



Original Article

Knowledge and Awareness of Rural People About Currently Emerging Disease Bird Flu

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Abstract

A descriptive type of cross-sectional study was conducted in a village Gohordo of Gabtoli Upazila, Bogra to assess the knowledge and awareness of people of age above 18 years and above about "bird flu", its modes of transmission and prevention, by an interviewer administered questionnaire. The questionnaire was pretested and data were collected using purposive sampling technique. In this study it was found that out of 418 people, 231(55.26%) were female and the rest 187 (44.74%) were male. Majority of the respondents 226 (54.06%) were in the age group of 20-40 years, followed by 29.19%, 8.85% and 7.89% were in the age groups of 40-60, <20 and above >60 years respectively. More than half ; 226 (54.06%) of the people heard the term 'bird flu'; majority of them (95.13%) as a disease. Among 226, 193(85.39) respondents know that the disease may transmit to human population. But only 32, (30%) people think that this disease is transmitted by keeping infected birds & suspected poultry, followed by 19.02% who think that it transmitted by caring & culling poultry. Among the people who heard the name of the disease, 95 (42%) people had no knowledge about the signs and symptoms of the disease and only 20.35% respondents knew poultry carrying people and poultry meat eaters as "susceptible groups" getting infection. About 195 (77.43%) people know that this disease is preventable. About 55.31% and 37.16% people think, partially cooked meat and half boiled egg respectively may spread the disease to man. There is a strong association of literacy with the knowledge of the disease ($p < 0.05$). This study will emphasize the proper health education to create awareness of the people for prevention of bird flu.

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Introduction

Avian Influenza, some times avian flu, and commonly bird flu, refers to "Influenza caused by viruses adapted for birds.¹ Bird flu is a name of disease by influenza A subtype(H5N1) virus, mainly occur in wild and migratory bird. Other subtypes pathogenic in humans are H7N3 and H7N7² virus of bird flu are present in the droppings respiratory secretions and blood of infected birds³. This disease can be transmitted to

man and at times it is life threatening. Avian influenza was first identified in birds in Italy in 1878.⁴ The virus was first isolated in South Africa in 1961 and the first outbreak of the disease occurred in Hong Kong in 1997. In recent years, several epidemics of avian flu, with subsequent human infections, has been reported, especially from South-East Asian countries and Eastern Europe⁵, in 2005. Evaluating the current outbreak caused by the H5N1 viruses, only 24 outbreak of

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highly pathogenic avian influenza have been recorded world wide since 1959. In Bangladesh, unusual poultry die offs were first noticed February /2007, was first confirmed near the capital city Dhaka in March, 2007⁶ and has since then spread mainly to northern districts and forced authorities to cull around 278000 chickens. About 4 million Bangladeshis are directly or indirectly associated with the poultry farming but so far there have been no cases of human infection, government and health officials' say⁷. H5N1 is a virus that is a major world threat to possibly to billions of lives.⁸ So many scientists called for adequate resources to fight this situation. Although millions of birds have become infected with the virus since its discovery, 262 humans have died from the H5N1 in twelve countries according to WHO data as August 31, 2009⁹. Epidemiologists are afraid that the next time such a virus mutates; it could pass from to human. They recommended workers and isolating flocks to prevent the spread of the virus¹⁰. On January 18, 2009, 27 year old women from eastern china have died of bird flu. Two tests on the women were positive for H5N1 avian influenza, said the ministry, which did not say how she might have contracted the virus¹¹. The clinical feature of this disease are fever, sore throat muscle pain, headache lethargy, conjunctivitis, breathings problems and chest pain¹². The disease is preventable, less pathogenic viruses are controlled by vaccination¹³. Therefore present study is designed to assess the knowledge and awareness of the people to prevent the occurrence of the disease.

Methods And Materials

This descriptive type of cross-sectional study was conducted in Choto Gordoho village of Gabtoli Upazilai Bogra district during the period May 2007. Data was collected from 418 people 18 years and above, selected purposively by a structured questionnaire. The questionnaire was pretested appropriately. The site was selected purposively. All relevant informations were collected by interviewing the respondents face to face. Data were analyzed by using statistical methods wherever required. Necessary significant test (chi-square) was done. Finally result was presented by several suitable tables.

Results

Table 1: Distribution of the respondents according to their sex (N=418)

Sex	Number	Percentage
Male	187	44.74
Female	231	55.26
Total	418	100

Above table shows that out of 418 people 231(55.26%) of the respondents are female and the rest 187(44.74%) are male.

Table 2: Distribution of the respondents according to their Age. (N=418)

Age in yrs.	Number	Percentage
<20	37	8.85
20-40	226	54.06
40-60	122	29.19
>60	33	7.89
Total	418	100

The above table shows that majority of the respondents 226 (54.06%) were in the age group of 20-40 years followed by 29.19%, 8.85% and 7.89% were in the age groups of 40-60, <20 and above >60 years respectively.

Table 3: Distribution of the respondents according to their educational status.

Educational status	Number	Percentage
Illiterate	122	29.28
Primary	109	25.95
Secondary	88	20.95
S.S.C and above	99	23.81
Total	418	100

Above table shows that 122(29.28%) of the respondents were illiterate, 25.95%, 20.95% and 23.81% were qualified at primary, secondary and S.S.C level and above, respectively.

Table 4: Distribution of respondents about relationship between literacy and the knowledge and awareness of the problem.

.Literacy	Knowledge		Number	Percentage
	Yes	No		
Literate	(a)	(b) 107	296 (70.81%)	63.85
Illiterate	(c) 37	(d) 85	122 (29.19%)	30.32
Total	226	192	418	100

(Chi square test: $X^2 = 39.094$, $df = 1$, $P = < .05$, hs , .So, Chi square test is strongly significant.)

The above table shows that among all respondents only 70.81% are literate and 29.19% are illiterate

of those 70.81% literate person only 63.85% respondents have the knowledge about the disease and of those 29.19% of illiterate respondents only 30.32% have the knowledge about the problem.

Table 5: Distribution of the respondents based on hearing the term “Bird flu”(N=418).

Respondents' response	Number	Percentage (%)
Yes	226	54.06%
No	192	45.94%
Total	418	100%

Above table shows that 54.06% respondents have heard the term “Bird flu” and others 45.94% have never heard the name of the disease.

Table 6: Knowledge of the respondents regarding sign symptoms of disease (N=226).

No. of respondents about their response regarding s/s	Number	Percentage (%)
a) Breathlessness	11	4.87%
b) Fever	23	10.18%
c) Cough	04	1.77%
d) All of them	44	19.47%
e) None of them	95	42.04%
f) No response	36	15.93%
g) Others	14	6.2%
Total	226	100%

The above table shows that out of 226 respondents, only 44(19.47%) know more or less the important signs and symptoms of the disease, 95(42.04%) people do not know any thing and 36(15.93%) have no response.

Table 7: Opinion of the people regarding susceptible group of getting infection.

No. of respondents about their opinion of " Susceptible groups"	Total	Percentage (%)
a) Agriculture farmer	7	3.10%
b) Poultry carrying people	70	30.97%
c) Poultry meat eaters	53	23.45%
d) Others	18	7.96%
e) b + c	46	20.35%
f) Others	4	1.77%
g) No response	28	12.39%
Total	226	100%

This table shows 30.79% respondents opines that poultry carrying people, 23.45 % respondents believes that, poultry meat eaters are the susceptible groups.

Table 8: Distribution of respondents to their knowledge about the ability of prevention of disease.

Number of respondents opined about Preventability	Total	Percentage (%)
a) Yes	195	77.43%
b) No	20	8.85%
c) No response	5	2.21%
d) Others	6	2.65%
Total	226	100%

In above table majority 195(77.43 %) of the respondents know that the disease is preventable.

Table 9: Knowledge of the people about prevention in their community (N=226).

Preventive knowledge	Number	Percentage (%)
a) Elimination of poultry	33	14.60%
b) Deterring people to buy poultry	10	4.42%
c) Developing community awareness	38	16.81%
d) Advising to eat cooked meat and egg	53	23.45%
e) c + d	15	6.63%
f) Others	32	13.27%
g) No response	32	13.27%
Total	226	100%

Above table, shows that 53(23.45%) respondents think that the occurrences of the disease in their community can be prevented by advising the people to eat cooked meat and egg .Other ways prevention are elimination of poultry (14.60%) ,detering people to buy poultry (4.42%) and developing community awareness (16.81%).

Table 10: Opinion of the people regarding the disease as a threat to our community. (N=226)

Number	Number	Percentage (%)
Agree ness		
a) Strongly agree	135	59.73%
b) Agree	58	25.66%
c) Undecided	09	03.98%
d) Disagree	04	01.76%
e) Strongly disagree	01	0.44%
f) No response	19	08.40%
Total	226	100%

Above table shows that among the respondents who heard the term Bird Flu, 59.73% strongly agree and 25.66% agree ‘that the disease is a threat to our country’.

Table 11. Knowledge of the respondents about the way of disease transmission.(N=226)

Number Response	Number	Percentage
a) By keeping infected birds & suspected poultry	73	32.30%
b) By caring & culling Poultry	43	19.02%
c) By taking well cooked infected Poultry meat	17	7.52%
d) Other	32	14.15%
e) a+b	25	11.06%
f) Except above	14	6.19%
g) No response	22	9.73%
Total	226	100%

Above table shows that 73(32.30%) respondents think that the disease is transmitted by keeping infected birds and infected poultry, followed by 19.02% who believe that the disease is transmitted by caring culling poultry.

Table 12: Distribution of respondents according to their knowledge about type of poultry meat that may spread disease to man (n=226)

Type of poultry meat	Number	Percentage
a)Uncooked meat	12	5.31
b)Partially cooked meat	125	55.31
c)Well cooked meat	7	3.1
d)No response	39	17.26
e) a+b	39	17.26
f) Others	6	2.65
Total	226	100

The above table shows that 5.31% respondents think uncooked meat may spread disease to man, 55.31% think about partially cooked meat, 3.1% about well cooked meat. There is no response from 16.37%, 17.26% think about both uncooked meat and partially cooked meat & 2.65% think about others.

Table 13: Distribution of respondents according to their knowledge about type of poultry egg that may spread disease to man (n=226)

Type of eggs	Number	Percentage
a) Raw eggs	37	16.37
b) Half boiled	84	37.16
c) Full boiled	04	1.76
d) No response	32	14.15
e) a+b	67	29.64
f) Others	02	0.88
Total	226	100

Above table shows that 16.37% think raw eggs may spread the disease to man, 37.16% think about half boiled egg, 1.76% about full boiled egg and 14.15% of them don't response, 29.64% of them think both about raw eggs and half boiled eggs and only 0.88% think about others.

Discussion

Among the respondents, 55.26 were female and remaining portion (44.74%) is male. (Table 1). This may be due to fact that male goes out for work during day time. Majority (54.26) percentages of people were aged 20-40 years group followed by 29.19% which belong to 40-60 years age group and only 7.89 % people were above sixty years (Table 2).The percentage of people above sixty is more or less consistent with our national demographic profile. About 1/3rd (29.28%) of the respondents were illiterate (Table 3) which is also consistent with our national literacy rate. In this study 63.85% educated person have knowledge and awareness about the problem.(Table 4) which indicates that education has strong co-relation with the knowledge of the disease.

It is found that only 54.06% respondents have heard the term "Bird Flu" which is a great concern for the country (Table 5).

Among the respondents hearing the term Bird flu only 19.47% more or less knows the sign symptoms of the disease (Table-6) and a vast portion of rural people are still unaware of sign-symptom of the disease which needs proper health education by mass media.

Regarding susceptibility 30.97% respondents thinks that poultry carrying people, 23.45% poultry meat eaters are susceptible group, (Table-7). 55.31% and 37.16% people thinks that the disease may transmit to man by eating partially cooked meat or by taking half boiled egg respectively. (Table 12 &13) .The Spanish flu virus strain may have been transmitted directly from birds to man. ¹⁴ It is a matter of great hope that majority of the respondents 77.43 % (table-8) believes that the disease is preventable. Elimination of poultry (14.60 %), advising intake of cooked meat and egg (23.45%) and developing

community awareness (16.81%) is the way of prevention of the disease. (Table 9). About 59.73% people strongly agree and 25.66% people agree that the disease is threat to our community. (Table 10). 32.30% of the respondents say that by keeping infected birds & suspected poultry is the way of disease transmission followed by caring & culling poultry (19.02%) and by other means (table 11). This type of idea of the people is quite satisfactory. In this study 55.31% people say that partially cooked meat and 37.16% say that half boiled egg spread the disease (Table 12 & 13), which is a good indicator of the consciousness of the people.

Recommendation and conclusion

Bird Flu is a pandemic disease with high case fatality rate. All human cases that have been reported to WHO shows high mortality rate.¹⁵ By the end of December 2006, the virus had infected 263 people in ten countries from eastern Asia to Turkey and a total of 158 people had lost their lives.¹⁶ By the end of June 2008, 385 people were attacked by avian Influenza world-wide of which 243 people died, resulting a case fatality rate 63%.¹⁷ This disease causes huge loss of people and property. So all the people specially the rural poultry carrying people should know the disease its distribution and preventive measure. This disease can be prevented by creating awareness among the people specially the rural people. But it is a matter of regret that a major portion of the people is still ignorant about the disease. So social awareness by health personnel by seminar and other methods through mass media is recommended.

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