



Effectiveness of Instruction Program on Teachers' Knowledge in Primary School regarding Chickenpox Diseases at Al-Najaf City

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ABSTRACT

Objectives:-To find out the effect of instructional program on Teachers' knowledge about chickenpox disease. To find out association between the instructional program and demographic characteristics of teachers

Methodology: A quasi-experimental design was carried out Al-Najaf Al-Ashraf Education Directorate / Primary Schools, from January 2019 until March 2019.

Results: The results of present study shows that most of the study group has been weak knowledge in pre-test; a high significant mean difference among study group concerning to their pre-test and post-test scores; There is a clear difference between the post test of the control group who have not been exposed to any instructional program and the study group who were exposed to instructional sessions.

Conclusion: There is an improvement in teachers' knowledge in the study group in post-test after exposure to the instructional program. Mass media is the main source of Teachers' knowledge regarding chickenpox diseases.

Recommendations: Teachers need to join special courses to improve their knowledge so that they can contribute in educating students through the information obtain from the courses because the students in this age group are more affected by the teacher.

Keywords: *Instruction Program, Teachers' Knowledge, Chickenpox Diseases*

INTRODUCTION

Chickenpox: known as **Varicella**, it is the disease that results from primary infection with the varicella-zoster virus (VZV). It is a highly contagious viral disease in early childhood and can be fatal disease specially in neonates because it causes very serious complications.⁽¹⁾

A varicella disease is transmitted directly by air spray from the respiratory secretions of the infected person when (coughing or sneezing) or by touching the virus particles that come from the blisters of the varicella. Also, it is simply spread from someone with an infection to another person who has not got the disease or has not received the varicella vaccine.

Incubation period for varicella diseases is ten to twenty one days after exposure. It may be prolonged in patients with impaired immune system. Individuals with varicella are considered infectious from 24 to 48 hour before the skin rash appears and until all lesions are crusted (scabbed) ⁽²⁾

All age groups (from newborn to adult), and person's with immunocompromised all of them are a higher risk for infectious with chickenpox disease. Also, Individuals with HIV, cancer and AIDS have more severe disease and a longer time. Chickenpox causes serious complications that can lead to death in some cases including pneumonia , secondary bacterial infections, dehydration, cerebella ataxia and encephalitis. Isolate infected persons with the disease and stay inside the house is one of the best ways to prevent the spread of the disease. An individual with chickenpox should avoid unnecessary exposure to neonate and patients with immunodeficiency diseases.⁽³⁾

Health care providers play an important role in educating people about the disease (including signs and symptoms, and modes of transmission) and how to prevent it. Public practices about prevention of chickenpox disease may be influenced by their knowledge about disease and accessibility of effective preventive strategies through vaccination.⁽⁴⁾

The incidence of varicella has changed in the last 15 years with the beginning of chickenpox vaccine.⁽⁵⁾ .In Iraq, annual cases of infections have increased from 38818 in 2009 to 51066 in 2014.⁽⁶⁾

Statement of problem: Instruction program on Teachers' knowledge in primary school regarding chickenpox diseases

- 1- To find out the effect of instructional program on teachers knowledge about chickenpox disease by comparing the pre and post-test score.
- 2- To find out relationship between instructional program and demographic characteristics of the teachers.

Study design: A quasi-experimental to find the effectiveness of instruction program on Teachers' knowledge about chickenpox diseases; the study

was start from January 7th, 2019 to March 7th, 2019.

Study Setting: The study was conducted in the primary schools in AL- Najaf city.

Study sample: The sample consists of 100 teachers, it is divided in 2 groups; 50 teachers are exposed to the instruction program as study group and other 50 teachers as (control group) are not exposed to the instruction program.

Results:

Table 1: Distribution of the study and control groups according to demographic data

Demographic data	Groups	Study		Control		Sig.
		Freq.	%	Freq.	%	
Age	<= 35	19	38	15	30	Chi-square (3.266) df (2) P-Value (0.195)
	36 - 51	29	58	28	56	
	52 Up	2	4	7	14	
Gender	Male	24	48	30	60	Chi-square (1.499) df (1) P-Value (0.224)
	Female	26	52	20	40	
Residence	Rural	1	2	0	0	Chi-square (1.010) df (1) P-Value (0.315)
	Urban	49	98	50	100	
Marital status	Single	37	74	45	90	Chi-square (0.478) df (3) P-Value (0.189)
	Married	5	10	1	2	
	Divorced	6	12	3	6	
	Widower	2	4	1	2	
Years of experience	<= 5	16	32	8	16	Chi-square (9.091) df (2) P-Value (0.011)
	6 - 10	14	28	7	14	
	11 Up	20	40	35	70	

This table indicate that more than half of both groups at (36-51) years old. Regarding to sample gender, in the study group (52%) from them are females and (60) are male from control group. Concerning residence, the majority of the study sample from urban areas. Regarding to marital status, the highest percent from them (90%) in control group, and (74%) of study group are single. concerning to experience years, (40%) from participates in study group and (70%) in control group have (11 and above) years of experience.

Table 2: Sources of Teachers' information about chickenpox diseases

Items	Rating and intervals	Study		Control	
		eq.	Percent	Freq.	Percent
Are you receiving information about chickenpox diseases	yes	28	56%	45	90%
	No	22	44.0%	5	10.0%
Total		50		50	
Sources of information	Doctor	1	2.0%	12	24.0%
	Doctor & Mass Media	2	4.0%	0	0.0%
	Nurse & Mass Media	1	2.0%	2	4.0%
	Friends	5	10.0%	12	24.0%
	Mass Media	19	38.0%	19	38.0%
	Total		50		50

Table 2 reveals that (56%) in the study group and (90%) in control group receive information about chickenpox diseases. The mass media is the main source of information.

Table 3: Teachers' knowledge of study group at pre-post test regarding to instructional program concerning chickenpox diseases

items	Pre-Test		Post- test	
	M.S	Assessment	M.S	Assessment
1. The main causes of chickenpox is	1.46	Weak	2.00	Good
2. Chickenpox can be spread through: Person to person by direct contact	1.60	Good	2.00	Good
3. Who is the most individual vulnerable to the chickenpox	1.64	Good	1.96	Good
4. is considered from the common signs and symptom of chickenpox	1.22	Weak	1.98	Good
5. Incubation period of this diseases is	1.40	Weak	1.64	Good
6. Chickenpox vaccine is recommended for the	1.44	Weak	1.96	Good
7. Common side effects of chickenpox vaccine	1.52	good	1.92	Good
8. is one of very rare severe side effects of chickenpox vaccine	1.06	Weak	1.66	Good
9. is considering more serious complications of chickenpox diseases	1.54	good	1.96	Good
10. is considering one of complications of chickenpox in the first 20 weeks of pregnancy	1.48	Weak	2.00	Good
11. is the best way to avoid infection	1.44	Weak	1.92	Good
12. Is it possible that a person be infected with chickenpox more than once?	1.34	Weak	1.80	Good
13. should not be receiving the chickenpox vaccine.	1.22	Weak	1.64	Good
14. When the child feels the stiff neck and fever that lasts longer than 4 days then he/she must be	1.76	good	1.96	Good
15. Patient with..... is advised to notify your doctor immediately	1.48	Weak	1.76	Good
16. Patient infected with itching skin will be advised as follows	1.34	Weak	1.84	Good
17. In cases of severe illness, treatment should be	1.58	good	2.00	Good
18. The most common beneficiaries of the chickenpox vaccine are	1.28	Weak	1.70	Good
19. it is one of the risk factors for adult people	1.62	good	1.98	Good

Table 3 reveals that the majority of participates in the study group have been poor knowledge in pre-test, while in post-test all of them (100%) are good knowledge after exposed to instructional sessions in the same items.

Table 4: Overall assessment of Teachers' knowledge in the Study group

Domain		Pre-test				Post-test			
		req.		.S	Assessment	req.		.S	Assessment
Overall knowledge	Incorrect	30	60%	1.48	Weak	0	0%	1.87	Good
	Correct	20	40%			50	100%		
	Total	50	100%			50	100%		

This table show the overall assessment for study group concerning teachers knowledge about chickenpox is good in post-test while is poor knowledge in pre-test.

Table 5: Teachers' knowledge of control group at pre-posttest regarding to instructional program concerning chickenpox diseases

Items	Pre-Test		Post- test	
	M.S	Assessment	M.S	Assessment
1. The main causes of chickenpox is	1.32	Weak	1.32	Weak
2. Chickenpox can be spread through: Person to person by direct contact	1.20	Weak	1.22	Weak
3. Who is the most individual vulnerable to the chickenpox	1.22	Weak	1.12	Weak
4. is considered from the common signs and symptom of chickenpox	1.34	Weak	1.34	Weak
5. Incubation period of this diseases is	1.40	Weak	1.30	Weak
6. Chickenpox vaccine is recommended for the	1.32	Weak	1.32	Weak
7. Common side effects of chickenpox vaccine	1.48	Weak	1.48	Weak
8. is one of very rare severe side effects of chickenpox vaccine	1.16	Weak	1.26	Weak
9. is considering more serious complications of chickenpox diseases	1.36	Weak	1.36	Weak
10. is considering one of complications of chickenpox in the first 20 weeks of pregnancy	1.42	Weak	1.42	Weak
11. is the best way to avoid infection	1.48	Weak	1.48	Weak
12. Is it possible that a person be infected with chickenpox more than once?	1.44	Weak	1.44	Weak
13. Should not be receiving the chickenpox vaccine.	1.70	Good	1.70	Good
14. When the child feels the stiff neck and fever that lasts longer than 4 days then he/she must be	1.58	Good	1.58	Good
15. Patient with..... is advised to notify your doctor immediately	1.44	Weak	1.55	Good
16. Patient infected with itching skin will be advised as follows	1.46	Weak	1.58	Good
17. In cases of severe illness, treatment should be	1.54	Good	1.54	Good
18. The most common beneficiaries of the chickenpox vaccine are	1.54	Good	1.52	Good
19. it is one of the risk factors for adult people	1.56	Good	1.65	Good

Table 5 indicate that the control group in pre and post test has been weak knowledge because they don't exposed to any information about topic.

Table 6: Overall assessment with Significant Difference between Pre-Test and Post-Test Scores in control group.

Domain		Pre-test				Post-test			
		Freq.	%	M.S	Assessment	Freq.	%	M.S	Assessment
Overall knowledge	Incorrect	35	73.3	1.44	weak	37	93.3	1.41	weak
	Correct	15	26.7			13	6.7		
	Total	50				50			

This table show that there is no significant difference among control group relative to their pre-test and post-test scores

Table 7: Statistical comparison of the teachers' knowledge between pre and post test in both groups

		No.	Mean ± SD	t	df	Sig. (2-tailed)
Study	pre	50	1.48 ± 0.132	20.48	49	0.0001 (HS)
	post	50	1.87 ± 0.082			
Control	pre	50	1.44 ± 0.112	1.070	49	0.290 (NS)
	post	50	1.41 ± 0.122			
Total		50				

Table 7 show that a highly significant relationship between post-test of the study group who are participated in the instructional sessions and control group (not exposed to any instructional sessions at p-value (0.0001).

Table 8: Relationship between Teachers' knowledge (Post-test) and their demographic characteristics

Demographic characteristics	Chi-square (X^2)	df	P-value (Sig.)
Age (years)	5.12	1	0.024 (S)
Gender	2.508	2	0.285 (NS)
Marital status	1.11	3	0.775 (NS)
Residence area	0.120	1	0.312 (NS)
Years of experience	1.59	2	0.49 (NS)
source of information	5.45	6	0.48 (NS)

This table reveals that there is a non significant relationship between Teachers' knowledge and demographic characteristics for the study group, except the age of the teacher found a significant relationship.

DISCUSSION

According to (Table 1) show that, more than half of both groups at age group of (36-51) years. This result is agreed with the result done by **Khalifa and Faraj(2014)** they reported that (40) years this age group is dominant age for the participants.⁽⁷⁾ In regard to sample gender, the highest percentage are females in study groups and male in control groups. Which is in consistency with **Hussein, et al (2011)** they mentioned that the female is dominant gender in study groups.⁽⁸⁾

Concerning to residence area, the majority of study sample are living in urban area. about to marital status, the majority of study sample in both groups are single. In regard to experience years, majority of teachers are 11 and above years of experience. This result is approved with **Hussein, et al (2011)** they mentioned that the higher percentage of study sample have more than 16 experience years.⁽⁸⁾

Table 2 reveal that the highest percentage of teachers received information about chickenpox diseases, the mass media is the main source about this information. Mass media including (TV, radio, newspapers, etc) can have an effect on a person's behavior because of availability and accessibility at present time.

In (Tables 3 and 5) shows that the knowledge of participant is deficit in the pre-test in study and control group. This means that teachers don't obtain sufficient knowledge towards communicable diseases.

Khalifa and Faraj(2014), in their study mentioned that awareness of teachers' towards control of communicable diseases was poor⁽⁷⁾

Regarding to (Tables 4 and 6) reveals that teachers knowledge regarding chickenpox diseases has been improved after exposure to instructional program in the study group, this results is disagreement with results indicated their responses of teachers were very poor(**Sheren N., et al 2011**).⁽⁸⁾

The researcher confirms that deficit of Teachers' knowledge in pre-test in both groups regarding chickenpox diseases may be due to lack of educational training courses that prevent the spread of communicable diseases.

(Table 7) indicate that there is a high significant relationship between post-test in the study group who are participated in the instructional sessions and control group who aren't exposed to any instructional sessions regarding chickenpox diseases; this indications that the effective of instructional program provided by the researcher to the teachers in the primary school.

In (table 8) indicates that a non significant relationship between demographic characteristics of study group and teachers knowledge (post-test) for all characteristics, except participant gender, there is a found significant relationship. This result supported with other study they mention that a significant relationship between age and Teachers' knowledge (**Zagade and Deshpande, 2013**).⁽¹⁰⁾ May be due to the reason that the increase the age of the individual the greater increased knowledge and awareness towards certain disease and how to deal with them.

Conclusions:

- 1- Most of the teachers are within age group (36-51) years, also the study finding most of study sample had between (10 and above) years of experience.
- 2- Mass media is the main source of Teachers' knowledge regarding chickenpox diseases.
- 3- There are improves in Teachers' knowledge in post-test for study group after exposer to the instructional program.
- 4- There aren't any significant alterations in their knowledge toward chickenpox diseases at pre-posttest in control group.
- 5- Finally, The effectiveness of instructional program is significant relationship with age for study group.

Declaration of Interest: Nil.

Source of Funding: Self.

Ethical Clearance: After the approval of protocol by the Ethical Review Board, faculty of nursing/ university of kufa/Iraq and before enrollment, all participant gave their informed consent.

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