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The Impact Of Water Scarcity On Women In Rural Area In Quetta

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Abstract

The distribution of water world is socially influenced, replicating incessant global gender inequalities and discrimination by those who hold leading perspectives on water. In the global varying situation, water is becoming scarier and significant owing to its non-availability for the communities in nearly each corner of the world. Concentrating on the significance of the water a study was conducted on the socio-economic effects of water scarcity and its effect on women, the purpose of the learning was to manuscript the approaches of women in the rural area of Quetta and their role in justifying water scarcity with a purpose of providing a set of recommendations. As the outcome of the comparatively uncharted nature of women's approaches, the study was exploratory. Primary data was collected through a questionnaire, secondary data from different generals, line departments and reports. The universe of the present study was district Quetta which consists of the rural areas of Quetta and the sample size of the present study was 400. The findings of the study indicate that due to water scarcity male respondents were more affected economically as compared to female respondents. The findings of the study indicate that water scarcity has affected the health of women in rural areas of Quetta. The results show that women are more effected as compare to men.

Keywords: Water Scarcity, Women, Rural Area.

تلخیص

آبی تقسیم سماجی طور پر اثر انداز ہوتی ہے جو عالمی طور پر صنفی عدم مساوات اور امتیازی سلوک کی عکاسی کرتی ہے۔ عالمی تبدیلی کے منظر میں پانی کی عدم دستیابی نے دنیا کے تقریباً ہر کونے میں لوگوں کو متاثر کیا ہے۔ پانی کی اہمیت اور اس کے نایابی پر توجہ دینے کے لیے ایک تحقیق کی گئی جس میں پانی کی نایابی کا عوام کے معاشرتی زندگی پر اثرات کا جائزہ لیا جاسکے تاکہ کوئٹہ اور گردونواح میں پانی کی گرتی ہوئی سطح پر سفارشات مرتب کی جاسکیں۔ مطالعے کا مقصد کوئٹہ کے دیہی علاقے میں خواتین کی حکمت عملی اور اس کے پانی کی کمی میں کردار ادا کرنا تھا۔ نتیجے کے طور پر خواتین کی نسبتاً غیر تحقیقی حکمت عملی کی وجہ سے مطالعہ تحقیقات تھا۔ ابتدائی اعداد

و شمار ایک سوالنامہ، مختلف تحقیقی مقالے، سیکشن ڈیپارٹمنٹ اور رپورٹس سے ثانوی اعداد و شمار کے ذریعے جمع کیے گئے تھے۔ موجودہ مطالعہ کے نمونے کا اندازہ ۴۰۰ تھا۔ مطالعے کے نتائج سے پتہ چلتا ہے کہ پانی کی کمی کے باعث معاشی طور پر خواتین کے جواب دہندگان کے مقابلے میں مرد جواب دہندگان زیادہ متاثر ہوتے ہیں۔ مطالعے کے نتائج سے پتہ چلتا ہے کہ کوئٹہ کے دیہی علاقوں میں پانی کی کمی نے خواتین کی صحت کو متاثر کیا ہے۔ نتائج کے مطابق مردوں کے مقابلے میں خواتین زیادہ متاثر ہوتی ہیں۔

کلیدی الفاظ: پانی کی قلت، عورتیں، دیہی علاقے

Introduction

Women in every society are the main target of water scarcity. Women are more powerless than men since they are more vulnerable to water related issues. They are accountable for both local and agricultural obligations that entail the utilization of water. Women also suffer on the grounds that individuals with wealth and the most minimal status in the social progressive system often endure excessively when water supplies are constrained (Howard, Bartram, Water & Organization, 2003).

When there is water scarcity women have to travel longer distances to look for water. Educational level among women is low due the drop out of young girls from schools, because they help their mothers and sisters in household chores. Women are similarly in closer contact with polluted water or water of low quality and are hence more prone to water-borne sicknesses, for example, cholera, as they need time and vitality to choose spotless and safe water for household purposes. What makes it more troublesome for women is that they migrate with their husbands for work and women depend entirely on the couple of belongings they have, including less food. basically this was not a main issue, since individuals would basically transfer to different areas for water in the dry season, however more thickly populated human settlements and natural debasement are hampering this transitory way of life (Fausto-Sterling, 2008).

Similarly to help guarantee an additional maintainable and beneficial utilization of water resources, it is vital to report the involvement of women in water administration and protection in consideration to the involvement of women will decide suitable and sustainable intercessions. Municipalities designs and distributes plans and power without counselling with their networks and women at different forums. The arrangement of local administration ought to advance network interest in representing women consequently and to be given the stage them voice relating to their issues that influence their everyday employments, for example, their participation in guaranteeing water security within their specific networks (Prakash, 2003).

As per the World Resources Institute (WRI) (2002), developing countries are facing water scarcity due to rapid growth in population, agricultural and industrial extension. Then again, per capita use keeps on ascending in the developed countries too. Water scarcity has additionally exasperated due to the quick urbanizing in developing countries. Moreover, 90-95 % of sewage and 70% of waste of industries in developing countries are dumped in the water, contaminating the water supply (Qadir, Sharma, Bruggeman, Choukr-Allah, & Karajeh, 2007). The area of 'water rights' is extremely covered in law of Pakistan, and land possession is generally an intermediary for entrance to, or, right to water. This indicates water for other than domestic needs such as drinking and sanitation (Qureshi, 2011).

Water scarcity is a main issue and the relationship between women and water needs is of great importance, which portrays the functional requirements of women within domestic domain at small scale. Since women are consumers of water at a large level, therefore, they should be included in water based emergency planning like making of dams and water reservoirs, water dispersion, water system, farming and other water base utilizations. Regarding water issues only few women are seen in this field as researchers, organizers, directors, specialists, analysts and professionals (Kamal, 2005; (Udas & Zwarteveen, 2010).

Balochistan is the most delicate province in Pakistan. The most genuine emergency Balochistan is looking right now is a water deficiency of a disastrous level. The province is arranged in an arid zone that encounters bring down levels of precipitation. The absence of rain has specifically added to its water misfortunes, however, because of the administration's defective arranging, the province has neglected to save sufficient rainwater. In the rural areas of Quetta females and teenagers walk 8 to 10 kilometres on average in search for water (Kahlown & Majeed, 2003).

The water scarcity is an existential risk to rural areas of Quetta on the grounds that the province is dominatingly an agricultural driven economy. Women in rural areas are the victim of water scarcity and they are facing serious health issues. Water problems have added to sustenance instability and decreased agrarian profitability in light of the fact that the flooded farming areas are not getting sufficient water. In the meantime, it also influences the livestock since about 90% of the water in rural areas of Quetta is utilized to develop sustenance, for example the case of apples. Over 80% of Pakistan's aggregate apple production originates from the province of Balochistan. Due to the lack of water, the production of assortments of apples has declined. One farmer featured, "Since the land isn't getting the required water, the apples growth and size is reduced." If adequate amount of water is made accessible for water system then the agricultural profitability might be multiplied (Khair, Mushtaq, Culas & Hafeez, 2012).

Additionally the gender division of work regarding water management creates severe health issues for women and girls, particularly in rural areas of Quetta. Mostly women and girls who bring water from distant areas have a harmful impact on the female skeletal system. Bringing hefty pots of water might lead to spinal issues, pelvic deformities, and chronic fatigue, it might too persuade early deliveries, impulsive abortions or a prolapsed uterus and is of excessive fear during pregnancy. Along with this, the other issues these women are facing includes: joints pain, mal-nutrition, which could cause anemia and mal-nourishment. These factors not only effect women's health but also that of the children she might bear (Glick, 2002). These facts indicate the health status of women in Pakistan. In the rural areas, women, particularly those who are middle aged complains about problems in the neck and shoulders along with diseases such as diarrhoea, tuberculosis, hepatitis, immobile births, miscarriages, and thyroid, skin and eye sight problems, which are contagious (Nizamani, Rauf, & Khoso, 1998).

Similarly water scarcity unfavorably affects human health in the study area. As mentioned earlier that water scarcity causes low status of human health. The greatest mutual health issues regarding water scarcity are related to spinal injuries and pelvic deformities among women. According to the study evidence was exposed from the agriculturalists in group discussion designates that expenditure on health has reduced about half as matched to the conditions earlier due to water scarcity. As a deduction, the agriculturalists, stated that they castoff to employ 20% of their income on health of their women to 10% currently. The scarcity of water has caused in the upsurge in infectious disease, particularly water borne diseases and in backbone injuries and pelvic irregularities among women in the selected population (Azizullah, Khattak, Richter, & Häder, 2011)

Review of Literature

Two third of the global surface consists of water apparently, which clearly identifies the importance of water for human life on earth. Along with fulfilling basic necessities for human consumption water is equally important for socio-economic development. Water is the one of inimitable endowment of God and the essential need of life. Due to the human exploitation and misuse of nature and natural resources global environment is badly effecting and thus, increasing risk for every living creature on earth. Such human indulgence has appeared to be the main reason of water depletion on gradual basis. Globally another cause for water scarcity is identified by the researchers as the shift of heavy water consumption for agricultural use. Since water scarcity is becoming a global issue, therefore developing countries like Pakistan are also facing severe water scarcity and thus, water for irrigation use is also not enough to produce required crops for required food supplies on national and international level for exports as well. Exports in this regard have also decreased. For past few years Pakistan is facing water shortage and due to increase in population, expansion of irrigation land, growing industrialization are

actually stressing the water resources more and more. However, it is needed to build water reservoirs along with water management strategies to meet the development requirements and to speed up the process.

Water scarcity could appear as a barrier in the development process, because water is viewed as fundamental need in all types of growth. Water issues should be resolved for the accomplishment od sustainable development. For holistic development countries should focus on water related issues like sanitation, management water resource administration, administration and distribution of water and natural disasters like floods severe environmental changes to manage and administrate water resources and sanitation, scarcity management, well-being, and managing ecological balance (Omer, 2008).

A focal concern to be measured in the disappointment of water schemes is the lack of involvement of women in the plan, preparation, usage and administration of such schemes. Water schemes have customarily been a male ruled procedure. Infect women are fundamentally in charge of guaranteeing a source of water to the domestic use and are additionally in charge of numerous other water related obligations. Women in rural networks have specifically relied upon regular assets (counting water assets) for their entire lives, and along these lines would have a better comprehension of and their own particular recognition about natural assets (Hemson, 2002).

Like other utilities, water is also a basic need for development and for keeping the clean and harmonious environment. Increase in population demands for expansion in utilities usage to minimize the harmful effects on people's health and environment. That is why it is needed to store fresh water to reduce the scarcity. Utilizing water is an extreme human requirement regarding the socio-economic development and the ecological protection at all levels of interior inexhaustible water accessibility of under 1000 m3/capita and water accessibility under 2000 m3/capita, water is viewed as a conceivably genuine requirement and a noteworthy issue in dry season years. Water scarcity becomes severe, especially during dry season, when the proportion of accessing normal accessibility of water per capita is low. This situation becomes more severe during natural calamities by paralyzing the entire network (Grey & Sadoff, 2007).

Water scarcity is caused due to variety of reasons. The current study identifies the reasons of scarcity, which are caused due to ill management and planning. To meet the future water requirements Pakistan needs to build dams on emergency basis, for which the Supreme Court has taken initiative. The water shortage is a very crucial issue which needs to be addressed on emergency basis (Jeevandas, Singh & Kumar, 2008).

Majority of the developing nations are facing negative impacts due to intense water scarcity. Water shortage not only affects the domestic use but also the efficiency of

industries and environment. If this scarcity persists then not only the present but also the future generation will suffer from its drastic effects. Keeping in mind the end goal to manage their necessities, these nations need to centre around the effective utilization of all water sources and on water distribution procedures that expand the financial and communal comes back to constrained water resources, and in the meantime improve the water distribution being equal (Bruinsma, 2009).

Integrated Water Resources Management (IWRM) Policy of 2006 featured that misuse of water, depletion of water and decrease in the level of underground water resources combined with water scarcity, have compromised the distribution of water in Balochistan. Just 36 % of the aggregate accessible water resources are used per year. The determined dry spell amid the time of 8 years (1998-06) has brought about undesirable effects on the accessibility of water and economic networks, which are basic for enhancing and supporting the management of surface and ground water resources in the region. Strategies and effective planning can assist water distribution in assistance with the IWRM policy (Syed M Khair & Culas, 2013).

Absence of access to Water, Sanitation and Hygiene (WASH), impacts poorly on women and young girls due to the existing biological and social elements in our society. Women are continuously suffering, because they need to go to distant areas to bring water for domestic purpose and to utilize for latrine purpose as well, where they can be exposed due to lack of privacy. Women have to walk long distances even for latrines before dusk to fulfil their needs of nature call with privacy, which can cause health issues due to contamination and exposure to unhealthy conditions. This disgrace, unpleasant and unhealthy situation exposes their privacy and absence of water, sanitation and hygiene (WASH) at home and schools effects young women and girls negatively. Women invest their energies in gathering water and finding shelter areas for latrine purpose (Hanjra & Qureshi, 2010).

Materials and Methods

The universe of the current research was rural areas of district Quetta. As objectives of this study aims to analyse the socio-economic impact of the scarcity of water in District Quetta, therefore, farming community and urban consumers of Quetta were mainly targeted. The total population of district Quetta is about 759941. District Census Reports (1998), however, a sample size of the present study is 400 people through stratified random sampling technique and it was calculated for the study using Arkin and Colton formula (Arkin & Colton, 1963) as shown below.

$$n = \frac{NZ^2 \times P \times (1 - P)}{Ne^2 + \{Z^2 \times P \times (1 - P)\}}$$

Sampling Tool

Focused group discussion and structured questionnaire were used to collect the data. The questionnaire was validated by pre-testing small sample size before using it at larger level.

Result and Dissuasions

The collected data was coded and then double entered using software Statistical Package for the Social Sciences (SPSS) and Microsoft Excel were used for descriptive (Max, Min) and inferential statistics (Chi Square Test), respectively. The significance threshold was set at 0.05.

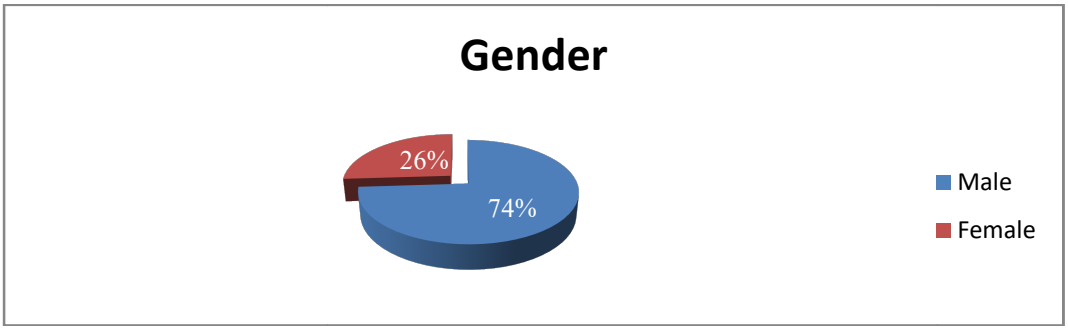


Figure (1) Survey respondents

Figure (1) shows gender wise distribution of the respondents. Data shows that majority 74% of the respondents were male and 26% were female, the ratio of female respondents was low, because of the spiritual and ordinary values of the society. Questionnaires were filled by head of the households.

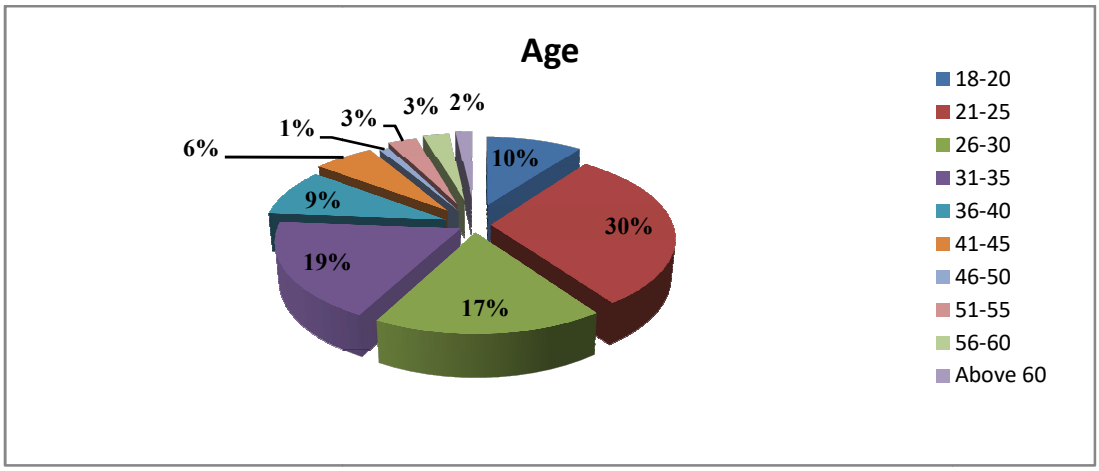


Figure (2) Age of the subject of the study

Figure (2) displays the age of the subject of the study all respondents of the study belongs to Quetta valley where total population has been estimated about 759941 with an average household size of 10.08 persons. Date shows that 30% of the subject of the study were in the age group of 21-25 while 19 % 0f the subject of the study were in the age group of 31-35 years. Moreover the data shows that 17 % of the respondents were in the age group of 26-30 years, whereas 10 % of the subjects of the study were in the age group of 18-20 years. Similarly 9 % of the subjects of the study were 36-40 years old while 6% of the respondents were 41-45 years old. Data further shows that 3% of the respondents were 51-55 and 56-60 years old whereas 2% of the respondents were above 60 years old. Only 1% of the respondents were 46-50 years old.

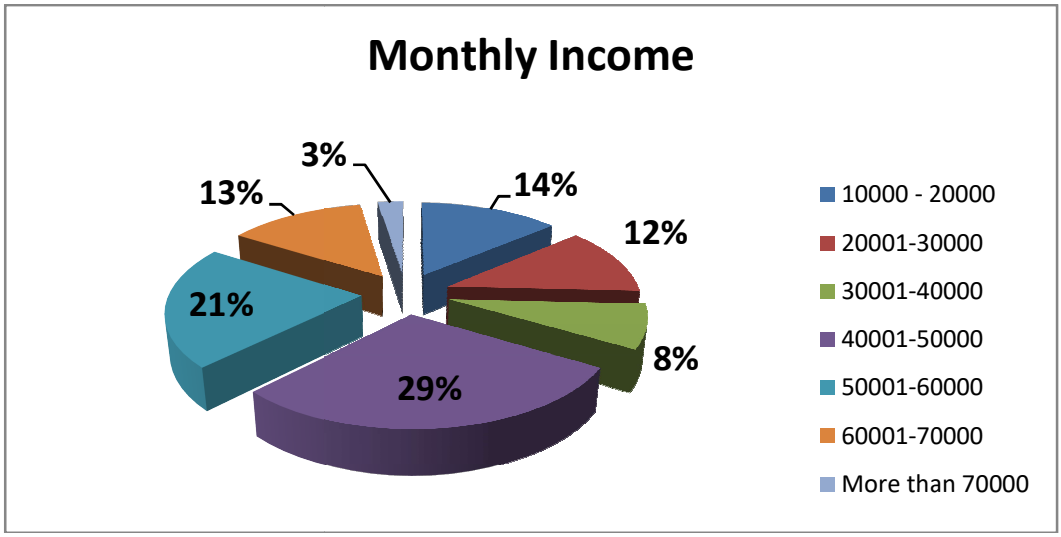


Figure (3)

Figure 3 demonstrates the monthly income of the subject of the study. Around 14% respondents have income within range of 10000-20000, 12% within 20001-30000 thousand, 8% within 30001-40000 thousand, 29% within 40001-50000 thousand, 21% within 50001-60000 thousand, 13% within 60001-70000 thousand whereas 3% respondents have monthly income more than 70000.

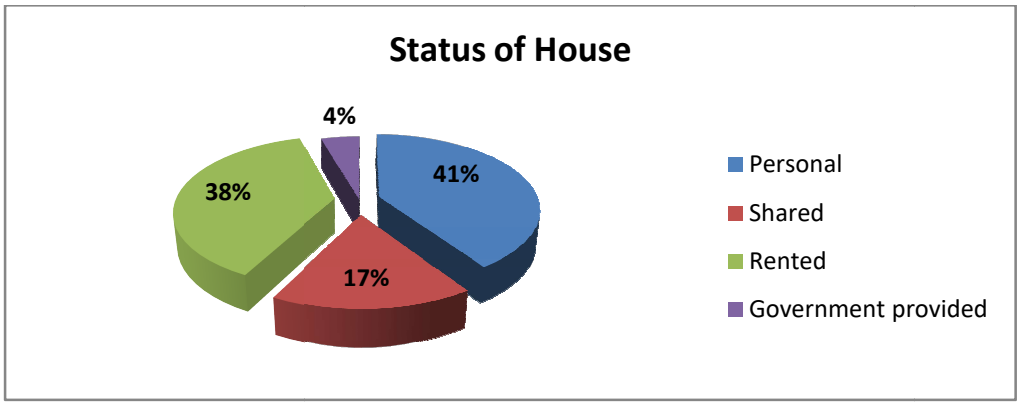


Figure (4)

Figure 4 shown house ownership data of the study area. The figure shows that, almost 41 % of the sample respondents were living in their own houses, whereas 38 % people were living in rented houses, 16 % people were living in shared houses and only 4 % people were living in government provided houses. The overall results reveal that, more than half of the population of the study were living in rented or shared houses due to low level of income.

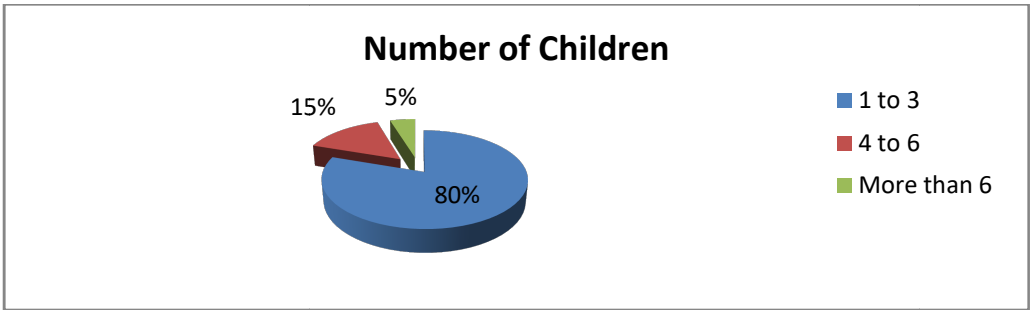


Figure (5)

Figure 5 shows that data about the number of children of the respondents. Majority i.e. 80% of the respondents have 1-3 children, whereas 15% has 4-6 children and only 5% of the respondents were having more than 6 children.

Chi –Square Analysis

Relationship of socio-economic variables and gender of the respondents

Variable	Chi -Square	d. f	P – value
Impact of water scarcity on Health of the respondents	9.610	1	0.001

There is a relationship of the gender of respondents and impact of water scarcity on Health of the respondents

$H_{0:}$ There is no association between the gender of respondents and impact of water scarcity on Health of the respondents.

H_1: There is an association between the gender of respondents impact of water scarcity on Health of the respondents.

Significance level: 0.05

Test statistics: x^2 test $x^2 = \sum_{i-1}^{r} \sum_{j-1}^{c} \frac{(o_v - e_v)^2}{e_v}$

Chi-Square Test

Variable	Chi-Square	d. f	P-value
Impact of water scarcity on Health of the respondents.	9.610	1	0.001

Interpretation

Chi square test as applied to check association between two variables such as gender of the respondents and Impact of water scarcity on Health of the respondents where the value of chi square is = 9.610 and value of P- is =.001. Data shows that P- Value = .001 is less than the level of significance α = 0.05, so the null hypothesis which is "there is no relationship of gender of respondents and Impact of water scarcity on Health of the respondents" is rejected and alternative hypothesis which conclude that "there is an association between gender of respondents and Impact of water scarcity on Health of the respondents" is accepted. Significant association indicates that majority of the female respondents' health were effected due to water scarcity in the area.

Though women are suffering severely from the water calamity, they have a massive obligation to fulfil the use of water for domestic tasks and family. If the matter of water scarcity is not taken seriously, it is for sure that women will suffer due to water scarcity particularly in the rural areas of Quetta. Due to the water scarcity women and young girls are facing serious health issues. Women carrying hefty pots of water might lead to backbone injuries, pelvic deformities, and chronic fatigue. It might similarly encourage untimely deliveries, impulsive abortions or a prolapsed uterus and is of inordinate fear during pregnancy.

Conclusions

Outcomes from the examination have demonstrated that Quetta is inclined to water scarcity because of the dry environment, dry season, parching, depleting water source and absence of foundation. The main victims of the water scarcity are women because they are powerless against water scarcity due to their limited political, economic and social role. Respondents have called attention to that, because of their low access of resources, they are inclined to the effect of water scarcity. The research shows that these women are especially inclined to loss of animals; medical issues, dropout from School, sitting idle and are mostly unfit to bear the cost of water administrations for nondomestic tasks. The investigations in this section have demonstrated that the women suffer because of their everyday utilization of water resources and the impacts of the scarcity in that area. The conclusions of the examination demonstrate the genuine socio-economic impacts on the number of inhabitants in Quetta. Increase in poverty is also an impact according to this viewpoint and it suggests for arrangement of social administrations like spending on children's wellbeing, because children are also affected. The findings of the study indicate that water scarcity has not only effected children and women but also male members of the society. It is indicated that male respondents were more affected economically as compare to female respondents.

Recommendations

1. Declaration of 'Water Emergency' in Quetta Valley is urgent need of the time. Government should ban on installation of tube wells and immediately withdraw subsidy on irrigation tube wells, and shift existing irrigation on efficient irrigation to minimize the use of water consumption.
2. Autonomous & empowered 'Water Body' should be set up to oversee all water sector projects. Community and water managers must in liaison to control the situation.
3. Conservation & efficient use of water and impact of water scarcity on women should be made as a part of school curriculums.
4. A special package and policy should be made regarding drinking water of rural areas of Quetta.

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