GCU Economic Journal, Volume LV (1&2), 2022, pp. 49-82

Exploring the pre- and post-COVID lived experiences and preparedness of rural informal healthcare workers: A qualitative study from Pakistan

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Abstract: The purpose of this research is to come up with an impactful understanding of the role of informal rural healthcare workers as am affective and affordable healthcare service provision. The study determines the role of informal health care providers in detecting high-risks diseases such as COVID-19 or other kinds of lived experiences. Secondly, the study explores the adherence of informal health care providers to new methods for the cure of low- and high-risk diseases and impact of such service on patient's satisfaction. The study had followed a qualitative approach by using in-depth semi-structured interviews. Twelve interviews were conducted by selecting rural union councils of Tehsil Shorkot of Punjab, Pakistan. The snowball sampling techniques was adopted to select participants. After conducting interviews, thematic analysis was employed for the analysis of qualitative data. The study's scope is encompassing the role of informal health care providers of rural areas only as they play an important role in filling the gap of limited or non-availability of formal health professionals.

Keywords: Pandemic, Healthcare services, awaremess.

1 Introduction

The title of the thesis hints the impacts of informal health care providers in Pakistan after COVID-19. It is also central to search for the role that is being played by these health care providers after the pandemic of COVID-19 in mitigating the emerged panic due to the elusive virus. In addition to this, the current research also deconstructs the mysterious deep-rooted health facilities in the form of informal health providers, which has been neglected in the past. The study targets the informal health care providers who do not have any formal medical degree or certificate from any institutions, but, to some extent, hold expertise in curing the low-risk diseases.

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In views of Inter-Agency Standing Committee (2020), identifying and working with the informal health care providers to spread awareness and expedite the speed of care protection measures, the real role of informal health care providers could be utilized on the face this elusive virus. Understanding local people behavior and perception through the help of getting first-hand knowledge from informal health care providers that they garner after interacting with local people is indispensable key in determining the needed action that must be taken to shape the policy. In short, the hidden potential can be realized by taking some concerted steps by the policymakers. In case of Pakistan, especially with reference to rural and remote areas, the informal health care provider is filling in the gap in the absence of formal health care services or expensive alternative treatments. These informal healthcare providers have no qualification or limited certified qualification/methods to deal with common low-risk diseases. The term 'informal' includes a great variety of providers who routinely or occasionally undertake activities for which they do not possess the required medical certification, as assessed by health authorities and/or legislation covering the provision of health services, Bloom (2011). Informal health care providers are: community health worker, compounder, hakeem, healer, herbalist, folk practitioner, folk medicine, lady health worker. On the other hand, formal health care providers are considered those health care providers who possess a medical certificate or degree from an institution.

Main issues that were faced by the people in rural areas are: food insecurity, unemployment, lack of education, lack of medical facilities, unavailability of local transport, and rise in the monopoly of food vendors; thereby, combined these all created a shortage of health resources. Above-mentioned issues compounded the insecurity of mental and physical health which resulted into depression, stress, anxiety, suicidal issues, and crime cases. Then COVID-19 emerged on the screen to make things more severe. It is also known that formal health sector of

Pakistan is not that much strong to tackle the issues. Hence, the need of the hour is to decipher the potential of the informal health care providers.

There is an existence of high-rate disparity in healthcare provision in Pakistan, especially between rural and urban divide. The differences can also be observed in terms of patient-doctor ratio and the huge gap between the elite and the less-affluent marginalized group. The affordable access to healthcare facilities is also a big stigma faced by the society where less privileged people have to face huge opportunity costs in terms of trade-off between basic consumption goods and demand for healthcare services. Therefore, the marginalized group especially in the rural areas must resolve towards informal health care service providers due to easy access and affordability. Hence, there is a burning need of current time to study the gap in terms of limited supply of health care facilities, especially in terms of qualified medical practitioner which is filled up by the informal healthcare practitioners and the impact of these informal healthcare on health outcome. In short, the above lines make necessary to study the role of in the current scenario during the era of the COVID-19. The boundaries of the research are just limited to decipher the role of informal health care providers in the four union councils of Shorkot, Punjab. Informal health care providers are those health care providers who do not have any formal medical degree or certificate from any institutions. Hakeems and Compounder are the main target of this study.

The focus of this study is to decipher the hidden potential of the informal health care providers. The study also focuses on knowing about their role for the treatment of the low-risk and high-risk diseases. In a similar fashion, to accomplish these goals, thorough investigation of the existing literature and interaction with different health care providers will be made necessary. The current study will try to provide a forward-looking approach to curb the menace of the low-risk and high-risk diseases by looking at the issue very keenly from the perspective of rural informal healthcare service providers. These service providers are important from the perspective of rural areas where they feel the gap by targeting the less

informed and less privileged people of the society. The study will provide a case for its replication and a larger scale to be investigated other districts of Pakistan by keeping in view their demographic conditions to reach out to a feasible solution to the respective health issues. The study explores the role of informal healthcare service providers in improving the health outcomes among rural population. It examines the prospects of informal healthcare service providers in detection of high-risk diseases especially after the COVID-19 pandemic as well as the differences in capability of informal healthcare service providers in detecting and curing of less-risk and high-risk diseases. This study also investigates whether informal healthcare service providers facilitate the marginalized group to make informed choices

2 Literature review

The role of informal health care providers is immense. In case of developing countries, informal health care providers play a significant role in tackling health issues. Not only informal health care providers are put aside by the people but also by governments that do not pay much head to the neglected part of health sectors. Moreover, in India, Das, Chowdhury, Hussam and Banerjee (2016) conducted a study to decipher the hidden potential of the informal health care providers, but in case of Pakistan there is dearth of data and the work on this important issue. Therefore, the current study tries to fill in the gap by undertaking a field survey to explore the role of informal health care providers in Tehsil Shorkot, Pakistan.

Most of the literature that targets the informal healthcare service provider are survey-based. The study undertaken by Das et al, (2019) highlights the role of informal health care provision for deeper insights through randomized control trial methods. Sudhinaraset (2013) conducted a study in West Bengal found that two are the most commonly cited reasons for

frequently visiting the informal care providers; the first one is location and the second one is flexibility in hours.

Das et al., (2019) endorsed that there is a lack of evidence about the hidden potential of informal health care providers in India. The study first found gap in the health sector of India, then they started working on the 75 percent of the neglected portion, which was to some extent blessing in disguise for the health sector.In addition, after spending 9 months in the experiment of randomized control trial, they came up with the finding that showed similarities to the concerns of Indian Medical Association. It was suggested that the provision of informal health care providers can be effective as the short-term strategy to improve health care provision, and this also complement critically in ensuring the quality of public sector. On the other hand, Caldwell et al., (2014) endorse that pharmacist are the main helpers in this category as they are easily accessible, and also women health care providers can be of cardinal importance owing to their strong social linkage in the society.

Moreover, according to Sudhinaraset et al (2013), people prefer informal health care provision owing to three reasons: convenience, affordability, and culture. Despite playing an important role, this part of the health sector is largely ignored by the government. Sudhinaraset et al., (2013) study is based on the overview of the literature reviews of 334 articles. It is concluded that the role of informal health care providers cannot be ignored in terms of affordability. According to Feldstein (1970), the backbone of economics development is decreased mortality rate and rise in general level of health. The Feldstein (1970) study highlights how important the health sector is for the economic development. Hence, one can say that neglected part of the health sector should also be highlighted to boost economic development.

In the world of advancement and innovation, there is an uproar in the policy-making circles about the inclusion of people-centric approach to tackle the health issues. In addition, there is much more cacophony on the hidden potential of informal health care providers. On the other hand,

concerns about the quality of service-delivery of the informal health care provider are also challenging. According to the study of Sieverding and Beyeler (2016) on Nigeria, the informal health care providers are the significant portion of the health sector which is not being fully utilized. The study concludes that the role of informal health care providers is vital in providing relief to the poor faction of society. Moreover, while highlighting the role of informal health care providers, Sieverding and Beyeler (2016) further contributes that the role of informal health care providers can be more people-centric if it is not much demanding the unseen geography, alien culture, and distant communities. In short, the cooperation between the formal health sector and informal health sector can be made better by ensuring the quality of informal health care providers which is termed as a key to improve both sectors.

Neto et al., (2021) explored how the Brazilians got rid of the health issues with the help of informal health care providers when it came to handling health issues of the old age patients. About 3.5 million people were in the state of bad health and formal health sector was unable to perform to meet the needs of all. Hence, informal sector played an important role in this regard. The study showed that owing to low risk of infection, low cost, and high emotional support of the terminal ill person many countries recommend short-term solution for patients in the form of informal healthcare service providers. Later, United Health System came up an outstanding idea of converting home care services to emergency services, which also comes into the zone of informal health care provision.

According to Doherty (1985), family centric approach is crucial to combat the disease. The approach holds that there should be systematic working with the family members of patients for prevention, treatment and control of diseases. With the rise of Covid-19, people were advised to stay at home to contain the spread of Covid-19. If affected by disease, they were quarantined and, in that period, the main responsibility was on the

shoulders of family members who had to play role as an informal health care provider.

The story of informal health care providers fits directly to those family members who come to rescue at the time of emergency with traditional knowledge of medicine. Same has been discussed in the study by Chali et al., (2021) that traditional methods of tackling the disease with the self-made medicine that includes the role of herbs. Surprisingly, traditional medicines in the age of advancement are getting more than enough attention when it comes to curing the Covid-19 or traditional diseases, which are not that uncertain as Covid-19 is being considered.

In a similar fashion, there has also been observed a huge decrease in the family-centered care during the pandemic, which remained for a long time on the limelight. The family-centered approach comes under the radar of informal health care providers. Family support was essential at the time of Covid-19 but unfortunately owing to the protocols to contain the virus it all goes against it. On the other side, Hart et al (2020) in their study endorse the needed role of family centered-care when it comes to tackling the elusive Covid-19, and on a similar line, Doherty (1985) argued that family centric is the key in combating pandemic. In addition, the study further put emphasize on the family-centered care as there was not any physical connection feasibility during the pandemic for the medical staff, and on the other side through technology, it was easy to utilize this opportunity to fight against the menace of Covid-19. Furthermore, websites holding enough material, treatment material was also suggested in this case. Apart from this, it was also advised to establish a connection with the family member of patient and with patient as well to make things easy in the uncertain time of Covid-19.

In the United States, according to the Hart et al., (2020) there was not put more reliance on the internet usage owing to its poor facility in some areas, but on the other hand, informal health care giving in the form of family-centered approach was put on the front. The family-centered approach was of cardinal importance as there was no alternative option

left for those who were vulnerable to the virus. In addition, the step was also taken to stop the spread of this disease on a large scale. The family-centered approach also endorsed the need to use more of internet to stop the spread of the diseases.

As it has now become clear that the informal health care providers are the integral part of the health sector, so there is a debate whether, with the help of technology, their role in formal sector can be increased or not. On the other, there had been debate in the past on the ban of informal health care providers, but the reality is something different. According to Sudhinaraset et al (2013) the role of informal health care providers is between 9 to 90% when it comes to interacting with patients, and that depicts how big the informal health sector is, and also it shows how much potential it has. In addition, this percentage increases in low to middle income countries. The informal health care providers are more active in the low- and middle-income groups owing to the disinterested political and economic behavior of stakeholder when it comes to tackling the issues of formal health sector. According to Godlonton and Okeke (2015), a change in political decision-making was observed in Malawi in the form of banning the informal health sector to improve the formal health sector, but it ended up in disappointment because the formal health sector was unable to uplift the bad quality of formal health sector

Part from this, after Covid-19, the world got into worse condition. With a ray of hope after vaccine roll out, new policies were stumbling in the corridors of power to contain virus with stricter measures. According to the Anderson et al., (2021), the rapid roll out of the vaccine would hinder the compliance of SOPs and thereby would create carelessness regarding the humans' behavior towards adherence to SOPs to combat the deadly disease. The study done by Anderson et al., (2021) holds vigilance in the face of changing human behavior with the hope of vaccine appearance in the world. The study further elaborates that when people heard that vaccine had been made then they eventually started to change their

behavior. For all the changes in the behavior, the onus goes to optimism as explored in the study of (Anderson et al., 2021). The academic implication also holds much closeness to the study. After the plethora of bad news, good news triggered a wave of happiness and carelessness in the people, which to some extent resulted into carelessness on every level. In the views of Taylor and Asmundson (2021), after Covid-19, 10-15 percent adults never or rarely wore face mask in the US and Canada, and also there were some rallies against mandatory face mask policies.

After Covid-19, much emphasized was laid on the need of individual's responsibility when it comes to curbing the menace of elusive Covid-19. Bartscher et al., (2021) mentioned in one of the studies about the apparent politicians urge to tackle the issues by belaboring on the individual role. Indirectly, they were aware about the point that social capital must move with the health outcomes. With the rise of Covid-19, governments started advising the people in Europe to follow the lane of responsibility, keeping in view social distancing, and strict hygiene recommendations.

The study done by Bartscher et al., (2021) encapsulated seven European countries, in which the authors observed that the rate of cases is declining as people are following suggestions and recommendations by the government. Here, the role by the government to convince the people proved itself worthy enough to curb the robust spread of the contagious virus. In a similar fashion, in term of theoretical framework role, previous studies also back the results and recommendations, and are proponent of positives outcomes of social capital with health outcome.

As the world is still grappling with the health crisis owing to the menace of elusive Covid-19, and its emerging variants, the question arises that whether the vaccine should be rolled out as an essential medicine for the individuals or not? Ironically, the big bulls of the world are keeping the vaccine's provision in their own zone that is why the poor factions of the world with the help of some super powers are tackling the issue in a lingering way, which is unfortunate to see. The main emphasize in the study by Smith et al., (2021) is on unlicensed vaccine authorization for

emergency and whether that is to be considered as essential medicine or not. According to study International Covenant on Economic, Social and Cultural Rights (ICESCR) Article 12, States have obligations to prevent and control epidemics. Therefore, placing more burden of obligation on the countries who has got into this race and, neglecting the already neglected part of the health sector would not be a good thing, particularly when it comes to tackling the informal health care providers with coercive measure in the 21st century.

3 The conceptual framework

The chain developed in the conceptual framework is further investigated in main themes. In addition, every variable associated with informal health care providers is investigated to navigate the route of research. These themes are developed based on extant literature relevant to the research topic which are then incorporated in the structured interview. Later, the content analysis of the interviews is undertaken in the light of these themes which are conducted in the four union councils of tehsil Shorkot. The variables discussed in the framework depict the association with informal healthcare service providers which is investigated through survey-based analysis. Therefore, the relation of the variables with informal health care providers varies from place to place and individual to individual. These themes reflect the experience of informal healthcare service providers, preparedness for the existing and new diseases, and attitude of patients towards informal health which is compared with pre-COVID and post-COVID situation. Most of the informal health care provider in the pilot sampling were aware about the symptoms of the COVID-19. Not just that they were aware about the symptoms of COVID-19 but they were also aware about the behavior of the people towards preventive and curative measures. Collective attitude of the patients moved in the same direction. Economic condition of the people after COVID-19 was much bad due to which they opted for affordable informal healthcare service in the presence of cough-like symptoms rather

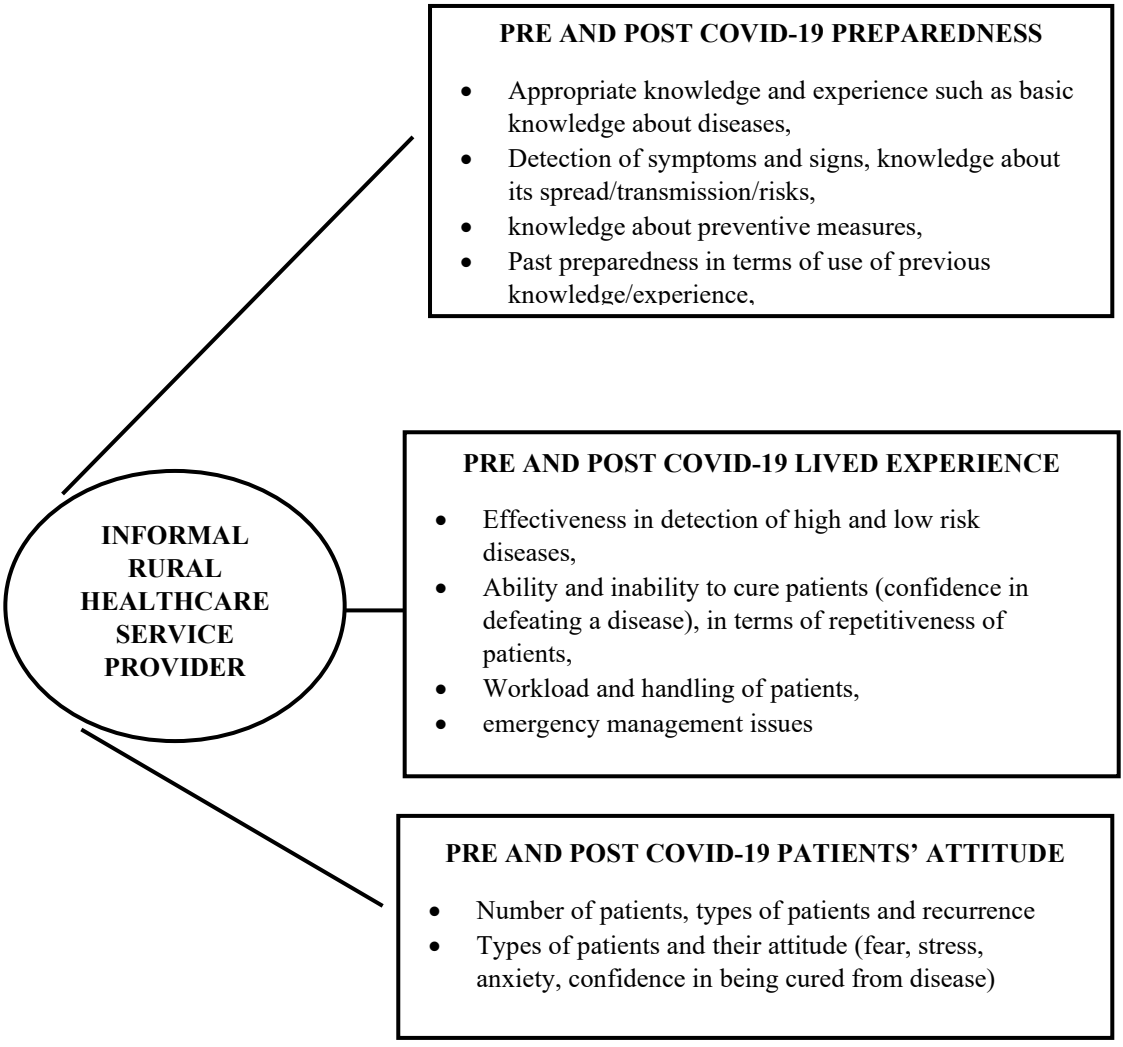
than approaching the formal sector. In addition, there was much fear in the masses owing to the existing conspiracy theories. From the slums of tehsil Shorkot, it was tried best to navigate the route of research in the right direction.

Initially, what the author came to know about the real nature of the research is that there was really need of family-centered approach in the rural areas of tehsil Shorkot. The point of family-centered approach was also endorsed by the Doherty (1985) in the form of family support to tackle low and high-risk diseases. In a similar fashion, the story does not end there. In addition, during the interviews process, one point highlighted most of the time was the usage of traditional methods of treating patients with a low cost. The similar arguments were supported by Chali et al., (2021) that how these traditional methods of treatments can be beneficial to mitigate worries regarding low-risk and high-risk diseases. The author wrote about the traditional methods of treating the patients of COVID-19 because the pandemic was on rise and formal methods of treating patients were disappointing the whole world. In another study, the same arguments put forth by the informal health care providers of the survey were supported by Hart et al., (2020). In a similar fashion, Godlonton and Okeke (2015) in one of their studies supported the arguments presented by the informal health care providers in the interviews that banning the informal sector of health would flourish the formal health sector. Same types of arguments were presented by the informal health care providers that poor economic condition of the people in these union councils is major cause of shift away from formal health sector. Similalry, Bartscher et al (2021) was of the view that individual role in curbing the spread of COVID-19 is essential. Mostly, rural people visit more informal health care providers owing to their less expensive treatment therefore, the above policy line of Bartscher et al., (2021) could be utilized to tackle the diseases.

Three core concepts on which this research is based are i) pre and post covid-19 preparedness ii) pre and post covid-19 lived experience iii) pre

and post covid-19 patients' attitude. The detailed conceptual framework developed in the study is presented in Figure 1.

Figure 1: Conceptual Framework of the Study



Source: Author's own framework

Linking the conceptual framework with some theoretical background that is contextual to economic thinking, the author of study has categorized it as follows:

i) Risk Aversion: People tend to be risk taker when there is little awareness about the prevailing conditions while in areas that were rampant with conspiracy theories about COVID-19 other than the facts, the wave of fear was much greater, and people were risk averse and paying more visits to the informal health clinic.

ii) Moral Hazard: The informal healthcare providers offers low-cost treatment which also act as an advertisement tool to attract more patients. In some cases, they may offer no cost for a cutthroat competition in the market with fewer service providers. This leads to moral hazard as people's behavior tend to be risk taker.

iii) Cost Theory: The informal healthcare providers brings a lot of easiness for the patients in terms of approach, convenience, and affordability; thereby raising the opportunity cost of formal health sector. In addition, people do not care about the sunk cost as they have no fear of losing too much money. Therefore, the demand of informal sector would remain high particularly in the rural areas.

iv) Rational Choice Theory: The economically impaired people think at the margins more as compared to wealthy. Therefore, such group prefer not going to doctors with the fear of added cost of lab testing and high-priced prescriptions. That fear and easy accessibility to the informal healthcare services motivate people to visit informal sector rather than the formal.

4 Data collection

4.1 Nature of Study: Qualitative Inductive Approach

The approach that was used in the study for analysis is qualitative analysis. An in-depth structured interview is conducted, and the contents of responses are coded keeping in view the three core themes followed in the conceptual framework (Figure 1).

4.2 Data Collection Tool: Structured In-depth Interview

Keeping in view the nature and core themes of the study, the questionnaire was developed using open ended questions. Initially, there was inclination towards making the study quantitative but limitations in getting a relatively large sample size to collect data was not allowing to proceed further. Due to prevalence of smaller number of respondents and the investigative nature of the study the qualitative approach was used for data collection. The questionnaire was designed by first making core themes and multiple variables were identified under each theme. On the basis these themes, the real potential of the informal health care providers is explored an in-depth interview was conducted through face-to-face talk. The ethical considerations for the study was taken into consideration i.e., voluntary participation, informed consent, confidentiality, and result communication. The responses were coded with respect to the conceptual framework developed by the study as presented in Figure 1.

4.3 Sampling

The area for the study was Tehsil Shorkot of District Jhang, Punjab, Pakistan. Particularly, four union councils of Tehsil Shorkot were selected for the interviews. In addition, Hakeem and Compounder were interviewed for the study as who comprised of most of the informal healthcare service provider in these union councils. The study followed the snowball sampling. In addition, it included the in-depth interviews from different union councils of tehsil Shorkot. In a similar fashion, the interviews timing was about 30 to 35 minutes. Apart from the pre-

determined questionnaire, some questions were asked that were aligned with the theme of questionnaire but were not included in the questionnaire to go with the flow of the interview. The respondents were identified through various networking, including gathered information from friends, relatives, and local people. There respondents were of two natures: Hakeems and Compounders, that showed willingness to respond the questionnaire. Hakeem is a traditional medical practitioner without any formal training or education and the method of healing is based upon cultural beliefs on the medicinal property of herbs or other organics. Compounder is the licensed rural medical practitioner but not a physician with formal medical degree.

Total 12 respondent showed willingness to participate in the study. The duration for data collection was three weeks, from 2nd March to 24th March 2022. While conducting the interviews, the author was helped by a medical student to mitigate worries regarding the medical terminologies and linguistic barriers. Initially, there was some resistance by the workers when it comes to showing willingness to respond to the questionnaire. The snowball sampling was used as the targeted population was difficult to approach due to non-responsiveness and less volunteers to willingly participate in interview due to fear from legal institutions. Through snowball sampling, connections were made to select respondents for conduct of interviews. Thereafter, respondents were asked to make further contacts to facilitate the interview process.

5 Analysis and discussion

The content analysis is done to interpret the first-hand information by the researcher The data was collected through in-depth semi-structured interview. The interview was conducted via face-to-face interaction of the respondent with researcher by making eye-contact, reading facial expression, and interpreting body language of the respondents. The views

of patients and public about the respondent were not included in the analysis but the perceptions of informal healthcare service provider.

The content of interviews was coded thematically based on the conceptual framework developed in Figure 1. The observations hints toward the increased ratio of patients after COVID-19 even for minor symptoms of illness or physical weakness. This was mainly due to the spread of fear among the community member regarding the pandemic. Moreover, the informal healthcare service providers claimed on having the knowledge to distinguish the COVID-19 patients from others. They collectively claimed that through the support of government they can participate in dealing with the pandemic. However, further analysis is counterfactual to this claim as the content of the collected data suggests that they do not indulge in the emergency cases of high-risk diseases, but they indulge in the emergency cases of low-risk diseases. Table 1 provides the profile of respondents in terms of gender, age, experience, category, and work experience.

Table 1: Background information of the informal rural health care providers

Characteristics	N
Gender	
Male	12
Female	0
Age	
20 < 40	5
40 < 60	5
60 < 80	2
Category	
Hakeem	5
Compounder	7
Experience	
Less than 5 years	1

6 -10 years	1
11 – 15 years	2
More than 15 years	8
Worked in partnership	
Yes	6
No	6

Source: Author's own based on field survey

There was a presence of more compounders than hakeems in the study area under consideration. There were two healthcare providers who were above the age of 60 years and rest were equally divided into two age groups of between 20 to 40 years and between 40 to 60 years. Moreover, a greater proportion of the sample included the workers having more the fifteen years of experience. Apart from this, male respondents were selected since they had more impact in the form of large response rate of patients as they were approached more frequently for different types of treatment. Whereas the female informal healthcare service providers in the study area were mainly the midwives who were the traditional birth attendants commonly known as Daii. Therefore, in the perspective of scope of current research female informal healthcare providers were not included in the sample.

5.1 Theme 1. Pre- And Post-Covid Differences in Patient's Attitude and Behaviour: Types of patients and their attitude (fear, stress, anxiety, confidence in being cured from disease)

The first interview from the Union Council, Qaim Bharwana, was enlightening. The respondent mentioned how economy molded people's behavior towards the informal sector which is fortunate for the informal health care providers but collectively unfortunate for the people of Pakistan who lack access to the modern health care sector. Other interview from the same union council followed the same chain of thoughts and concluded that poverty levels in the country has forced the

poor people of rural areas to shift towards informal healthcare. Using the snowball sampling, the journey led to another union council named Shah Sadiq Nihang. The respondents in this union council showed some similarity in thoughts to the previous union council.

A male respondent of the union council revealed

"There was no change in the behavior and attitude of the people about the informal health sector after COVID-19."

Furthermore, the respondent also claimed that during the period of elusive COVID-19, patient behaved with them very well though they came with a lot of stress, anxiety, and depression. This is because people owed them very much, he argued. Therefore, there was not much inclination of the people towards formal health sector. For the increasing ratio, he puts onus on the beleaguered economy, and resistance on the testing system of people prescribed by formal sector to detect the real nature of disease. The respondent claimed:

"During the period of COVID-19 patient behaved with them very well though they came with a lot of stress, anxiety, and depression."

Moreover, the third interview from the same union council was more interesting. After COVID-19, the respondent reiterated that ratio of patients has increased. The increased ratio of patients is owing to the prevailing fear of expensive treatment of formal sector. In addition, he opinioned on the feedback question that every time patients went satisfactory from his clinic that is why he is still practicing.

From the same union council, there was another respondent who stepped forward to give his insight regarding the existing role of the informal health care providers. For indifference attitude inbehavior, he put blame on the negligence of the people who were completely unaware about the COVID-19 symptoms though they had heard about newly emerged disease in the world. On the other side, according to the respondent there

was general fear among the people of his union council, far greater than people coming from other union council. The onus for the fear goes to the conspiracy theories that were existing in the market. While talking about the observation about the society he was of the view:

"People went for preventive measures not for curative measures due to fear of the disease."

When asked about the shift in the tendency to move towards the formal sector, there was not much difference in the visiting percentage over the period towards the informal health sector. The respondent argued that the people are still attractive towards the informal health care sector. Surprisingly, he was hopeful that the sector will remain prevalent for long period of time because of the abject poverty and inequality of wealth in the society. From the same union council, another respondent came with some new insightful ideas. He argued:

"Initially patients were afraid about the disease but they came again with confidence to them to get the treatment."

After completing two union council, the next turn for interviews was Bhangoo union council. The respondent was very open to talk about some of prevailing issues regarding the informal health sector. Moreover, according to the respondent, there has been observed that there happened no change in the attitude and behavior of the people regarding COVID-19. The second respondent from the same union council also shared that there happened no change in the attitude and behavior of the people. The reason, he argued, is lack of awareness about the elusive disease. Therefore, he said:

"It becomes clear that people did not go for preventive nor for curative measures as they did not contract with COVID-19."

In addition, the masses were more concerned about the regular diseases not about the new ones therefore, there was no difference in the percentage of patients visiting to their informal clinics. On the positive note, he added that patients always provided satisfactory feedback to him. Mostly, they came with sweets upon paying a return visit. Such positive notes are the reason that he is still practicing and getting good feedback from every patient. The third respondent from same union council came with an alternative response. Keeping aside other claims, he responded that there is a stark change in the behavior and attitude of the people. Furthermore, he conceded that after COVID-19 people had fear, stress, and anxiety owing to the spread of COVID-19.

In the union council Chak.No. 497, the respondents were also very open to share their thoughts about informal health sector. In the very first interesting interview, the respondent shared that there has not been faced any stark change in the attitude and behavior of the regular change when it comes to talking about their view about informal health sector. They remained indifferent throughout the period. In a similar fashion, he stated that patient behavior owing to the rampant formal health sector is not the same as it was before the spread of COVD-19. He was of the view that patient's tendency toward traditional methods has lost over the period owing to fear of death. In addition, he revealed that people do not fear about the new disease. Sharing his experience of last twenty days, he claimed that he did not face any such thing that showed people have fear about the new disease. He expanded on the question of how people have lost interest after COVID-19. The response was:

"People lost interest on the formal sector because they had fear about expensive treatment."

He further argued that people did not go for preventive nor for curative measures in the period of COVID-19. Another respondent from the same union council argued:

"There happened no difference in the attitude and behavior of the people regarding the spread of new disease."

The reason he provided for no difference was that people started believing that COVID-19 did not exist. Further he said that people in the area were of the view that it is government policy. On the other side, in the wave of fear and anxiety, they complained that there was no difference in the behavior of individuals.

Furthermore, he claimed that they cooperated with each other. He revealed that there, in his area, happened a case of death about which people thought that it is owing to COVID-19 which resultantly spread fear, stress, and anxiety in the masses. Moreover, he discussed that the existing fear, anxiety, and depression was due to the previously mentioned death of a lady. Following the same chain of thoughts, the third respondent argued that there happened clear difference in the attitude and behavior of the individuals after COVID-19. The fear in the masses about COVID-19 resulted into a clear surge in fear, stress, and anxiety which they discussed with them upon visit to their clinic/shop.

5.2 Theme 2. Response on the Detection of Low and High-Risk Diseases Pre and Post Covid-19: Detection of symptoms and signs, knowledge about spread/transmission/risks, knowledge about preventive measures

Surprisingly, the first respondent in the union council Qaim Bharwana was aware of the symptoms of the COVID-19 which he came to know through social media and government advertisement policies. Regarding his expertise in the treatment of diseases he claimed:

"I know about Polio virus and about how to cure it."

The respondent claimed to have treated many diseases over the period of time which include fever, flu, cough, polio, skin-care, and cancer. His response towards key to success is his vast experience. He further

belabored that he has contact with doctors in big hospital, but he never used their methods.

The second respondent also shared that he was aware about the symptoms of COVID-19. In addition, he opined about the people's behavior towards COVID-19 which, he revealed, was not preventive but was curative. He stated that:

"During COVID-19 pandemic, I am using some combination of different anti-biotic to cure the high-risk diseases."

He further said that he did not use new medicine without first getting details about its working. Regarding the detection of COVID-19 patient, his responded that it is difficult task in his field, therefore, he did not indulge in such matters. The third respondent opened up on the details regarding diseases being treated by him over time that included mostly the liver patient, cough, flu, diarrhea, and cancer. In addition, the feedback of his treatment methods got 60 to 70 percent satisfactory results. Furthermore, he also claimed to use new methods for the treatment of disease occasionally. During the period of COVID-19, he stated that immunization plays a crucial role but he did not try to innovate or create a new thing for the treatment of this elusive virus.

Following the snowball sampling the researcher moved to another union council which is named Shah Sadiq Nihang. The first respondent revealed that he has been visited by a heart patient but he referred him to a big hospital. In addition, mostly he has treated patients with spiritual methods. He further said that he has cured four patients with spiritual methods. Moreover, he was of the view that patients are their advertisement; they came again with satisfaction. He did not try to innovate or create anything new to cure COVID-19 patient.

From the same union council, there was another respondent who stepped forward to give his insight regarding the existing role of the informal health care providers. His response was as follows:

"I do not tackle high-risk diseases and most of the time I cure bone-cracking issues."

After the treatment, people went with satisfaction, but sometime people also get disappointed. He was of the view that he did not to try innovating new methods of cure and has been practicing what he has learned from his ancestors. In addition, he was of the view:

"I do not think this sector has potential to fight with COVID-19".

Moving ahead towards Bhangoo, the first respondent came up with some more insightful response. Surprisingly, without treating any COVID-19 patient, he claimed that he has ability to differentiate between COVID-19 symptoms and some other regular diseases symptoms, but he also added that it was not in his capacity to treat a COVID-19 patient. His response was contradictory as he claimed to know about the differences between COVID-19 and regular flu but refused to have capacity to deal with the former.

The second respondent from the union council was of the view that he does not indulge in treating high-risk diseases. Mostly, he treats some low-risk diseases and patients go satisfied and come back with good feedback. In the period of COVID-19, he did not treat any patient of high-risk disease. The third respondent came with some outstanding response and mentioned some of the diseases he has treated over the period of time including fever, cough, flu, stomach, and allergy problems. In addition, apart from the inherited knowledge that he got from the forefathers, he did not try to innovate or use new methods to treat new diseases that are being faced by the society.

In the union council Chak.No. 497, the respondents were also very open to share their thoughts about informal health sector. The first repondent said that he had no idea about the symptoms of COVID-19, but he

claimed that through social media he came to know about a little bit about the symptoms of COVID-19. Apart from this, he denied:

> *"It was not in my capacity to distinguish the symptoms of COVID-19 with other diseases but still I am still optimistic about the future that the sector is not going to fade away."*

Another respondent from the same union council came up with some outstanding insight to give a new dimension to our analysis. Upon asking some questions on COVID-19, he accepted that he knew about the symptoms of COVID-19. He claimed that there has not been any case of COVID-19 in his union council. The third respondent argued that there happened clear difference in the attitude and behavior of the individuals after COVID-19. On the other side, he claimed:

"We detect diseases on the basis of experience."

Therefore, people have good perception. He very bluntly mentioned that he knew about the difference in the symptoms of COVID-19 and some other regular diseases

5.3: Theme. 3. Deconstructing the Informal Health Care Providers' Hidden Potential and Incorporating Some Pre and Post Covid-19 Changes: Ability and inability to cure patients (confidence in defeating a disease), in terms of repetitiveness of patients

The first respondent from the union council Qaim Bharwana was of the view that he observed some intensity in diseases of cough. In addition, he also tried to treat the patients with some his own old methods of treating the patients. On the other side, second interview from the union council Qaim Bharwana also is of great importance when it comes to tackling the trust of patient. The informal health care provider claimed that people get half medicine then they come to get the remaining half if the result happens in the positive direction. He was much confident about his methods of treating patients that he presented his daughter for sample testing for his medicine. The potential he showed is beyond one's

imagination because he claimed to treat cancer patients. The other two respondent from the same union council did not show that much confidence in the previous two respondents.

The journey of collecting data via snowball sampling comes to another union council which is named as Shah Sadiq Nihang. When it comes to talking about COVID-19, the denied that he did not know about the symptoms of COVID-19. From the same union council, another respondent came up with a claim that:

"I know how to cure the patients with the usage of some spiritual methods."

Upon asking questions regarding their feedback on the spiritual treatment, he revealed that they came again satisfied from previous experience. He argued that patients are his advertisement. In the union council Chak.No. 497, the respondents were also very open to share their thoughts about informal health sector. Apart from this, he accepted that sometime he treats people free of cost so that people can trust his methods of treatment. Moreover, he claimed:

"Patients always leave good comments after treatment and that make me satisfied about my methods."

He further expanded that informal sector is less expensive than formal sector. Therefore, patients who do not have the luxury of visiting some big hospital come to him for treatment. He revealed that public perception is good about his treatment; people of his union council trust him. Another respondent answered the question related to the treatment of high-risk diseases, by claiming that he treated a woman who was having some liver issue. Apart from this, he argued that he did not treat any case of high-risk disease.

After shedding light on the treatment of high-risk diseases, he further claimed that most people came to him with good feedback. He further said

that good feedback had motivated him to still work in the field. Moreover, he accepted that he had treated some regular disease over the period, including some diseases related to stomach issues. His response was:

"I receive good feedback from my patients that is why I am still working in this field."

In addition, he accepted that informal health sector is less expensive, but limited to the treatment of few low-risk diseases but incapable to deal with high-risk diseases. Furthermore, he claimed that despite the growth of formal sector people still came to him for treatment due to poverty. He further opened on the issue that informal sector has ability to tackle some high-risks disease if it is properly supported. Following the same opinion, the third respondent argued that there happened to be clear difference in the attitude and behavior of the individuals after COVID-19 but the informal health sector cannot suggest for tests before treatment. In addition, he is very hopeful about the future of this sector. He believes that until there is poverty is not eradicated, this sector will remain functioning.

5.4 Theme 4. Gauging The Role of Informal Health Care Providers Pre and Post Covid-19: Ability and inability to cure patients (confidence in defeating a disease), in terms of repetitiveness of patients, workload and handling of patients, emergency management issues

The first respondent from the union council Qaim Bharwana claimed that he came to know about Covid-19 symptoms through social media and he argued that it is not difficult to detect the differences between normal fever and Covid-19 fever and the cough as symptoms. In addition, upon asking about the change in people behavior when it comes to making decision regarding the high-risk diseases after Covid-19, he argued

"People had fear of going to doctors because they prescribe them tests before treatment".

On concluding remarks, he said that he has used some new combinations for treatment that depicts his potential to treat patients with severe diseases. Another respondent from the same union council argued that formal sector present fear of many tests and expensive treatment of the diseases, therefore, people shift towards informal healthcare sector for treatment. The respondent observed that people were more attractive towards this sector due to poverty. On the other side, he mentioned that it was in his capacity to distinguish symptoms of Covid-19 and some other low-risk diseases. Furthermore, he said:

"*Government has taken some concerted steps but the economy is not that much strong so people would definitely come to us owing to their bad economic condition*."

The third respondent revealed that he knew about the symptoms of the Covid-19 and was also aware about what kind of preventive measures must be adopted by the people. It was claimed that sometimes lab reports get wrong and that need to be resolved. On the other side, without lab reports he said:

"We hold the capacity to distinguish Covid-19 patients and some other normal patients."

In the light of above responses, one can easily say that the informal health care providers hold a powerful claim of playing a cardinal role in mitigating the worries of people in the wake of Covid-19 pandemic.

Apart from this, the first respondent of Chak. No. 497 revealed that he knows about the symptoms of Covid-19 and possess the power to distinguish symptoms of low-risk diseases and Covid-19 symptoms. In addition, he was hopeful about the future of this sector and its survival. On the other side, the second respondent showed resistance on answering the question about Covid-19. He commented

I have not treated any Covid-19 patient therefore, I have no idea about Covid-19 symptoms. So, I would not be able to comment on this.

On similar note, third respondent from the same union council also responded of being unaware about the symptoms of Covid-19. Therefore, he further commented on this that the sector does not hold capacity to treat Covid-19 as it lacks modernity in it. Summing up the whole story, the respondent was optimistic about the future of his field by saying:

> *"The profession of Hikmat cannot be ended as Jalal Hikmat said it will remain till end because it has religious literature in it."*

The first respondent of the union council Shah Sadiq Nehang remained neutral upon asking the question on the symptoms of Covid-19. In addition, he was of the view that people got more attractive towards this sector as they had no money to spend on formal health sector which is comparatively expensive. Furthermore, he said:

"I am unable to distinguish symptoms of low-risk diseases (flu) from Covid-19"

On the other side, he is hopeful that the sector would flourish due to prevailing demand; keeping in view the current economic condition of the people who are more prone to seek informal health service due to affordability in comparison to formal sector. The second respondent was of the view that he has ability to detect Covid-19 patients as he is aware about its symptoms. Concluding his remarks, he argued that if government supports them, they will continue the practice. The third respondent of the same area did not answer the that whether he is aware about the symptoms or not, but he was of the view that if he had a chance to treat a Covid-19 patient, he would have treated the patient with the same methods. About his views regarding the treatment of patients, he said:

"Sector will flourish."

The first respondent from the union council Bhangoo showed some similarity of the views to the previous interviews. He argued:

"I am aware about the COVID-19 symptoms and people do not opt for preventive measures".

On the other side, upon asking a question, he said that he is unable to distinguish the symptoms of COVID-19 and some other low-risk diseases. Second respondent of the union council argued that he did not know about COVID-19 symptoms and its spread so he would remain neutral on this matter. Moreover, the third respondent from the same union council revealed that he knew about the symptoms of COVID-19. He also observed that people went for curative measures and they did not wear face masks, and care for SOPs. He further argued that more people got attractive towards the informal health sector in the period of COVID-19. However, he admitted:

"It was not in my capacity to distinguish the symptoms of COVID-19 and some other low-risks diseases".

In his conclusionary remarks, he was of the view that the informal sector will not diminish with the passage of time as the demand is still prevalent even under the fear of pandemic.

6 Conclusion and recommendations

Concluding the current study on role of informal rural health care providers. It is observed that mitigating the damage inflicted by COVID-19 is not an easy task as against the claims of few respondents whereas majority agreed with the inability of informal health sector. However, the role of informal health care providers holds too much importance in the lives of those people who do not have access to resources. Resultantly, they seek services from this sector to get treatment with meager amount of

money. In addition, it is observed as per the claims of respondents that there is some hidden potential that need to be figured out to avert damages of the future viruses.

On the other hand, there was relief in knowing that without having any formal education; these informal health care providers had a fair idea about the symptoms of COVID-19. In some cases, they even treated some other high-risk diseases and two of the respondents even claimed to have treated an early-stage cancer patient. However, it was difficult to countercheck this claim via a valid proof and was beyond the scope of this study as qualitative data on perceptions was collected. Nevertheless, majority of these informal workers treated the low-risk diseases. The study also revealed that this sector is completely under negligence by the government despite filling the gap of healthcare provision in rural and remote areas where formal care in not prevalent. The larger distance and costly treatment discourage the rural population to approach formal healthcare and such economic conditions is the main reason of prevailing demand for informal healthcare. All of the respondents demanded government support and facilitation. In a nutshell, poor economic conditions and resistance due to expensive lab testing system attached with formal sector keeps the majority of rural population away from the formal healthcare sector.

Based on the researcher's observation some recommendations include government interventions such as legalizing the profession, removing the institutional barriers, and adding marginal value to the existing skills of informal health care providers. Legalizing the profession to work freely without any resistance is indispensable as they are catering to the demand in rural area suchas removing institutional barriers that are in the form of raids from different government departments to stop them from working and making it hard for them to get approval for practices. Last but not the least, adding marginal value in their performance by conducting different training camps and programs is necessary since these workers cannot be eliminated from the society as they are very importantly bridging the gap

in rural and impoverished areas. All the above-mentioned measures are possible if there is government involvement.

7 Limitations and future direction for research

The major limitations of this study was the resistance from the informal health care providers to voluntarily take part in the survey due to institutional fear, lack of prior studies on this topic with reference to Pakistan, and lack of availability of reliable data to support and countercheck the findings of this study. Although this study has provided some useful insights with reference to the much-neglected sector, still there is greater prospects for future research in the informal healthcare. The next steps are to encompass the whole sector by including all the potential groups such as quacks, midwives, herbalists, spiritualist. In addition, another important aspect to include in the future research is 'family-centric' approach. Further gap that still need to be filled is the unanswered questions raised by this study such as why the informal sector has been put aside by the stakeholders and treated as illegal practitioners despite their relentless services to the impoverished society.

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