Educational Program regarding Reproductive Health for Handicapped Adolescents in Sharkia Governorate

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Abstract

Background: Handicapped adolescents represent a significant portion of the world's population and when compared to those without handicapping, are four times more probable to show fair or poor health. **Aim:** To assess the effect of educational program regarding reproductive health for handicapped adolescents in Sharkia Governorate. **Subjects and Methods**: It was a Quasi-experimental research design conducted at Al Noor and Al Amal schools in Sharkia Governorate. Purposive sample of ninety one students Blind and Deaf students from El-Amal School for Deaf and Hard for Hearing, and El-Nour School for Blind **in Sharkia Governorate. Two tools were used; I.:** A structured interview sheet consisting of three parts: Part A; Demographic characteristics of the student. Part B; Student's knowledge about reproductive health. Part C; Students' menstrual history. II. An observational checklist to assess the student's self-report practice related to perineal care and personal hygiene regarding self-care during menstruation. **Results**: Generally, the sample was deficient in pre-intervention except for their knowledge about abortion (81.3%), while after implementation of the educational program their knowledge was improved (P≤ 0.001). Additionally, regarding perineal care, 32.9% of handicapped adolescents (blind and deaf) before intervention performed practice about perineal care, while after program implementation the percentage was 82.1% and 86.7% at post-intervention and follow up respectively. **Conclusion:** This study results provided evidence that after application of the educational intervention among handicapped adolescents (blind & deaf) at Al Noor and Al-Amal schools their knowledge, and practices about reproductive health improved in all components (p<0.001). **Recommendation:** Continuous health education programs should be implemented to increase handicapped adolescents' about awareness of reproductive health and menstrual hygiene practices.

Keywords: Reproductive Health, Handicapped Adolescent, Educational and Training Program.

Introduction

Disabled people have a greater chance of being abused physically, emotionally, or sexually, to be sexually assaulted, or to get HIV or other sexually transmitted diseases **(Krahn et al., 2015).** Furthermore, students with impairments are less probable to get screened for breast and cervical cancer **(Havercamp & Scott, 2015).** Scarcity of physical access, e.g. transportation difficulties or lack of closeness to clinics, scarcity of accessibility to communication and information tools, and health insurance are all possible causes for these discrepancies in the reproductive health of disabled persons **(National Association of County & City Health Officials, 2014).**

Adolescence is a critical period in girls' lives as it is a transition from childhood to adult responsibilities (**Wong's et al., 2012**). According to latest numbers, Egypt's population consists of 97, 37 000 million approximately, so the number of youths represents around 21% of the population in accordance to this year's statistics. The World Health Organization estimates that more than one billion people in the world are between the ages of 14 and 24. More than 90% of them live in developing countries (**Central Agency for Public Mobilization and Statistics of Egypt**, **2019).** Investing in the health of this age group has played a major role in the development of human societies due to the dual role of women in the health of society and the well-being of future generations as one of the main pathways for achieving the Millennium Development Goals and Youth Goals (**Parvizi et al., 2011**).

Blindness and deafness are terrible physical circumstances with profound economic and emotional consequences. They cause significant lifestyle and behavioral changes that might lead to complications with psychological, physical and social modifications **(McConachie & Moore, 2011)**. They have a significant impact on female teenage students, their families, and their communities (**Christie & Viner, 2012**). According to The World Health Organization (**WHO) (2012)**, estimates for the visual impairment recorded 148 million globally might be blind, and approximately 110 million of visual impairment was reported at risk of blindness. Developing countries account for about 90% of the world's visually impaired individuals; this indicates that 9 out of 10 visually impaired persons reside in developing countries.

Reproductive Health (RH) is described as a condition of physical, mental, and social well-being in all aspects of the reproductive system, at all life stages. People with good reproductive health can have a fulfilling and safe sexual experience **(Stidham et al., 2014)**. RH issues are essential properties of such development. According to all research and literature reviews, Egyptian adolescents lack fundamental reproductive health information and frequently acquire information from sources that are misleading or erroneous. As they develop and take on family responsibilities, comprehensive sexuality education empowers young people to safeguard their health and well-being **(Wahba & Fahimi, 2012).** In public areas, adolescent students have difficulties with menstrual hygiene management. The United Nations International Children's Emergency Fund approximations that 1 in 10 African girls of school age does not go to school during their period. Similarly, according to World Bank statistics, students miss four days of school every four weeks owing to menstruation **(United Nations, Educational, Scientific & Cultural Organization (UNESCO), 2014).**

Menstruation is particularly prominent as it has a greater impact than other components of puberty on the quality and enjoyment of schooling. It encompasses the instructional component, the environment and the infrastructure of the schools. It comprises These include access to hygiene products, latrines and changing areas, clean water and sanitation and appropriate habits of hygiene such as hand washing with soap handling **(United Nations, Educational, Scientific & Cultural Organization, 2014).**

The community health nurse can endorse for blind and deaf adolescents, enhancing their demands by designing

programmes to lead a healthful lifestyle or even participating in educational classes that focus on specific areas such as physical activity, nutrition, stress management, family planning, injury prevention, and health protection from risks such as smoking, drug use, and the risk of spreading **(Wong's et al., 2012).**

Significance of the study:

Deafness and blindness trigger significant variations in lifestyle and behaviors, that can lead to difficulties with psychological, physical, and social adjustments, and have a serious impact on adolescent students, families and communities (**McConachie & Moore, 2011**). In Egypt, about 6-7 per 1000 children have a hearing loss (**Mehl & Thompson, 2010)**. In addition, the prevalence of blindness is 1.1% which is equivalent to approximately 737,000 blind people. Young people typically do not meet sexual and RH needs and lack access to information and services on sexual and reproductive health (**Pokharel, 2010**).

Aim of the Study:

Assessment the effect of educational program for handicapped adolescents on their knowledge and practices regarding reproductive health in Sharkia Governorate through:

1.Assessing knowledge and practices regarding reproductive for handicapped adolescents' pre-intervention.

2. Design and implement educational program regarding reproductive health for handicapped adolescents.

3.Evaluate knowledge and practices regarding reproductive health for handicapped adolescents' post-intervention.

Research Hypothesis:

The implementation of the intervention program will improve the handicapped adolescents knowledge and practice about reproductive health in Sharkia Governorate.

Subjects and Methods

Research design:

A quasi-experimental research design performed to carry out current research.

Setting of the study:

Deaf and Hard of Hearing students were conducted in Zagazig School, which was randomly selected from 9 schools in Sharkia Governorate, while blind students were conducted in Al Noor School which is only one school for blind students in Sharkia Governorate.

Zigzag School:

The Zigzag School for the Deaf and Hard of Hearing is considered the mother school. It contains three primary, preparatory and secondary stages, and two new kindergarten classes. The school has workshops for tailoring, knitting, computer, and carpentry, plumbing, and an ornamental department. There is a Department of Home Economics, Art Education and Agricultural Education. The primary building has three floors and the preparatory and secondary building has five floors. Outstanding students are admitted to the Department of Art Education in the Faculty of Specific Education. The school has dry feed for the outside and cooked for the inside.

Al Noor School:

There is one school for the blind in Sharkia Governorate, which includes the three stages: primary, preparatory, and secondary. Education is taught in Braille, there is a library, and the school has a restaurant for students to live in. Additionally, outstanding students are admitted to theoretical colleges.

Sampling:

The study settings were eligible to be included in the study sample if they were fulfilling the following criteria: 1. Age ranges between 14 to 20 years 2. Having no health problems rather than hearing and visual impairment. 3. IQ more than 70; (records of the students in school) and agree to participate in the study.

Sample size:

A sample of 91 students with hearing and visual impairment attending the study settings during the study period.

Sampling technique:

A purposive sampling technique was used to recruit students according to their eligibility criteria until the sample size were fulfilling.

Tools for data collection:

Tool I: A structured interview sheet was prepared by the researchers to collect data from blind and deaf students based on review of pertaining literature and guided by **(Mohamed et al., 2014).** It included three parts:

Part A: This was for collection of demographic characteristics of blind and deaf students such as, age, birth order, and several siblings. It also covered the family characteristics as, parent's age, education, job, and family income.

Part B: This part assessed blind and deaf students' menstrual history such as, age at menarche, period and history of female genital mutilation.

Part C. This part was intended to assess blind and deaf students' knowledge about reproductive health. It consisted of a series of 62 questions of various forms, open, multiple choices, true/false, covering the following areas of knowledge: Anatomy/physiology of genital system, physical and psychological puberty charges, fertilization, female genital mutilation, menstrual hygiene, premarital counselling, pregnancy, delivery, family planning, and sexually transmitted diseases.

❖ **Scoring:**

Each of knowledge items a correct answer was give score 1and the incorrect scored 0. Regarding area of knowledge, the total of item scores was divided by number of the items. The knowledge of blind and deaf students was deemed satisfactory if the percent score was ≥60% or, and unsatisfactory if recorded ≤ 60%.

Tool II: An observational checklist to evaluate self- reported practices of students related to perineal care and personal hygiene regarding self-care during menstruation (using doll). The tool was adopted by **Mohamed and El-Nagger (2012)**. The procedure consists of 8 steps as follows, prepare equipment, wash the hands before each perianal care, remove the soiled pad from front to back and dispose of it in the waste container. Additionally, pour warm water or a cleansing solution onto the perineum area without opening the labia clean and the perineum according to the

following direction: a) clean the pubic area from the level of the clitoris to the lower abdomen, b) clean the thighs from the middle to the horizontal, c) clean the labia majora from top to bottom in one motion. Moreover, dry the perineal using the same technique and apply a clean perineal pad, and finally, wash the hands after each perineum care.

❖ **Scoring**:

Each observed step "done" was scored one point and "not done" zero. The eight steps are summed up. The practices were considered satisfactory (60%), and unsatisfactory (<60%).

Content Validity and Reliability

For evaluation of data gathering tools validity, five experts were involved from Community Health Nursing and Obstetrics and Gynecological Departments, Faculty of Nursing, Zagazig University, in addition to staff members from El-Noor and El-Amal school. The reliability of proposed tools was performed by Cronbach's Alpha test statistic, which recorded 0.845 and 0.750 for the tools (I) and (II), respectively.

Fieldwork:

Data collection took 5 months, beginning October 2020 until the end of February 2021. An educational and training program was developed by the researches which included the theoretical and practical parts based on the relevant literature. The researchers discussed the questionnaire and program with teachers in Al-Amal and Al Noor schools to translate it into sign language during the discussion of the program. Also, the researchers relied on the explanation with the blind to repeat and record the lecture to hear it again, as well as using the doll in the practical part. The research was implemented through four phases including assessment, planning, implementation and evaluation.

Assessment phase:

This step involves gathering pre-intervention data to determine baseline. Firstly, the researchers introduced themselves and briefly discussed the objective of the research to the Directors of Al-Amal and Al Noor schools in Sharkia Governorate.

Planning phase:

Based on the collected literature, characteristic of samples, and collected results during assessment phase, investigator planned the intervention sessions content.

General objective:

The general objective of the educational program is to promote the awareness of blind and deaf students about reproductive health.

Implementation phase:

The intervention was performed in the form of sessions; the studied sample was divided into 10 groups in a variety of numbers ranged between 8- 10 adolescents in each group. It was performed in the library of the Al-Amal and Al Noor schools.

Sessions 1, 2 and 3 concentrated on disseminating knowledge of the definitions, goals, factors affecting RH, components, target groups, elements of childhood stage, pre-marriage stage elements, elements of adolescence stage, normal puberty age, signs of puberty in females, the ovaries function, and ovulation time and the post-reproductive age components. As well as the anatomy

of internal and external reproductive organs of the female. Group discussions and lectures were applied as teaching approaches. Additionally, the researchers explain signs of pregnancy, stages of delivery, puerperium period, family planning, and sexually transmitted diseases. A mannequin was used for practical sessions to provide accurate places of genitalia and practice of menstrual hygiene.

Sessions 4 the researchers demonstrated the procedure of perineal care and personal hygiene regarding self-care during menstruation. Demonstration and re-demonstration were performed as teaching methods. Finally, a global summary and review of program objective, and termination module sessions were done.

Evaluation phase:

The nursing educational intervention was evaluated immediately and then three months after it implements the sessions; by applying the same pretest tools to compare changes in deaf and blind students' knowledge, and practices towards reproductive health after the educational sessions.

Pilot study:

Before carrying out the principal study, a pilot study was performed on 9 students in blind and deaf students to ensure the reliability of the tools and the feasibility of the study. The piloted students were excluded from the main study sample.

Administrative and ethical considerations:

An official letter of approval was obtained from the Dean of Faculty of Nursing, Zagazig University, to Directorate of Al-Amal and Al Noor schools. The approval of the local ethics committee was taken before starting the study. An oral informed consent was taken from each student's parent's participant while filling in the interviewer sheet.

Statistical analysis

Data collected were tabulated and statistically analyzed using SPSS 20.0 for windows (Statistical Package for Social Science). Quantitative data were expressed as the mean and standard deviations and qualitative data were expressed as frequencies and percentages. Friedman test for several related samples is a non-parametric alternative to the one-way ANOVA with repeated measures or related samples. In this study (F) test was used to obtain repeated measurements on the study sample through three phases of the study (pre, post and follow-up). Pearson's correlation coefficient was used to assess relationship between various study variables. Stepwise multiple linear regressions for predicting factors which affect total score of knowledge and practices were performed. Cronbach alpha coefficient was calculated to assess the reliability of the scales through their internal consistency. All tests were two sided. P-value < 0.05 was considered statistically significant, $p<0.001$ was considered statistically highly significant and p-value ≥ 0.05 was considered statistically non-significant (NS).

Results

Table (1): the mean students' age was 16.37±1.65 years, 63.7% of them were third and more in birth order. Additionally, 79.1% of them were from rural areas, and 51.6% have the secondary school level. The highest percentage of them had four siblings (33.0%) followed by five siblings (28.6%) then three

siblings (25.3%). Furthermore, 31.9% of the students' families were having sufficient income and 12.1% were saving as well.

Table (2): demonstrates that the mean age of the student' mothers was 31.32±6.12 compared to 38.21±5.68 of their fathers. As for the educational level, 48.4% of students' fathers and 45.1% of their mothers were illiterate. Furthermore, 6.6% of fathers and 8.8% of mothers had a university-level education, and 62.6% of fathers had manual work, whereas 89.0% of the mothers were housewives.

Table (3): describes that only 4.4% of students had circumcision or female genital mutilation. The age at menarche was mostly 13 years (42.9%), 86.8% had regular menses with 64.8% have 4-<6 days period, 23.1% of them took medication at menarche.

Table (4): As for the assessment of student's knowledge **Table (4**) indicates that it was generally deficient in pre-intervention except for their knowledge about puberty (34.1%), female genital mutilation (33.0%), menstrual hygiene (33.0%), and abortion (81.3%). There were highly, statistically significant differences of all knowledge component between pre, post and follow up interventions at p-value <0.001.

Table (5): Distribution of self-report practice score of the blind and deaf students about perineal care and personal hygiene regarding self-care during menstruation throughout intervention phases (n=91).

Figure (1): illustrates that only 11.0% of the students had total satisfactory knowledge about puberty changes and reproduction at pre intervention, which increased in post-intervention and follow up to 100%.

Figure (2): illustrates that the total practice score of the blind and deaf students about perineal care was 32.9% of students before intervention performed practice about perineal care. However, after program implementation the percentage the percentage was 82.1%, and 86.7% at post-intervention and follow up respectively.

Figure (3): represent the regression trendline and correlation between average knowledge (on x-axis) as independent variable and average practice (on Y-axis) as dependent variable. Accordingly, there were a strong positive highly significant correlation between knowledge and practice as revealed by simple linear regression and correlation. According to previous test the increase in knowledge is associated with a significant increase in practice items.

Table (6): Variables entered and excluded: Residence, sibling number, birth order, child educational level, father age, father education, father job, mother age, mother education, mother job, family income, and the total score of practices.

In a multivariate analysis, table (6) shows that the statistically significant independent positive predictor of the deaf student knowledge scores related to reproductive health was student age. The model explains 0.105 of the variation in this score.

Table (7): Variables entered and excluded: Child age, residence, sibling number, birth order, child educational level, father age, mother's age, mother education, mother job, family income, the total score of knowledge.

demonstrates that in multivariate analysis the statistically significant independent positive predictor of the deaf student practice scores related to

reproductive health was their father education. While father job was a statistically significant independent negative predictor of the deaf student practices scores.

Table (1): Personal features of studied blind and deaf students (N=91).

Child Characteristics		No.	Percent (%)
Age in years	14-	57	62.6
	16-	26	28.6
	18-20	8	8.8
	Mean ±SD	16.37±1.65	
School			
Blind		20	22
Deaf		71	78
Birth order	The first	17	18.7
	The second	16	17.6
	The third and more	58	63.7
Residence	Rural	72	79.1
	Urban	19	20.9
Phase	Primary	44	48.4
	Secondary	47	51.6
No. of sibling	2	4	4.4
	3	23	25.3
	4	30	33.0
	5	26	28.6
	6	8	8.8
Family income	Insufficient	51	56.0
	Sufficient	29	31.9
	Saving	11	12.1

Table (2): Characteristics of parent of the studied blind and deaf students (N=91).

Parent Characteristics		Mother		Father	
		No.	(%)	No.	(%)
Age (in years)	25 -	75	82.4	25	27.5
	35 -	11	12.1	58	63.7
	45 and more	5	5.5	8	8.8
	Mean ±SD	31.32±6.12		38.21±5.68	
Educational	Illiterate	41	45.1	44	48.4
Level	Basic	16	17.6	13	14.3
	Diploma 3 years	16	17.6	24	26.4
	Institute	10	11.0	4	4.4
	University	8	8.8	6	6.6
Occupation	Housewife/manual work	81	89.0	57	62.6
	Working/employees	10	11.0	34	37.4

Table (3): The menstrual history of the studied blind and deaf students (N=91).

Medical history		No.	Percent (%)
Female Genital Mutilation	No	87	95.6
	Yes	4	4.4
Age at menarche (in years)	11	19	20.9
	12	21	23.1
	13	39	42.9
	14	12	13.2
Regularity	No	12	13.2
	Yes	79	86.8
Taking medication at menarche	No	70	76.9
	Yes	21	23.1
Duration of menstrual period (in days)	Less than 4	23	25.3
	4-	59	64.8
	6-	9	9.9

Table (4): Distribution of Blind and Deaf Students Knowledge about Puberty changes and Reproduction throughout Intervention Phases (n=91).

Knowledge	Pre		Post		Follow up		Friedman test	
	N	%	N	%	N	%	Test	p-value
Puberty	31	34.1	85	93.4	77	84.6	**109.6**	**<0.001****
Anatomy/ physiology of the genital system	9	9.9	74	81.3	68	74.7	**147.9**	**<0.001****
Psyc changes with puberty	10	11.0	79	86.8	55	60.4	**140.2**	**<0.001****
Female genital mutilation	30	33.0	82	90.1	64	70.3	**86.9**	**<0.001****
Fertilization	10	11.0	70	76.9	55	60.4	**134.7**	**<0.001****
Menstrual hygiene	30	33.0	74	81.3	68	74.7	**83.9**	**<0.001****
Premarital counseling	10	11.0	80	87.9	53	58.2	**141.2**	**<0.001****
Pregnancy	9	9.9	91	100	91	100	**164.0**	**<0.001****
Vaccination	9	9.9	91	100	72	79.1	**154.0**	**<0.001****
Delivery	9	9.9	83	91.2	76	83.5	**158.6**	**<0.001****
Puerperium period	13	14.3	85	93.4	78	85.7	**144.0**	**<0.001****
Breastfeeding	10	11.0	74	81.3	58	63.7	**137.9**	**<0.001****
Abortion	74	81.3	76	83.5	76	83.5	**4.0**	**0.135 NS**
Family planning methods	11	12.1	72	79.1	60	65.9	**132.2**	**<0.001****
Sexually of transmitted diseases	8	8.8	72	79.1	64	70.3	**146.1**	**<0.001****

** Statistically highly significant NS: statistically non-significant

Figure (1): Total Knowledge of the Blind and Deaf Students About Puberty Changes And Reproduction Throughout Intervention Phases.

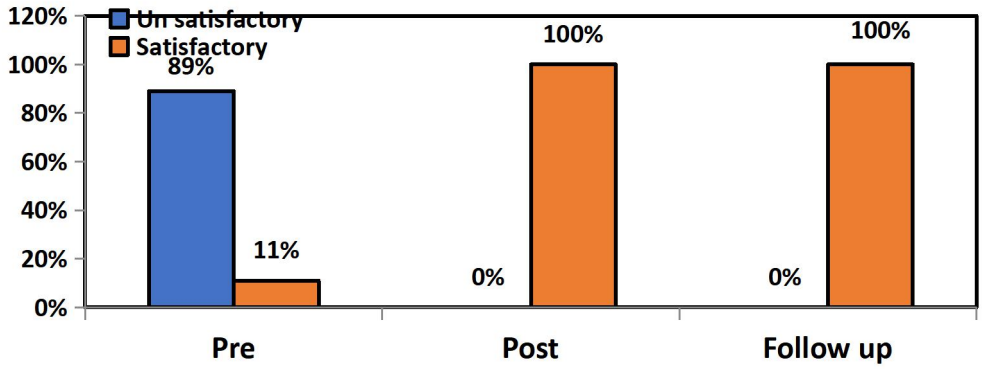

Table (5): Distribution of self- report practice score of the blind and deaf students about perineal care and personal hygiene regarding self-care during menstruation throughout intervention phases (n=91).

Self- Reported Practices	Pre-test		Post-test		Follow-up		Friedman's test	
	No.	%	No.	%	No.	%	test	p-value
1. Prepare equipment	91	**100**	91	100	91	100	N/A	>0.05
2. Wash the hands before each perianal care	30	**33**	75	82.4	80	87.9	87.5	<0.001***
3. Remove the soiled pad from front to back and dispose of it in the waste container	91	**100**	91	100	91	100	N/A	>0.05
4. Pour warm water or a cleansing solution onto the perineum area without opening the labia	91	**100**	91	100	91	100	N/A	>0.05
5. Clean and the perineum according to the following direction:	29	**31.9**	72	79.1	74	81.3	73.2	<0.001***
6. Dry the perineal using the same technique	22	**24.2**	68	74.7	78	85.7	92.3	<0.001***
7. Apply a clean perineal pad	91	**100**	91	100	91	100	N/A	>0.05
8. Wash the hands after each perineum care	34	**37.7**	79	86.8	83	92.2	87.1	<0.001***

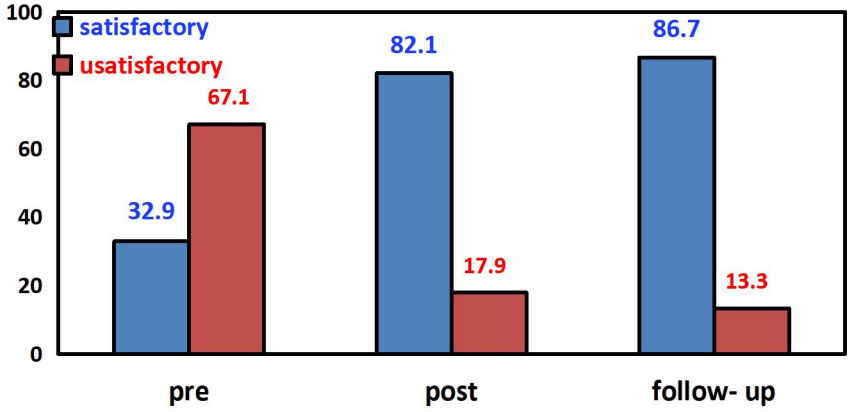

Figure (2): Total practice score of the Blind and Deaf Students about perineal care and personal hygiene regarding self-care during menstruation throughout intervention phases (n=91).

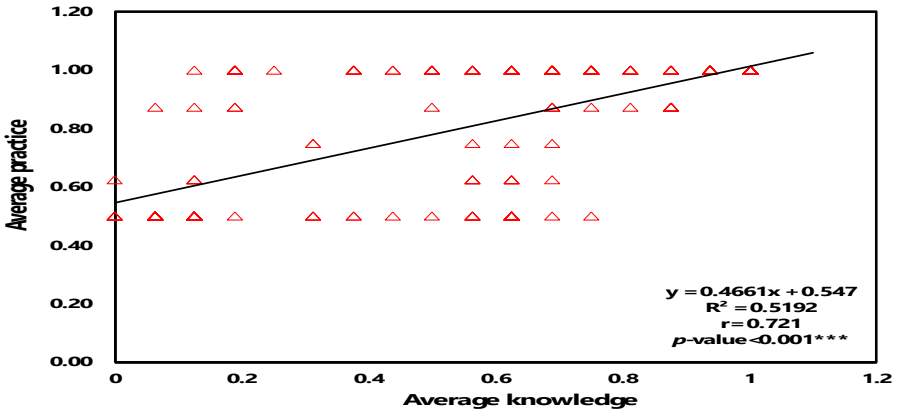

Figure (3): Regression trendline and correlation between average knowledge (on x-axis) as independent variable and average practice (on Y-axis) as dependent variable.

Table (6): Best Fitting Multiple Linear Regression Model for The Knowledge Score.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	SE	Beta			Lower	Upper
(Constant)	14.46	7.05		2.05	0.043	0.446	28.47
Student age	1.39	0.43	0.325	3.24	0.002**	0.536	2.24

** Highly significant (p<0.01); R-square=0.105, ANOVA: F=10.488, p<0.001

Table (7): Best Fitting Multiple Linear Regression Model For The Practice Score.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	SE	Beta			Lower	Upper
(Constant)	4.41	0.23		19.19	<0.001**	3.954	4.867
Father job	-0.98	0.29	-.713	-3.37	0.001**	-1.552	-0.400
Father education	0.28	0.11	.510	2.41	0.01**	0.048	0.501

** Highly significant (p<0.01)
R-square=0.127, ANOVA: F=6.390, p<0.001

Discussion

Blind and deaf students are disadvantaged as it is difficult for them to have usual social, emotional and cognitive development levels. They experience various losses such as self-esteem, physical integrity, mobility, activities of daily living, leisure, occupation, personal independence, and social fit **(Ali & Abd-El al, 2015)**.

According to student's demographic features, the mean students' age was 16.37±1.65; regarding to the mothers' education, the minority has completed their university education. This finding is in agreement with **Ali and Abd-El al (2015)**, at **Ain Shams University, Egypt** who found that the mean age of students was 15.07 ± 1.17; concerning mothers' education; minority completed their university education. These results are also in line with **Montgomery and Montgomery and Morris (2011)**, in **London**, who indicated that most of students' mothers are housewives and about half of them being uneducated.

In the current study, after substantially achieving the main objectives of the educational and training program, the results indicate generally high levels of grading knowledge. These results, are in agreement with **Mahmoud and Ibrahim (2020)** in **Egypt**, showed that generally high levels of knowledge scores especially in the areas of pregnancy, premarital counselling, family planning, menstruation, and sexually transmitted diseases. These findings are also consistent with **Madeni et al. (2016)** in **Tanzania** who stated that a RH program enhanced the students' behavior and knowledge about reproductive health. Moreover, these results are congruent with that of **Ali and Abd-El al (2015)** in **Egypt**, who reported a statistically significant improvement in blind students between pre-and post- test outcomes in relation to RH. Similarly, **Osman et al. (2014)** in **Assiut Governorate,** discovered that all sampled deaf and blind students had poor knowledge concerning RH in the pre-test, whereas their knowledge enhanced in the post-test to 58.8%.

Regarding students' practices towards perineal care and personal hygiene concerning self-care during menstruation, the current study results revealed that the majority of blind and deaf students had poor practices in the pre-test while their practice improved in the post-test with great evidence of improvement between the pre-test and the post-test. This finding might be due to adolescents' students with handicapping, whether blind, deaf or those with intellectual or physical disabilities have significant gaps in their hygiene during menstruation. These findings are in agreement with the **Nsemo et al. (2020)** in **Ghana** which showed that the adolescent students have good menstrual

hygiene practices after implementation of educational and training program. Also, **Osman et al. (2014)**, in **Assiut Governorate**, **Egypt,** reported that their practice of perineal care and personal hygiene improved after the intervention. These results are according to **Mohamed (2018)** in **Port Said, Egypt** it was reported that, in comparison to the pre-test, most students had a healthy practice score in all elements of menstrual hygiene in the post-test. When compared to the pre-test, the majority of them avoided typical activities in the post-test. In the same line, **Ali and Rizvi (2010),** in **Karach Pakistan** found that in the post-test, highly significant differences were seen concerning the menstrual hygiene items, where p-value = 0.001.

Furthermore, according to **Wahba and Fahimi (2012),** reported that young Egyptians receive a limited amount of RH education within the formal educational system. According to national and subnational studies, Egyptian youth lack fundamental reproductive health information and frequently acquire information from sources that are misleading or erroneous. According to the surveys, both students and their parents want more information on these issues to be taught in school. As well, in **Ethiopia** and **Northwest Nigeria** study results by **Tharkre et al. (2011) and Teklemariam, (2014)** were 88.7% and 90.9% respectively. This was similar to the result of other previous study conducted in the past in **India** by **Mudey et al. (2010).**

Conclusions:

Both blind and deaf students in Al Noor and Al- Amal schools had their knowledge and practices evolving after the implementation of the health education program.

Recommendations:

1.A continuous health education program should be provided to the blind and deaf students on reproductive health and personal hygiene.

2.The nursing curriculum should include reproductive health for disabled adolescents.

3.Further studies should be conducted on the reproductive health care needs of disabled adolescents.

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