Rapid Assessment of Measures on Safety of Sanitation and Waste Workers during Covid-19 in Pakistan

A QUALITATIVE STUDY REPORT

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We hope the findings, analysis and recommendations of this study will contribute to informed and responsive planning and programming.

Ameera Kamal
Lead Consultant
APEX Consulting Pakistan

Table of Contents

LIST OF CASE STUDIES

LIST OF FIGURES

LIST OF TABLES

List of Acronyms

AJ&K	Azad Jammu and Kashmir
AKRSP	Aga Khan Rural Support Program
GB	Gilgit Baltistan
HCF	Healthcare Facility
ICT	Islamabad Capital Territory
IDI	In-Depth Interviews
KII	Key Informant Interviews
KP	Khyber Pakhtunkhwa
PPE	Personal Protective Equipment
UNEG	United Nations Ethical Guidelines
WSSP	Water and Sanitation Services Peshawar

EXECUTIVE SUMMARY

WaterAid Pakistan commissioned this rapid assessment research on the knowledge, practices and perspectives of sanitation workers and solid waste collectors about Covid-19 pandemic in Pakistan. The specific objectives of research were to understand the knowledge, practices and concerns of sanitation and waste workers regarding coronavirus, and; to find out the gaps and come up with recommendations to improve the health and safety of sanitation and waste workers during the pandemic. The research was carried out in May – June 2020 in Sindh, Punjab, Balochistan, Islamabad Capital Territory (ICT), Khyber Pakhtunkhwa (KP), Azad Jammu & Kashmir (AJ&K) and Gilgit Baltistan (GB).

The primary data for this qualitative research consisted of 56 KIIs and seven IDIs. Information was collected through semi-structured questions with three categories of respondent groups: solid waste collectors, sanitation workers (employed at homes, offices and public department), and solid waste collectors at Health Care Facilities (HCF) involved in Covid-19 testing and treatment.

More than half of respondents (59%) were Muslims, followed by Christians (35%) and Hindus (6%). Majority were males (83%) and only 17% were females, mainly employed at homes. Fifty-two percent were employed with the public and 48% with private sector. Forty-four percent were employed on permanent basis, while the non-permanent included those employed on temporary and contractual basis, and as daily wagers. Respondents were involved in more than one type of sanitation work such as rag picking, septic tank cleaning, sweeping, latrine cleaning, domestic cleaning, drain/sewer cleaning, and waste collection.

RESEARCH FINDINGS

Knowledge and awareness about transmission, symptoms, prevention and treatment of coronavirus was sufficient. About 30% respondents could identify at least two ways of virus transmission. Majority understood that the virus spreads through close contact with infected person. Similarly, cough, fever and flu were the common stated symptoms. About 46% could identify three or more symptoms of virus. Wearing masks (26%), gloves (13%) and keeping social distance (25%) were the most reported preventive measures of coronavirus. This was followed by frequent handwashing (11%). Isolation (38%) and seeking care from doctor/hospital (35%) were reported as the most effective treatment. Television was identified as the main source of information regarding the knowledge about coronavirus.

Majority (89%) of the respondents continued work during the lockdown but with increased workload. The rest (11%) discontinued work due to closure of offices, laid off by employer and/or sent on paid leaves during the lockdown. These were mainly sanitation workers employed at private offices and homes. For 46% respondents, lockdown did not bring change in work timings but for 38%, it brought relaxation either in the form of reduced timings and/or days.

Most of respondents were working in more than one place or doing small businesses and part-time jobs to meet their economic needs. The lockdown affected their multiple sources of income and thus decreased their monthly income considerably, making it difficult for them to meet expenses such as house rent, utility bills, school fees, repaying loans and others. For this, they took help from family/friends and their employers. They also obtained food items from shopkeepers on loan, got discounts from schools, sold assets and cut down expenses. Half of

the respondents received aid and support in the form of ration and cash from government, private and individual support groups. Most of this support came from the government (39%), individuals (16%) and employers (22%). The support was adequate for some and inadequate for others depending upon the need, family size and expectations.

The occupational implications such as the fear of catching the virus, losing jobs and not getting paid were perceived to have serious repercussions on health and economic burden. However, those affiliated with the government were least or not worried at all owing to the nature of their employment being permanent.

Knowledge and awareness on using safety measures during work and especially at time of pandemic was quite good. Majority (85%) of the respondents were observing some safety measures in the form of masks (37%), gloves (26%), frequent handwashing (17%) and using hand sanitizers (13%). About 8% respondents were partially observing these safety measures and 6% were not observing at all. Almost all respondents had personal protective equipment (PPE). The usage of both disposable and reusable equipment was equally preferred. Reusable equipment was cleaned with water and sometimes with detergents and antiseptics. Washing detergents and disinfectants (Dettol) were not available at workplace and respondents were using them at home. The disposable equipment was disposed-off in any dustbin and in specific dustbins by solid waste collectors employed at HCF.

Respondents found protective equipment uncomfortable to use and of poor quality, especially gloves and masks. Apart from the shortage of equipment, respondents also complained about their faulty fitting and the cost implication of buying/acquiring them repeatedly. It was encouraging to find some safety protocols put in place by the employers. These were special garbage collection bags, disinfecting sprays, masks, gloves and sanitizers. Awareness raising sessions on coronavirus and hygiene were also provided by some employers.

The importance of hand hygiene was positively recognized and frequent handwashing with soap was deemed the most effective measure to prevent virus from spreading. The reported duration of handwashing ranged from 20-40 seconds at interval of 30-60 minutes. Handwashing facilities with soap and water were conveniently available at mosques, offices and healthcare facilities but not always at site of work (septic tank cleaners, rag picker, solid waste collectors, drain cleaners and sweeper etc.) These workers would use sanitizers or wash hands at nearby mosques. Washing facilities were available at homes along with soap/shampoo. Sanitizers, though were not commonly available at homes. Bathing facilities for sewers/septic tanks cleaners/drain cleaners were not available at site of work. But it was available at municipal departments.

The expectations of most respondents revolved around increase in salaries, free ration and PPE, financial support, health and medical benefits, and awareness on health in general and coronavirus in particular.

RECOMMENDATIONS

A behavior modification mechanism for coronavirus and hand hygiene should be developed. It should focus on solid waste collectors (public and health facility based), sanitation workers at public and private offices and, domestic workers. It is important to treat domestic workers separately owing to the nature of their employment and other work dynamics.

Interventions should include a media campaign (national channels, satellite channels, or local cable); and sensitization of agents of change (e.g. employers, youths, religious clerics, and community elders). The purpose should be to promote adherence to safety measures and hygiene practices during the pandemic. A monthly electronic brief should be produced in collaboration with the respective health and sanitation departments at the provincial level. The same should be circulated to private and public organizations for wider adherence and awareness.

It should be made mandatory for employers to provide safety equipment to their sanitation worker. This should also include sanitizers and disinfectants for increased risk due to contagion. The work burden should be shifted by increasing the sanitation workforce, regularizing the employment, and doing away with ghost employments. A proper mechanism for waste handling and management should be in place with the municipalities for handling and disposing hazardous waste.

The National Sanitation Policy should be revised to incorporate latest and relevant approach towards WASH. It should also include a standardized and consistent protocol for health emergency situation. Sanitation workers should be considered as one of its primary stakeholders. This should be simultaneously incorporated in provincial policies and plans.

Under the revised policy, the employer should be accountable to provide health insurance (health cards) and financial compensation to sanitation worker in case of injury or death due to work. A fixed minimum wage and provision of annual revision in same as per the inflations rates should be integrated in policy and implemented accordingly. Employers and contractors should be responsible to link the sanitation workforce with social security benefits, pension, life/health insurance and regular provision of safety equipment.

SECTION 1: BACKGROUND, METHODOLOGY & ETHICAL PRINCIPLES

1.1. Background and Objectives

Pakistan is the second hardest-hit country in the region after India, as the number of coronavirus cases has risen to 139,230 (till 14 June 2020). If this trend continues with this pace, the numbers could reach 1 to 1.2 million by the end of July[1]. With increasing cases and deaths, the pandemic is posing a threat for the frontline workers providing essential services especially in healthcare and sanitation.

Sanitation workers work in life-threatening and unhygienic work conditions [2]. Lack of adequate safety equipment and protective gear put their lives at risk as they remain in contact with organic and inorganic wastes [3]. They remain infected or in constant threat of being infected from diseases mainly asthma, skin problems, allergy and injuries [4]. Continuous inhalation of dust and gases has increased the cases of chronic obstructive pulmonary diseases among street sweepers of Pakistan [5].

Poor urban planning and city encroachment has made sanitation work more difficult as it becomes impossible to bring machinery or equipment near the site. As a result, workers are forced to clean sewers manually [5].

A lot of their hardships could have been minimized, had not the sanitation workers and waste collectors systemically ignored in government policies [3] (National Sanitation Policy 2006 [6], Sindh Sanitation Policy 2017 [7]), plans and development initiatives. This lack of consideration in policy, irregular implementation of constitution and added societal stigma has laid difficult hurdles for these workers who have to face discrimination at various levels due to the non-permanent nature of their employment, religious faith and the overall label of being unclean. Further, the non-permanent employment deprives them access to benefits, pensions etc [8] making their retired life skeptical and vulnerable.

Non-Muslims comprise more than 80% of sanitation workforce in Pakistan [9]. The 5% (minority quota) reserved employment seats are largely placed at lower tier - mainly designated for sanitary workers [10]. Evidence shows that municipalities in Pakistan rely heavily on non-Muslims for menial tasks. Most of these non-Muslim workers are usually hired on contract to work on behalf of actually appointed Muslim workers who refuse to do unclean work [5].

The attitude of the community based on caste discrimination and taboos around sanitation work further contribute to their victimization and they are often abused by contractors (employers), police, and residents [3]. At times, doctors also refuse to treat the sweepers, who are seen as unclean and untouchables [11].

In the current Covid-19 pandemic, it is important that the human rights of the workers who provide hygiene and sanitation services are protected in terms of health, safety, conditions for jobs and required access to knowledge and information.

In this context, WaterAid Pakistan commissioned a rapid assessment research to inform the knowledge, practices and perspectives of sanitation workers and solid waste collectors about Covid-19 pandemic. The research was carried out in May–June 2020 in Sindh, Punjab, Balochistan, Islamabad Capital Territory (ICT), Khyber Pakhtunkhwa (KP), Azad Jammu & Kashmir (AJ&K) and Gilgit Baltistan (GB).

The specific objectives were:

1. To understand the knowledge, practices and concerns of sanitation and waste workers regarding the Covid-19 pandemic, with a focus on the risk of contagion.
2. To find out the gaps and come up with recommendations to improve the health and safety of sanitation and waste workers during the pandemic.

1.2. Methodology

The research was designed in line with the information requirements and guidelines provided in the TORs, discussions with the WaterAid technical team, and qualitative research principles.

Information was collected through semi-structured open-ended questions with the following three categories of **respondent groups** finalized after discussion with WaterAid team:

1. Solid Waste Collectors: This included respondents identified from municipal corporations.
2. Sanitation Workers: This included workers employed privately (at homes and offices) and those employed by public departments, municipalities or local governments.
3. Solid Waste Collectors at HCF: Workers at healthcare facilities that are involved in Covid-19 testing and/or treatment.

As advised by the WaterAid team, the **secondary sources review** was kept basic and presented as a background information. The main component of the study was **primary data collection** and consisted of:

1. Key Informant Interviews (KIIs): A total of 56 KIIs were conducted with first and second category of respondents.
2. In-Depth Interviews (IDIs): Seven IDIs were conducted with solid waste collectors at healthcare facilities that are involved in Covid-19 testing and/or treatment.
3. Case Studies: Three case studies were generated from the data to build a strong narrative around grassroot voices.

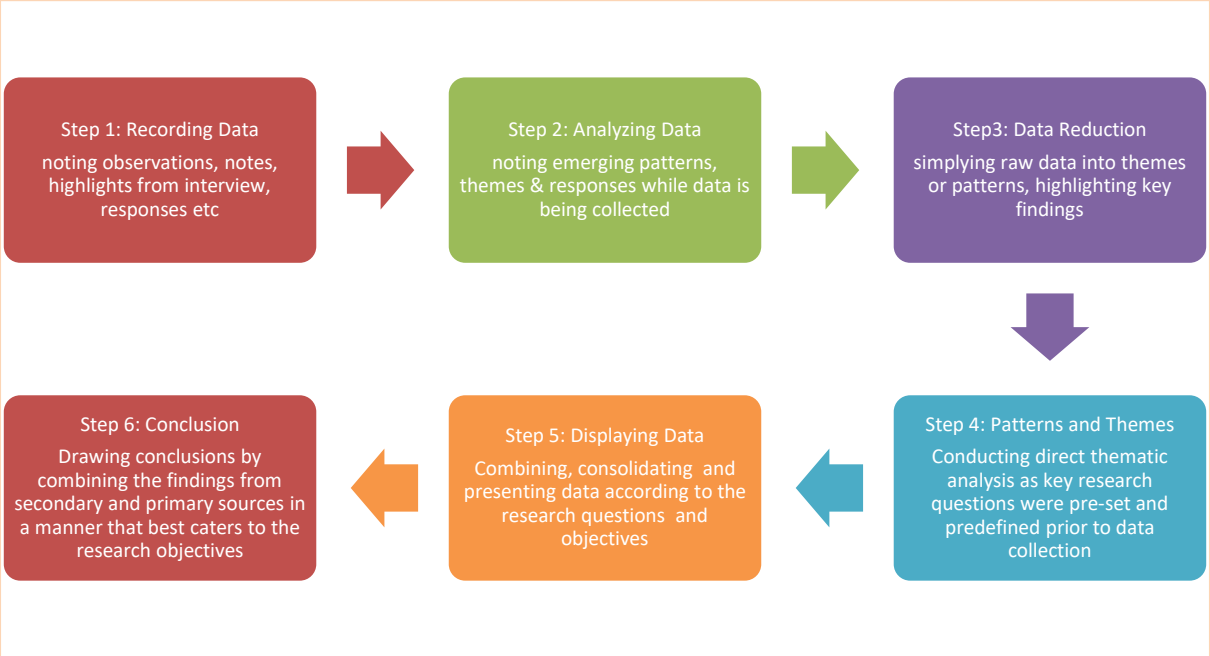
The following table provides a category-wise and province wise break-down of the sample.

Table 1: Sample Plan

Province	KIIs with Solid Waste Collectors	KIIs with Sanitation Workers			IDIs with Solid Waste Collectors at HCF	Total
		Office	Homes	Public		
Punjab	2	2	2	2	1	9
Sindh	2	2	2	2	1	9
KP	2	2	2	2	1	9
Balochistan	2	2	2	2	1	9
Islamabad	2	2	2	2	1	9
AJ&K	2	2	2	2	1	9
GB	2	2	2	2	1	9
Total	**14**	**14**	**14**	**14**	**7**	**63**

The qualitative data analysis was carried out using the Pell Institute Evaluation Toolkit – Qualitative Data Analysis Approach.

Figure 1: Qualitative Data Analysis Approach[1]



1.3. Ethical Principles

We adhered to the ethical principles of the United Nations Ethics Guidelines (UNEG)[2].

- Client was kept informed and engaged in all stages of research to ensure compliance and adherence to TORs.
- APEX maintained independence of judgement by recruiting qualified researcher and competent data collection team to ensure that the data is credible and impartial.
- The procedures to safeguard the rights of and confidentiality of information providers, e.g., legal issues such as provisions to collect and report data were observed, particularly, informed consent, voluntary participation, storing and maintaining security of collected information and protocols to ensure anonymity and confidentiality.
- Ethical compliance in respecting the differences in religious beliefs and practices, caste, culture, work nature, disability, age and ethnicity were duly maintained. Our team was instructed to remain mindful of personal opinions and judgements when interviewing the sanitary workers. Engaging local researchers barred language and cultural barriers.

[1] http://toolkit.pellinstitute.org/evaluation-guide/analyze/analyze-qualitative-data/
[2] http://www.unevaluation.org/document/detail/102

1.4. Limitations

Following were the limitations of the research:

- As the research was qualitative and involved open-ended questions, therefore inferring all results in percentages and numbers is out of scope of research principle and ethics.
- Data collection was largely affected due to the developing situation around coronavirus and increasing number of identified cases each day. Families of some of our field teams were affected as well which delayed data collection and submission.
- The research was focused on the questions outlined in the ToRs and the guideline shared by WaterAid. It thus provides information on the predefined questions and information requirement.
- The selection of respondents was also based on the ToRs, which identified 3 categories of sanitation workers exclusive of their religion, sex, employment nature etc. As the sample was not random neither large, it limited the correlation within data. The findings could not be cross-compared on these characteristics. However, these characteristics did comprise a basic profile of respondents and has been shared as such in the findings section.

SECTION 2: RESEARCH FINDINGS

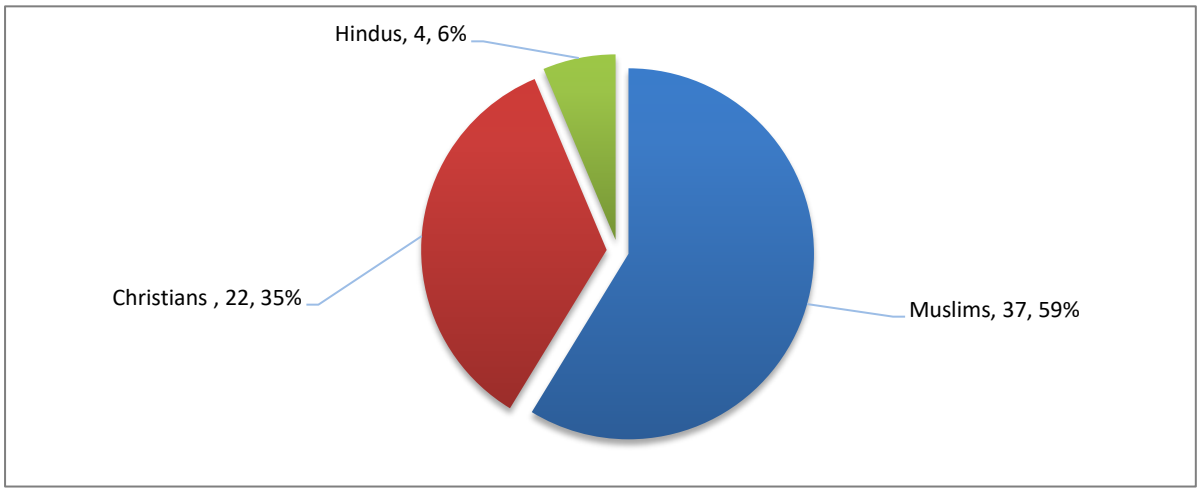
These findings include information collected through in-depth and KIIs from the three identified categories of respondents. Three case studies have been supplied as relevant.

2.1 Respondents Basic Profile

2.1.1 Religion

A little more than half of respondents were Muslims, followed by 35% Christians. Only 6% of the respondents were Hindus.

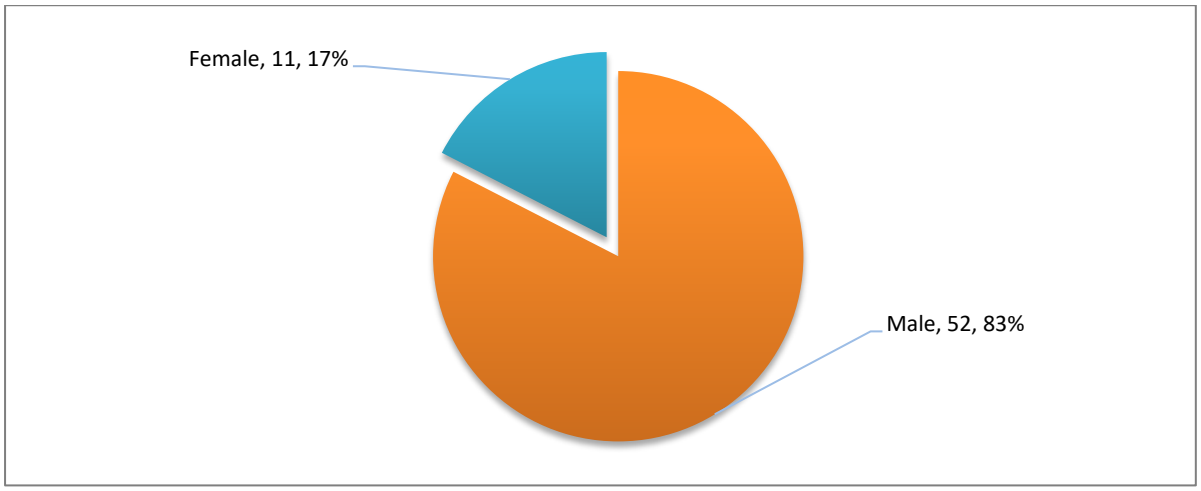
Figure 2: Religion wise distribution of Respondents



2.1.2 Gender

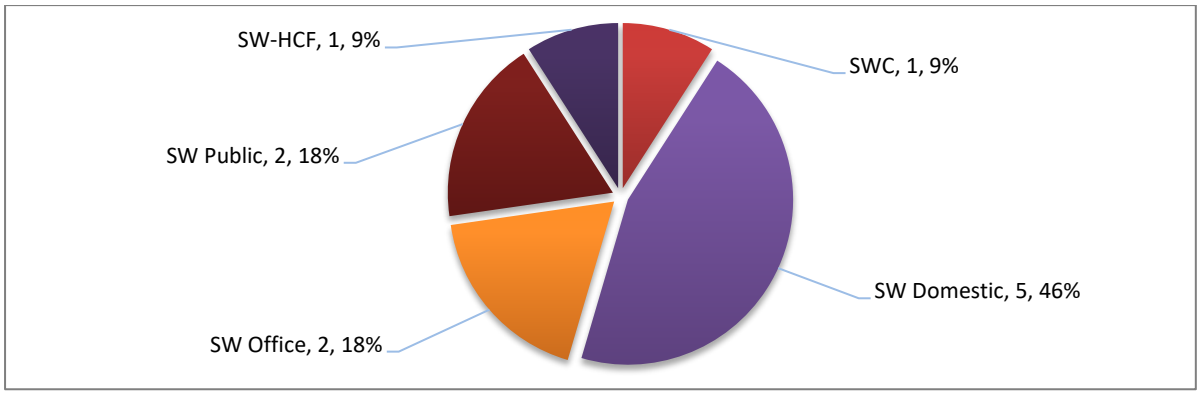
Predominantly, the respondents were male. Only 17% were females. See figures 4 and 5 for more detail.

Figure 3: Gender wise distribution of Respondents



Out of all the female respondents, majority were employed at homes.

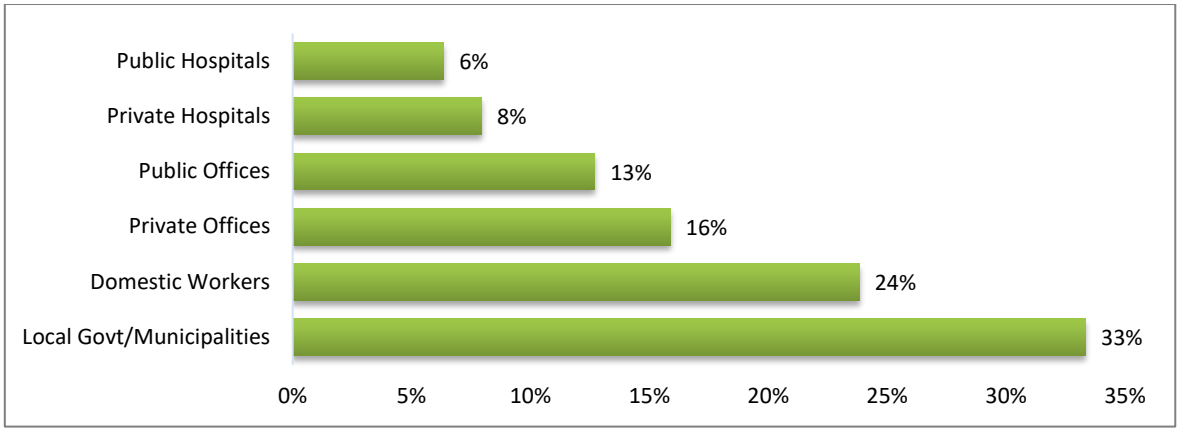
Figure 4: Female - Distribution of Categories



2.1.3 Type of Organization

Respondents were associated with various organizations. These included government offices, public hospitals and school; local government and municipalities, private offices and hospitals and those working in domestic households. The following figure provides an overview of major categories of organizations.

Figure 5: Respondents association with the type of Organization



2.1.4 Nature of Employment

About 44% respondents were employed on permanent basis, while the rest were employed on temporary, contractual and as daily wagers.

Figure 6: Respondents nature of employment

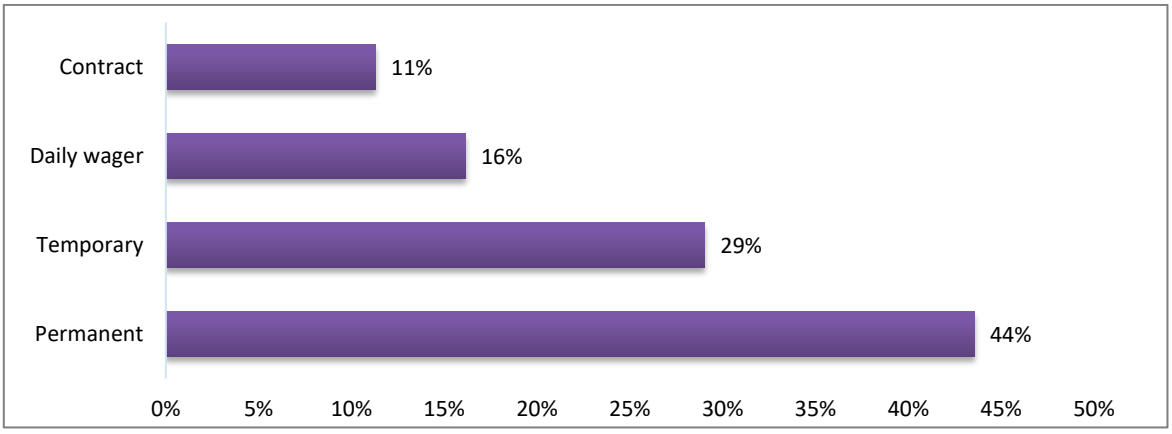
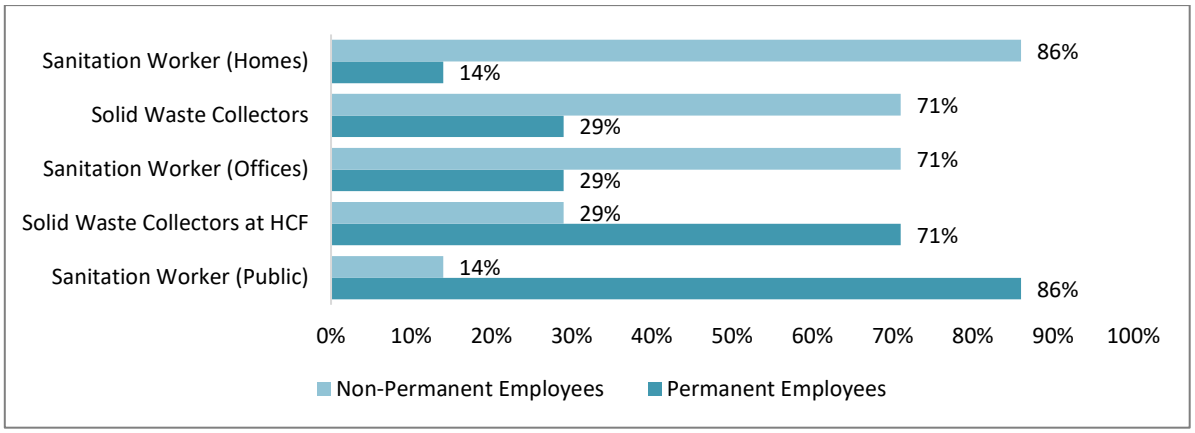


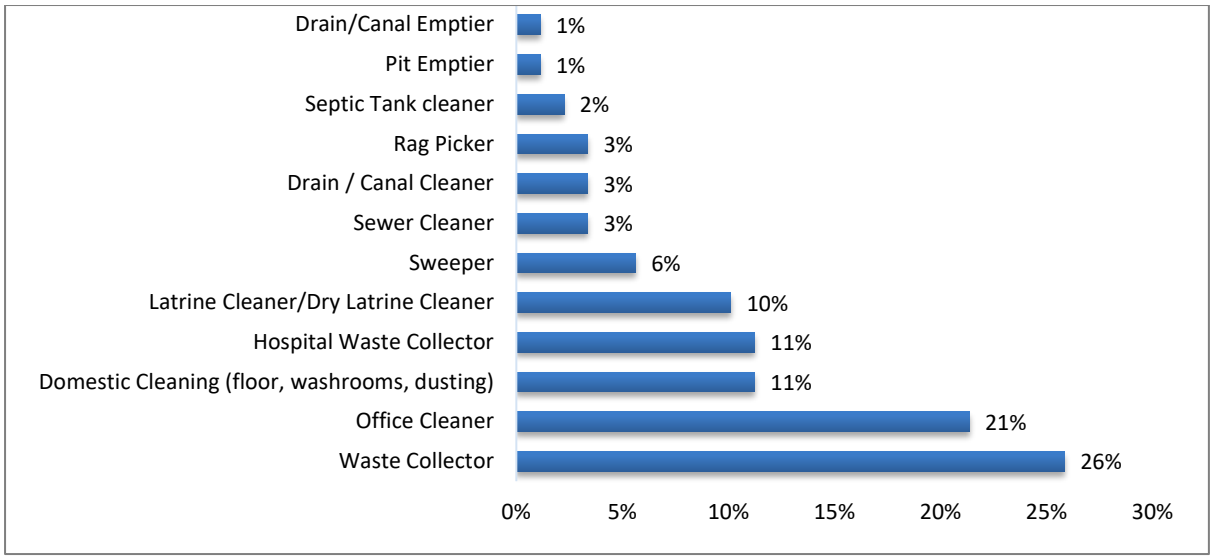
Figure 7: Permanent & non-permanent employees in each category



2.1.5 Type of Work

Respondents were involved in more than one type of sanitation work. It included rag picking, septic tank cleaning, sweeping, latrine cleaning, domestic cleaning (cleaning floor, washrooms and dusting), drain/sewer cleaning, drain/pit emptying, office cleaning, street cleaning, dry latrine cleaning, waste collection and hospital waste collection. Figure 8 illustrates in detail.

Figure 8: Respondents Type of Work



2.2 Knowledge about Covid-19

Respondents' awareness about Covid-19 was found adequate at various levels, with a slight variation in terms of symptoms and transmission of the disease. More than two-third of the respondents called coronavirus *a disease, a virus,* or *a disease related to flu, fever and cough*, transferred from *person to person*. For a few, it meant a *Chinese disease, a big virus* and *a virus like cough and TB*. No difference in knowledge was found in three identified categories of respondents as well as nature of employment (permanent and non-permanent). However, in the province wise analysis, AJ&K and Sindh showed having little knowledge.

Almost all respondents from Balochistan could not elaborate about the virus. Some respondents from Punjab and AJ&K claimed that they do not know much while some others (from Punjab, Sindh and Islamabad) said it is *some sort of disease* that has *caused closure of*

businesses. Some misperceptions were also recorded, particularly, doubt about the existence of virus as the respondents had not seen a single case.

2.2.1 Knowledge about Transmission

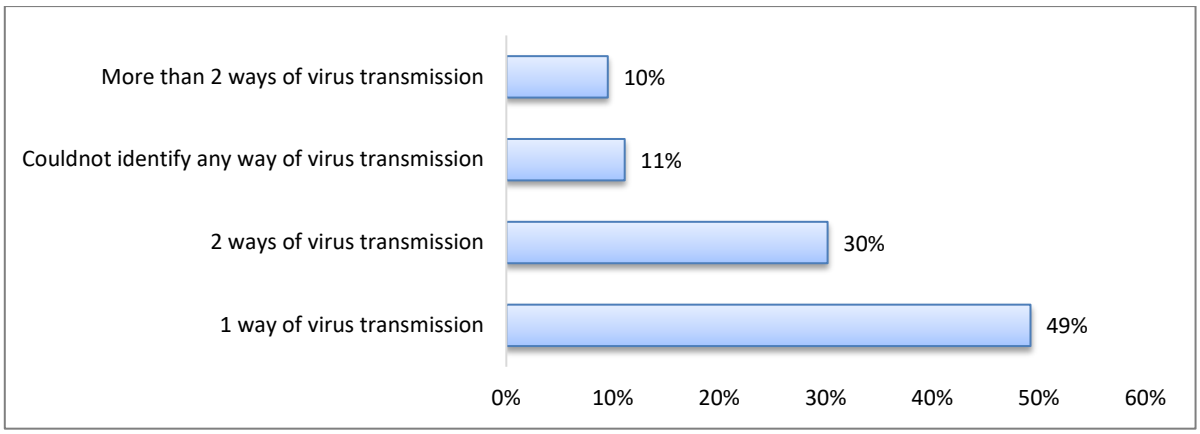
About half (49%) of the respondents were able to identify only one way of virus transmission. Majority understood that the virus spreads through close contact with infected person (through cough and sneeze).

Few respondents (11%) failed to state any method of virus transmission and claimed that they do not know how it spreads. These were mainly from AJ&K and Islamabad.

Some of the misperceptions regarding spread of virus included *'virus spread due to deterioration in society'* (AJ&K), *'coronavirus is the result of our sins* (Punjab) and disbelief in contracting virus.

> *We collect waste from streets. Our elders have been doing this work since long and they have never contracted any virus during work. (Solid waste collector, Islamabad)*

Figure 9: Identified ways of Virus Transmission



2.2.2 Knowledge about Symptoms

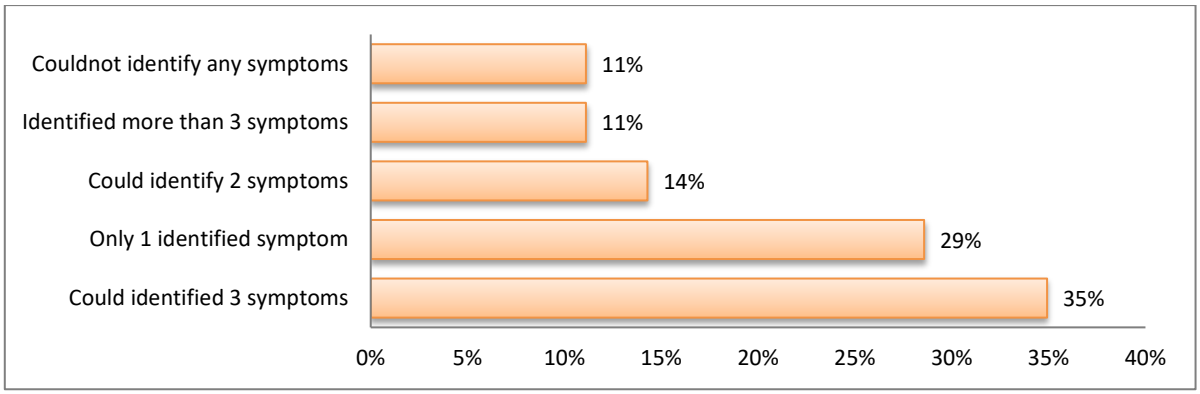
Cough, fever, flu and breathing difficulty were the common most symptoms reported amongst all categories of respondents. Almost half (46%) of them were able to identify three or more symptoms.

> *Symptoms are cough, sore throat, flu, dry cough and discomfort in the stomach. (Sanitation worker-homes, Punjab)*
>
> *Those infected with coronavirus suffer from mild fever, cough, flu and difficulty in breathing. These symptoms appear within 14 days. Patients also feel pain in backbone. (Sanitation worker-public, Islamabad)*

A solid waste collector from Punjab said,

> *The only symptom I know is that in coronavirus patient's body is covered with large blisters. (Solid waste collector, Punjab)*

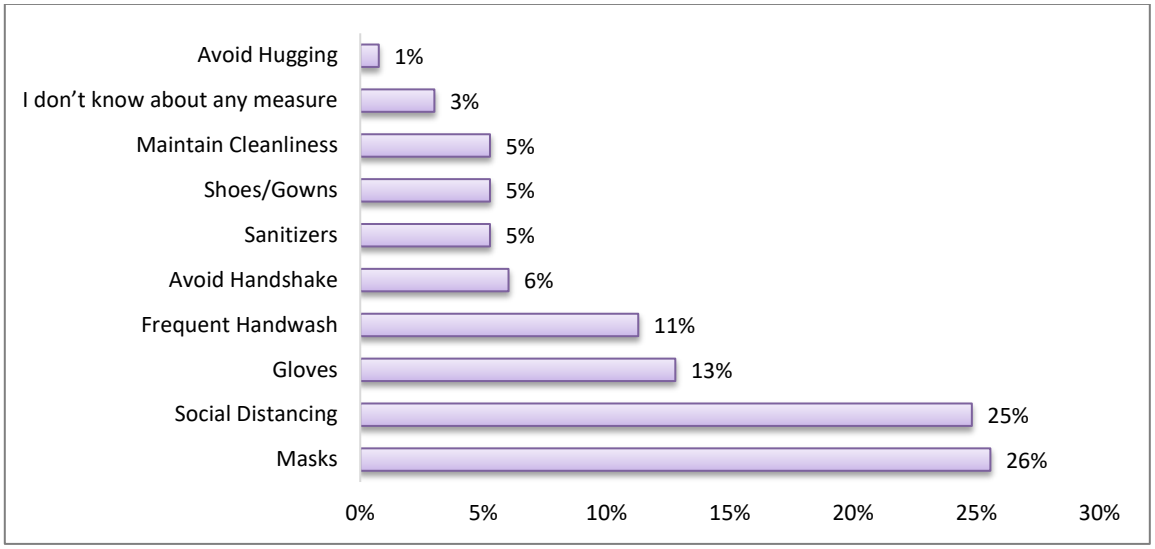
Figure 10: Identified Symptoms of Coronavirus



2.2.3 Knowledge about Prevention

Wearing masks and keeping social distance were reported as the most effective preventive measures followed by gloves and frequent hand washing.

Figure 11: Identification of Preventive Measures



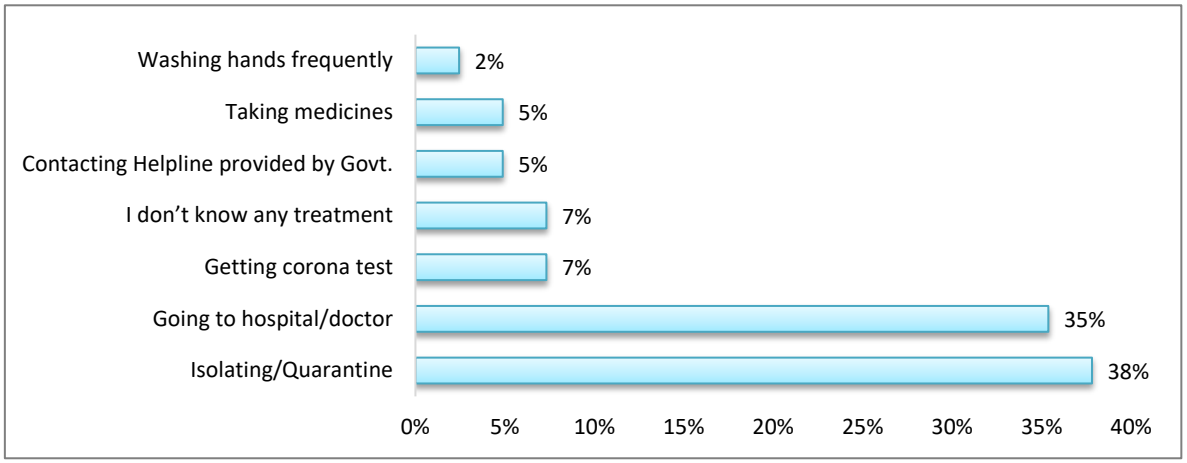
2.2.4 Knowledge about Treatment

Around one-third of respondents (35%, n=29) stated that they would immediately seek a doctor in case of feeling any symptoms to get tested for the virus. Only about 10 of these respondents were permanent employees. About 38% emphasized on keeping themselves in isolation to avoid further spread of virus and then approaching a doctor or a helpline for further assistance.

> *We must isolate ourselves first, then visit a doctor to help us. (Sanitation worker-private office, GB)*
>
> *If someone contracts the virus, he should call on numbers given by the government and should visit medical centers designated by the government. (Solid waste collector, Islamabad)*

A female sanitation worker who worked in a private office in Balochistan said that to treat coronavirus one should *urgently take a bath and start taking klonji water, and afterwards get tested for coronavirus.*

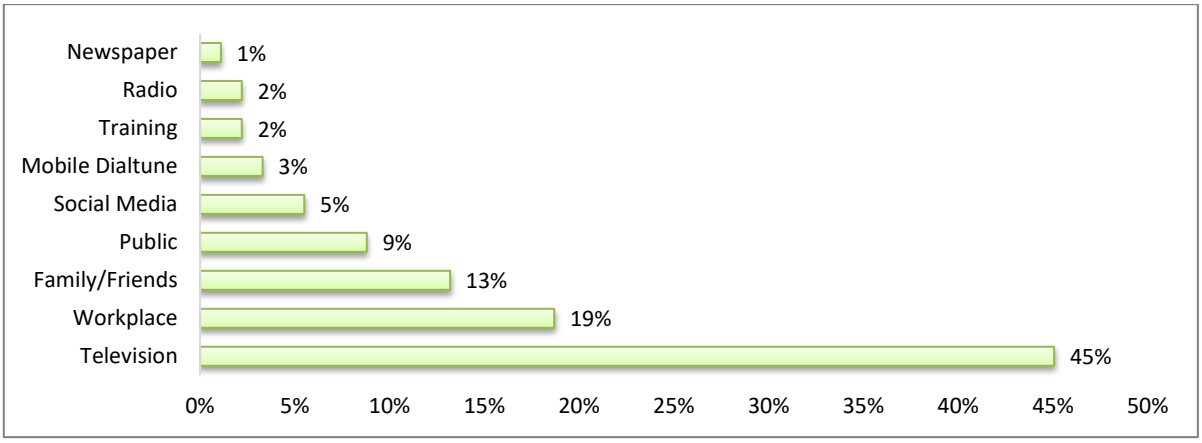
Figure 12: Identified Treatment



2.2.5 Sources of Information

Television was the most common source of information reported, followed by colleagues /employer at workplace and family or friends.

Figure 13: Sources of Information - Knowledge on Corona Virus



2.3 Economic Implications of Covid-19

2.3.1 Implications on Work

Majority (89%) of the respondents reported to have continued their work during the lockdown. They also emphasized that work burden during this time increased considerably, though they did not state any reason.

The rest (11%) had discontinued work due to closure of offices, laid off by employer, and/ or sent on paid leaves. These were sanitation workers employed at private offices and homes and they were most affected by the pandemic.

> *Before lockdown I was working in two households. One of them totally laid me off whereas the other provided me with paid leave. (Sanitation worker-homes, Punjab)*

2.3.2 Implications on Work Timings

Respondents who continued work during the lockdown reported change in work timings (both hours and days). A little more than one-third (38%) reported decrease and 16% reported increase in work timings. About 46% respondents reported no change in timings. Change in

work days was twice to thrice a week. These were sanitation workers who worked in private offices and homes along with solid waste collectors.

> *Since lockdown I have been going on alternate days. (Sanitation worker-office, Islamabad)*
>
> *I went to work twice a week during lockdown. (Solid waste collector, Balochistan)*
>
> *My working hours got decreased. I was working only two days; on Mondays and Fridays. (Sanitation worker-public, Punjab)*

2.3.3 Implications on Income

The average monthly incomes against each category of respondents and percentages of permanent and non-permanent workers is shown in the table below. The income was noted as reported by respondents without probing about its source.

Table 2: Income and Employment Distribution of Workers

Respondents Categories	Income Range PKR	% of Permanent Employees within income range	% of Non-permanent Employees within income range[3]
Sanitation Worker (Public)	15000 – 35000	86%	14%
Sanitation Worker (Homes)	7000 – 15000	14%	86%
Sanitation Worker (Offices)	6000 – 30000	29%	71%
Solid Waste Collector	8000 – 20000	29%	71%
Solid Waste Collector at HCF	13000 – 25000	71%	29%

It was observed that most of the respondents had more than one source of income. Besides sanitation related jobs, they also worked as drivers, sellers, rag pickers and car washers. They shared that the lockdown has largely affected their other sources of income due to which their monthly income has decreased considerably. Others stated that change in work hours/days has caused decrease in income.

> *Before the pandemic, I would wash vehicles after duty time to earn additional money. But after the outbreak my additional income source has ceased. (Sanitation worker-public, Islamabad)*
>
> *Before, I worked in other office to earn extra money. Now that office is mostly closed. (Sanitation worker-public, Balochistan)*

A solid waste collector at healthcare facility, Balochistan reported decrease in income from PKR 9000 per month to PKR 2000 due to lockdown.

However, a slight increase in income was reported by waste collectors in Gilgit Baltistan and sanitation worker (homes) associated with Metropolitan Corporation Islamabad.

[3] The percentages have been generated by combining the temporary, contractual and daily wagers.

2.3.4 Implications on Expenditure

More than half of the respondents faced some sort of difficulty in meeting their monthly expenses during this time. The most frequently reported challenge was paying house rent. This was followed by repaying loans, electricity bills, school fees and medical expenses. The least reported challenges were spending on Eid shopping and family ceremonies.

> *When lockdown was started, I faced problems in paying my children's school fee. (Solid waste collector, GB)*

Respondents in Balochistan, Sindh and Punjab reported difficulties in meeting their families' food requirements and other expenses due to shortages and price hike.

> *Due to this lockdown situation, I'm unable to meet my food, rent and utility bill expenses. (Sanitation worker-homes, Punjab)*

> *We have faced challenge of increase in prices - everything is expensive especially food items. (Sanitation worker, public, Sindh)*

2.4 Mechanism for Coping with Economic Implications

Half of the respondents managed to cope with these economic implications by taking loans from friends/family/bank, obtaining food items from local shopkeeper on loan, using savings, getting discount from schools for fees, selling mobile, asking for help from employers or homes where they worked.

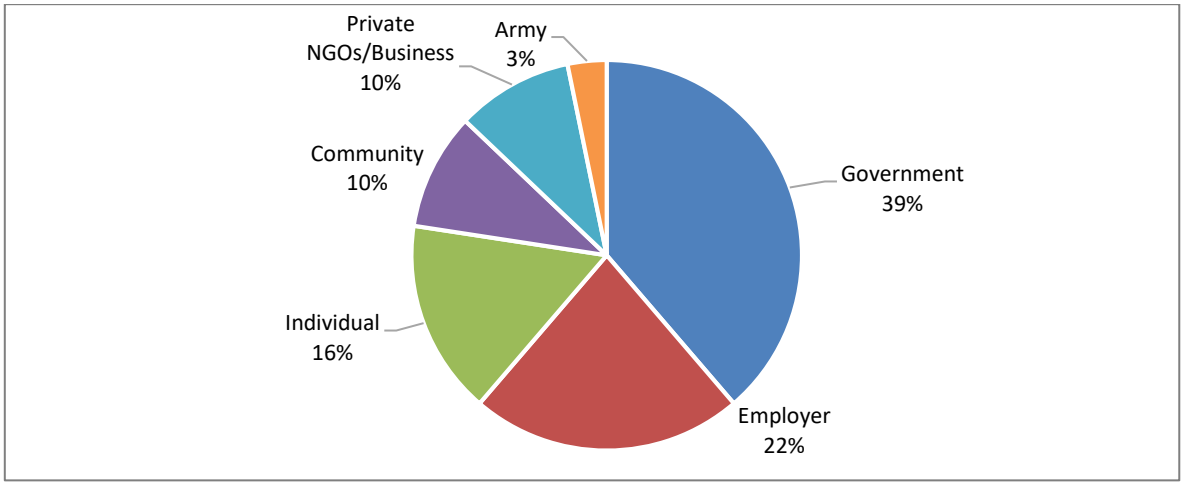
> *Some of my peers helped financially, and I was able to buy some necessary food items. (Sanitation worker-office, GB)*

Some also reported cutting down expenses to meet the requirement.

> *I totally have cut down my personal expenses but even then, I am unable to meet my family's expenses easily (Solid waste collector-HCF, Punjab)*

While, other half of the respondents (49%) received assistance and aid in the form of cash and ration. Most of this support came from the government (39%), individual people (16%) and households/offices (22%) where the respondents worked.

Figure 14: Distribution of Source of Support



However, some respondents were not satisfied with the support they received from the government and said;

I received cash from Ehsaas program, but it was too late and not adequate to meet my family's' expenses. (Sanitation worker-homes, Punjab)

Apart from this, a couple of respondents claimed that they were refused assistance as they *didn't have CNIC* or they were told that the g*overnment employees were not eligible.*

2.4.1 Expectations

Respondents were asked to share their expectations and knowledge about other support for the patients of coronavirus. A few claimed that being a *government employee they would be provided support'* by the government.

Respondents said that they have heard about some financial aid given by the government for coronavirus patients and patients who die from it. Some others stated about free testing and treatment provided by the government.

I heard that government has given facilities of free testing and treatment and quarantine centers. (Sanitation worker-public, GB)

2.5 Fears and Concerns Regarding Work

Respondents were asked to share their perceived occupational implications due to coronavirus. A lot of respondents **feared losing their jobs** due to this situation and also due to temporary nature of their jobs. These were sanitary workers employed at private offices and homes along with solid waste collectors, employed both on permanent and non-permanent basis. A couple of them had already lost their jobs during the lockdown.

I fear losing my job as I am working on temporary basis with this employer. (Sanitation worker-office, Khyber Pakhtunkhwa)

A sanitation worker employed at a school feared **not getting paid**.

If school remains closed for long time, then they will not pay our salary. (Sanitation worker-public, GB)

Some respondents worried about **getting infected** with the virus at some point.

I am afraid of being infected from the virus during my work. (Solid waste collector, GB)

I work in hospital and there are greater chances to get infected from the virus here. (Solid waste collector-HCF, GB)

While others were more concerned about the **decrease in income** due to the lockdown.

Before lockdown, I was working in shifts at this job and at a wedding hall. But now due to lockdown the hall has been closed. This means less work and less income. (Sanitation worker-office, Khyber Pakhtunkwa)

It has affected my income. There is a lot of fear regarding this illness which is spreading very quickly and causing lot of deaths as well. (Sanitation worker-office, Balochistan)

Some workers related the **increased work burden** as their primary concern as they said that the *virus has made people conscious about the importance of cleanliness.*

Work load has increased. We have to be here for 16 consecutive hours. (Solid waste collector-HCF, AJ&K)

Apart from these concerns, it was found that a majority of sanitation workers and solid waste collectors affiliated with government had little to **no worries** about impact the coronavirus crises can bring to their work.

I don't have any fear because my job is safe. (Solid waste collector, Sindh)

Case Study 1 of Sajid[4], a sanitation worker from Balochistan, employed by government on permanent employment

'Before this situation, I was earning extra income by working some hours in another office but now that office has closed and this has reduced my monthly income very much', said a much concerned Sajid, while responding to how the pandemic situation has placed him under economic stress.

Like others from his Christian community, Sajid also faced many challenges during this time and tried coping with them, by getting loans from neighbors, relatives and friends. He also received ration bag from government but said that that was not enough for his family of ten.

With economic implications came constant fear of losing his job. Sajid observes all safety measures he can and uses masks and gloves daily as he picks up rags, collect wastes, cleans latrines and sweeps the floor of the office where he works. Still as the number of cases increase each day, he fears of catching the virus one day or another as he feels that the quality of masks and gloves provided to him is not good.

Sajid has not still received any training on coronavirus, but he understands the importance of keeping good hand hygiene as, *'all major illnesses spread though hands so it is necessary to wash hands properly'*.

He believes that more awareness is required in Balochistan regarding the virus, as he sees people seldom taking any safety measures and going to crowded markets and bazaars without masks. Javed urged all to take care of their health, use safety measures and avoid going to public gatherings.

He also urges the government to compensate the poor and forgive their loans and rents, and provide them financial support during this time of crisis.

[4] Name has been changed to maintain anonymity.

2.6 Knowledge and Practice on Safety Measures

Respondents were asked to share their knowledge and practice on safety measures at workplace. All respondents understood the necessity of using protective equipment/gear during work, especially during the pandemic. No disparity was found in this practice from any province and respondents' categories.

Eighty-five percent respondents stated that they were observing these safety measures. The most common measure reported were masks (37%), gloves (26%), washing hands frequently with soap and water (17%) and using hand sanitizers (13%).

Two female respondents from Balochistan stated *having green tea* and *hot drinking water* regularly as a safety measure for coronavirus. While emphasizing on the importance of masks and gloves, a waste collector said;

> *One should wear masks and gloves while working. One should be extra careful while collecting and dumping solid waste. Solid waste should be dumped responsibly and hands should be washed and gloves should be changed afterwards. (Solid waste collector-HCF, Punjab)*

About 8% of all respondents were partially observing these safety measures and 6% were not observing. The reasons for this have been discussed in the next section (See 2.7)

2.6.1 Availability and Provision of PPE

Most of the respondents had gloves and masks, at the time of interview. Most of it was provided by their employer.

> *We get mask after 24 hours and gloves after 2-3 hours. (Sanitation worker-office, Khyber Pakhtunkhwa)*

> *Full protective kit is provided by the hospital. (Solid waste collector-HCF, Khyber Pakhtunkhwa)*

Exceptions were reported from those who were not employed at the time of interview and those who said *it was not provided by employers* (municipal office). However, all waste workers at healthcare facilities had complete protective equipment provided by their hospital administration.

A sanitation worker from Punjab neither had these PPE nor felt any need to use it.

> *No, I don't have any of these things. But I usually cover my mouth and nose with my dupatta. (Sanitation worker-homes, Punjab)*

Another worker from Islamabad opined;

> *Earlier, I had mask and gloves but they got damaged during work. Now I don't have them. I used them only few times. If one has to catch virus then these masks and gloves cannot protect us. (Sanitation worker-homes, Islamabad)*

> *We aren't provided any kind of PPE. We buy masks and wash hands with soap. (Sanitation worker-public, Sindh)*

2.6.2 Equipment Type and Usage

Usage of both reusable and disposable equipment was equally reported. Workers at healthcare facilities were using a mix of disposable and reusable gears.

> *Gloves and masks are disposable while protective gown/coverall and goggles are reusable. (Solid waste collector-HCF, Khyber Pakhtunkhwa)*

Respondents who were using reusable protective equipment washed them with hot water, washing detergents, hand wash and sometimes with Dettol. It should be noted here that washing detergent and Dettol was not available at workplace and respondents were using these at home. The disposable equipment was always disposed-off at any dustbin and at specific dustbins in healthcare facilities.

2.7 Challenges in Using Protective Equipment

Respondents were asked to share challenges they face in observing safety measures or using protective equipment. The most reported challenge was the **uncomfortable feeling** or **the feeling of suffocation during hot weather**.

> *Working with a mask during hot weather causes problem. We remove them at intervals. (Solid waste collector, Islamabad)*

> *I use this kit during work but it is not weather friendly. It is warm and we cannot use it in intense hot weather. (Sanitation worker-public, AJ&K)*

Quality of masks and gloves was a point of concern for many workers.

> *Gloves are not durable and get damaged during work. Afterwards we work without gloves. (Sanitation worker-public, Islamabad)*

> *Due to shortage of masks, low quality masks are available. One can only use for once. (Solid waste collector, Balochistan)*

Shortage of protective equipments was constantly reported by respondents from Balochistan. They claimed that these are either not available at all or available at **high price**.

> *There is shortage of masks and gloves. Even if available, their price is too high while quality and fitting is poor. (Sanitation worker-public, Balochistan)*

A few workers from Balochistan and Sindh also reported **ill-fitted masks and gloves** as a regular challenge that makes it difficult to work with them.

A couple of sanitation workers employed at home and private offices stated that **acquiring masks** or **buying masks every other day** has its cost implications for those who are not provided these by employers regularly.

> *I have to buy masks and gloves on daily, which becomes costly for me. (Sanitation worker-homes, GB)*

2.8 Employer Response Mechanism

Respondents from Islamabad said that besides masks and gloves, their employer provided them **special black plastic bags** *for wrapping solid waste of homes where there are suspected coronavirus patients.*

Sanitation workers employed at public offices said that their employers had **placed disinfecting sprays** and **sanitizers** at the entry and exit points of office.

> *We wear masks and gloves. Our temperature is checked in the morning before starting duty. (Sanitation worker-public, Islamabad)*
>
> *They have made available soaps, sanitizers and Dettol everywhere. (Sanitation worker-public, Punjab)*

Respondents also reported receiving some **training**, briefing or guidance from their respective employers about following SoPs and safety measures. The content of training was about using and disinfecting PPEs, keeping social distance, importance of hand hygiene, self-hygiene, frequent hand washing and disinfecting toilets.

> *I attended a training on hand washing practices and how to wear mask. (Solid waste collector, Sindh)*
>
> *All the sanitation staff received a training on following SoPs which include wearing mask and gloves, keeping social distance and reporting to the employer in case of having fever. There is a fine imposed if SoPs are not followed. (Sanitation worker-private office, Khyber Pakhtunkhwa)*
>
> *They conducted an awareness seminar about keeping ourselves and others safe during coronavirus. (Sanitation worker-public, GB)*

Workers at all healthcare facilities, except Balochistan and AJ&K were thoroughly trained.

> *Doctors at the hospital instructed us to wash hands or use hand sanitizer even after using disposable gloves. They also taught us how to wash hands properly. (Solid waste collector-HCF, Khyber Pakhtunkhwa)*
>
> *We have received training on coronavirus. Our controller trained us by acquainting us with coronavirus, the importance of hand washing, wearing gloves and masks and the ways to handle solid waste. (Solid waste collector-HCF, Punjab)*

It should be noted that very few trainings were reported from Balochistan and AJ&K in categories solid waste collector and sanitation workers. Most of the workers employed at homes were guided by their employers about the necessity of frequent hand washing, disinfecting latrines etc.

> *They guided me to take care of myself by washing my hands frequently, by letting me know the ways to disinfect latrines, by taking bath on daily basis, by washing my hands after coming back from market and by washing things brought from the market. (Sanitation worker-homes, Punjab)*

A few respondents reported seeing **written and pictorial instructions** at places like elevator and stairs about coronavirus and its safety measures.

Case Study 2 of Sara[5], a solid waste collector of healthcare facility in Islamabad

'At this moment, our major requirement is safety kits. Like doctors, we are also performing an important duty. Therefore, only doctors should not be the center of attention, we are also human beings and deserve respect and support'.

Like most of the people, Sara first heard about coronavirus from a television news when it had just started to spread in China but it was not until a doctor and a fellow sanitary worker fell sick from the virus that she realized the seriousness and severity of situation.

Sara believes that the only effective measure to prevent coronavirus from spreading is frequent handwashing with soap at least 10-15 times a day. She has also seen that isolating the infected patient has been effective for their complete recovery.

She has been vigilantly observing safety measures from day 1 while also performing her duty regularly. The lockdown did not stop her from daily coming to her duty; though in absence of public transport, she had to cover long distance on foot to reach her work place. But once inside, she would hurriedly change her dress and put on special coronavirus kit all the time taking extreme care to cover herself completely with coverall before heading towards the coronavirus patients ward. But these precautions do not end here, as after coming out from the wards she immediately removes the coverall wrap and dispose it off in specified dustbins. She knows that the contents of these dustbins are burnt afterwards. Taking these precautions not only ensures her own safety but also of her family and colleagues.

As more cases started getting reported, the hospital administration banned their staff including herself from taking unnecessary leaves during this time but as she knew that her work meant more importance now than it has ever meant before, Sara did not complain. She felt relieved when she got to know about the new schedule, according to which staff working in coronavirus wards have been allowed to take 10 days leave after every two weeks of regular attendance.

Sara is a permanent employee at the healthcare facility and gets a salary of 24,000 rupees. Facing many challenges due to the economic implications, she has to remain content with this salary due to competitive market of workers outside and fear of losing her job to one of them.

She hopes that her voice will get heard and sanitation workers like herself will be given compensation in terms of one extra salary for performing their duties during these times while also putting their families at risk.

[5] Name has been changed to maintain anonymity.

2.9 Hand Hygiene

The **importance of hand hygiene** was recognized by all respondents. They understood that frequent handwashing with soap can help in preventing this virus from further spread. Moreover, they also stated that the nature of their work requires them to wash hands at regular intervals. The reported **duration of handwashing** ranged from 20 to 40 seconds at interval of 30-60 minutes. However, respondents emphasized that in their job, handwashing is done on need basis.

> *People say that virus transfers form patients to other people through hand shake, so washing hands at intervals is must. Hands should be washed for 20 seconds after every 30 minutes or hour. (Sanitation worker-public, Islamabad)*

> *Keeping coronavirus aside, the nature of our work is such that we should frequently and properly wash hands. We pick the solid waste with our hands, so washing hands is very important. (Sanitation worker-office, Islamabad)*

The importance of frequent handwashing was recorded from all provinces and was emphasized as the most effective method to protect from virus during work.

> *To prevent ourselves from catching any disease we should wash our hands and change our clothes on daily basis (Sanitation worker-homes, Punjab)*

> *We should wash hands and avoid touching our face during work. (Sanitation worker-office, Islamabad)*

> *I think hand hygiene is important because mostly illness spreads due to this. (Solid waste collector-HCF, Balochistan)*

Handwashing facilities with soap and water were conveniently available at mosques, offices and healthcare facilities but not at site of work (septic tank cleaners, rag pickers, solid waste collectors, drain cleaners and sweepers etc.) As no hand washing facilities were available at site of work, therefore, these workers would sanitize hands first and then either wash hands at home or at nearby mosques.

Critical times of hand washing were reported as: after shaking hands with other people, after work, before work, before eating/drinking, before going home, after dumping waste, after cleaning, sweeping floor, washing latrines, handling garbage, after receiving market bought things. Most of the respondents claimed washing hands at least 4-8 times (depending on the nature of work) during work and 10-20 times in a day.

> *I sanitize my hands time to time but I wash my hands only 5 to 6 times. (Sanitation worker-office, GB)*

> *I wash the hands 3-4 times when I clean the washroom, sweep the rooms and after collecting the garbage. (Sanitation worker-public, Balochistan)*

All respondent said that they not only wash hands on reaching home but take a bath before interacting with family. **Washing facilities were available at homes** as well as soap, shampoo, Dettol and water. Sanitizer were not available at homes commonly. **Bathing facilities** for sewer/septic tank/drain cleaners were not available at their work site but at municipal departments or office.

> *First, I take bath with warm water and soap, then meet my family. (Sanitation worker-public, AJ&K)*

Case Study 3 of Ahmed, a solid waste collector of public healthcare facility in Punjab

I wear mask and gloves; I frequently wash my hands; I change my gloves after every two hours and carefully handle the solid waste. Such were the precautions Ahmed took daily to keep himself protected from virus.

Coronavirus spreads from touching an infected person, says Ahmed recalling what he learnt from a training provided by the hospital administration. In that training, he learned about coronavirus, the importance of handwashing, wearing gloves and masks, and ways to handle solid waste.

For Ahmed and other workers like him, there is no question of not following safety measures. The hospital administration gives strict instruction for all staff to follow SoPs; which bounds everyone to practice these at all times at all cost.

Ahmed thinks that frequent handwashing is the most effective method to contain the virus. He heard it in the training as well. '*Hand hygiene is extremely important to protect you from coronavirus. If you don't want to get infected you must wash your hands frequently'*, he says.

Additionally, the nature of his work demands extra consciousness and keeping good hand hygiene. Handwashing facilities is not a concern as they are conveniently placed in the healthcare facility where he works and also in the staff's washroom.

I wash my hands with soap for 1 minute, 8-10 times a day. I wash my hands coming back from work, before eating food and after collecting and dumping waste, he points out.

Since the outbreak of coronavirus, Ahmed never forgets to observe safety measures neither at his workplace nor home. At home too, he always washes hands at intervals. On returning from work, he first bathe and change into clean clothes before meeting his family. As father of two young children, he understands that he has to be cautious and responsible, therefore he takes extra care for the sake of his family.

2.10 Expectations and Aspirations

Most of the respondents had similar expectations from the government, employers and private organizations or NGOs. The most mentioned responses (most to least stated) have been provided below.

Table 3: Responses on Expectations from Govt., employer & NGOs

Solid Waste Collector	*Sanitation Workers*
• *Provide protective gear and latest equipment* • *Financial benefits and loans* • *Increase salary* • *Provide free ration* • *Health benefits and free medicines* • *Regularize jobs* • *Provide awareness on health and coronavirus*	• *Financial assistance and loans* • *Provide free ration* • *Increase salary* • *Provide protective gear and latest equipment* • *Health benefits and free medicines* • *Provide awareness on health and coronavirus* • *Ensure equal distribution of cash and ration*
Solid Waste Collectors at Healthcare Facility	
• *Provide mask, gloves and sanitizer etc. for our homes.* • *Increase salary* • *Provide free ration* • *Provide health benefits and free medicines*	

SECTION 3: DISCUSSION

Following is the discussion of key findings of this research:

- Almost everyone had adequate knowledge regarding coronavirus and understood the safety, prevention and its treatment. Respondents were prepared to conform to safety measures and receptive to more awareness about the new virus.
- Misinformation, though present, was deemed insignificant as it was limited to some respondents only. Moreover, continued severity of virus is bound to correct the misinformed at some stage.
- The viable source of information was television which has actively helped to spread the important information on the virus across the country.
- The virus and the ensuing lockdown had not put the workers at employment risk, as majority of them continued their work. However, recognition of their services as essential during this time and increased awareness on cleanliness, made its implications on their work burden.
- The discontinuation of work was temporary due to closure of offices and sent on leaves by employer, but the economic implications (such as paying rent, bills etc.) depicted an income that was not tied to inflation rates. Due to this imbalance in income and expense, workers had more than one sources of income in the form of small business and part-time work.
- To cope with the economic crisis, the workers sought support at family, community and at the government level. The support was readily received, though often labelled 'inadequate', 'not timely' and 'unjustly distributed'.
- Increasing crisis invited occupational concerns, especially fear of catching the virus. One could not help but feel that the risk of getting infected formed the core of all other concerns.
- The positive inclination to practice safety measures at workplace suggest awareness and responsibility. The most common measures were masks and gloves (both disposable and reusable), readily provided by the employers and even bought by the cautious workers to protect themselves.
- Usage of both disposable and reusable equipment was equally reported without preference. In absence of complete washing facilities at workplace, the thorough cleaning of reusable equipment was done at home.
- Once used, the disposable equipment was thrown along with other waste. Only in healthcare facilities, specific dustbins were allotted to manage such waste.
- The active usage of masks and gloves depreciate their reported uncomfortable usage and poor quality. However, a more comfortable and strong material would sharply reduce the health and occupational hazards associated with sanitation work.
- Surprisingly, no waste handling safety and waste management protocol was reported. Specific waste bags were reported to be in use at one place but a larger-scale observation was not found.

- Corona specific trainings were few and focused on safety and response. More focused trainings on handling wastes, disposing wastes, hand washing, and disinfecting were expected.
- The importance of keeping hand hygiene was not new. Owing to the nature of their work, maintaining good hand hygiene and personal cleanliness comprise a part of their routine. The duration of hand washing seemed new though, as respondents' knowledge on this varied.
- Lack of handwashing facilities at workplace compelled these workers to use sanitizer or wait till a handwashing facility was in access.
- Regular expectations included continued supply of safety equipment, increase salary, financial and health benefits, and ration.

SECTION 4: RECOMMENDATIONS

Behavior Modification

- A behavior modification mechanism for coronavirus and hand hygiene should be developed. It should focus on (i) solid waste collectors (public and health facility based); (ii) sanitation workers (at government and private offices); and (iii) domestic workers. It is important to treat the workers employed at homes separately as the work and employment dynamics are different than those employed at offices.
- Interventions should include a media campaign (national channels, satellite channels, or local cable); and sensitization of agents of change (e.g. employers, youths, religious clerics, and community elders). The purpose should be to promote adherence to safety measures and hygiene practices during the pandemic.
- A monthly electronic brief should be produced in collaboration with the respective health and sanitation departments at the provincial level. The brief should summarize the monthly national status, updates and interventions as well as globally recognized practices of safety. It should be circulated to various stakeholders at public and private levels.

Establishing functional linkages within the Departments for sustained efforts

- Sharing responsibilities and prioritizing risks for smooth provision of safety equipment in sufficient quantity is eminent. It should be made mandatory for employers to provide safety equipment to sanitation workers. This should also include sanitizers and disinfectants for increased risk due to contagion.
- The work burden should be shifted by increasing the sanitation workforce, regularizing the employment, and doing away with ghost employments.
- A proper mechanism for waste handling and management should be in place with the municipalities for handling and disposing hazardous waste; and adopting safe hygiene practices during and after their work.

Policy Interventions

- National Sanitation Policy needs revision to incorporate latest and more relevant approach towards WASH. It should include a standardized and consistent protocol for health emergency situation. It should also include sanitation workers as one of the primary stakeholders. This should be simultaneously incorporated in provincial policies and plans as well.
- Revision should also cater to the occupational and health risks of sanitation workers. Under this, the employer should be accountable to provide health insurance (health cards) and financial compensation in case of injury or death due to work. This could also be linked to the welfare funds received from the corporate social responsibility.
- A fixed minimum wage and the provision of annual revision in same as per the inflations rates should be integrated in the policy and implemented accordingly. It should be noted that increase in salaries was highly emphasized by workers as well.
- Employers and contractors should be responsible and held accountable to link the sanitation workforce with social security benefits, pension, life/health insurance and regular provision of safety equipment.

There is emerging evidence of good practices and a growing body of actors working under the aegis of environment friends, climate advocates, advocates of 3Rs (reduce, reuse and recycle), organic and healthy living. Such platforms could be used to trigger behavior change and provide alternative solutions in terms of wastes disposal, safe hygiene practices and reduced environment risks.

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