Original Article

Assessment Of Poverty Vulnerability And Water Insecurity In The Tharparkar, Sindh, Pakistan - A Kap Survey

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Abstract

Low-income households living in the Tharparkar suffer from water insecurity and poverty vulnerability due to lack of human and economic development inadequate water access remains a topic of vital importance to global health. The problem of poverty requires urgent attention. The present study is based on assessing the level of poverty vulnerability and water insecurity. The data indicate that very small numbers of the respondents were practicing cleaning containers/bottles and storage tanks on daily basis and they don't wash their hands after defecation, child cleaning, preparing food, and feeding. In the study, the data was not available. The respondents informed that large numbers of their animals died during the last six months due to a shortage of water and fodder and also due to diseases outbreak. The data suggested that 5% of the respondents used water supply lines and dug well and 11% used rainwater harvesting. Similarly, 81% of the respondents told that they had their water storage facility and 19% did have their water storage facility. 5% of the respondents informed that due to fever 55% of animals caused mortality, 4% khulkyo, 4% mosar, 37% motion. More than half 57% of the respondents told that they had up to 5 acres of agricultural land, 36% had land, while 43% had above 5 acres. And 36% of the respondents cultivate and 64% did not cultivate the land. These indicators are critical for the identification of specific problematic insecurity aspects and to find out new targets to improve health water and nutrition interventions.

Keywords: Water insecurity, poverty, diseases, health, and hygiene.

INTRODUCTION

Globally, over two billion people do not have regular access to safe, sufficient, and nutritious food [1], at the same time as about four billion people have been exposed to water stress at least once a month [2]. However, definitions of food insecurity and water insecurity go beyond only inadequate access. The most widely accepted
definition of food security is when all people at all times have physical, social, and economic access to safe, sufficient, and nutritious food to meet their dietary needs for an active and healthy life [3]. Water security is related to food security and refers to safe and reliable access to adequate quality and quantity of water for consumption, economics, and cleanliness [4] [5].

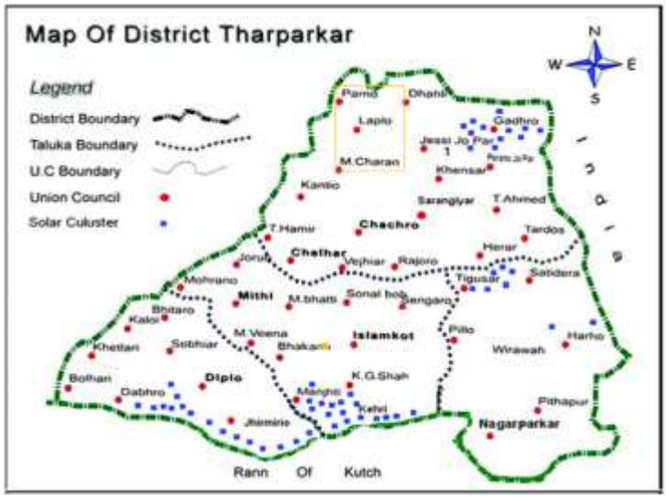
Water insecurity at the household level is less established than food insecurity and few cross-culturally valid metrics exist. The most common evaluation of water insecurity is developed by the World health organization (WHO) classifies water access based on fetching time, and water sufficiency based on the quantity of water available per person [6]. They frequently constantly coexist within the same households [7]. The high incidence and co-occurrence of food and water insecurity may have synergistic effects on adverse health outcomes [8]. This may have considerable suggestions for achieving sustainable development goals (SDG). Two, three, and six to “end hunger and all form of malnutrition”. ensure healthy lives and enhance well-being for all” and ensure availability and sustainable management of water and sanitation for all” [9]. World hunger reached a historic high level in 2009 more than one billion people are living with chronic hunger [10]. Undernutrition includes deficiencies of micronutrients, also referred to as hidden hunger which is caused by inadequate dietary intake or disease, in turn, stems due from food insecurity, poor maternal,

child care practices, unsafe food, inadequate access to clean drinking water, sanitation and quality of health services. Human and socioeconomic costs of undernutrition are enormous, falling hardest on the poorest, especially on children and women [11] [12]. Unfortunately, food crises are not only part of the history of humanity; these are the real issue in many countries and regions. The global report on the food crises reported on 2018 showed that 124 million people across 51 countries and territories faced acute food insecurity crises level in 2017. These food crises have been enlarged attributed due to prolonged drought conditions or conflicts in countries including Afghanistan, Pakistan, Yemen, South Sudan, Myanmar, the Democratic Republic of Congo, and Syria. Economical, environmental, and social, challenges include resource scarcity, climate change, and ecosystem degradation [13], [14], [15], [16]. [17], [18]. Animal diseases are causing a very serious impact on socioeconomic that lead to poverty, human health complication, starvation, and malnutrition [19], [20].

METERIAL AND METHOD

Purpose of the study:
The KAP study was conducted in the two Union Council of the taluka Chachro District Tharparkar for the assessment of poverty vulnerability and water insecurity

Geographical Scope:
The geographical scope of the proposed study was two union council including Mithrio Charan and Parno of taluka Chachro district Tharparkar, Sindh, Pakistan



Sampling Size:
KAP sampling Size 224 samples were randomly selected and collected from 22 villages of union council Parno and 18 villages of union council Mithrio Charan. The vulnerable households were randomly selected and the questionnaires were individually filled by the head of individual households

Data Collection:
The team members of the data collector were provided an appropriate orientation in developing their understanding of the purpose of the survey by an expert and then implemented. The team comprised five males and seven females. Senior members of the team were facilitated to other members. The enumerators filled the questionnaires of the households, while the same was supervised by the senior members and the team leader ensured the quality of the collected data and adequately interpreted.

Data Analysis:
Once the structured interviews were over, responses from the survey were tabulated, analyzed, and entered into the report as well. Moreover, the interviewers immediately noted all impressions and observations made during the interview which helped in drawing a proper analysis

RESULT

Since the global food and water insecurity crises are fundamental issues of the universal level. During the last decades, water insecurity and poverty vulnerability remain the top public health problems. However, recently the problem has somehow decreased with the efforts of the government and NGOs.

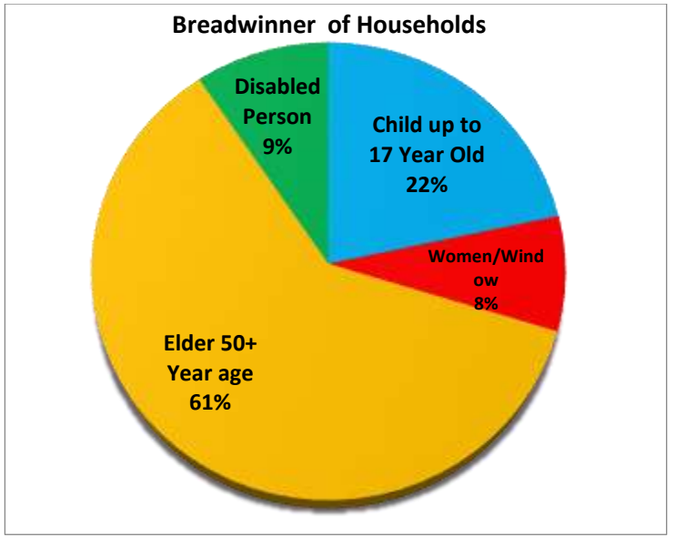


Figure 1: Bread winner of HHs

With the reference to the above graph, it is indicated that the breadwinner of the household including about 16% of the respondents was up to 17 years of age, 6% were women/widows, 45% were elder (age 50+ years) and 7% of the respondents were a disabled person.

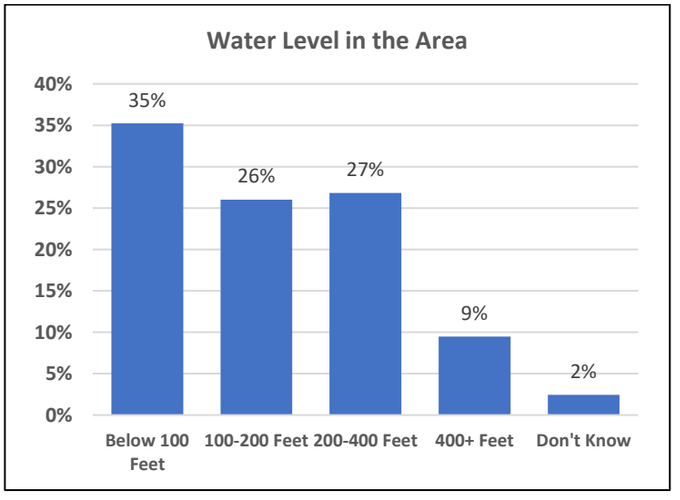


Figure 2: The water table level in the area

In the response this question, a significant (35%) of the respondents told that in the selected area the water table level is below 100 feet, 26% of respondents agreed that 100-200 feet, 27% guided 200-400 feet, 11% respondents said (400+) and very low number (8%) did not know the water table level in the area. Likewise, in the study, a big number (30%) informed that the water table level in this area is below 100 feet.

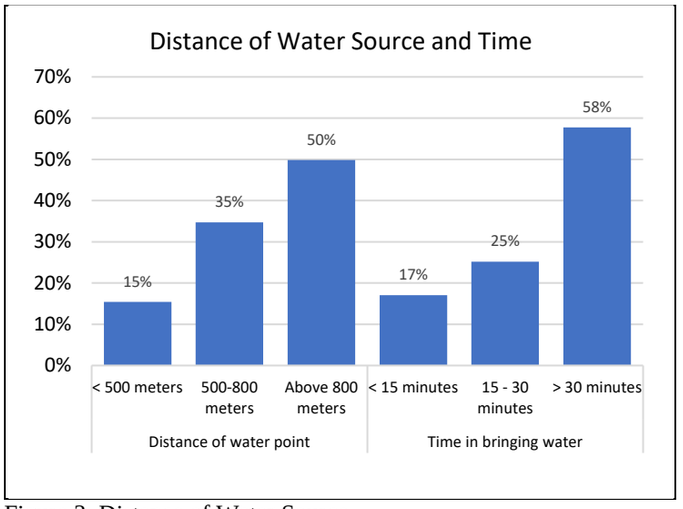


Figure 3: Distance of Water Source

Distance of water source result graph in figure 3. It is indicated that about 15% of the respondents agreed on the distance of water from the main source is about Under 500 meters, 35% said over 5000-800 meters, and 11% told that above 800. Also, it was asked how long the queuing time is at the main water source. A sufficient number of about 17% informed that it takes less than 15 minutes to collect water from the water source to home, 25% above 15-30 minutes, and similarly, 58% respondents agreed that it takes approximately above 30 minutes to collect water.

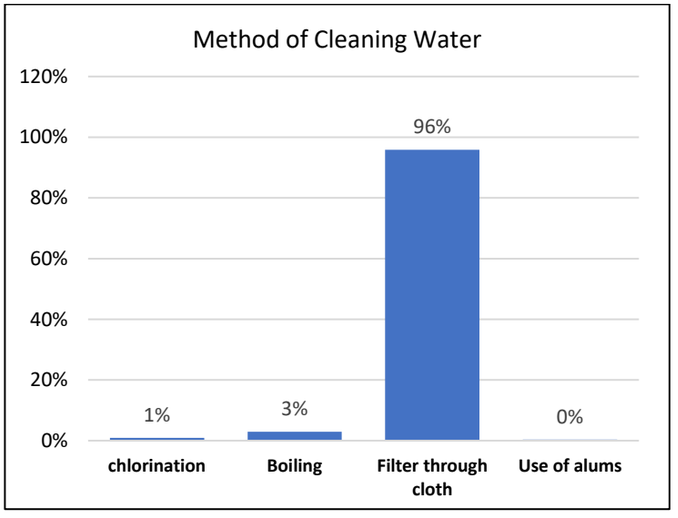


Figure 4: Method of Cleaning Water

The method of cleaning water results show in figure 4. In this answer respondents also shared that 1% use chlorination, 3% boiling, and 96% filter through cloth while they do not use the alums method.

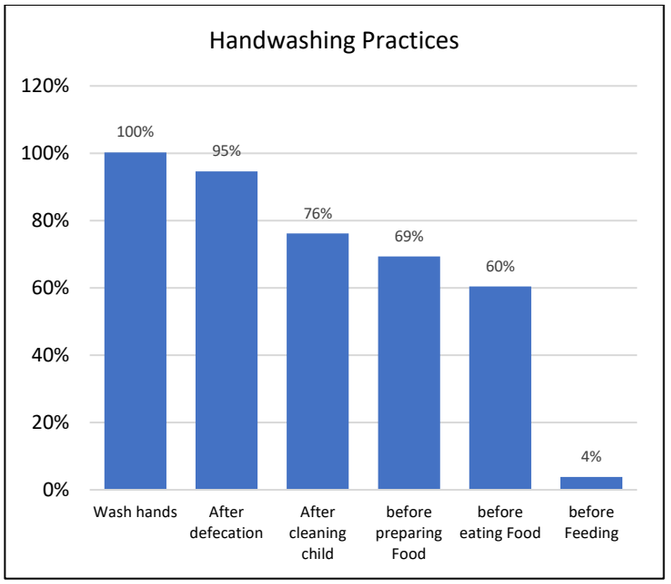


Figure 1: Hand washing Practices

Further, they told that 95% wash their hands after defecation, 76% after cleaning the child, 69% before preparing food, and similarly 60% before feeding. While only 4% were practicing before feeding.

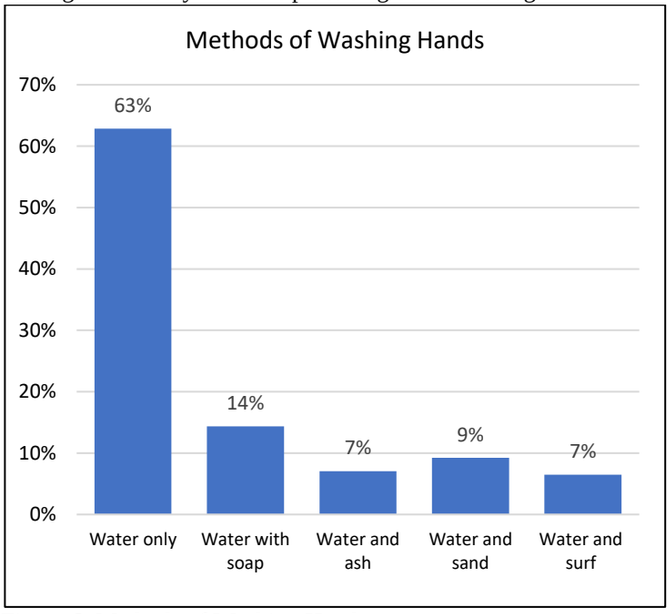


Figure 6: Methods of Washing Hands

In this graph, surprisingly, 63% told that they washed their hands with water only, 14% with water and soap, 9% with water and sand, and 7% used water and surf to clean their hands.

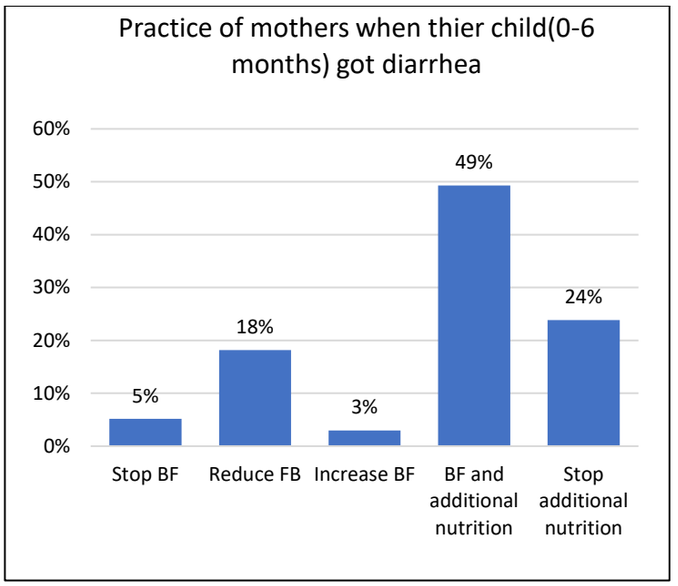


Figure 72: Practice of Mothers when their Child (0-6 months) got Diarrhea

Data indicates that about 5% of mothers stop BF, 18% reduce FB, 3% increase BF, 49% gave BF and additional nutrition, and only 24% of mothers stop additional nutrition.

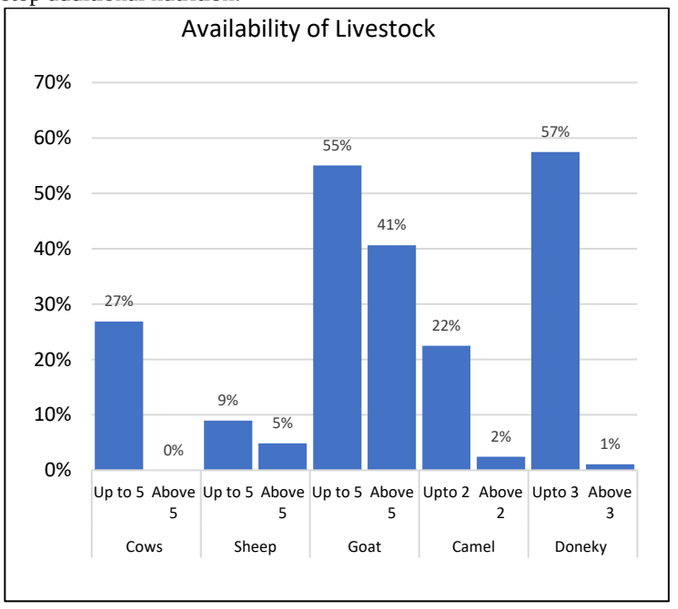


Figure 83: Availability of Livestock

In this regard, in this graph, 27% of the respondents told that, they had up to 5 cows, 9% had up to 5 sheep, 55% had up to 5 goats, 41% had above 5 goats, 22% had up to 2 camels, 2% had above 2 camels, 57% had up to 3 donkeys, and 1% had above 3 donkey.

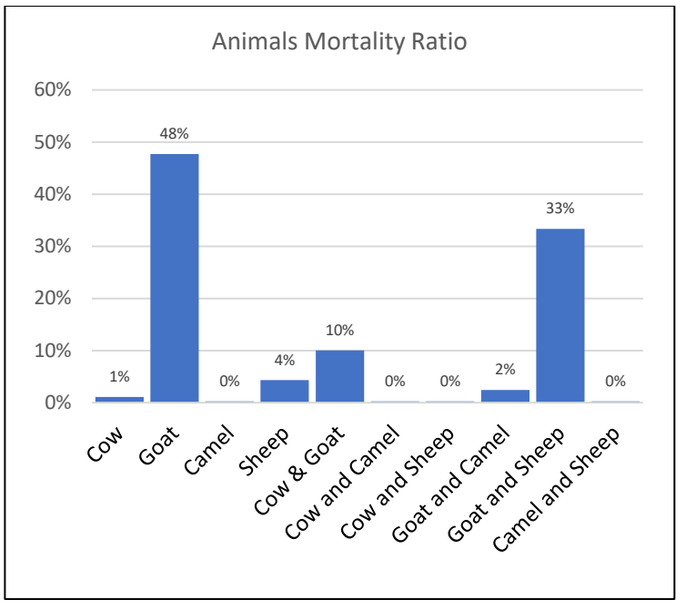


Figure 9: Animals mortality ratio

In terms of ratio, 1% of the respondents informed that cow die, 48% goat, 0% camel, 4% sheep, 10% cow and goat, 0% cow and sheep, 2% goat and camel, 33% goat and sheep, and 0% camel and sheep.

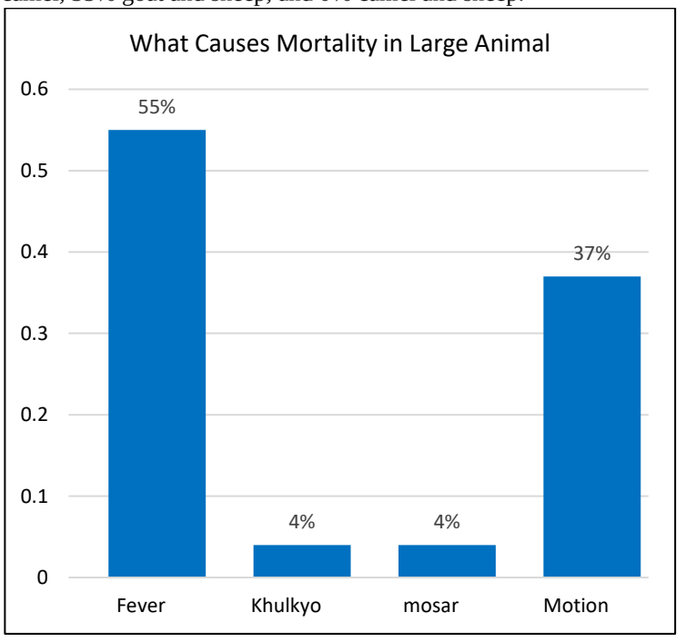


Figure 10: What Causes Mortality in Large Animal

In response to this question, 55% of the respondents informed that fever caused mortality among 55% of animals, Khulkyo caused 4%, Mosar 4%, and motions caused mortality among 37% of livestock.

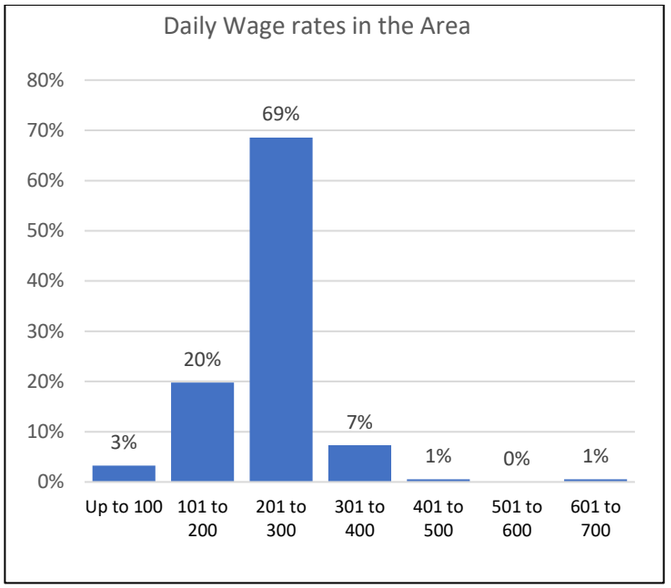


Figure 11: Daily Wage rates in the Area

For the daily wages of unskilled labor, 3% at said up to 100, 20% at said 101-200, most of the labor fall into the category of 201-300 with 69%, while 7% at said 301-400, 401-500, 501-600 and 601-700 daily wage was uncommon and remained lowest(1% to 0%) at both stages.

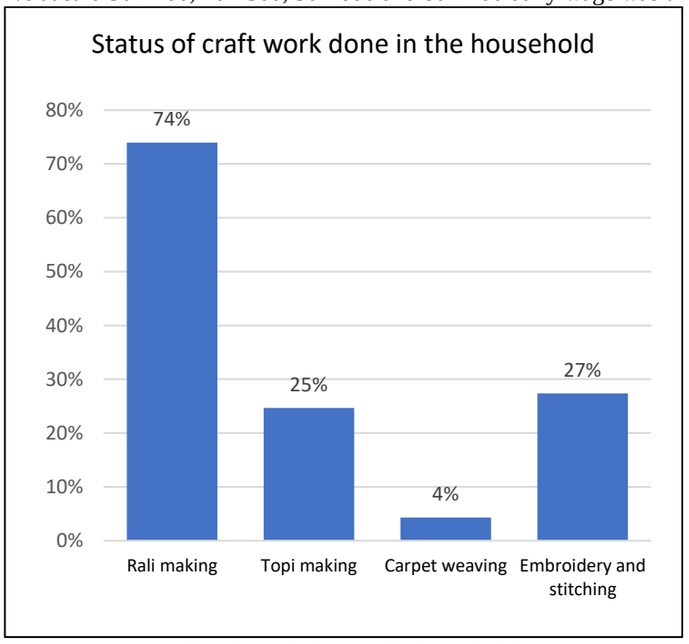


Figure 12: Status of craft work done in the household

For the type of craft work majority, 74% said Rali making. 25% at said Topi making, 4% at said carpet weaving, while 27% at said embroidery and stitching.

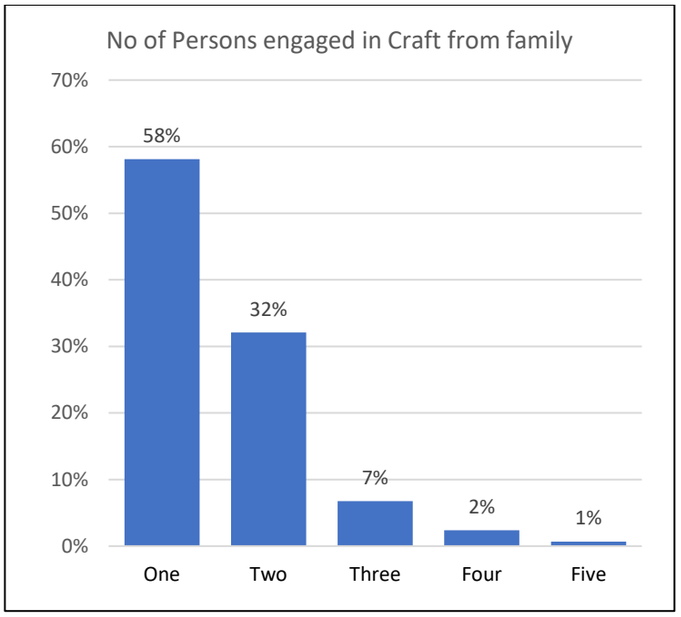


Figure 13: No of Persons engaged in Craft from family

For the frequency of family members involved in craft work, 58% at said one person, 32% at said two persons, 7% at said three persons, 2% at said four persons

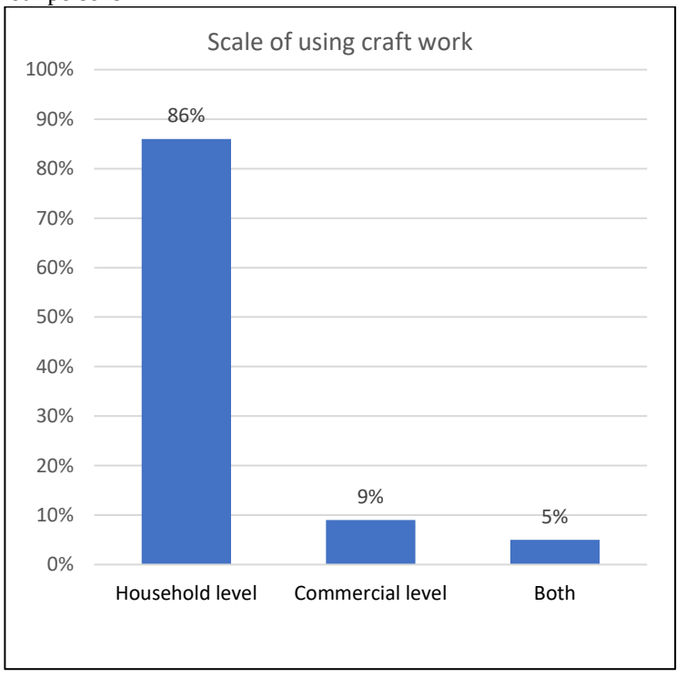


Figure 14: Scale of using craft work

The scale of using craft work at the household level was found to be 86% and commercial level with 9%. For that both HH and commercial level, it was found to be 5%.

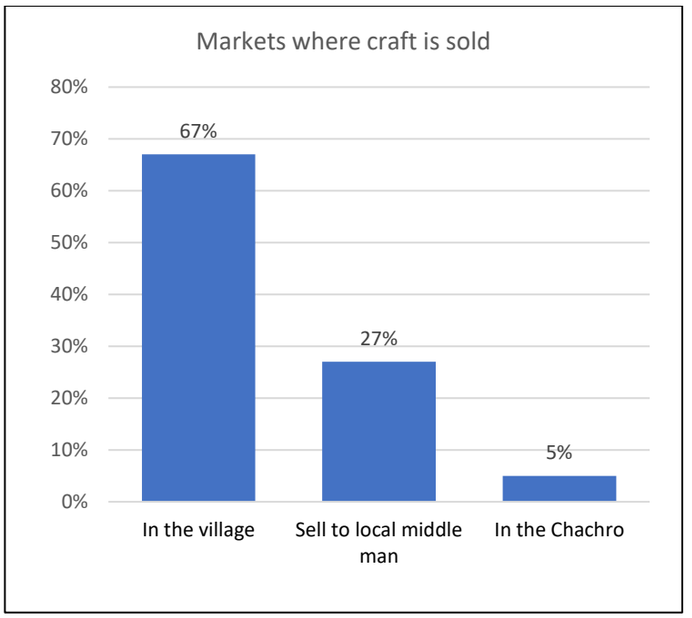


Figure 15: Markets where craft is sold

The market approached by the sellers to sell their craft was reported to be a village market by 67% while those who sold it to local middlemen were 27%. And those who were selling the craft to Chachro market were 5%.

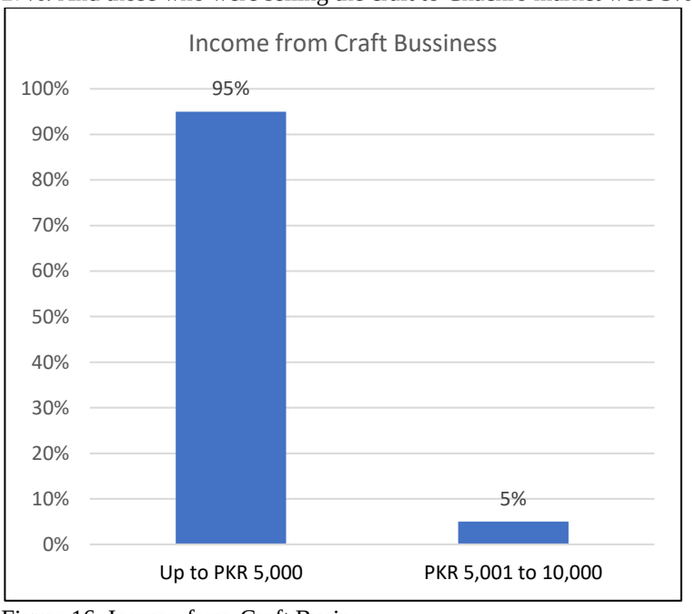


Figure 16: Income from Craft Business

The income of those involved in crafts business was up to 5000 for 95% while for 5001-10000 earning for their crafts, 5%.

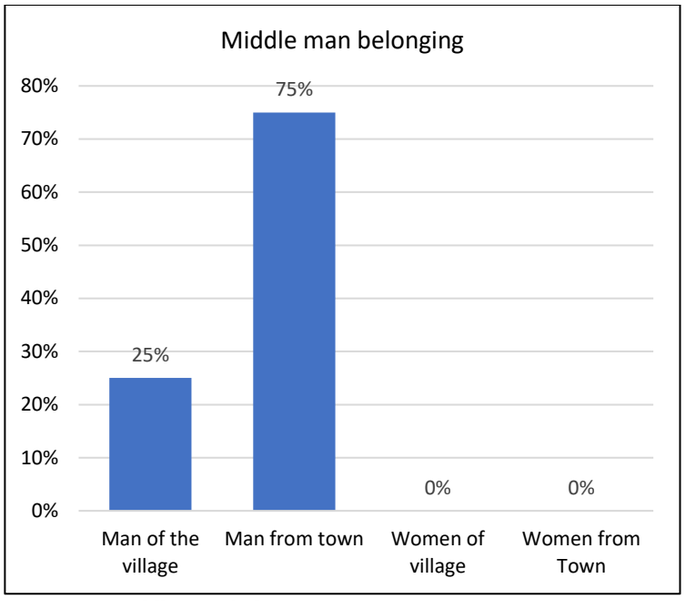


Figure 17: Middle man belonging

When asked where the middleman belongs, at baseline 25% said that middleman was the man from the village while for those who reported the middleman from the town were 75%. Those who reported the middleman (women) to be women of the village were 0% and those who reported the middleman (women) to be women from town were 0% at baseline.

Discussion

Tharparkar district is a big desert belt of Pakistan's Sindh province and its agriculture is fully dependent on seasonal rain. Its main sources of livelihood are livestock. It is reported that 22% of the livestock of Sindh province [21]. Livelihood is also based on agriculture that is dependent on rainfall [22]. It is reported that income-generated sources include goats 35%, cows 15%, sheep 21%, camels 11%, and donkey 9% [23]. Animal diseases are causing a very serious impact on socioeconomic that lead to poverty, human health complication, starvation, and malnutrition [24]. The goal of this study was to develop new measures of food and water insecurity that are aware of their multidimensionality to advance the discussion on impactful water security and health intervention for vulnerable populations [25]. Water insecurity is the biggest problem of the Tharparkar. The poor water access was significantly correlated with all food insecurity dimensions. The poor food access and low food quality and availability and low water reliability were correlated with poor food access and household shocks. The first aspect refers to "poor water access" including types of water sources and degree of agreement with water quality. Finally, the third dimension refers to "low water reliability" and includes information on whether water for drinking and nondrinking purposes was unavailable at any point. Water quantity was the only dimension not identified, likely due to the low access was found to be poorer among households interviewed during the dry season compared to the rainy season. During the dry season, households may need to travel a longer distance and spend more time finding water because their usual water source ran dry, whereas, in the rainy season, water sources may be more abundant [26], [27].

Conclusion

WASH is undoubtedly regarded as important as the life of a child and women. Clean water, better hygiene, and feeding practice and good hygiene practices are vital for the survival and development of women and children. It was noticed that respondents were much more aware to drink safe and healthy water. It is said that due to poverty and socio-economic barriers the women were reluctant to go to hospitals and get treatment. There is a need to give more awareness sessions to improve the condition in the respective areas. A large number of respondents informed that their animals died during the last six months due to a shortage of water and fodder while the respondents informed that due to livestock they migrate. It is recommended to launch more awareness campaigns at the Union Council level to mobilize communities to stand up and demand basic facilities i.e. clean water, health facilities, and food. Awareness among lactating and pregnant women on food and nutrition at the UCs level has been fine, but there is a need to spread the message through media at district and province levels.

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