

## Effect of Nursing Intervention on Reproductive Health knowledge among Adolescent Females with Educable Intellectual Disabilities

Asmaa Fath Allah Elgiar<sup>1</sup>, Inas Kassem Ali Kassem<sup>2</sup>, Aida A El-  
Razek A El-Rahman<sup>3</sup>, Saied Abd El Aty Saleh<sup>4</sup>

<sup>1</sup>A teacher of Nursing at the Institute of Nursing, Menoufia University

<sup>2</sup>Professor of Maternal and Newborn Health Nursing, Faculty of Nursing, Menoufia University

<sup>3</sup>Professor of Maternal and Newborn Health Nursing, Faculty of Nursing, Menoufia University

<sup>4</sup>Professor of Obstetrics and Gynecology, Faculty of Medicine - Menoufia University

**Abstract: Background:** Persons with disabilities represent a significant portion of the world's population, and they are part of every community. Information on reproductive health is often inaccessible to them. **The purpose of this study** was to investigate the effect of nursing intervention on sexual and reproductive health knowledge among adolescent females with educable intellectual disabilities. **Design:** A quasi- experimental research design was utilized (pretest–posttest test). **Sample:** Twenty adolescent females with an educable intellectual disability were enrolled in the study. **Instrument:** Two instruments were used. An interview questionnaire was developed to collect information about social characteristics. Second instrument was developed to assess knowledge of adolescent females having educable intellectual disability about reproductive health. **Results:** significant difference between the girls' pre, post intervention regarding their knowledge about female reproductive system (P value < 0.001) Pre 20 (100%) And post3 (15%). **Conclusion:** The present study concluded that the educational guidelines had a positive effect on the awareness of adolescent females with educable intellectual disability regarding reproductive health. **Recommendation:** Further studies should be conducted on the reproductive health care needs of adolescents with disabilities.

**Keywords:** Nursing intervention, Reproductive health knowledge, adolescent females with educable intellectual disabilities.

### Introduction

In Egypt young people with disabilities (YPWD) are more likely than the general population to be illiterate, unemployed, and impoverished. They often lack equal access to information and education for reasons ranging from barriers regarding physical access to services to varied special learning needs. Very little is known about knowledge, attitude, and practice (KAP) of YPWD regarding reproductive health

(RH) related issues. (Curtis, Geagan, 2016)

Persons with disabilities represent a significant portion of the world's population and are part of every community. About 10 percent of the world's population, 650 million people, live with a disability. Approximately 1.4 million children in the world are blind; 75% of them live in developing countries. Persons with disabilities often face stigma, discrimination, violence and poverty

***Effect of Nursing Intervention on Reproductive Health knowledge among  
Adolescent Females with Educable Intellectual Disabilities***

also; being female and disabled has been described as 'double jeopardy'. They experience the deprivation of opportunities in all aspects of life, including access to essential services (WHO, 2009 & Smeltzer, 2013).

Adolescence is one of life's most fascinating and complex stages of human life. The World Health Organization (WHO) defines adolescents as young people aged 10-19 years. Attitudes and behaviors formed in the physical and psychological maturation process are crucial to the current and future Reproductive Health (RH) of individuals and affect the well-being of their families and communities (USAID, 2001; UNICEF, 2012 & WHO, 2013).

People who are blind, deaf, or have intellectual or cognitive impairments find that information on reproductive health is often inaccessible to them. In particular, their sexuality has been ignored and their reproductive rights denied. Informing young persons with disabilities about RH is often difficult because parents, educators, and RH counselors often do not know how to broach the subject. As a result, many young people with disabilities do not receive even basic information about how their bodies develop and change as they mature (UNFPA, 2009, WHO, 2009 & TARSHI, 2014).

Raising awareness about RH for persons with disabilities frequently requires fighting misconceptions, stigma, and discrimination in communities. A key message is that negative attitudes and barriers in societies are often more disabling than the actual impairments. Community health nurses are in a prime position to advocate for the health needs of the disabled person. (DDG, 2017).

**Significance of the study**

Approximately 56 million people in the United States, or 20% of Americans, live with a disability, and this number is expected to rise as the baby boomer population ages. (National Association of County and City Health Officials, 2014)

According to Egyptian National Review report (2018) it was found that percent of disabilities is approximately 12.2% of Egyptian population 9.71% of them are living in village. Egypt health issues survey (2015) found that the number of adolescent girls aged 15-19 years is 8 million, only 4,1% of them have enough information about reproductive health, 8,22% of them are living in towns but 4,7 % of them are living in villages (Egypt Demographic Health Survey, 2018)

People with disabilities are four times more likely to report fair or poor health when compared to those without disabilities. For instance, people with disabilities are more likely to experience physical, emotional problems. (Havercamp & Scott, 2015)

It founded that this study isn't discussed in Menofia or in Egypt before so the researcher found that disabled adolescent females are neglected, and it is important to shed the light for disabled youths for reproductive health education can no longer be ignored and neglecting their reproductive health and well-being to avoid adverse effects both now and on their future health and wellbeing.

**Purpose of the Study**

The purpose of the study is to evaluate the effect of nursing intervention on reproductive health knowledge among adolescent females with educable intellectual disabilities.

*Effect of Nursing Intervention on Reproductive Health knowledge among  
Adolescent Females with Educable Intellectual Disabilities*

**Research Hypotheses**

Disabled adolescent females who receive reproductive health knowledge will have higher scores on posttest than before intervention.

**Method**

**Research Design: -**

The study was conducted using a Quasi- experimental research design utilized (pretest – posttest test).

**Research Setting: -**

The study was conducted at agriculture secondary school for dual education at El Sadat city

**Type of sample**

Purposive sampling

**Sample size:**

The total number of all female students with educable intellectual disabilities for the three levels is 34. The researcher selected 20 adolescents. They were selected from the three levels of the school: -4 from the first level, 10 from second level and 6 from the third level as regards the inclusion criteria.

**Inclusion criteria:**

Adolescent female with educable intellectual disability (F.E.I.D) age ranged between (14-18).

**Exclusion criteria**

Adolescent female with educable intellectual disability dependent on shadow teacher.

**Instruments of data collection**

The data was collected through two instruments

**Instrument One:** It was a structured interviewing questionnaire. It contained 16 questions.

It included 2 parts as follows: d

Part one: Social characteristics such age, educational level, number of sisters and brothers, educational level of parents and living with both parents or not, etc.....

**Part Health history:** It contained questions about puberty, about menstruation, reproductive system, etc.....

**Instrument two: Knowledge about reproductive health.**

It was developed by the researcher after a review of related literature to assess adolescence awareness about reproductive health which include anatomy of adolescence reproductive system (4 items), puberty (5 items), menstrual hygiene (19 items), marriage (2 items), pregnancy labor (8 items) and family planning methods (8 items)

**Pilot study: -** A pilot study was conducted on 10% of the total sample (n=....) to test the feasibility, clarity and applicability of the instruments, and to estimate the time needed to fulfill them. Necessary modifications were done. Sample of the pilot study was excluded from the total study.

**Ethical consideration:** A written approval was obtained from the ethical and research committee of the Faculty of Nursing, Menoufia University. There were no risks or any cost of participation, also there were voluntary participation and confidentiality of each subject who was agreeing to participate in the study was assured.

*Effect of Nursing Intervention on Reproductive Health knowledge among  
Adolescent Females with Educable Intellectual Disabilities*

**Procedure:**

**Data collection** the data collection of the study took two months starting in October 2021 and ending in November 2021. In this study the participant female in adolescent age (15-18), divided into four groups according to their attendance days. Each group contained..... The researcher presented to the school from 8am to 12pm and interviewed females in presenting days. Health visitor attended meeting with study participant.

**Preparatory phase:**

A comfortable and private place was chosen for interventions. Orientation was done about researcher name, purpose, and content of the study. Subjects were interviewed individually at their rooms where pre-test was done using semi structured questionnaire about reproductive health.

**Implementation phase:** this training was divided into 7 sessions; conducted two times\ week each session has a set of specific objectives. This was achieved through several teaching methods such as Charts, pictures, and graphs. Presentation with power point and Simulator.

First session the researcher introduced herself; explained the purpose of the study and introduced the (Sociodemographic data and pretest). then analyzed pretest findings to identify needs of girls Knowledge about reproductive health (needs assessment). Time allowed: half hour.

**The second and third sessions:** Separate the second session from the third session. **Anatomy of reproductive system).** It included

Definition of reproductive system, structure of female reproductive system and functions of female reproductive organs.

**The fourth session: (Menstruation) Intended learning Out comes (ILOs) of the fourth session (knowledge and understanding skills):** It included definition of menstrual cycle, List symptoms of menstruation and Identify methods of relieving menstrual pain.

**The fifth session It included** define menstrual hygiene, List steps of prenatal care during menstrual hygiene and Enumerate types of pads used

**The sixth and seventh sessions: -** Separate the sixth from the seventh session It involved Family planning methods .

A post test was conducted one week following the health education intervention using the same data collection instruments

**Limitation of the study: -**

The researcher forced to change the place of the study because of the schools prevents any visitor related to spread of corona virus and low immunity of students.

**Data analysis:**

The data obtained were reviewed, prepared for computer entry, coded, analyzed, and tabulated. Descriptive statistics (i.e., frequencies, percentage, mean and standard deviation, etc.) was done using computer program SPSS version 16. Chi-square test used to compare differences in the distribution of frequencies among group. It is considered \* significant when P values were less than 0.05 or ( $P < 0.05$ ).

*Effect of Nursing Intervention on Reproductive Health knowledge among Adolescent Females with Educable Intellectual Disabilities*

**Results**

**Table (1):** describes the social characteristics of the studied FEID student's as regards their age group, number of family members, education level and occupation father& mother and living with both parents or not. The table shows that the largest age group in the study was the age 16 years old (50%). Most of mothers represented (75%) had high educational level. Almost of them (81.7%) were employed.

**Table 2:** shows information for FEID about the female reproductive system. This table reveals that there was a highly statistically significant difference between the girls' pre, post intervention regarding their

knowledge about female reproductive system (P value < 0.001).

**Table (3):** shows the studied FEID students' level of knowledge about puberty. This table reports that there was a highly statistically significant difference between the pre, post intervention regarding their knowledge about puberty where (p value <0.001).

**Figure 3:-** This figure shows that the study FEID students' knowledge about **puberty** was significantly increased in the girls who had good communication with parents than those who had no communication with parents (P value<0.05).

*Effect of Nursing Intervention on Reproductive Health knowledge among  
Adolescent Females with Educable Intellectual Disabilities*

**Table 1: Distribution of adolescence according to their social characteristics**

Social Characteristics	N=20
<b>Age</b>	
15 years	1 (5%)
16 years	10 (50%)
17years	8 (40%)
18 years	1 (5%)
<b>Number of families members</b>	
From 3-4	14 (70%)
From 4-6	4 (20%)
7 or more	2 (10%)
<b>Number of sisters</b>	
One	14 (70%)
Two	2 (10%)
Four or More	2 (10%)
None	2 (10%)
<b>Number of Brothers</b>	
One	7 (35%)
Two	7 (35%)
Four or More	2 (10%)
None	4 (20%)
<b>Number of rooms in the house</b>	
Three rooms	20 (100%)
<b>Father educational level</b>	
Read & write	7 (35%)
Secondary school	8 (40%)
University	5 (25%)
<b>Father job</b>	
Employed	20 (100%)
<b>Mother educational level</b>	
Read & write	2 (10%)
Secondary school	3 (15%)
University	15 (75%)
<b>Mother job</b>	
Employed	16 (80%)
Unemployed	4 (20%)
<b>Your order in brothers and sisters</b>	
The eldest	14 (70%)
Middle	4 (20%)
Number	2 (10%)
<b>Do you live with your parents</b>	
Both	18 (90%)
One of them	2 (10%)

*Effect of Nursing Intervention on Reproductive Health knowledge among Adolescent Females with Educable Intellectual Disabilities*

**Table 2: Knowledge of FEID about reproductive system before and after intervention**

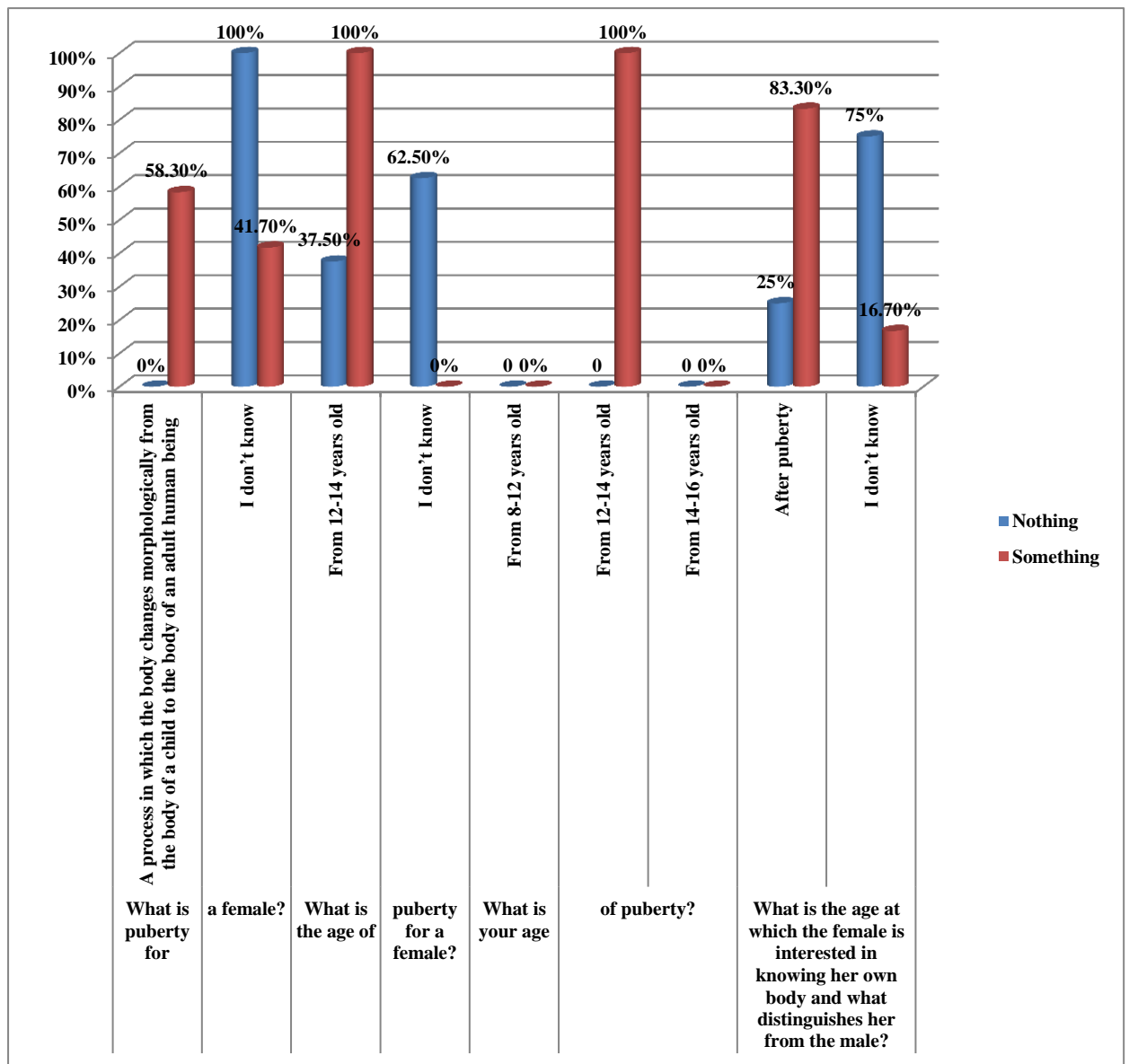
Reproductive system	Before nursing Intervention	After nursing Intervention	P value
<b>Do you know what the reproductive system is?</b>			
Yes	0 (0%)	17 (85%)	<b>&lt;0.001*</b>
I don't know	20 (100%)	3 (15%)	
<b>Do you know what the female reproductive system is made of?</b>			
Fallopian tubes, ovaries, uterus and vagina	2 (10%)	0 (0%)	<b>&lt;0.001*</b>
All of the above	0 (0%)	18 (90%)	
I don't know	18 (90%)	2 (10%)	
<b>Have you heard of the hymen</b>			
Yes	7 (35%)	20 (100%)	<b>&lt;0.001*</b>
No	13 (65%)	0 (0%)	
<b>What are the types of hymen</b>			
All of the above	0 (0%)	20 (100%)	<b>&lt;0.001*</b>
I don't know	20 (100%)	0 (0%)	

**Table 3: Knowledge of adolescence about puberty before and after intervention**

Puberty	Before nursing Intervention	After nursing Intervention	P value
<b>What is puberty for a female?</b>			
A process in which the body changes morphologically from the body of a child to the body of an adult human being	7 (35%)	16 (80%)	<b>&lt;0.001*</b>
All of the above	0 (0%)	4 (20%)	
I don't know	13 (65%)	0 (0%)	
<b>What is the age of puberty for a female?</b>			
From 12-14 years old	15 (75%)	20 (100%)	<b>0.047*</b>
I don't know	5 (25%)	0 (0%)	
<b>What is your age of puberty?</b>			
From 8-12 years old	4 (20%)	0 (0%)	<b>0.050*</b>
From 12-14 years old	14 (70%)	14 (70%)	
From 14-16 years old	2 (10%)	6 (30%)	
<b>What are the changes that happen to a girl at puberty?</b>			
Menstruation	4 (20%)	5 (25%)	<b>&lt;0.001*</b>
The appearance of hair in some areas	2 (10%)	0 (0%)	
Other is	0 (0%)	11 (55%)	
I don't know	9 (45%)	4 (20%)	
Menstruation and the growth of sexual Organs	5 (25%)	0 (0%)	
<b>What is the age at which the female is interested in knowing her own body and what distinguishes her from the male?</b>			
Before puberty	0 (0%)	5 (25%)	<b>0.001*</b>
After puberty	12 (60%)	15 (75%)	
I don't know	8 (40%)	0 (0%)	

*Effect of Nursing Intervention on Reproductive Health knowledge among Adolescent Females with Educable Intellectual Disabilities*

**Figure 1:** Relationship between communication with parents and girls' information about menstrual hygiene



**Discussion**

Reproductive health care addresses the reproductive processes, functions, and systems at all stages of life. It encompasses the reproductive health of both men and women, as well as maternal and child health. Reproductive health includes issues of adolescent sexual development, sexual orientation, sexual behaviors, pregnancies, and, if indicated,

contraception (Wolgemuth et al., 2021).

In general, the needs of adolescent with disabilities are less likely to be met in developing countries. Still, developed countries also continue to face significant challenges, particularly as their population's age. adolescents with disabilities have the same sexual and reproductive health



***Effect of Nursing Intervention on Reproductive Health knowledge among Adolescent Females with Educable Intellectual Disabilities***

(SRH) needs as other people. Yet they often face barriers to information and services. The ignorance and attitudes of society and individuals, including health-care providers, raise most of these barriers -- not the disabilities themselves. In fact, existing services usually can be adapted easily to accommodate persons with disabilities. Increasing awareness is the first and biggest step (Magson et al., 2022).

As to the knowledge of the researcher, few studies have been carried out among disabled young people concerning to sexual reproductive health especially in middle east. Also, all researches which carried out in the developed countries had different topics in reproductive health which include if the studied sample had sexual intercourse, types of contraceptive used during their first sexual encounter, unintended pregnancy, history of abortion and use of condom. All of these topics didn't fit with our communities. So, the present study aimed to evaluate of the effect of nursing intervention on reproductive health knowledge for adolescent females with educable intellectual disabilities.

So, the present study aimed to evaluate of the effect of nursing intervention on reproductive health knowledge for adolescent females with educable intellectual disabilities. The findings of the current study succeeded in achieving the hypothesis that was formulated to achieve the purpose of the study.

A study was carried out by Abdul-Aziz Seidu et al., 2020 to assess the challenges young people with disabilities (YPWD) s face in accessing sexual and reproductive health services (SRHS) in Ghana. Sample of the 2127 respondents, more than half were males and the

rest were females. The highest proportion of the respondents were aged 15–19.

Also in agreement with Sabra et al., 2019 who conducted a study about “Effect of Health Educational Program for Females Blinded Adolescents Students regarding Reproductive Health” in El-Nor and El- Amal School Elfayoum City& Benisuef City.. The results showed that the age of them between 12 -14 years old (36.6%).

### **Conclusions**

In the light of the present study results, it can be concluded that adolescent females with educable intellectual disabilities showed a significant improvement after nursing intervention regarding information about the female reproductive system, puberty, menstruation, menstruation symptoms, hygiene, family planning methods and contraceptive and types of contraceptives compared to before nursing intervention.

Based on the findings of the current study succeeded in achieving the hypothesis that was formulated to achieve the purpose of the study.

### **Recommendations**

Based on the findings of the present study, the following recommendations are suggested:

Continues health education programs should be implemented for increasing awareness of adolescents with intellectual disabilities about reproductive health and further studies should be conducted in reproductive health care needs of adolescents with disabilities

### **References**

Curtis B, Geagan J. 2016. Disability Inclusion Among Refugees in the Middle East and North

*Effect of Nursing Intervention on Reproductive Health knowledge among  
Adolescent Females with Educable Intellectual Disabilities*

- Africa - A Needs Assessment of Libya, Egypt, Yemen, Jordan, and Turkey. Arab Forum for the Rights of Persons with Disabilities (AFPRD).  
<http://www.disabledpeoplesinternational.org/documents/DPO-Report-FINAL.pdf>
- Smeltzer, S., (2013): Improving Health and Wellness of People with Disabilities. International Encyclopedia of Rehabilitation. Available online: <http://cirrie.buffalo.edu/encyclopedia/en/article/300/>
- WHO, (2009): Promoting sexual and reproductive health for persons with disabilities: WHO/UNFPA guidance note. Geneva: available at [http://whqlibdoc.who.int/publications/2009/9789241598682\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241598682_eng.pdf). Accessed June 30, 2010 .
- WHO, (2013): Adolescent health. available at [http://www.who.int/topics/adolescent\\_health/en](http://www.who.int/topics/adolescent_health/en).
- UNICEF, (2012): Fast facts on Adolescents and Youth in Latin America and the Caribbean. Consulted on March 18, 2012. Available at [www.unicef.org/media/files/Fast\\_facts](http://www.unicef.org/media/files/Fast_facts).
- USAID (2001): Population report 29 (3):2-33. Available at <http://www.usaid.gov>.
- WHO, (2009): Promoting sexual and reproductive health for persons with disabilities: WHO/UNFPA guidance note. Geneva: available at [http://whqlibdoc.who.int/publications/2009/9789241598682\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241598682_eng.pdf). Accessed June 30, 2010 .
- Bond Disability and Development group (DDG). (2017). Stigma, disability and development. Bond.  
[https://www.bond.org.uk/sites/default/files/resourcedocuments/stigma\\_disability\\_and\\_development.pdf](https://www.bond.org.uk/sites/default/files/resourcedocuments/stigma_disability_and_development.pdf)
- TARSHI, 2014: sexuality And disability in the Indian context. Available at <http://www.tarshi.net>.
- National Association of County and City Health Officials. (2014). National assessment of the knowledge, awareness, and inclusion of people with disabilities in local health departments' public health practices. Retrieved Feb. 17, 2015, from <http://eweb.naccho.org/prd/?na631pd>
- Havercamp, S. M., & Scott, H. M. (2015). National health surveillance of adults with disabilities, adults with intellectual and developmental disabilities, and adults with no disabilities. *Disability and Health Journal*, 8(2), 165-172. Retrieved May 15,
- Egypt Demographic Health Survey, 2018: Egypt Demographic and Health Survey, 2018 .Cairo, Egypt and Rockville, Maryland, USA: Ministry of Health and FPopulation and ICF International from <http://www.dhsprogram.com>.
- Wolgemuth, T., Stransky, O. M., Chodoff, A., Kazmerski, T. M., Clowse, M. E. & Birru Talabi, M. 2021. Exploring the Preferences of Women Regarding Sexual and Reproductive Health Care in the Context of Rheumatology: A Qualitative Study. *Arthritis care & research*, 73, 1194-1200.

***Effect of Nursing Intervention on Reproductive Health knowledge among  
Adolescent Females with Educable Intellectual Disabilities***

- Magson, N. R., van Zalk, N., Mörtberg, E., Chard, I., Tillfors, M. & Rapee, R. M. 2022. Latent Stability and Change in Subgroups of Social Anxiety and Depressive Symptoms in Adolescence: A Latent Profile and Transitional Analysis. *Journal of Anxiety Disorders*, 102537.
- Mollaioli, D., Sansone, A., Ciocca, G., Limoncin, E., Colonnello, E., Di Lorenzo, G., et al. 2021. Benefits of sexual activity on psychological, relational, and sexual health during the COVID-19 breakout. *The journal of sexual medicine*, 18, 35-49.
- Osman et al., 2014. Educational Program About Reproductive Health for Blind and Deaf Adolescent Girls in Assiut Governorate. *Assiut Scientific Nursing Journal*, 2, 57-67.
- Abdul-Aziz Seidu et al., 2020 Factors Contributing to Challenges in Accessing Sexual and Reproductive Health Services Among Young People with Disabilities in Ghana. *Global Social Welfare*  
<https://doi.org/10.1007/s40609-020-00169-1>.
- Sabra et al., 2019 Effect of Health Educational Program for Females Blinded Adolescents Students regarding Reproductive Health *Egyptian Journal of Health Care*, 2019 EJHC Vol.10 No.1.