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Water Conservation Attitude of Residents of Rawalpindi

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Abstract *The study titled "Water conservation attitude of residents of Rawalpindi" was conducted in the Rawalpindi Cantonment Board (RCB) area of Rawalpindi. The current study used a Quantitative research design and cross-sectional in nature. A total of 399 sampled respondents were selected by the Random sampling technique, and responders were male and female residents of Rawalpindi. The aim of the current study was to explore the residents' attitudes to water conservation and their consumption practices. For intending to study and understanding the topic with theoretical perspective researcher used the Theory of Reasoned Action/Planned Behavior by Ajzen and Fishbein (1980). Reliability analysis was carried out on the entire variables and explored a Cronbach Alpha of (.721). Hypothesis testing of the study showed that a positive association exists between attitudes and behavior towards water conservation, and with higher education, people exhibit a positive attitude to water conservation behavior.*

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Introduction

Availability to water is an elementary human right, and individuals develop a view about any phenomenon by their personal experience. The Obtainability of water plays the main role in shaping a society. Individuals' insight of water and the behaviors in which a principle values it got as concerning the absenteeism or existence of diverse forms of water in dissimilar eras in time as water is vital for creatures at an individual and social level (Oestigaard, 2009). Water scarcity grounds deficiency of access to clean drinkable water mandatory for straightforward hygiene (water requirements for bathing, cookery and housework) and cleanliness (Gude, 2017).

Water is one of the requirements for life, and without its subsistence is incredible. On typical in the US, straight internal water routine (water from the tap, toilet, dishwasher, and so on) takes approximately 138 gallons (522 liters) per family per day or 60 gallons (227 liters) per being per day. Leaks are, feasibly, the most astonishing routine of water on the list – they volume to 17 gallons (64 liters) of water per family per day gone to dripping toilets, appliances and faucets (Water Footprint Calculator, 2017). The figure demonstrates the regular water of liters per day spent by each family in the United Kingdom (UK), a family of one takes 149 liters of water per day, and a family of five takes 523 water liters per day (Statista, 2018). In Karachi, the water request for 54 gallons per being per day (gpcd), when transformed in liters, turn out to be 204 liters per being per day (Dawn, March 19, 2017).

Russel and Fielding (2010) revealed that attitudes, opinions and conducts linked to water show a prime causative part in water conservation and contend that study engrossed on these aspects might assist in reassuring housing water conservation along with updating indication-grounded strategy and practice.

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One of the furthermost crucial natural means to nourishing the soul is freshwater. Water is unavoidable sources on which all living creatures survive, depends and directly affect their lives. It is not just a living need for human beings, but it also has economic, social and cultural life (Kılıç, 2008). The quality of life for humans, animals and plants is consequently connected with the quality and quantity of water resource. A huge amount of the water used in the home because water is a source used in numerous ways everywhere the home: for drinking, in food preparation, for sanitation (cleaning people, clothes and the home itself) and to uphold lawns and gardens (Boylu & Gunay, 2017).

Water consumption differs naturally from one area to another. Variables that regulate water practice profiles are of diverse categories (conservational, monetary, party-political, and communal) and might be contingent on the rule of space and time. Housing water usage creates the focal request for water at the community level in built-up zones. In current eras, water consumption of this type has developed as main related problems to insufficiency, use conflicts and changeability, which are the importance of changing aspects happening inside towns and connections among cities and their adjacent districts. Residential water request has been considered with diverse purposes, i.e., for predicting, an estimate of amount flexibility, scrutiny of features shaping consumption and handler behavior, among others (Donkor, Asce, Mazzuchi, Soyer, & Roberson, 2014). Approximating residential water demand is measured as a precondition to strategy for any policy on water. Though, doing so can be challenging for various reason: absence of consistent data, such as bills paid for services and handlers' socioeconomic characteristics, and suboptimal use material in the state of board facts (Vargas, Mingoti, & Heller, 2018).

Water-usage practices are separated into internal consumption (drinking, individual cleanliness, kitchenette routine, and washing clothes) and outside routine (vegetal plot, cattle, and house and lawn spring-cleaning) (Fan, Liu, Wang, Ritsema, & Geissen, 2014). Fan, Liu, Wang, Geissen, Ritsema, and Tong (2013), in their study, discuss inhabitants with dissimilar assessed water- usage actions, i.e., Simply overvalued indoor water-use practices and undervalued outdoor water-use exercise. Interior water-custom actions used less water than out-of-doors water-use actions.

Massive work is accessible on residential drinking water demand in developed countries. Still, the estimate for drinking water demand is difficult as families in these nation statuses numerous springs for drinking water (Nauges & Whittington, 2010). Furthermost, the present studies evaluated the price erections, accompanied by additional factors to direct the estimating plans in those countries (Nauges & Berg, 2009). A well considerate of domestic water use in emerging countries is vital for effective and operative management and growth of water systems. The examination of rating structure and income adaptabilities is disapprovingly vital in framing strategies for better water supply, mainly in city areas of emergent economies. Water pricing is a significant economic tool that not one supports enhanced structure growth (through bigger profits) but likewise cooperative in-demand managing procedures to keep and make well-organized usage of water resources. Pakistan is fronting speedy expansion, with the possibility of semi its populace residing in metropolises by 2025 (Kugelman, 2013).

Previous research has resolute that water consumption inside households is reliant on many factors, which involves: the number of individuals in the house, the age of inhabitants, education levels of people, proportion size of properties, inhabitants' salary, the effectiveness of water-consuming gadgets (i.e., clothes washers, showerheads, tap fixtures, dishwashers and toilets) and the attitudes, beliefs and behaviors of users (Jorgensen, Martin, Pearce, & Willis, 2014).

Multiple studies have ensured that water conservation attitudes and behavior are thoroughly connected (Willis, Stewart, Panuwatwanich, Williams, & Hollingsworth,2011b). Few studies exposed that inhabitant with confident attitudes could not continually display encouraging behavior (Jorgensen, Graymore, & O'Toole, 2009). This

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verdict exposed that a vast gap occurs amid attitude and behavior. The explanations behind such a hole contain water-usage customs, worth, water-saving behavior info, water consumption insight, and belief in authorities. Corral-Verdugo, Frias-Armenta, Perez-Urias, Orduna-Cabrera, and Espinoza-Gallego (2002) stressed the significance of public insight on water consumption because this insight aids to develop attitudes and behavior that lead towards water conservation. If inhabitants have an incorrect insight of water consumption, water-saving approaches such as proper education to alteration behavior and the use of water-saving mechanisms to progress effectiveness will be unproductive (Department for Environment, Food and Rural Affairs {DEFRA}, 2008). Though the water use doings of households are repetitively done daily, the applicants in the study show little information about the water consumption of certain doings. So, findings guarantee the outcomes of preceding research, i.e., immense gaps exist between supposed and genuine water consumption.

Attitude to water conservation behaviors probably relies on the behavior that the approach is engaged toward. For instance, conservation behaviors that need an advanced level of life modification might be thought-provoking for individuals to accept and consequently, people showed less constructive posture toward the behavior. An assessment of research proposes that reviewing attitude development is central since though stance behavior predicted, optimistic attitudes are a precondition for behavior alteration to happen (Heberlein, 2012). Thus, it looks beneficial to realize the development of a positive water conservation view to assist describe water conservation behavior further sketchily (Matthew, Jeffrey, DeWayne, Robert, & Brett, 2014).

The existing research aimed to explore the water conservation attitudes of residents of Rawalpindi. The emphasis of the study was to highlight what was the attitude of residents of Rawalpindi regarding water, whether they considered water as a human resource, private property or natural resource because their usage of water depending on how they perceived water. The existing research was empirical and theoretical contribution in the academic research. This study may be an important contribution to add academic knowledge in the discipline of Sociology as a study of water conservation behavior and attitude. Sociology is the study of society, so studying social problem become part of it and in the current time, water issue becomes a social problem as water is a natural resource and important for life. In the current time, water is scarce in regions, and there is a need to conserve water for future use. This study helps in understanding the actual water conservation attitude and to provide solutions to improve the water conservation behavior. This study contributes to the literature by identifying water conservation behavior in the Pakistan context, and it provides a new dimension to new researchers to further conduct research on this in the field of Sociology. As in the sociology field, little work is done on that problem, but it is a social issue because it affects society.

Methodology

The research was conducted with the quantitative research procedure, and data was collected accordingly. A cross-sectional research design was used for the present study. The quantitative research design was appropriate for the present research as the sample size was very large, i.e., 399, so it was not possible for the researcher to conduct this study by using a qualitative design. In the current study, the population is based on people residing in Rawalpindi. This present research is concerned with the water usage and conservation behavior of Rawalpindi residents. The study respondents comprised both male and female residents of Rawalpindi. This study employed the probability sampling method. To measure current research objectively, probability sampling was used. For the persistence of this research, the researcher used a random sampling technique. In sampling researcher randomly selected the respondents by using a sampling frame. The sample size was 399 drawn by Taro Yamane's (1967) formula.

The Objective of the Study

- To measure the attitude of people towards water conservation.

Research Question

- How the attitude of people related to water conservation behavior?

Discussion and Results

Data analysis is the process of thoroughly applying statistical modus operandi to describe and demonstrate the data. However, the study is based on quantitative technique, and for this process, SPSS is the basic tool used to evaluate the primary source of data. The data is now being presented in the tabular form with proper details as required, along with explanation, interpretation and descriptions.

Univariate Analysis

Table 1. Frequency and Percentage Distribution of Respondents view Regarding Water Resources

What is Water	Frequency	Percentage
A commodity	17	4.3%
A natural resource	257	64.4%
A private resource	1	0.3%
A public resource	44	11.0%
A human right	80	20.1%
Total	399	100.0%

Source: Author's Calculation

In Table 1, the study illustrates the frequency distribution and percentage of respondents who viewed water. Water is one of the main resources in this world, and without its survival is impossible, and it leads to many serious and negative consequences for human beings. The data showed that 4.3% of respondents 'well-thought-out water as a commodity, 64.4% considered it as a natural resource, 0.3% took it as a private resource, 11.0% perceive it as a public resource, and 20.1% take it as a hominid right. In the past civilization, water represents a crucial part in satisfying the lifecycle and construction of societal constructions. The accurate admittance to an adequate quantity of harmless intake water for individual and internal uses has been familiar as an ultimate humanoid rightful by the United Nations in September 2010. Protection of water has great importance round the world (Yang, Shuang-Hua, Magiera, Froelich, Jach, & Laspidou, 2017).

Table 2. Frequency and Percentage Distribution of Respondent's Experiences about Water Shortage and its Manageability

Experiencing Water Shortage	Frequency	Percentage
Yes	266	66.7%
No	133	33.3%
If yes, then how to manage		
No water shortage faced	133	33.3%
By limiting water use	126	31.6%
By use of water tanker	50	12.5%
Both a and b	88	22.1%

It is government property; I talk to government officers	2	0.5%
Total	399	100.0%

Source: Author's Calculation

In Table 2, the study also demonstrates the frequency distribution and percentage of respondents' response about experiencing water shortage and the way to cope with water scarcity. Water insufficiency can mean a lack in owed to bodily deficiency, or shortage in availability because of the letdown of institutes to guarantee a consistent amount or owing to an absence of satisfactory set-up. The data depicted that 66.7% of respondents faced water shortage whereas 33.3% doesn't face water shortage. The data demonstrated that 31.6% of respondents managed water shortage by limiting their water use, 12.5% respond they managed it by use of water tanker, 22.1% replied they manage it by both limiting their water use as well as by use of water tanker, and 0.5% answered that they talk to government bodies as water is government property. Since population progress, enlargement of business activity, city growth, water contamination, environment variation and deficiency has donated to enlarged water scarceness in several areas of the biosphere. It is predictable that a fifth of the ecosphere's populace living in zones of substantial water lack, where there is not enough water to fulfil entire petitions. One-third of the world's population does not have availability to fresh drinking water (Molden, 2007).

Table 3. Frequency and Percentage Distribution of Respondents Regarding the Payment of Water Bill

Water Bill	Frequency	Percentage
Yes	313	78.4%
No	86	21.6%
Total	399	100.0%

Source: Author's Calculation

In Table 3, the study also explains the frequency distribution and percentage of respondents' water bill data. Water bill is the amount of water paid based on water consumption quantity. The data revealed that 78.4% of respondents paid water bill while 21.6% of respondents don't pay the water bill. This displayed that the highest frequency of respondents paid their water bill. Respondents' water billing decision depends on the rating strategy of the country, i.e., at what rate water is offered to people. Water rating strategy was revealed to have an effect on single-household inhabited water use (Polebitski, Palmer, & Waddell, 2011).

Table 4. Frequency and Percentage Distribution of Respondents Regarding the amount of Water Consumption in a Daily Routine

Water Consumed in a day	Frequency	Percentage
Yes	211	52.9%
No	188	47.1%
Total	399	100.0%

Source: Author's Calculation

In Table 4, the study also explains the frequency distribution and percentage of respondent's consumed water check in a day. Checking the amount of water consumed in a day can enhance conservation actions, and it will be a fruitful step to an adaptation of eco-friendly conduct. The data depicted that 52.9% of respondents checked the amount of water

consumed by them in a day while 47.1% of respondents don't check the amount of water consumed by them. This showed that the majority of respondents keep checked on the amount of water consumed each day. Water consumption and domestic water use are interrelated with each other as a huge amount of water used for the indoor purpose and to keep a check on consuming water quantity helps in accomplishment of water preserving tasks. Research over the previous period revealed that domestic water use is linked to numerous factors (Ouyang, Wentz, Ruddell, & Harlan, 2013; Zhang & Brown, 2005).

Table 5. Frequency and Percentage Distribution of Respondents Regarding Water Conservation

Water Conservation	Frequency	Percentage
Yes	300	75.2%
No	99	24.8%
Total	399	100.0%

Source: Author's Calculation

In Table 5, the study also explains the frequency distribution and percentage of respondents' thought about water conservation. Water conservation is a thoughtful matter everywhere in the republic. Everybody and all require water to endure. People are uncaring when it comes to safeguarding water, but tiny do they see that conserving water can make the world a healthier place. The world does not make itself spotless; it is our responsibility to ensure it. The data demonstrated that 75.2% respondents thought about water conservation while 24.8% of respondents don't think about water conservation. This analyzed that the majority respondents had understood that water is precious and need to be conserve and avoid excessive use of water.

Table 6. Frequency and Percentage Distribution of Respondents Regarding an Estimate of Liters of Water Consumption in a Day

Estimate of liters of water consumed in a day	Frequency	Percentage
10-20 liters	75	18.8%
20-50 liters	141	35.3%
50-100 liters	142	35.6%
100 or more liters	41	10.3%
Total	399	100.0%

Source: Author's Calculation

In Table 6, the study also explains the frequency distribution and percentage of respondent's water estimate in liters consumed each day. Considerate water routine and consumption is crucial to estimating water pressure. Measures of water practice specified the degree of struggle and dependence on water capitals. The data demonstrated that 18.8% of respondents estimated that they consume 10-20 liters of water per day, 35.3% of respondents estimated that they devour 20-50 liters of water per day, 35.6% estimated that they intake 50-100 liters of water, and 10.3% estimated that they munch 100 or more than 100 liters of water each day. The highest response of water estimate comes under 50-100 liters water. According to the US Geological Survey (2015), a female should use 273.07 liters each day, a male uses 164 liters a day, a child uses 161.21 liters, and a retired person should use 401.38 liters a day but in India households with a high income are supposed to consume 250-600 liters a day per person, whereas low-income household consume 40 liters a day per person (Mohandas, 2013).

Table 7. Frequency and Percentage Distribution of Respondents 'Attitude to Water Conservation

Individual attitude to water conservation	SD	D	Neutral	Agree	SA	Total
I am very positive about water conservation.	25	10	49	177	138	399
	6.3%	2.5%	12.3%	44.4%	34.6%	100.0%
Water conservation is obligatory because of water scarcity.	16	16	39	175	153	399
	4.0%	4.0%	9.8%	43.9%	38.3%	100.0%
Water conservation isn't my responsibility.	158	138	40	53	10	399
	39.6%	34.6%	10.0%	13.3%	2.5%	100.0%
I promote water conservation among my friends and family.	25	38	99	164	73	399
	6.3%	9.5%	24.8%	41.1%	18.3%	100.0%
I only conserve water if water conservation does not cause extra expenditures for me.	47	98	97	130	27	399
	11.8%	24.6%	24.3%	32.6%	6.8%	100.0%
I only conserve water if water conservation does not take more time.	38	111	90	127	33	399
	9.5%	27.8%	22.6%	31.8%	8.3%	100.0%
It is a challenge to convince others to conserve water.	19	34	66	164	116	399
	4.8%	8.5%	16.5%	41.1%	29.1%	100.0%
Water conservation alone can save Pakistan's water problem.	22	48	71	140	118	399
	5.5%	12.0%	17.8%	35.1%	29.6%	100.0%

Source: Author's Calculation

In Table 7, the study explains the frequency distribution and percentage of individual attitude to water conservation. This question measures the responders' attitude to water conservation that what kind of behavior they exhibit towards safeguarding water. As water is life and it is important to measure the behavior of people to adopting water conservation doings. In response to the statement, I am very positive about water conservation; 6.3% of respondents were strongly disagreed, 2.5% disagreed, 12.3% neutral, 44.4% agreed, and 34.6% were strongly agreed with it. In response to the statement, Water conservation is obligatory because of water scarcity, 4.0% of respondents were strongly disagreed, 4.0% disagreed, 9.8% neutral, 43.9% agreed, and 38.3% were strongly agreed with it. With reference to the statement, Water conservation isn't my responsibility, 39.6% of respondents were strongly disagreed, 34.6% disagreed, 10.0% neutral, 13.3% agreed, and 2.5% were strongly agreed with it. In response to the statement, I promote water conservation among my friends and family, 6.3% of respondents were strongly disagreed, 9.5% disagreed, 24.8% neutral, 41.1% agreed, and 18.3% were strongly agreed with it. As Owen and Videras (2007), using OECD data display that individuals who are keener to act according to moral norms are also keener to protect the public good of the natural situation. With reference to the statement, I only conserve water if water conservation does not cause extra expenditures for me, 11.8% of respondents were strongly disagreed, 24.6% disagreed, 24.3% neutral, 32.6% agreed, and 6.8% were strongly agreed with it.

In response to the statement, I only conserve water if water conservation does not take more time, 9.5% of respondents were strongly disagreed, 27.8% disagreed, 22.6% neutral, 31.8% agreed, and 8.3% were strongly agreed with it. Corral-Verdugo et al.'s (2002) model discovered that the observation that others were wasting water declined conservation motivations and caused increased water consumption. If the public does not trust others to save water, they will practice this to rationalize their personal deficiency of motivation to conserve, which outcomes in their own higher water consumption (pp. 527-28, 533-34). With reference to the statement, it is a challenge to convince others to conserve water; 4.8% of respondents were strongly disagreed, 8.5% disagreed, 16.5% neutral, 41.1% agreed, and 29.1% were strongly agreed with it. When behaviors are habitual, it is challenging to transform individuals' attitudes towards their actions. Gregory and Di-Leo (2003) recommended that when strong habits exist, convincing struggles to alter attitudes may

have little consequence on behavior. In reference to the statement, Water conservation alone can save Pakistan's water problem, 5.5% of respondents were strongly disagreed, 12.0% disagreed, 17.8% neutral, 35.1% agreed, and 29.6% were strongly agreed.

Table 8. Frequency and Percentage Distribution of Respondents' Attitude to Water-Efficient Appliances

Statement	SD	D	Neutral	Agree	SA	Total
Water efficient appliances are a good idea.	13	13	60	205	108	399
	3.3%	3.3%	15.0%	51.4%	27.1%	100.0%
I look for a good water usage rating when ordering appliances.	6	36	89	196	72	399
	1.5%	9.0%	22.3%	49.1%	18.0%	100.0%
I think they are good if they are cost-effective.	9	22	98	207	63	399
	2.3%	5.5%	24.6%	51.9%	15.8%	100.0%
I don't know how much water they save.	9	37	117	192	44	399
	2.3%	9.3%	29.3%	48.1%	11.0%	100.0%
I would need more information to make a purchase decision.	13	23	103	191	69	399
	3.3%	5.8%	25.8%	47.9%	17.3%	100.0%
Water-efficient appliances cost too much.	7	34	122	166	70	399
	1.8%	8.5%	30.6%	41.6%	17.5%	100.0%
I don't know much about water-efficient appliances.	9	50	118	159	63	399
	2.3%	12.5%	29.6%	39.8%	15.8%	100.0%
Water-efficient appliances don't save enough water from being worth the cost.	21	64	137	118	59	399
	5.3%	16.0%	34.3%	29.6%	14.8%	100.0%

Source: Author's Calculation

In Table 8, the study also explains the frequency distribution of respondent' attitudes to water-efficient appliances. Customers view about water effective devices is important to know as it affects the decision of buying utilizations of another public. People often buy things by reviewing their rating. In response to the statement, water-efficient appliances are a good idea, 3.3% of respondents were strongly disagreed, 3.3% disagreed, 15.0% neutral, 51.4% agreed, and 27.1% were strongly agreed with it. In response to the statement, I look for a good water usage rating when ordering appliances; 1.5% of respondents were strongly disagreed, 9.0% disagreed, 22.3% neutral, 49.1% agreed, and 18.0% were strongly agreed with it. In response to the statement, I think they are good if they are cost-effective 2.3% of respondents were strongly disagreed, 5.5% disagreed, 24.6 % neutral, 51.9% agreed, and 15.8% were strongly agreed with it. With reference to the statement, I don't know how much water they save; 2.3% of respondents were strongly disagreed, 9.3% disagreed, 29.3% neutral, 48.1% agreed, and 11.0% were strongly agreed with it.

With reference to the statement, I would need more information to make a purchase decision; 3.3% of respondents were strongly disagreed, 5.8% disagreed, 25.8% neutral, 47.9% agreed, and 7.3% were strongly agreed with it. In response to the statement, water-efficient appliances cost too much,1.8% of respondents were strongly disagreed, 8.5% disagreed, 30.6% neutral, 41.6% agreed, and 17.5% were strongly agreed with it. Controversial, the outcomes indicated that retrofitting water efficiency devices is inexpensive and is effective in saving a small percentage of water on a daily basis (Waterwise, 2011). With reference to the statement, I don't know much about water-efficient appliances; 2.3% of respondents were strongly disagreed, 12.5% disagreed, 29.6% neutral, 39.8% agreed, and 15.8% were strongly agreed with it. In response to the statement, water-efficient appliances don't save enough water from being worth the cost, 5.3% of respondents were strongly disagreed, 16.0% disagreed, 34.3% neutral, 29.6% agreed, and 14.8% were strongly agreed with it. Ownership of water effective gadgets mainly depends on the house status i.e.; the individual

is the owner of the house or renter. Tenant behavior-associated water usage in housing structures is a serious matter for water conservation, and water use forecast (Kontokosta & Jain, 2015; Suero, Mayer, & Rosenberg, 2012).

Bivariate Analysis

Hypothesis Assumed for the Study

- There is a positive association between attitudes and behavior towards water conservation.

Table 9. Hypothesis: There is a Positive Association between Attitudes and Behavior Towards Water Conservation

Have you thought about water conservation * I promote water conservation among my friends and family						
	SD	D	Neutral	Agree	SA	Total
Yes	11	17	67	144	61	300
	3.7%	5.7%	22.3%	48.0%	20.3%	100.0%
No	14	21	32	20	12	99
	14.1%	21.2%	32.3%	20.2%	12.1%	100.0%
Total	25	38	99	164	73	399
	6.3%	9.5%	24.8%	41.1%	18.3%	100.0%
Chi-Square: 51.654 DF: 4 Level of Significance: .000						

0 cells have an expected count of less than 5. Source: Author's Calculation

In Table 9, the study explains the bivariate analysis of an independent (respondents' ever thought about water conservation) and dependent (I promote water conservation among my friends and family) variable by using chi-square techniques. Water conservation thinking predominantly inspires people to adopt actions that lead to protecting water. The data revealed that 3.7% of respondents were strongly disagreed with the statement that yes, they support water conservation among friends and family, 5.7% disagreed, 22.3% neutral, 48.0% agreed, 20.3% were strongly agreed with it. Whereas 14.1% of respondents were strongly disagreed with the statement that they don't advocate water conservation among friends and family, 21.2% disagreed, 32.3% neutral, 20.2% agreed, 12.1% were strongly agreed with it. Former investigations have exposed constant discoveries concerning the standing of feelings in envisaging pro-conservational behaviors and have revealed the standing of theoretic representations grounded on sentiments (e.g., Durán, Alzate, López, & Sabucedo, 2007; Grob, 1995; Müller, Kals, & Pansa, 2009). Precisely, Grob (1995) facts out that the harmful demonstrative reactions by conservational deprivations ease the execution of pro-conservation behaviours.

The cross table shows the significance level of (.000), which illustrates that result was highly significant. When the significance level was less than 0.05 assumption accepted; here, it is .000, which supports that the assumed hypothesis accepted, and there is a positive association between attitudes and behavior towards water conservation which means that attitude develop behavior and their attitude reflect their water conservation behavior.

Table 10. Reliability Analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.721	68

Source: Author's Calculation

The above table shows the reliability of the data. The value of Cronbach's alpha is 721, which shows that the data is reliable. Alpha normally ranges between 0 and 1, although in certain cases, it might be negative.

Conclusion

The study concluded that water conservation attitude and behavior are interrelated with each other because attitude shapes behavior. Hence, education, income, and family size are major variables by which water consumption habits of people can be identified as the study indicates that educational qualification influences water consumption and conservational attitude. It was the assumption that shows the significant association is that the respondents' academic qualification had an influence on positive actions and approved attitudes toward water conservation. This means that education inspires people thinking and actions. A person with high qualification has knowledge of societal issues, and they had more capability to think about the solution of issues that they faced in society as water scarcity is a social issue because a huge number of people affected by it. Water scarcity is not only natural but also a social construct as it developed in society because of the traditions and practices associated with it. Conservation needs education and greater information regarding water use and society's influence on the water source.

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Annexure 1
Questionnaire of the Study

1. Gender

a) Male b) Female

2. Age

a) 20-24 b) 25-29 c) 30-34 d) 35 and above

3. Qualification

a) Primary b) Middle c) Metric d) Inter mediate e) Bac helors
f) Masters g) MS/MPHIL h) PHD

4. Residential area

a) Rural b) Urban

5. Father / husband/own occupation

a) Government Job b) Private Job c) Businessman d) Work on daily wages
e) Any other, please specify

6. Family Monthly Income

a) 21,000-30,000 b) 31,000-40,000 c) 41,000-50,000 d) 51,000-60,000
e) 60,000 and above

7. Marital Status

a) Single b) Married c) Divorced d) Widow

8. Family Type

a) Nuclear b) Joint c) Extended

9. Family Size ----------

10. Water Source you used?

a) CDA b) Boaring c) Both a and b

11. According to you, what is Water?

a) A commodity b) A natural resource c) A private resource
d) A public resource e) A human right

12. Are you Experiencing Water Shortages in the Area where you Live?

a) Yes b) No

13. If yes, then how will you Manage?

a) By limiting water use b) By use of water tanker c) Both a and b
d) Any other, please specify,----------

14. According to you, what is Water Scarcity?

a) lack of abundant available water resources b) lack of pure drinking water
c) habit of taking low quantity of water d) improper and unhygienic water
e) all of these

15. Do you Pay Water Bill?

a) Yes b) No

16. Do you ever Notice of Water Consumed in a day by you?

a) Yes b) No

17. Have you ever thought about Water Conservation?

a) Yes b) No

18. Are you Aware of your own Water Consumption?

a) Yes b) No c) Somewhat

19. Given what you know about Water Consumption, how many Liters of Water would you Estimate you use in one Day?

a) 10-20 liters b) 20-50 liters c) 50-100 liters d) 100 or more liters

20. Water usage Performing Household and other Activities

Water Consumed activities	Low	Medium	High
Household			
Shower			
Clothes Washer			
Dishwasher			
Bathtub			
Toilet			
Other end users			
Leak			
Tap			
Gardening			

21. How often you Wash Car?

a) Daily b) Two times a day c) Once a week
d) After two weeks e) Once a month f) I don't have a car

22. How often you Water your Garden?

a) Daily b) On weekly basis c) After two weeks d) I don't have garden

23. Individual Attitude to Water Conservation

Individual attitude to water conservation	SD	D	Neutral	A	SA
I am very positive about water conservation					
Water conservation is necessary because of water scarcity					
Water conservation isn't my responsibility					
I advocate water conservation among my friends and family					

I only conserve water if water conservation does not cause additional expenses for me
I only conserve water if water conservation does not take more time
It is a challenge to convince others to conserve water
Water conservation alone can save Pakistan's water problem

24. Conservation Practice

Conservation practice	Yes	No
I make sure that taps do not drip		
I use minimal water for cleaning		
I strictly adhere to water restrictions		
I take shorter showers		
I have a drought tolerant / low water consumption garden		
I do not wash my car with water		
I have a rainwater tank		
I hand wash clothes		

25. Ownership of Water Efficient Appliances

Ownership of water efficient appliances	Yes	No
Dual flush toilet		
Water efficient showerhead		
Water efficient washing machine		
Water efficient taps		
Hot water insulation		
Water efficient dishwasher		
Tap/hose timers		
Water collection system for sink/washing machine/shower		

26. Respondent Attitudes to Water Efficient Appliance

Statement	SD	D	Neutral	A	SA
Water efficient appliances are a good idea					
I look for a good water usage rating when buying appliances					
I think they are good if they are cost effective					
I don't know how much water they actually save					
I would need more information to make a purchase decision					
Water efficient appliances cost too much					
I don't know much about water efficient appliances					
Water efficient appliances don't save enough water to be worth the cost					

27. How we can Onserve Water?

Statement	SD	D	Neutral	A	SA
By minimize water wastage					
Through proper monitoring of water use for each activity					
By recycling water (recycled water for watering your lawn, washing your car, and other activities which do not involve direct personal contact)					

By collecting/ preserve rainwater
By using water efficient appliances
Turn off taps while brushing teeth and other activities
By providing awareness to conserve water