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PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3604633>Available online at: <http://www.iajps.com>**Research Article****KNOWLEDGE AND SELF-REPORTED BEHAVIOR
REGARDING FOOD SAFETY AMONG REPRODUCTIVE
AGE WOMEN**Hafiz Muhammad Muzammil¹, Aneeqa Bakhtiyar², Anam Ibrahim²¹ Bahawal Victoria Hospital, Bahawalpur² Shaheed Zulfiqar Ali Bhutto Medical University**Article Received:** November 2019 **Accepted:** December 2019 **Published:** January 2020**Abstract:**

Background: According to the WHO (2007), the increase in the incidence of food-borne diseases is a Public Health concern in both developed and developing countries. *Material and Methods:* It was a cross sectional descriptive epidemiological study. The study was conducted in Quaid-e-Azam Medical College Girls Hostel, Bahawalpur. The study was conducted on females of reproductive age group. A questionnaire was designed, tested, finalized and then used for data collection. Our questionnaire consisted of three parts. First Part included questions about socio demographic profile, Second Part carried questions regarding knowledge and third comprised questions on self-reported behavior on food safety. Data was coded and entered in SPSS version 21. Interpretation has been presented in the form of tables and figures. *Results:* The study found that 88.7% of respondents had good knowledge of food safety, whereas, 11.3% merely had satisfactory knowledge of food safety. The data collected from respondents revealed that only 39.3% respondents fell in good category of practice / self-reported behavior regarding food safety. We found a statistically significant association ($P=0.001$) between education of respondents and knowledge regarding food safety. There is a statistically significant association between respondent's education ($P=0.009$), respondents' occupation ($p=0.043$), respondents monthly family income (0.020) and practice / self-reported behavior regarding food safety. *Conclusion:* The study found a significant correlation between education of the female and knowledge regarding food safety on Phi test, Cramer's test, Pearson's R and Spearman correlation. Moreover, a significant correlation was found between educations of the female, occupation of the female, family's monthly income and self-reported behavior regarding food safety on chi-square test for independence.

Key Words: Knowledge, Practice, Food Safety, Reproductive Age Women

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INTRODUCTION:

Foodborne diseases take a major toll on health. Millions of people fall ill and many die as a result of eating unsafe food. Deeply concerned by this, who member states adopted a resolution in 2000 to recognize food safety as an essential public health function. Food safety encompasses actions aimed at ensuring that all food is as safe as possible. Food safety policies and actions need to cover the entire food chain, from production to consumption. A significant proportion of food borne illnesses arises from practiced in the home kitchen (1).

Information is needed on how food becomes unsafe in the home and on what changes in environmental conditions, and in beliefs and behavior, must be accomplished in order to reduce food hazard. Awareness, knowledge and judgement on foods can be affected by the habits and other perceptions that result from social, cultural, and economic influences (2).

Foodborne illness can result in long term health consequences and even death, especially in young children. Approximately one half of reported foodborne illness occurs in children and an estimated one-third of all related costs (\$2.3 billion dollars per year) are due to illnesses in infants and children under the age of 10. The increased risk for foodborne illness among children is due to their limited control over meal preparation. Children are disproportionately affected by five foodborne microorganisms; *Campylobacter*, *Escherichia coli* O157:H7, *Listeria*, *Salmonella* and *Shigella*. Infants (under one year of age) have the highest reported cases of salmonellosis and campylobacteriosis (3-5).

Pervious research demonstrates that food safety knowledge in young children is typically low. Interestingly many of those who contract a foodborne illness generally self-report adequate food safety knowledge. In the developing world, foodborne illness causes an estimated 2.2 million deaths each year, of which 1.9 million are children. About 40% of foodborne illness occurred in home so cases are less likely to be reported (6, 7). Most cases of foodborne illness are preventable if food protection principles are followed from production to consumption. Given that it is currently impossible for food producers to ensure a pathogen free food supply, the home food preparer is a critical link in the chain to prevent foodborne illness. Several studies in various countries have revealed that consumers have inadequate food safety knowledge and/or practices and most of them reported gaps between their food safety knowledge and practices (3, 5, 8).

Most of the work during the last few year has centered on hazard control in the production sector, but an equal effort was not dedicated to improving the food safety education of consumers. The need for enhanced food safety education started to be recognized in developed countries with the launch of national initiatives to find ways to educate consumers effectively.

METHODOLOGY:**STUDY DESIGN:**

It was a cross sectional descriptive epidemiological study.

STUDY AREA:

The study was conducted in Quid-e-Azam Medical College Girls Hostel, Bahawalpur

DURATION OF STUDY:

14th April, 2016 to 18th May, 2016.

STUDY POPULATION:

The study was conducted on females of reproductive age group.

SAMPLING TECHNIQUE:

It is a non-probability convenience sampling.

ETHICAL ISSUES:

Informed consent was taken from all participants.

SAMPLE SIZE:

According to the available time and resources, it was decided to take a sample of 150 women of reproductive age group.

Inclusion criteria:

All females of reproductive age group whether single, married or widowed were included in the study who are involved in the process of food handling and preparations.

EXCLUSION CRITERIA:

Not willing were excluded.

TOOLS OF DATA COLLECTION:

A questionnaire was designed according to the requirement of the study. A pre-test assessment was done by few interviewers in the neighborhood to look for any ambiguities in the questionnaire. There was no need for any correction and thus the questionnaire was finalized after consultations of our supervisor.

The questionnaire was used for data collection. Every women was interviewed after explaining the study and taking their verbal consent. Our questionnaire consisted of three parts. First part included questions about socio demographic profile, second part carried questions regarding knowledge and third comprised on self- reported behavior on food safety.

DATA ANALYSIS:

Data was coded and entered into SPSS version 21. Frequencies were run and percentages were calculated. Interpretation has been presented in the form of tables. In order to give eye catching

references of the data it has been presented in the form of bar charts. As a matter of precaution, it is pointed out that the figurative presentation has been used to have a quick and spontaneous comprehension. Chi-square test has been used as a test of significance where required.

RESULT:

The study found that 88.7% of respondents had good knowledge of food safety, whereas, 11.3% merely had satisfactory knowledge of food safety.

The data collected from respondents revealed that only 39.3% respondents fell in the good category of practice /self-reported behavior regarding food safety, whereas, 58.7% respondents fell in the satisfactory category and only 2% respondents fell in the poor category.

The age group which showed the highest knowledge of food safety was 21-25 (43/150), whereas the group which produced the least good knowledge was 46-50 (6/150).

The age group which showed the highest good practice / self-reported behavior of food safety was 21-25 (17/150), whereas, the group which produced the least good practice /self-reported behavior of food safety was 41-45 (3/150).

The data collected was also put through Pearson's R and Spearman Correlation which revealed that there is a weak uphill (Positive) linear relationship among age and practice / self-reported behavior regarding food safety. This relationship is insignificant because the p value is more than 0.05. In other words, there is no statistically significant association between age and practice /self-reported behavior regarding food safety.

DISCUSSION:

The WHO (2010) identified five key food handling factors associated with foodborne disease outbreak: (a) Improper Cooking, (b) Temperature abuse during food storage, (c) Cross contamination between raw and cooked foods, (d) Poor Sanitization and hygiene, and (e) using unsafe water and raw materials. The WHO (2010) indicated that four out these five factors were directly linked to food handlers. Food handlers have been directly linked to a number of foodborne disease outbreaks (1).

In our study 26.7% of the women had education till secondary or above that and 69.3% were not working. The study found that 88.7% of respondents had good knowledge of food safety while 39.3% respondents had good practices regarding food safety. This tells that the knowledge of the women was better than their practices regarding food safety.

Taking in view a study by Mohamed F Farahat, Mona M.El-Shafi and Mostafa I. Waly on Saudi women which included 811 women. The educational level of about 80% of the interviewed women was secondary and Bachelor and 72.4% not working. Exploring food safety knowledge and practices of these 811 women revealed that their practices were better than their knowledge concerning overall food safety (9).

According to our study, there is no statistically significant association ($p=0.219$) between age and knowledge regarding food safety. Likewise, no statistically significant association ($p=0.492$) was found between age and practices / self-reported behavior regarding food safety. We found a statistically significant association ($p=0.001$) between education of respondents and knowledge regarding food safety. Similarly, there is a statistically significant association ($p=0.009$) between respondent's education and practices / self-reported behavior regarding food safety. There is no statistically significant association ($p=0.135$) between occupation of respondents and knowledge regarding food safety but there is a statistically significant association ($p=0.043$) between respondent's occupation and practices / self-reported behavior regarding food safety.

But the results of study on Saudi women were different. It showed that there were significant positive correlation ($P<0.05$) between overall food safety knowledge and practices in age groups. There were significant variations ($P<0.05$) among different educational levels in both knowledge and practices of food preparation and overall food safety. There were significant positive correlation ($P<0.05$) between overall food safety knowledge and practices in both working and non-working women. Thus in the 2 studies we only found consistency in result about a significant correlation among different educational levels in both knowledge and practices.

According to our study it was seen that the education of the women ($p=0.001$) is a significant factor in determining the knowledge of the women regarding food safety. Knowledge regarding food safety seen in a study of Mainland China by Shunlong Gong, Xizhuo Wang, Yinsheng Yang and Li Bai makes it clear that per capita annual income ($p=0.04$) is the most important and significant factor in determining the level of knowledge of food safety and handling, suggesting that education programs should be built and adapted to the food handlers that are distinguished by this factor. So we found no consistency between the two studies (10).

Our study has clearly indicated that women has far better knowledge regarding food safety than their practices. There is evidence that knowledge is not a

significant predictor of safe food-handling practices. this is consistent to our study as well

CONCLUSION:

The study found a significant correlation between education of the female and knowledge regarding food safety on all tests.

Moreover, a significant correlation was found between education of the female, occupation of the female, family's monthly income and self-reported behavior regarding food safety on chi-square test for independence.

SEM shows that the contribution of LS and Demographics in estimating KP is 15%.

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