divide as a serious challenge to data collection: "Mostly, the Bagris have no smart phones. Even if they have, it is rare that the Bagris know their use and benefits". In another Bagri coresearcher's view, access to the net is not easier for everyone: "Some mobile networks work very well, while many of them are weak in their signals in the areas where the Bagri community is living". Yet another non-Bagri coresearcher sadly accepts that, "I accept that there is a very low digital literacy rate among the Bagris". Some other coresearchers explain that digital illiteracy and inability to purchase smartphones are serious challenges to data collection: "Many Bagris are poor and lack digital awareness. Most of the Bagris do not know how to use new applications which facilitate virtual gathering. In some cases, there is weak network and the Bagris do not even how to use some digital features of smartphones. This digital divide is a serious problem to data collection." (See Table 3).

A brief analysis of the above responses, about the nature of digital divide and what it means for the coresearchers, confirms the double marginalization of the Bagri community, and how it posed challenges to data collection.

In this regard, the coresearchers' perceptions might reflect social reality, and these may make it more difficult to access the Bagri community for data collection. The coresearchers' frames and their discourses of the Bagri community's marginalization and their fieldwork experience also present a window to their social world view, mirroring the Bagri community's digital divide caused by both poverty and the pandemic-induced lockdowns.

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Table 3:
What Digital Divide Means to Coresearchers

Digital Illiteracy	Lack of Access to the Net	A Challenge to Data Collection
Unable to use smartphones or other modern gadgets.	Weak signals	Weak signals causing poor quality voice.
Unable to write a message or email.	Lack of 4G network; access only to 3G network.	Not authentic data.
Unable to record and share audio/video via social media.	Unsophisticated mobiles incompatible with 4G services.	Noisy interruptions
Unable to surf the internet due to unawareness.	Fewer signal poles in rural areas; electricity load shedding disrupting the net signals.	Lack of paralinguistic features in audio interviews.
Unable to use Zoom and other applications.		Unwillingness to share data through mobile calls.

Though challenging, collecting data from the vulnerable Bagri community and other such vulnerable marginalized communities is viewed as indispensable for research development and hopefully, in time with such knowledge, to national level policy changes which might upgrade their situation.

In the era of the Covid-19, digital divide is no more limited to urban and rural areas, rather its tentacles have spread into areas where vulnerable communities live. Under the garb of social discrimination, digital divide has drastically marginalized the Bagri community of Sindh. Social discrimination and digital divide, to borrow Spivak's terminology (Riach, 2017), have brought about 'double marginalization' of the Bagri community.

Besides eliciting their responses as to what challenges researchers can face when collecting data, we also tried to explore how increasing marginalization of the Bagri community is posing challenges to researchers in collection of data. According to a non-Bagri coresearcher,

"First of all, due to the pandemic, it has become necessary to maintain social distancing. This has caused double marginalization of the Bagri community. This increasing contact gap is a big obstacle to collecting data from the Bagri community. They are seen as dirty, cheap, and ugly. Researchers are usually resorting to digital tools for collecting data from the Bagri community, however, this technique may raise questions on authenticity of collected data."

Another Bagri coresearcher discussed, "There are governmental restrictions, lockdown and social distancing in Sindh and Pakistan. Due to these, it is difficult to collect data from the Bagri community… In some cases, there is weak network, and the Bagris do not even know

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how to use some digital features of smartphones. This digital divide is a serious problem to data collection". According to another Bagri coresearcher, "the Bagri community was already marginalized, and people (non-Bagris) would keep themselves away from the community; the lockdown and pandemic increased discrimination against them. Digital divide multiplied their problems and accessing them for service and other purposes became difficult. This probably could be the problem faced by researchers working on the community".

These responses not only show what challenges and hurdles researchers face when collecting data from the Bagri community, but also manifest how the lockdown and digital divide resulted in deprivation of the community. As Barry (2013) and Wamuyu (2017) postulate, digital divide is a form of marginalization. Besides, one must not limit examination of marginalization to a community's social deprivation, focusing only on what basic needs a community lack, but analysis should also address how lockdown affected a community's access to modern information and communication technology.

Hence, important insight that emerges from the responses of the coresearchers is that digital, double marginalization of the Bagri community is posing challenges to data collection from the community. All these responses suggest two important themes: one, digital divide has caused digital, social deprivation of the Bagri community. Two, the deprivation has posed challenges to data collection. Scholars also postulate that digital divide is increasing troubles of vulnerable communities around the world (Elias, Ben and Paradies, 2021).

C. Patriarchal Mindset: A Challenge to Data Collection

There was a question that addressed how lockdown affected the coresearchers' access to the Bagri community for data collection. It was important to ascertain their views, perceptions, and more importantly to determine how the lockdown posed challenges to collecting data from women of the Bagri community. The analysis shows patriarchal mindset was one of the main factors that prevented the coresearchers from accessing to and collecting data from Bagri women. Here, we present some of the androcentric elements which the coresearchers, mostly friends of researchers, encountered during data collection.

- The Bagri men considered it illegitimate to collect data from their women.
- To seek consent of the Bagri men was necessary before interviewing the Bagri women.
- Mostly, the Bagri men denied permission to interview Bagri women.
- The older Bagri women criticized the younger Bagri women for their cooperation.
- Most of the Bagri women were illiterate because male members of their family were also illiterate.

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- Most of the Bagri women were given no smartphones by their paterfamilias and lacked digital literacy.
- They worked strenuously in dismal conditions and had no time for interviews.

As the above given list demonstrates, the coresearchers mostly faced patriarchal factors as hurdles to collecting data from the Bagri women, such as limited freedom of the Bagri women, lack of access to educational, digital literacy among them, and their dismal work conditions which caused problems of collecting data on time. Other coresearchers also noticed during their field work that the senior Bagri women are also playing their part in suppressing the younger Bagri women by criticizing their willingness to share their views with coresearchers. This criticism includes negatively describing the young Bagri women, and there is the probability of these young women being accused of having illicit relationship with the coresearchers. A few others recalled that during their fieldwork, they had to seek consent of the Bagri men to conduct interviews with the Bagri women, who in many cases denied participating in these interviews without providing any reason. The following is one excerpt from an interview with a Bagri co-researcher which elaborates on how it was necessary to seek consent of the Bagri men before conducting the interviews with Bagri women. For example, the coresearcher said that "First, we will need to seek consent of their men. For instance, we will tell them we are working for an organization, and we are collecting data for a purpose. If they allow us, it's okay to go ahead otherwise they would criticize and will not allow access to us. Sometimes, we must beseech, irrespective of our self-respect. These are indeed some of the obstacles to data collection…". Another Bagri coresearcher expressed his views about how the cooperative Bagri women are negatively perceived,

"When we used to collect data from them (the Bagri women), their senior women and other family men put up hurdles, and they would criticize their younger women if they showed some willingness of sharing their views with us. We have faced so many such hurdles. Even in this era of modern technology, some people have been unable to overcome their narrowmindedness and bias".

Another non-Bagri coresearcher admired the role of the Bagri women in earning for their family. However, the coresearcher lamented that their proactive role has not won for them their due rights. The coresearcher said: "the Bagri women have no freedom to openly express their views and talk about their work conditions with researchers, and it is normally believed among them that good women never complain to strangers". One other non-Bagri coresearcher argued that "the Bagri women may not feel comfortable in expressing their views with researchers who are mostly outsiders/strangers. This is indeed a challenge to collecting valid data from the Bagri women". The views of the coresearchers resonate with the way Walker, Bailey, Churchill, and Peckham (2021) discuss how the pandemic has wreaked havoc on vulnerable communities through social distancing and discrimination. In this case, the Bagri women are facing

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social and digital marginalization during the pandemic and are mostly unable to share their views with the coresearchers.

However, these challenges might be tackled by spreading social, digital awareness and providing the Bagri community with the state-of-the art net. This is now discussed.

D. Overcoming Challenges to Data collection: A Way towards Research Development

Challenges to collecting data from the Bagri community that have emerged in the wake of Covid-19 may be dealt with taking some measures. Dealing with the challenges can also pave the way for research development. Since most of the Bagris may not comfortably share their views with outsiders, it is advised to deploy a Bagri friend to conduct interviews of the Bagri community. Outsider researchers may not be successful in collecting detailed responses from the Bagris due to the social gap. Also, the non-Bagri researchers usually rely on a second language for data collection from the Bagri community, and the use of second language may be a linguistic barrier to the Bagris. Therefore, it is much better to employ a Bagri friend or a friend of friend to collect data from the community using Bagri language, which can later be translated into a language the Bagri research assistant knows. Afterwards, researchers can transcribe and translate data into English for analysis.

One should also emphasize the need to select these coresearchers carefully. They must be objective and not have a biased view of the community they are interacting with.

Patriarchal mindset is yet another challenge to data collection from the Bagri women. However, this challenge can also be met if researchers employ a literate Bagri woman to collect data on researchers' behalf. It is usual that the Bagri women may like to express themselves to a female insider, rather than to a male outsider. In case, there is no such Bagri woman easily available, researchers can also convince a non-Bagri woman to collect data from the Bagri women. This is how the voice of the Bagri women might be recorded (see Table 4).

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Table 4:
Ways of Collecting Data

1.	Using neutral coresearchers from the Bagri community.
2.	Using non-community members who are friends as coresearchers.
3.	Deploying women friends both members and non-members of the Bagri community as coresearchers.
4.	Getting grants from different institutions and NGOs to purchase mobile phones with 4 G for the Bagri community.
5.	Employing video and audio calls through smartphones for collecting data.
6.	Training coresearchers with humane education and help them overcome their bias against the Bagris if any.
7.	Carefully selecting coresearchers who do not have the negative perception of the community as this may affect the outcome of the kind of data collected.

Moreover, universities or other concerned research institutes should allocate research grants on merit, which researchers can use to buy smartphones for the digitally deprived Bagri community. Training in digital skills and access to 4G internet can facilitate accessibility to data collection from the Bagri community. Hence, the effort needs to be geared towards mainstreaming the Bagri community. It is also important to ensure that the Bagri community can access 4G network and can share data when needed during the lockdown. As shown in the data, the coresearchers suggested organizing digital literacy programmes for the Bagri community, because doing this would make data collection easier. In the words of Taurines (2020), a researcher and blogger, "The importance of digital skills for social inclusion has been fairly evident to most of us over the past decade". Fulfilling these digital needs of the Bagri community, thus, can be helpful to data collection and research development.

Also, inclusive, human friendly education (which eliminates racism, classism, and other forms of discriminatory perceptions) needs to be encouraged, and the Bagri community should be redefined in a humane way so that social discrimination against the community might be mitigated. Changing social perceptions towards the Bagris through education and social media platforms will perhaps entail mainstreaming of the Bagri community in Sindhi society, and it will encourage social connection and access to the Bagri community, which can facilitate data collection and research development in the long run.

IV. A Critical Summation

In Ye and Yang's (2020: 7) words, digital divide is reflected in "limited access to the Internet...lack of IT knowledge and skills. This lack of digital literacy causes double marginalization, and it may pose challenges to

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data collection. This study has shown that attempts of data collection from the Bagri community are deeply affected by digital divide, social discrimination, and lockdown. Our study has also shown how the recurrence of digital divide and marginalization and use of the words of the coresearchers exemplifies social disconnection and embodies researchers' worldview on the challenges of data collection. As a result of digital divide and double marginalization, data have revealed sufficient evidence of how challenges to data collection from the Bagri community have intensified, and how these might be overcome for data collection and research development. In relation to data collection, this study provides evidence on how "moving from an "open research ecosystem" to a "socially distanced research ecosystem" emerged as a new norm of data collection (Prommeger, Thatcher, Wiesche, and Krcmar, 2020: 100).

Challenges to collecting data from the Bagri community might be seen as a hurdle to research development. Data collection is considered as crucial for conducting research, which the coresearchers believe, can open doors of successful research if collected without any intervention of research bias.

All the challenges to collecting data from the Bagri community faced by researchers are intensified by social divides between the Bagris and the non-Bagris in Sindh. These challenges might be overcome through inclusive education, digital awareness, and economic improvement of the Bagri community. According to other scholars, such as Smyth and McInerney (2013) 'the notion advocacy ethnography' as a way of designing and conducting research on community marginalization should be adopted because it helps in advocating the case of the marginalized, however, it needs to be ensured that this advocacy does not result in biased advocacy. Data collection can function as an emancipatory force and help in overcoming social gaps.

Also, literate Bagri or non-Bagri women can play an important role in overcoming the challenge

of collecting data from the Bagri women. This is because the coresearchers' responses suggested that the Bagri women are more marginalized than the Bagri men.

In Sindh and Pakistan, the main problem lies in digital divide, marginalization, and socio-economic inferiority imposed on the Bagri community. The existing digital divide (Hassan et al., 2019) and social discrimination (Tunio, 2014), testify to these inequalities where the vulnerable communities have been drastically marginalized. This marginalization through social gaps is also bringing forth challenges to data collection from the Bagri community. Thus, because of digital divide and social discrimination, the Bagris have been unable, up to some extent, to convey their concerns to researchers.

To sum up, the research concludes that digital divide and double marginalization offer a useful theoretical lens to examine challenges to data collection from the Bagri community. This analytical lens is hoped to guide other researchers to expand their range of research to other contexts, and critically trace and understand the effects of digital divide,

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digital deprivation, lockdown, and social discrimination in collecting data from the vulnerable communities. Moreover, digital divide can also be used as a frame to analyze the inherent conflict and contestation between digitally dominant communities and digitally deprived communities. The evident challenges to data collection, rooted in digital divide and double marginalization, result in challenges in conducting research on such communities. This calls for robust agentive response from both researchers, universities, NGOs, and government authorities to provide digital facilities to such communities in this way knowledge about them through data collection and information dissemination regarding for example, the need to get themselves vaccinated, during social distancing imposed by the Covid 19 regime may become easier.

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