

Assessment of Knowledge and Practice of Primary School Personnel towards Communicable Diseases among School Age Students in El-Minia City

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Abstract: Background: School age children are the parents, workers, leaders, and decision makers of tomorrow & their future success depends in good measure on achievement of their educational goal today. Communicable diseases (CD) are the leading cause of killer of children and young adults. It accounts for over half the total burden of disease in poor countries with high mortality rates. In particular, they cause over 13 million deaths each year, and account for one out of every two children's deaths. In addition, a small number of infectious diseases are responsible for 90% of deaths: pneumonia, AIDS, diarrhea, tuberculosis, malaria, and measles. Person with infectious diseases may exhibit a broad spectrum of disease that range from inapparent infection to severe and fatal disease and increase spread of infection to large number of people thus increase economic burden. **Objective:** study is to assess knowledge and practices of school personnel towards communicable diseases among school students. **Methods:** Study subjects were distributed among the following schools: Elekhssass, Shallaby, Eltagrebia, Elfoly, Elmontazha, Elsalah, Houda Shaghrawy, Saaed Zaglol, Taric Ebn Ziaed, Othman Ebn A fan, Elsaedia and Omar Ebn Elkhtab. In El-Minia city 2008; subjects of this study are consist of a sample size which included 525 primary school personnel (471 teachers, 42 workers and 12 school nurses), the schools selected randomly after excluding of private schools and schools with special needs. The tools used included two types; a)-structured assessment questionnaire, and b)-observational checklist. **Results:** There are statistical significant differences were found among awareness of school personnel about infection and (CD). Statistically significant differences were found among awareness of school personnel about measures used to prevent spread of infection among students. There are statistical significant differences were found among school personnel related to the sources of getting information. There are statistical significant differences were found between school teachers and nurses when they find communicable diseases among students. There are statistical significant differences were found between school teachers and nurses toward health education. **Conclusion;** all school personnel weren't completely oriented to (CD) that affect their students, lack of inservice training program for the school personnel, and unavailability of health insurance guide books, and all school workers hadn't any protective clothes during work time. **Recommendations;** all school districts should provide initial inservices training program about (CD) for all staff, and an annual update for the all.

Key Words: Assessment Knowledge And Practice; Primary School Personnel; Communicable Diseases.

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INTRODUCTION:

School health is an important branch of community health. Health services are provided for promotion of physical, mental and social wellbeing of children at school age (6-18 year). According to the American Academy of Pediatrics.^(3, 4), schools should provide at a minimum the following 3 types of services; (1) state-mandated services including health screenings, verification of immunization status, and infectious disease reporting; (2) assessment of minor health complaints, medication administration, and care for students with special health care needs; and (3) capability to handle emergencies and other urgent situations. More comprehensive services might include administration of immunizations, case management, wellness promotion, and patient education, as well as services for students with special needs, such as physical therapy.⁽⁸⁾ The mortality rates of school age children (5-14years old) are comparatively low and

have decreased substantially over the last century. This reduction can be attributed to effective prevention and control of the acute infectious diseases of childhood. Although mortality rate are low, morbidity among school children is high. Children of this age group are most often affected by respiratory illness, followed by digestive conditions. Among school children, the incidence rate of measles, rubella, mumps, chickenpox and pertussis have dropped considerably because of wide spread immunization efforts. Cases of these communicable diseases still occur, some with potentially serious complications, such as nerve deafness from mumps and birth defects from rubella.⁽²⁾ Dad (2005) agree that and added CD are one of the most common causes of suffering and death, and they impose a significant financial burden on society.⁽¹²⁾ Measles accounted for 17.4 to 23.5% of the deaths in the years 1958 to 1961.⁽¹⁵⁾ In Egypt the incidence of (CD) among Egyptian children was; in

2000 the incidence of measles was 2.633 cases, mumps was 1.390 cases, pertussis was 3 cases, rubella was 24 cases, in 2001 the incidence of measles was 2.150 cases, mumps was 849 cases, pertussis was 1 case, rubella was 12 cases, In 2002 the incidence of measles was 653 cases, rubella was 274 cases, *In 2003 the incidence of measles* was 164 cases, mumps was 639 cases, rubella was 216 cases, *In 2004 the incidence of measles* was 80 cases, rubella was 18 cases, *In 2005, the incidence of measles* was 77 cases, mumps was 251 cases, rubella was 520 cases, *in 2006 the incidence of measles* was 953 cases, mumps was 251 cases, rubella was 2587 cases.⁽²⁷⁾

Egyptian media reported that 150 cases of chickenpox in an outbreak in a school in Alexandria, and 200 cases in outbreak of rubella excluded from a school in Cairo.⁽¹⁷⁾

Communicable diseases occur in every country, in every urban and rural area and in every neighborhood from the very rich to

the very poor. In developing countries the incidence of typhoid fever was 13/100.000 persons per year and the incidence of brucellosis was 18/100.000 persons per year.⁽¹¹⁾

In 2004 Center for Disease Control and Prevention estimates that each year seventy six million people in the US get sick, more than 300,000 are hospitalized and 5000 die as a result of food borne illnesses.⁽⁹⁾ Chickenpox has been a nearly universal disease of childhood; in temperate climates, nearly 90% of children had chickenpox by age 15 years before vaccine became available.⁽²⁵⁾ (CD) can be defined as "an illness that directly or indirectly transmitted from person to another".⁽²⁶⁾ **Ball and Bindeler (2006)** stated that "a (CD) is an illness that directly or indirectly transmitted from person or animal to another by contact with body fluids, by contact with contaminated objects, or by vectors (CD) are diseases caused by biological agents for example

bacterium, virus, and parasite that can be communicated from an infected person or animal to another person or animal, meaning that they can easily spread through direct or indirect contact".^(6,20) (CD) take four stages such as: Incubation stage, pretrial stage, illness stage and convalescence stage⁽²³⁾. There are many factors which affecting on (CD) 1) - Host factor 2)-Agent factors 3)-Environmental factors.⁽¹⁰⁾

METHODS:

This study was conducted in 12 governmental primary schools in Minia city chosen randomly. Subjects were distributed among the following schools: Elekhssass, Shallaby, Eltagrebia, Elfoly, Elmontazha, Elsalah, Houda Shaghrawy, Saaed Zaglol, Taric Ebn Ziaed, Othman Ebn A fan, Elsaedia and Omar Ebn Elkhtab. In El-Minia city 2008; the school personnel samples were 578 persons distributed as (505 teachers, 61 workers

and 12 school nurses). Subjects of this study consisted of a sample size which include 525 primary school personnel (471 teachers, 42 workers and 12 school nurses).⁽²⁸⁾ The investigator met them at their workplace during work and they were interviewed in their schools at times that were convenient for them. A descriptive study was chosen and the schools were selected randomly after excluding of private schools and schools with special needs. Primary schools in El-Minia city are divided into four sectors according to geographical location; each sector consists of number of schools, these as follow Neferty sector include 11 schools, Taha Hussine sector include 9 schools, Saaed Zaglole sector include 13 school and El-Shaheed sector include 9 schools, and the total number of primary schools in El-Minia City is 42 schools; and the researcher randomly selected three schools from each sector to represent El-Minia city.

Tools of the Study:**A-Structured assessment questionnaire**

which included:-Personal characteristic and socio-demographic data such as; name, age, sex, education level, occupation, marital status and years of experience. Knowledge of persons regarding major (CD); such as definition, types, causes, sign and symptom, methods of transmission, factors that affect the transmission, incubation period and precaution & control methods. Sources of their information related to all personnel.

B-Observational checklist: The investigator used observation checklist to assess applicable practices of school personnel to prevent and control major (CD) with student.

METHODS OF THE STUDY:

Permission to conduct the study was obtained from the dean of faculty of Nursing at El-Minia University. The official letter was obtained from Ministry of Health to obtain the statistical results of

communicable diseases among children, and agreement of country safety, Vice of Ministry of Education then administrative directory of learning and education in El-Minia Governorate for data collection were obtained. Then the approval was given to every director of schools for data collection.

The researcher follows ethical guidelines of epidemiological research, each subject were explained the objectives of the study and details of the collected data. Subjects were also assured confidentiality which was maintained by removing names of subjects from data collection forms, only serial numbers were kept for identification, and no invasive techniques were carried out. Study objectives were presented to the school administration, teachers, workers and school nurses. Respondents were informed of their freedom not to participate in the study.

A pilot study was performed to evaluate the questionnaire validity and

reliability. It was carried out on a sample of 53 persons (10% from the total sample) in primary school personnel; it helps test validity and reliability of study questionnaire. This sample was excluded from the total sample, the necessary modification in the questionnaire was done and final form was developed and used in data collection.

The researcher determined 62 questions without the socio-demographic data and source of getting the information, about the primary schools personnel knowledge of communicable diseases, every question equals one degree and total scores equal 62 degrees which distributed as the following: incomplete answer and unknown answer mean zero; and complete answer means one degree

After the calculation of each persons' score the researcher determined that poor level mean less than 50%, pass level range from 50 % to less than 65 %, good level

percentage that range from 65 % and more.

Statistical design: The collected data were tabulated and analyzed using computer. Data analysis was done by using SPSS and cleaning of data was done then data analysis was started by descriptive statistics such as frequencies, percentage, mean and standard deviation. Then cross tabulation and correlation was done to assess the relationship between knowledge and practices. Student t test, Chi-square test and ANOVA test were used. If the result of p value was less than or equal 0.05, it was considered statistically significant.

Results: table (1); summarizes the socio demographic data of the study population. It was found that half of school teachers (51.7%), were ranged from 37 to 47 years old, the mean age of the studied sample was 41.2 with +_SD.(4.3). Half of the sample has diploma degree (51.9%). Regarding years of experience more than

half of teachers 52.5% are ranged from 15 to 25 years. According to marital status the majority of teachers (89.4%) are married and have children, Compared with school nurses (83.3%) are ranged from 48 to 58 years old, the mean age of the study sample is 46.1 with \pm SD.(4.7). All have diploma degree. Regarding years of experiences the majority of the school nurses (83.3%) are ranged from 26 to 36 years with according to marital status (83.3%) of school nurses are married and have children with In addition to workers, more than half of school workers (57.1%) are ranged from 48 to 58 years old, the mean age of the study sample is 42.5 with \pm SD (4.5), most of them are able to read and write (88.1%). Concerning years of experience half of school workers (50%) are ranged from 15 to 25 years. According to marital status more than two third (69%) of school workers are married and have children. There are statistical significant differences were found between socio

demographic data of the study population.

Table(2); shows sources of getting information; more than half of school teachers 56.8% have information from all sources, 19.7% from reading,7.8% from visual media, 7% get nothing and 6.8% from friends. Also this table shows that most of school nurses have information from reading, one third 33.3% have information from all sources, in spite of 8.3% have nothing. Regarding school workers, most of them (57.1%) have information from friends, 28.6% have nothing and minority of them 7.1% has information from reading and visual media. There are statistical significant differences were found. **Table (3);** points out that there are no significant statistically differences between knowledge & practices among school personnel. **Table (4)** Shows distribution of school teachers and nurses when they find communicable diseases among school students, it was found that majority number of teachers sometimes

have a role with ill students; in spite of school nurses don't observe signs and symptoms of disease, all nurses refer the ill students to proper place, (91.7%) inform to school members after child return, all school nurses sometimes observe students contact, sometimes observe ill student when on returning to school after cures and all don't follow the absences and ask about the cause of absences and the majority of nurses (91.7%) don't follow the progress or deterioration of child condition. There are statistical significant differences were found between school teachers and nurses when they find communicable diseases among students. **Table (5) shows** that 69% of workers didn't wash their hands after work, 21.5% sometimes do, more than one third 40.5% didn't wash their hands before and after work, 59.5% sometimes do, in addition 35.7% did not wash their hands after eating but 54.8% sometimes do, 21.5% did not wash their hands before eating and 69% sometimes do. Also this

table points out that all schools workers hadn't any protective clothes during work time. (Mask, gloves, special clothes and special shoes).

Discussion: School nurses participating in this study are ranged from 26 to 58 years old with mean $46.1 \pm SD 4.7$, the majority of them (83.3%) has a health visitors education with 26 and 36 years of experiences and only two nurses have a diploma program of education with experience four to fourteen years of experience. Similar finding was revealed by **Abed El-Kader (2002) & Kamel MI (2003)** stated that the age of school nurses are ranged from 40 to less than 50 years old, and the mean of total age was 41.07 ± 7.79 . The majority of the sample have their years of experiences ranged from 22 to <32 years which is special for the health visitors, and the mean years of experience of the total sample was $22.95 \pm 7.76^{(18,1)}$. On other hand Maghraby, **(2002)** stated that the most school nurses aged between

40 and 49 years, and most of them had more than 20 years of experience.⁽¹⁴⁾

Kamel MI (2003) found that school nurses participating in the study were in their middle age, and the majority of them had health visitor diploma with more than 30 years of experience.⁽¹⁸⁾

The age of school teachers participating in this study are ranged from 26 to 58 years and the years of experience ranged from 4 to 37 and more, nearly similar results with **Little (2008)** who found that 22% of teachers reported being special education teachers, 48% indicated that they were 46 years of age or older 38% age between 30 and 45 years and 14% reported that they were younger than 30 years and teaching experience ranged from one to fourteen years.⁽²¹⁾ And age of workers ranged from 26 to 58 years with mean $42.5 \pm SD 4.5$, and years of experience ranged from 4 and 37 and more with mean $10.7 \pm SD 0.808$. This study indicates that school nurses have a good

knowledge about importance of vaccination and complete role for immunizing the students. But these results are consistent with the results of **Abed El-Kader (2002)** who found that the school nurses have a good knowledge about importance of vaccination, and have complete role with students immunization.^(1,22), mentioned that the highest standard of health education services was related to advising the parents about prevention of transmission of diseases and counseling as well as health guidance. However, the lowest standard of services was related to unavailability of teachers to perform first aide. Health education was weak at governmental schools, and this due to an adequate knowledge of school health nurse as well as improper knowledge and attitude of teachers while conversely. School nurses play an integral role in the management of the school health program.⁽⁷⁾ Conversely with the results of **Maghraby, (2002)**, who stated that immunization of students as

strategy for prevention of (CD) is one of her basic responsibilities. This task proved to be absolutely neglected by the school health nurse in Assuit and they rationalized it by stating that nurses serving in the health insurance fully take that responsibility because they get the necessary training in vaccine skills, while the school health nurse is always deprived of that training, none of them was asking to attend any training or program about vaccination.^(14,24)

In the present study all school workers do not wear any protective clothes during work time such as mask, gloves, special dressing and the majority of them do not wash their hands after work, all workers have health insurance and all have benefits from health poster guide, in 2007 **Eaton** reported about half of all states offered health insurance to their staff, and the state paid for some or all of the cost of the insurance or made the insurance available

to staff at their own expense and health insurance covered all or part of preventive services.⁽¹³⁾

CONCLUSIONS:

Based on the result of the present study, it can be concluded that school nurse has been a part of school life and she can be seen in schools today as the only person that can responsibly answer questions concerning the medical needs of students. All school personnel weren't completely oriented to (CD) that affect their students (knowledge and practices) and the nurse duties were unclear to the school nurses. Presences of heavy written duties with no rewards, absences of computers, typewriters. Lack of inservice training program to the school personnel, and unavailability of health insurance guide books, all these items affect the knowledge and practices of school personnel therefore they do their work activities as part of a routine.

RECOMMENDATIONS

Based on the previous finding of the present study, the following recommendations are suggested; 1)-all school districts should provide initial training for all staff, training for new employees, and an annual update for all staff, 2)-written, and clear job description for school nurses should be offered, 3)-computers, typewriters should be available to minimize the heavy written duties for school nurses, 4)-guide books about insurance health program, communicable diseases and infection control precaution should be present, 5)-protective materials for school workers such as special clothes, mask, gloves, cleaning materials should be at hand, 6)-cooperation between school and local health departments, official

community health care providers should be activated, 7)-cooperation between parents and school nurses, teachers and administrators in primary schools should be implemented, 8)-each school should have; {(a)- written policy; (b)- named contact for dealing with children who are unable to attend school for medical reasons; (c)-clear referral procedures; (d)- effective multi agency working practices; (e)-full collaborative partnerships with parents and pupils; and (f)- well-structured well-supported reintegration planning} 9)-health education program about communicable diseases should be offered, and 10)- establishing an effective referral system within the primary, secondary, and tertiary health care for ssuspected and confirmed cases.

Table: 1 Distribution of the study sample according to their sociodemographic characteristics in El-Minia city 2008-2009.

Items	Teachers N;(471)		School nurses N;(12)		Workers N;(42)		Total	
	No	%	No	%	No	%	No	%
1- Age:								
1-26-36	145	30.7	00	00.0	03	07.2	148	28.3
2-37-47	243	51.7	02	16.7	15	35.7	259	49.3
3-48-58	083	17.6	10	83.3	24	57.1	118	22.4
Total	471	100.0	12	100.0	42	100.0	525	100.0
Mean ± SD	41.2 ± 4.3		46.1 ± 4.7		42.5 ± 4.5			
2-Qualifications								
1-Read and write	000	00.0	00	000.0	37	88.1	037	07.0
2-Diploma	245	51.9	12	100.0	05	11.9	262	49.9
3-University	207	44.1	00	000.0	00	00.0	207	39.5
4-Post graduate	019	04.0	00	000.0	00	00.0	019	03.6
Total	471	100.0	12	100.0	42	100.0	525	100.0
3-Years of experience								
1-4-14	157	33.3	02	16.7	10	23.8	168	32.0
2-15-25	248	52.5	00	00.0	21	50.0	269	51.3
3-26-36	058	12.5	10	83.3	09	21.4	078	14.8
4-37 and more	008	01.7	00	00.0	02	04.8	010	01.9
Total	471	100.0	12	100.0	42	100.0	525	100.0
Mean ± SD	13.2 ± .704		22.3 ± .622		10.7 ± .808			
4-Marital status								
1-Married with children	420	89.4	10	83.3	29	69.0	459	87.4
2-Married without children	013	02.8	00	00.0	02	04.8	015	02.8
3-Single	027	05.5	00	00.0	03	07.2	030	05.8
4-Divorced or widowed	011	02.3	02	16.7	08	19.0	021	04.0
Total	471	100.0	12	100.0	42	100.0	525	100.0

Table (2). Distribution of study sample according to the sources of getting information in primary schools in El-Minia city 2008-2009.

Items	Teachers N;(471)		School nurses N;(12)		Workers N;(42)		Total		X2	sig
	No	%	No	%	No	%	No	%		
1-Reading	093	19.7	07	58.4	03	07.1	103	19.6	1107.076	.000
2-visual media	037	07.8	00	00.0	03	07.1	040	07.6		
3-friends	032	06.8	00	00.0	24	57.1	056	10.6		
4-internet	009	01.9	00	00.0	00	00.0	009	01.7		
5-All of above	267	56.8	04	33.3	00	00.0	271	51.7		
6-Nothing	033	07.0	01	08.3	12	28.7	046	08.8		
Total	471	100.0	12	100.0	42	100.0	525	100.0		

Table (3). Relation between knowledge and practices of school members in El-Minia city 2008-2009.

Items	Percent		
	Teachers	School nurses	Workers
Knowledge	1	1	1
Practices	.012	.051	.316
P-value	.800	.874	.019

Table (4) Distribution of school teachers and nurses when they find communicable diseases among students in primary schools in El-Minia city 2008-2009.

Items	Teachers		School nurse		X2	Sig
	No	%	No	%		
Observing for sign and symptoms of disease					138.011	.000
No	049	10.4	09	75.0		
Sometime	298	63.1	03	25.0		
Yes	124	26.5	00	00.0		
Total	471	100.0	12	100.0		
Referring of ill students					078.411	.000
No	084	17.8	00	000.0		
Sometime	185	39.2	00	000.0		
Yes	202	43.0	12	100.0		
Total	471	100.0	12	100.0		
Observing students contact					056.137	.000
No	225	47.7	00	000.0		
Sometime	246	52.3	12	100.0		
Yes	000	00.0	00	000.0		
Total	471	100.0	12	100.0		
Observing ill student when on returning to school after cures					253.103	.000
No	288	61.0	00	000.0		
Sometime	132	28.2	12	100.0		
yes	051	10.8	00	000.0		
Total	471	100.0	12	100.0		
Following up the absences and ask about the cause of absences					143.874	.000
No	233	49.4	12	100.0		
Sometime	172	36.7	00	000.0		
Yes	066	14.0	00	000.0		
Total	471	100.0	12	100.0		
Following up the progress or deterioration in child condition					140.574	.000
No	471	100.0	11	91.7		
Sometime	000	000.0	01	08.3		
Yes	000	000.0	00	00.0		
Total	471	100.0	12	100.0		
Informing to school members after child return					133.474	.000
No	471	100.0	00	00.0		
Sometime	000	000.0	01	08.3		
Yes	000	000.0	11	91.7		
Total	471	100.0	12	100.0		

Table (5). Distribution of workers protective methods used during work time as a sample of primary schools in El-Minia city 2008-2009.

Items	No	%
Worker washes his hands directly after work		
No	29	69.0
Sometime	09	21.5
yes	04	09.5
Total	42	100.0
Worker washes his hands before eating		
No	09	21.5
Sometime	29	69.0
Yes	04	09.5
Total	42	100.0
Worker washes his hands after eating		
No	15	35.7
Somtime	23	54.8
Yes	04	09.5
Total	42	100.0
Worker washes his hands before and after work		
No	17	40.5
Sometime	25	59.5
Total	42	100.0
Worker wears mask when collecting the wastes		
No	42	100.0
Sometime	00	000.0
Yes	00	000.0
total	42	100.0
Worker wears gloves when collecting the wastes		
No	42	100.0
Sometime	00	000.0
Yes	00	000.0
Total	42	100.0
Worker wears special clothes when collecting the waste		
No	42	100.0
Sometime	00	000.0
Yes	00	000.0
Total	42	100.0
Worker wears special shoes when collecting the west		
No	42	100.0
Sometime	00	000.0
Yes	00	000.0
Total	42	100.0

علي رد فعل كل شخص. وتم تجميع البيانات من سبتمبر 2008 إلى يناير 2009 ماعدا أيام الأجازات الرسمية والعطلة وأيام الجمعة. **نتائج البحث:** أوضحت هذه الدراسة بأن 1- الزائرات الصحيات عندهن معرفة جيدة حول التطعيم وبعض أنواع الأمراض المعدية وقله المعرفة حول مضاعفات المرض وفترة حضانة بعض الأمراض 2- المعلمون عندهم معرفة جيدة حول تعريف الحصبة والنكاف والسعال الديكي، الجديري المائي – وقله في المعرفة حول العناصر الأخرى للأمراض المعدية.

3- عمال المدرسة عندهم معرفة جيدة حول تعريف العدوى وطرق انتقال الحصبة الألمانية والأمراض المعدية بينما عندهم قلّه في المعرفة في أعراض وعلامات الأمراض وفترة الحضانة والمضاعفات والعناية بالتلميذ المصاب. 4- لا توجد علاقة ذات دلالة إحصائية بين المعرفة وممارسات العاملين بالمدراس. 5- كل العاملين بالمدراس عندهم قلّه في المعرفة تجاه الامراض المعدية في نفس الوقت يودون ممارسات روتينية. في ضوء هذه النتائج فإن أهم توصيات هذا البحث تتضمن (1) عمل دورات تدريبية في المدارس عن الأمراض المعدية لكل العاملين. (2) توفير المواد الوقائية لعمال المدارس مثل قناع وقفازات وملابس خاصة ومواد تنظيف للتحكم في انتشار العدوى. (3) التعاون بين المدرسة والمجتمع للتحكم في الأمراض المعدية. (4) الاتصال بين المدرسة وأولياء الأمور لتسهيل مهمة مكافحة الأمراض المعدية. (5) توفير الكمبيوتر والطابعات في حجرة الزائرة لتقليل الأعباء الكتابية. (6) توفير

الملخص العربي

إن تلاميذ المدرسة هم أباء وعمال وزعماء وصناع قرار الغد ويعتمد اليوم نجاحهم على الإجراء الجيد في تحقيق هدفهم التربوي ، ونجاح مدرستهم يعتمد إلى حد ما علي حالتهم الصحية وهم مجموعه سكانية مهمة ؛ لان صحتهم الطبيعية والعاطفية حيوية إلى مستقبل المجتمع ويتطلبون توجيهها واتجاهها سليما. وإن الأمراض المعدية مازالت أحد الأسباب الأكثر شيوعاً في الوفيات و خطر المرض. يهدف هذا البحث إلى تقييم معلومات ومهارات العاملين بالمدارس الابتدائية تجاه الامراض المعدية في تلاميذ المدارس في مدينة المنيا. وكانت أدوات جمع البيانات كالتالي: 1-بيانات شخصيه وتحتوي هذه الاستمارة علي الآتي السن والمؤهل والوظيفة وسنوات الخبرة والحالة الاجتماعية. 2-استمارة لتقييم معلومات العاملين بالمدارس الابتدائية حول الأمراض المعدية مثل تعريف المرض ، طرق العدوى فتره حصانه المرض والمضاعفات والعناية بالتلميذ المصاب 3-استمارة تدقيق ملاحظه لتقييم ممارسات ومهارات العاملين بالمدارس لمنع والسيطرة علي الأمراض المعدية مع التلاميذ. **وشملت عينه البحث: 525** شخص من العاملين بالمدارس الابتدائية وهم كالتالي: 471 مدرس ، 42 عامل ، 12 زائرة صحية. وتم تجميع البيانات من قبل الباحثه وذلك من خلال زيارات المدارس وذلك بمقابله كل شخص بعد شرح الغرض من البحث وتم اخذ موافقتهم وكان العدد المتوسط الذي يتم مقابلته في اليوم حوالي 6الى 8 أشخاص في زمن حوالي 25:30 دقيقه لكل فرد وهذا يعتمد

المدارس قد يساعد على مكافحة هذه الأمراض.

كتب عن الأمراض المعدية وطرق التحكم في العدوى داخل

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