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## Knowledge regarding impact of health on water Stagnation: Observational study

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### Abstract

Water stagnation in and around house could lead to health hazards especially communicable diseases like vector borne diseases and water borne disease. The aim of the study was to assess the knowledge regarding impact of health on water stagnation in homes. Community based observational study was carried out 60 women who fulfilled the inclusion criteria in the selected rural area. Structured questionnaire was used to collect the data. Data were analyzed by using descriptive and inferential statistics. The results of the present study observed that out of 60 women, 32 (53%) had inadequate knowledge, 18 (30%) had moderately adequate knowledge and 10 (17%) had adequate knowledge. Level of knowledge is associated with the demographic variables of occupation at the level of  $P < 0.05$ . The findings of the study concluded that health education program and campaigns can provide with accurate and appropriate information regarding the health hazards of water stagnation in and around the house and highlight the preventive measures of water stagnation which prevents the deadly diseases especially non-communicable disease like vector borne, water borne diseases.

**Keywords:** Health hazards, water stagnation, impact of health, rural women

### Introduction

Water stagnation occurs when water stops flowing. When this happens it can become an environmental hazard. Too much stagnated water that isn't draining can damage flooring and foundations, as well as creating a perfect breeding ground for mosquitoes that are known to carry very harmful diseases. Mosquitos and various other unwanted bugs breed and multiply in stagnant water and can spread diseases to your family and neighbours like West Nile and Encephalitis. The reasons for water stagnation at home level may be blocked drains, improper drainage system, seepage of water from pipes etc.,. Water can become stagnant in as little as 24 hours, mold and bacteria also begins to grow within 48 hours. Stagnated water also leads to bad odour due to organisms or vegetation that cannot survive in the water. Waterborne diseases can be spread via groundwater which is contaminated with fecal pathogens from pit latrines. Malaria and dengue are among the main dangers of stagnant water, which can become a breeding ground for the mosquitoes that transmit these diseases. Stagnant water can be dangerous for drinking because it provides a better incubator than running water for many kinds of bacteria and parasites. Stagnant water is contaminated with human and animal feces, particularly in deserts or other areas of low rainfall. Cleanliness is everyone's responsibility as well government also taking lot of initiative to promote cleanliness through swachh Bharath and unnat bharat abhiyan scheme. Environment is cordial structure to prevent many illnesses and everyone should aware about it. Hence the investigators conducted the study with the aim to assess baseline knowledge regarding impact of health on water stagnation in homes among women in rural area.

### Materials and Methods

Non-experimental - Cross Sectional research design was carried out to assess the level of knowledge on impact of health on water stagnation in home with 60 women residing in selected rural community. The samples were selected by convenience sampling technique who met the inclusion criteria. Women with 20-40 years, willing to participate in the study and available during the time of data collection and have no cognitive and sensory impairment were included in the study. The women who consented in written form to participate were informed about the purpose of the study. The tool used for the study was demographic variables and multiple choice questionnaires to assess the level of knowledge.

The level of knowledge was categorized as inadequate knowledge (50%), moderately adequate knowledge (51-75%) and adequate knowledge (>76%). Structured interview schedule was used to collect the data on one to one basis. They were assured about their confidentiality and anonymity throughout the study. The collected data prepared for analysis using Microsoft excel and were analysed by using descriptive and inferential statistics. P values less than 0.05 were considered statistically significant.

**Result and Discussion:**

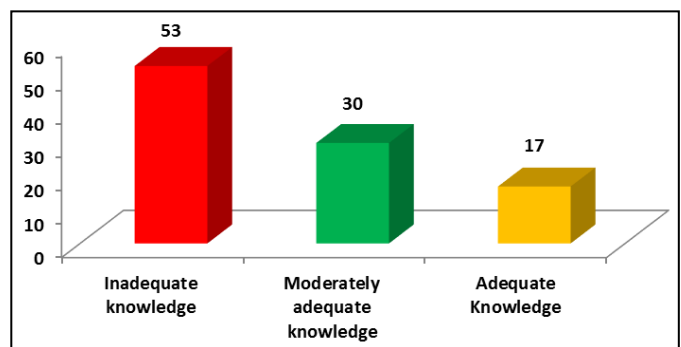
Water is a natural resource which contributes to the maintenance of health. When house holding waste water stops flowing water stagnation occurs. When this happens it can become an environmental hazard as well health hazards. Hence the present study was conducted with the aim to assess the knowledge regarding impact of health on water stagnation among women in rural area as rural area does not have proper drainage system. The current study observed regarding the demographic variables of women residing at a selected rural village and depicted in Table. There are 60 women were recruited for the study. Out of 60 samples, majority (40%) was in the age group between 36-40 years

and 100% were female. Regarding educational status 33.33% were educated till primary and higher secondary education and remaining 17% illiterate and were graduated. Level of education could be a key determinant of knowledge of the impact of health on water stagnation, prevention of water stagnation, as well as attitudes and practices, especially women who are the primary care taker of the family. Level of education also could be related to the degree of empowerment to control water stagnation. Around 50% were house wife and majority of them were obtained the health information through health care personnel and 15% were received through social media. The more information received from the sanitary workers during intensive vigilance of mosquito breeding places such as in and around houses and within the house itself from the vessel without lid to store the water, water tank during the epidemics of dengue fever. Moreover they have obtained from the social media of whatsapp, YouTube. 60% were experienced of health issues such as malaria, dengue fever, typhoid fever etc., as an impact of water stagnation in and around home. Stagnated water area becomes good source for mosquito breeding which could cause mosquito-borne diseases like malaria, dengue fever, chikungunya.

**Table 1:** Frequency and Percentage distribution of demographic variables of Women

S.No	Demographic variables	Frequency	Percentage
1.	<b>Age</b>		
	a. 20 - 25	10	16.67%
	b. 26 - 30	12	20%
	c. 31 - 35	14	23.33%
	d. 36 – 40	24	40%
2.	<b>Education</b>		
	a. Illiterate	10	16.67%
	b. Primary	20	33.33%
	c. Higher secondary	20	33.33%
	d. Graduate and others	10	16.67%
3.	<b>Occupation</b>		
	a. House Wife	30	50%
	b. Farmer / Coolie	11	18.33%
	c. Private Employee	9	15%
	d. Others	10	16.67%
4.	<b>Health Information Obtained through</b>		
	a. Health Personnel	21	35%
	b. Newspaper	20	33.33%
	c. Television	10	16.67%
	d. Social Media	9	15%
5.	<b>Experience of impact of health on water stagnation in home</b>		
	a. Yes	36	60%
	b. No	24	40%

The present study observed that out of 60 women, 32(53%) had inadequate knowledge, 18(30%) had moderately adequate knowledge and 10(17%) had adequate knowledge as shown in Figure 1. Awareness on health hazards associated with stagnated water in and around home is not adequate. This present study assessed only the knowledge and lacks in assessing the attitude and practice. Because whoever had knowledge they should possess the attitude and practice thereby could prevent the hazardous due to water stagnation. Further studies may also be recommended to assess the knowledge regarding prevention and measures to treat the stagnated water. Because this stagnated water affects the ground water which is used for drinking purpose.



**Fig 1:** Percentage distribution of level of knowledge on impact of health on water stagnation in home

**Table 2:** Distribution of Mean and Standard Deviation of Knowledge regarding Impact of health on Water Stagnation

<b>Knowledge regarding Impact of health on Water Stagnation</b>	<b>Over all Mean</b>	<b>Standard deviation</b>
	3.94	1.08

Table 2 shows that the overall mean and standard deviation of knowledge regarding impact of health on water stagnation among women was 3.944 ±1.08.

**Table 3:** Association of the level of knowledge regarding impact on health on water stagnation in homes with selected demographic variables of women

<b>Demographic Variables</b>	<b>Inadequate Knowledge</b>		<b>Moderate Knowledge</b>		<b>Chi-Square</b>
	No	%	No	%	
a. House Wife	4	6.7	6	10	X <sup>2</sup> =13.56, d.f=6, p=12.59 (S)
b. Farmer / Coolie	7	11.6	4	6.7	
c. Private Employee	9	15	0	0	
d. Others	15	25	15	25	

df- Degrees of freedom, S- Significant

The Chi-square test reveals that there is a significant association between the level of knowledge with occupation at the level of  $P < 0.05$  which infers that occupation is highly influencing level of knowledge. Occupation is the place where people could share information related to health and other aspects. The current study observed only the level of knowledge and lacks in observing the attitude and practice as well as the measures to prevent and treat water stagnation. Hence future study may be recommended to pursue with large sample as well can do it as interventional study by importing knowledge through video assisted and distribution of pamphlets.

**Conclusion**

The finding of the current study concluded that inadequate knowledge on impact of health on water stagnation was found among women residing in the rural area. Health education program and campaigns can provide with accurate and appropriate information regarding the health hazards of water stagnation in and around the house and highlight the preventive measures of water stagnation which prevents the deadly diseases especially non-communicable disease like vector borne, water borne diseases

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**Conflict of Interest**

Author declares no conflict of interest.

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