



Improving health through behavior change in water sanitation and hygiene

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Abstract

The current research study entitled an analysis of community satisfaction and Behavior change in WASH Program with hygiene and sanitation in rural district Peshawar. A total of 359 respondents' has been proportionally allocated to sub village in selected Union counsel, and then simple random sampling techniques were used. Data collection was held on a 3 level Likert scale interview schedule cover all variables of the study. Chi square was used for testing the level of association between study variable. Mentioning household nature of toilette facility ($p=0.000$), Toilette facility using by more households instead of one family ($p=0.000$), the kids stool regularly disposed, mention place ($p=0.000$), mention the place, where normally adults of a HH regularly go for defecation ($p=0.000$), is Toilet helpful towards bringing improvements in life standard as well as seclusion ($p=0.000$), sort of drainage system from HH toilette ($p<0.022$), personal hygiene i.e. cutting nail, teeth cleaning, taking bath etc. ($p=0.000$). Correspondingly, the findings of the research study are that mass communities had high level of satisfaction with regards to the initiation, deliverance and execution of the initiated project in the targeted area. Mechanism of strong follow ups maximizes involvement of community and interventions of public sector initiate such programs, to promote competitive environment for government as well as other implementing agencies were the recommendations in the light of present research study.

Keywords: Hygiene, Sanitation, Community, Satisfaction, Building, Capacity, WASH, Positive Behavior.

Introduction

Public Health and hygiene promotion is "the holistic approach of procedures which contains the very philosophy which enhances the capacity of controlling in the adoption of positive behavior on improved health of wellbeing with special reference on achieving progress in the area of hygiene and sanitation. While behavior changes concerning to public-health contains package of activities and methodologies focusing on environment, community and individuals, which bring changes and regularize human behavior. The mentioned interventions are fundamental to enhance personal satisfaction rotating around an incorporated WASH approach, prompting control of mortality with specific reference to the vulnerability segment helpless human population during crisis¹. The sanitation into various classifications and categories starting from water storage, accumulation of water from safest point. Water treatment, recycling of safe disposal of human faeces to mechanical and industrial wastes and dangerous waste management². It's been reported that approximately about 80 percent childhood illnesses, are due to poor hygiene and sanitation predicting into the grown-ups as well. Furthermore more report reveals that ill health is directly related with drinking of water from un-unsafe source, open poop, which has striking association with pneumonia, which causes deaths of life just about 750000 youngster's yearly³. A research study revealed that, who use to go to toilet feeling more contented than the individuals who use going to open poo/stool, are using the call of the nature i.e. forest, bushes and fields. In addition open poo is unsafe on the

grounds that the dung get went into the items of our food stuffs through our fingers and additionally through air⁴. As a result of Millennium Development Goals (MDGs), WASH related issues did not settled down till now, However 50% of the globe population is going for defecting in open grounds, field forests, bushes. Though 50 percent world population use to going for call of nature i.e. open defecation. Additionally water sanitation facilities will get more time for continuation in building community capacity and adopt positive behaviors. On the other hand, 2.5 billion of populations and individuals don't have access to improved hygiene and sanitation practices⁵. In a reported study findings have two facets of healthy life first is environment which is free from open defecation and stool disclosure in open air leads to contaminate the stuff and more essential is to have more concentration on hygiene practices is depended after setting up sensibility of advancing better-quality sustenance cleanliness, prevalently the cleanliness of forestalling nourishments stuffs, devoured by youngsters in the age grow most defenseless towards diarrheal disease⁶. Sanitation has focused on prosperity impacts among adolescents under five years of age. In any case, there is creating affirmation of various kind security threats women and young women stand up to due to deficient sanitation, comprising extended maternal mortality risk of unhygienic natal practices and poor defilement mechanism, Uro-genital tract sicknesses, urinary incontinence and unending obstruction of origination and fertility⁷. The household finances on upgraded hygiene and sanitation having strong correlation, amongst improved water provision and

livelihoods, regardless of whether, for drinking or domestic purpose usage. In addition, in high income states, previous expenditure in provision of water arrangement and the volume to place more in the contemporary grows water reservation and, obviously, achievement in well-being⁸. Hand washing cleanser or with other purifying item or substance diminished the peril of diarrheal ailment up to 47%. Besides, diarrheal ailment as well as different maladies too, (Dysentery, Typhoid and Cholera). In addition, there are methodologies about hand washing alongside compounds chemically prepared can reduce horrendousness by different afflictions, for example, Respiratory Infections, Ascariasis etc⁹. Because of tainted water general masses particularly kids below five years of age confronting problem of worms in digestion tracts, which influence body growth e.g. snare worm sicknesses has appeared to experience the underhanded effects of change barrier, understanding and mental impedances. Also, the association of hookworm have been debilitated knowledge, expanded sad needs from school, diminishes in coming days cash related proficiency¹⁰. Hand washing with compound or cleanser is most vital before setting up any kind of nourishment for family, kids and particularly to lactating ladies, before milking their new natal, may be basically considerable in decreasing diarrheal maladies and get into sickness¹¹. Ladies during menstrual cycle who uses dirty menstrual wipes have a high relationship with unfortunate circumstance. Nonetheless, inadequate with regards to singular cleanliness practice is the risk of conceptive tract infringement. Besides, written and reported works are obtainable on the use of sullied resources stuff in menstrual cycle. The reported information delineate that there is connection between non-business menstrual wipes and indigenous menstrual cleanliness hones urinary and vaginal contaminations. In addition, psycho-social injurious circumstances may occur, vulnerability and unsettling influence in true serenity by utilizing tainted stuff as menstrual wipes in periods¹². There must be specifically separate place for toilet construction the planning of plausibility is indispensable. Besides, DRR part should be ensured in toilet construction during designing and feasibility, particularly the space and distance of separation essential to measure from water source i.e. all things considered, capacity according to cleanliness principles and standards, Moreover, toilet construction should ensure distance from kitchen, likewise ensure the proper disposal for sanitation water. Furthermore each and every lavatory created is required would guarantee that it is put aside. A result of this philosophy, regardless, the latrine course of action of an offer must be direct to low wage. The toilet must be planned within a targeted cost¹³. As per survey report conducted at Nigeria recommends that unhygienic and recycled materials, for example, latrine/tissue paper and piece of garments usage may harbor, and reusing of these stuffs may thusly build up a wellspring of genital issue. Moreover, it is of vital importance that appropriate arranging off these used latrine/tissue paper¹⁴. In 2004 report issued by health department exhibits that 1.9 million of youngsters passed away due to ailment. All of this life loses were just because of poor water and sanitation practices. One more report issued by world

health organization, (2004) dying's advance noticeable number of young people due to HIV, malarial measles disorder and both. Moreover, all these life loses reported to non-use of cleanliness and promotive health measures¹⁵.

Methodology

The nature of this research study is descriptive to explore behavior changed in relation to effective outcomes, in result of WASH Program been initiated in last decade either by Government or non-governmental development organization. The research study was held in rural district Peshawar, Khyber Pakhtunkhwa, data was collected from respondents of target union council.

Variables of the Study	
Independent variables	Hygiene and sanitation
Dependent variable	Behavior change in WASH Program

Sampling design: The sampling techniques been used was Simple random sampling for the purpose to get response from them and further rigorous statistical test application to found relationship. For the sample size extraction the formulae has been used for proportional allocation among the huge number of total population size was 5714. The total sample size of respondents 359 were randomly drawn out on the mentioned criteria given by Sekaran¹⁶.

Data analysis: After collection of data, then the data analysis has been held through computer software i.e. (SPSS, version-20) statistical Package for social sciences. Collected data, then punched in the program of SPSS, percentages, frequencies calculated on the base of data punched in SPSS data base.

Chi Square test (χ^2): Chi square test is of the great importance amongst the numerous test of implication established by statisticians. Therefore, Chi-square test is appropriate in enormous number of problems¹⁷. Through these tests it becomes possible for researchers testing the significance and association level between independent and dependent variables.

Chi Square test (χ^2) has been used for qualitative data discovering level of association, between two study variables (dependent and Independent variables). Chi square test (χ^2) was used, implementing technique drawn by McCall¹⁸.

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - e_{ij})^2}{e_{ij}} \quad (\text{Chaudry and Kamal 1996})^{19}$$

Where: "Ojk" the perceived frequency in the cell matching to the connection of "Jth" row and "Kth" Column "r" the number of rows and "c" number of column.

Formula basically guides to take the formed origination of frequencies for every cell further divided by the anticipated frequency. Subsequent value is disseminated as Chi square with all relevant degrees of freedom, calculated as below.

$$d.f = (r-1)(c-1) \quad (\text{Mac Call, 1975})^{20}$$

When the frequencies in the cells was less than “5” Fisher Exact Test has been used in place of simple Chi Square by taking the procedural measures by Bailey²¹.

Additionally, it is requisite that sample size need to be objectively huge, that no predictable frequencies is less than “5” for r and $c > 2$, or < 10 if $r=c=2$. Though, this hypothesis was desecrated several times in data and therefore, Fisher Exact Test (Exact Chi Square Test) used in place of simplified chi square. The correlation developed by, Fisher is given in equation-II²²;

$$\text{Fisher Exact test Probability} = p = \frac{(a+b)!(c+d)!(a+c)!(b+d)!}{n! a! b! c! d!}$$

Where: a, b, c and d the observed figures in four cells, of contingency table and “ n ” total number of observations. For the, purpose of data analysis, including percentage, frequencies, proportion, Chi-Square software has been used (SPSS-20).

Results and discussion

Hygiene and Sanitation and Behavior change and Community Satisfaction in WASH: To measure the significance of hygiene and sanitation, few statements regarding behavior change and community satisfaction in WASH Program, feedback of the respondents were recorded in Table-1. The response of community in given table was limited to assess provision of water sanitation and hygiene in preventative health care. The findings of the study that majority of the respondents 41.8 percent revealed that, they had pour-Flush to Pipe Sewerage Structure in HH. Regarding sanitation, More than half of Pakistani population having access to anisolated non-shared better-quality latrine piped or pour flush to gutter, septic or ditch, and Majority of the respondents were having no facility at all and reported using the bushes, forests or fields²³. Moreover, the data revealed that, 89.1 percent of the responses were usage of household lavatory without sharing with other relative households. It would be ascribed to the family larger in size, wherever a specified amount of toilets weren't sufficed to accommodate daily requirements of them for this vigorous human requirement.

Majority of the respondents 87.5% showed response about, place of kids excreta regularly disposed. They responded that they rinsed it into Commode orditch, drain, and put in garbage. It was apparent from these given information's, the respondents strictly followed the personifications of lavatory in their daily routine lives notwithstanding over burdening. Several schools, especially in rurality, don't have better-quality sanitation services and often, if a lavatory is available, but neither well-

maintained nor well utilized. Almost a larger part 87.5 percent of the responses described about, infants' poop usually arranged to dispose. They responded that they Put/Rinsed into Commode, deplete, discard or Garbage. Moreover it was crystal clear from their given responses, that these respondents had strictly follow the embodiments of lavatory in their day to day life despite over burdening phenomena. Many schools, particularly in country side, rurality don't have enhanced sanitation offices and frequently, if a restroom is accessible, it is not all around kept up and in this way not well utilized²⁴.

Similarly 70.8% respondents conceded to the announcement that grown-ups in family unit more often than not go to family toilet to poop. The youth's state of mind of utilizing lavatory open situation could be ascribed to those primitive practices, where adolescents think of it as basic to go outside because of keeping their dominant role as man over females. Sanitation Minimizing the equipment blessing and utilizing family wander is consistently observed as the finest strategy to manage surety each and every lavatory manufactured is required²⁵. In this regard 86.1% respondents trusted that restroom gave under the venture addressing their families' needs. Moreover, 78.8% of the respondents give response that it diminished Smell as an essential advantage in utilizing the toilet. Besides, 94.7 percent of respondents given response that they believed, Latrine helped in enhancing way of life together with protection. These discoveries were in consonance in portraying the data. One of the essential points of such lavatory had the imperative part of keeping up the client's privacy²⁶. At the slighter piece of the range, limit water and faeces disposal can bring variation in cheerfulness. It was additionally found that 51.8 percent of them showed that they had underground waste of toilet. An appropriate method for underground waste item had been the dumping of every single risky item. Restroom squander is deadly both in smell and had the spread of different sicknesses also. For moment laid out before, having sparkling toilettes in schools and Colleges may build the participation proportion of fiery young women²⁷.

In reliability to the above mentioned discoveries, 66.3 percent of the respondents delineated that they utilize simple water for hand washing after pooping. These data clearly clarified the different techniques for purification of hands after pooping. These rehearses were explained in the religious lessons; they been utilized to acquire from religious pioneers with abnormal state of compensation in divine term. Water is in like way essential for cleanliness practices, e.g. hand-washing an appraisal of the impression of washing hands through synthetic on the runs. Three research contemplates has been composed, goes in which obviously little water was open^{28,29}. Momentum inevitable assistant prescribed hand washing with synthetic earlier orchestrating of young people's sustenance may be mainly considerable in lessening diarrheal illness³⁰. For 86.9 percent of the responses were, that they sparkle their teeth with brush, cutting nail with nail cutter, taking bath regularly. Furthermore, it would be due to religious practices and

messages in the targeted research area. Lacking of an individual purity is acknowledged not the hazard of conceptive tract harms, written research work present in prosperity encounters (both short term and whole deal) had connected with consumption of contaminated usable stuff during monthly menstrual cycle. That dismal composition accounts a correlation among noncommercial menstrual wipes and indigenous menstrual pioussness and purity improves urinary and vaginal pollution³¹. Majority of respondents 86.9 percent, revealed about the regular use of cleaning teeth with blush/Miswak, Bathing regularly, and cutting nail with nail cutter.

Table-1: Perception of Sampled Respondents about Behavior Change and Community Satisfaction in WASH Program.

Statement	Yes	No	Don't Know
Mention, Type of Latrine facility used by this household. Service Bucket Latrine/PIT Latrine, Flush to Pipe Sewer System, Field, Forest, Bushes, Composting/Dry Latrine	41.8%	37.6%	20.6%
Mention Number of households HH share this Latrine? (A). Not Shared (1HH), (B). Shared Family (2-HH), (3). Communal toilet (3-HH or more)	89.1%	10.6%	0.3%
Please mention Place where babies stool are normally disposed	6.1%	87.5%	6.4%
Please mention Place where adults of HH normally go for defecation.	70.8%	8.4%	20.9%
Is the latrine provided under this project meeting your households need?	86.1%	13.9%	0.0%
Mention the benefits of using the latrine	78.8%	15.0%	6.1%
Latrine helped you in improving your life standard and privacy	94.7%	0.8%	4.5%
What type of drainage system does your Toilet have	51.8%	34.0%	14.2%
Mention the name of item you usually practice for washing hands after defecation. (A). Soap, (B) Ash/Sand, (C) Water Only	31.2%	2.5%	66.3%
Do you cut your nails in a week, clean teeth daily, taking bath etc.	86.9%	9.7%	3.3%

Association between Hygiene and Sanitation and Behavior change in WASH: The table demonstrates highly significant association ($p=0.000$) was existed between variety of latrine for

family usage with satisfaction of the community. Waste disposal i.e. stool protection was suitable with the coded methods, are the resultant pledge of project start, execution and appropriate deliverance. The issue remains indeterminate, the presence about a lot of faces, every now and again demonstrate seriously degraded situations³².

Furthermore, highly-significant association found ($p=0.000$) between co-sharing of lavatory more than single households. Might be apparent factor related to massive population size at HH level. Moreover, an inadequate number of the lavatories not up to necessities of amount of household members, might not be ruled out. The number of persons per lavatory was rightfully associated with *Ascaris lumbricoides* pollution control. Nevertheless, it is un-clear whether inclusive public per lavatory, considered or found common and offer of use of lavatories to additional family expands risk of stomach diseases and protozoan bloodsuckers. Almost certainly because of chances of usage of household toilette making change in attitude to avoid open excreta in fields, bushes and forests³³. Moreover, a significance association was found ($p=0.000$) between disposing off kids excreta and community satisfaction. Schistosomiasis causes re deaths in sub Saharan Africa. This all is due to hygiene and drinking and using of Low TDS and nontoxic water. These diseases are immovably related to nonattendance of face washing, consistently in light of absenteeism of adjoining wellsprings of safest water³⁴.

Similarly, highly significant association was found ($p=0.000$) between place of the adults/grown-ups of a household use go to poo of need fulfillment and community satisfaction. This is maybe because of the reason that awareness of health and hygiene practices led to healthy body could be achieved through practicing g these messages. This is fact that healthy physique is having healthy brain. In India, 66% of the country population lives don't consider sanitation as a burning issue and a standard 600 million person's poo outside, addressing 60% of the overall people sharpening open defecation³⁵.

However, non-significance association was found ($p=0.901$) between toilette provision in this project and community satisfaction. It might be related with social practices in which men contemplate utilizing toilette as losing admiration and notoriety inside the family unit individuals have. The utilization of toilet was presumably reliant on social imperatives due to non-utilizing of toilet by male family. It is just limited to youngsters and ladies in certain. Creators found that the construction of toilet basically fabricates the peril of *Escherichia coli* disease amongst young females, Moreover, utilization of lavatories deprived of cleanliness direct change, could speak to a risk to youths.

There is an unanswered inquiry as to the sufficiency of improving informative outcomes through latrine advancement without hand-washing workplaces, and a strong wellspring of flawless, running water³⁶. Moreover, non-significance

association was found ($p=0.140$) between advantages they find in using the toilette with community satisfaction. The utilization of restroom though, didn't know little about or influences on family lives. That might be low level of mindfulness, on basically considering the toilettes as normal life occasion, don't have significant impacts as far as its utilization. Over late years, convincing insistence been accumulated that critical and vital success impressions are co-related with updates in approaching to fundamental public health and hand washing workplaces³⁷.

A high-significant association was found ($p=0.000$), between toilette helped them enhancing way of life including security with satisfaction of the community and Unlikely, significant association was found ($p=0.022$) between seepage in family unit toilette and community satisfaction. Surface drainage system tainted water source and when there wasn't deplete flies and mosquitoes exchange open defecated poo, dung particles moves into their nourishment and made them defiled through their legs, quills and body as a wellspring of brisk exchanging of pollution of open or no deplete. Routinely, everyone have prerequisites of water, regardless of whether they are rich or living underneath neediness line, overflows and urinates step by step. In any case, where it happens fundamentally influences family prosperity. Families with, toilettes in their premises having countable cut down loathsome rates as comparing them with ones didn't have it. Personal toilettes advantages to the families and neighbor who ensured the security from the family crap.

Needy individuals and neighbors, especially physical in a nation or non-underserved series, consistently require disconnected toilettes, convincing poo visible to everyone spaces, relinquishing them additional vulnerability to transferable infections³⁸.

A non-significant association was found ($p=0.597$), between hand-washing on vanishing pooping with satisfaction of community avoiding ignorance on eating contaminations and tidy, open crapped excrement particles. Individuals were discovered settling on hand-washing in the fundamental operationalization of undertaking. Though, they were discovered through getting their response imagining of non-washing hands due to un-accessibility to cleansers and other purging apparatuses. Found when no garbage of human excreta remain obvious disclose to open air, this regard an organized control of pit toilette would be the best option of ODF, whether been secured through a lit and that lit should be protected from all types of flies³⁹. Moreover, highly significance association was found ($p=0.000$) between, cleaning of teeth with brush, nails cutting with nail cutter, bathing regularly and so on so forth with community satisfaction. The outcomes portrayed these activities of specific practices, which had prompted bringing cleaning. These included cleaning of teeth with brush/Miswak, cutting of nail with nail cutter, scrubbing down regularly and so on. All these were found in the educating session of Islam also, Frequent lectured by Islamic religion appears on different sermons too. Methodology of examinations

on cleanliness have focused on the prosperity impacts among adolescent under five years, there is creating affirmation of the exceptional prosperity perils women and young women go up against in view of deficient cleanness, including extended maternal mortality risk from unsanitary birth performs and poorer sully control⁴⁰. Conversely, non-significant association was found ($p=0.617$) between the learning about Operations and Maintenance procedures prepared for source of water upkeep with community satisfaction. The discoveries portrayed about nearness of an office. The presence of office was added to supportable protection of cleansing practices and mindfulness over the issue. O and M is key section of supportability, and an endless reason behind disappointment of water sanitation and hygiene advantage working environments sometimes as of late. Different thwarted expectations are not particular ones. They may happen by virtue of nonattendance of judgment aptitudes, deficient cost recuperation, or the effort insufficiencies of joined working environments. The above discoveries inferred that sanitation rehearses were by and by as resultant components in light of mindfulness and operationalization of performs from the initiated project⁴¹.

Conclusion

This reported study concluded, running successively hygiene campaigning through NGO, television (TV), Radio, agency, Picture/poster, school teachers, religious leaders, health worker, disseminations of information and educated and learnt segment of society had increased level of community satisfaction. During a project implementation the selection of families per vulnerability criterion had done the progress effective and efficient and goal oriented, Reflection of strong impetus of NGOs intervened programs side by side with public sector intervened programs. Volunteer community practices, for instant, treatment of household drinkable water Boiling, Sand Filtering, Chlorination, were some of and other strategies taught. Which been in practice since long.

The latrine facility had extensively upgrade and brought improvements by impeding the disease causes due to contaminations like cholera, Dysentery etc. that included, adoption of sound criterion for digging well at appropriate distance from lavatories as per criteria given by WASH Practitioners. The research study additionally explored mechanism, of group contributions, composed by donors agencies, locality and other mentioned washing-group, the solitary purpose of ascertaining and delivering to redress any scathing events with smooth procedure of initiated project could increase well-being of general masses of an open defecating and facing of diarrheal disorder, cholera and dysentery etc. Usage of latrine could bring healthier physique, along with hand-washing with soap or cleanser at critical time is saving lives from any type of ailment and diseases. The counted distance of source of water from drain and latrine leads to better-quality health conditions.

Table-2: Association between Hygiene and Sanitation and Behavior Change in WASH.

Statements	Response	Community Satisfaction			Total	Chi-Square (χ^2) (P-Value)
		Yes	No	Don't Know		
Type of Latrine facility, this household normally use	Flush to Pipe Sewer system	44.6%	55.3%	0%	100%	$\chi^2=105.339$ (P=.000)
	Bucket latrine	14.0%	85.9%	0%	100%	
	Filed/Bushes	2.7%	79.7%	17.5%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Sharing of this household's toilet	Not shared	26.2%	70.9%	2.8%	100%	$\chi^2=33.074$ (P=.000)
	Shared	10.5%	81.5%	7.8%	100%	
	Communal	0%	0%	100%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Mention Place, where babies poop/stool usually disposed	Kids Use toilet	13.6%	86.3%	0%	100%	$\chi^2=29.000$ (P=.000)
	Put into toilet	25.1%	71.3%	3.5%	100%	
	Left it open	26.0%	65.2%	8.6%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Mention Place where adults of household usually go for defecating	H Latrine	31.1%	68.8%	0%	100%	$\chi^2=71.478$ (P=.000)
	Other Latrine	26.6%	73.3%	0%	100%	
	OD/Field/Forests/Bushes	1.3%	82.6%	7.3%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Toilet provided in this program does meet your household need	Yes	24.9%	71.5%	2.5%	100%	$\chi^2=.209$ (P=.901)
	No	22%	74%	4%	100%	
	Uncertain	0%	0%	0%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Mention benefits you see in using the lavatory	Reduce smell	24.0%	71.7%	4.2%	100%	$\chi^2=6.923$ (P=.140)
	Privacy	33.3%	64.8%	1.8%	100%	
	Uncertain	9.0%	90.9%	0%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Does Toilet helped you in improving lifestyle and privacy	Yes	25.8%	72.9%	1.4%	100%	$\chi^2=88.308$ (P=.000)
	No	0%	66.6%	33.3%	100%	
	Uncertain	0%	56.2%	43.7%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Mention type of drainage facility your HH Toilet have	Underground	36.5%	63.4%	0%	100%	$\chi^2=51.179$ (P=.000)
	Kacha	15.5%	79.5%	4.9%	100%	
	No Drainage	1.9%	84.3%	13.7%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Mention name you use to hand-wash after defecating	Soap	43.1%	67.8%	0%	100%	$\chi^2=11.478$ (P=.022)
	Ash/Sand	33.3%	66.6%	0%	100%	
	Water Only	20.5%	73.9%	5.4%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Do you cut nail weekly clean teeth and took bath etc.	Yes	24.6%	71.4%	3.8%	100%	$\chi^2=2.769$ (P=.597)
	No	28.5%	68.5%	2.8%	100%	
	Uncertain	8.3%	91.6%	0%	100%	
	Total	24.5%	71.8%	3.6%	100%	
Have you knowledge of any O and M committee been trained for maintenance of water source	Yes	28.4%	71.5%	0%	100%	$\chi^2=99.181$ (P=.000)
	No	2.1%	70.2%	27.6%	100%	
	Uncertain	10%	90%	0%	100%	
	Total	24.5%	71.8%	3.6%	100%	

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