Effect of Educational Program on Family Communication for Nurses At Maternal and Child Health Centers in Tanta City

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Abstract: *Family communication is the cornerstone to attain a healthy, happy, and harmony family. Nurses` families face challenges related to their workload and hours, so they need effective family communication to have ongoing family functioning.* **Aim of the study:** *to evaluate the effect of educational program on family communication for nurses at Maternal and Child Health centers in Tanta city.* **Material and Methods: Research design:** *an experimental research design was utilized in this study.* **Study setting:** *The study was conducted at all Maternal and Child Health centers (n=5) and the two Medical centers affiliated to Ministry of Health in Tanta city, El-Gharbyia governorate.* **Subjects:** *All available nurses working at the previously mentioned settings were included in the study. They were randomly divided into two equal groups according to the working setting.* **Tools:** *An interview schedule was used to collect data and for evaluation, it consisted of four assessment tools as follows; Tool I: Socio-demographic and environmental data. Tool II: Family communication. Tool III: Gratitude among family members. Tool IV: Family Health, Happiness and Harmony (3Hs) scale. They were used three times during the study period; before the program, immediate, and three months post program.* **Results:** *before implementation of the program the study and control groups showed poor family communication. Immediately and three months after implementation of the program, the study group reported significant increase in the average time of communication /chat with family members per day and time to communicate with family members than the control group with a statistically significant difference between the two groups.* **Conclusion and recommendations:** *the educational program improved nurses' family communication. Therefore, maternal and child health centers should encourage nurses using workplace to give classes on family communication skills to improve family mental health. Advice couples to use effective communication skills during family mealtime in order to provide a role model for their kids about healthy eating and transmit the values of the family from one generation to the next.*
Key wards: *family communication, healthy, happy, harmony family, and Maternal and Child Health centers (MCH).*

I. Introduction

Family is the cornerstone of society. It provides physical and psychological support, comfort, and shelter to its members. A satisfactory family relationship based on effective communication can enhance its social harmony and stability. Intimate interaction is closely related to family health, happiness and harmony (3Hs). Under rapid socioeconomic transition, family structure, function, values and relationships has been changed and traditional extended families are gradually being replaced by nuclear families [1-3].

Work has an important role in individuals' social lives. It provides the support of a regular income, opportunities for personal growth, social identity and self-esteem. However, work may has consequences on the worker's health [4]. Owning to economic hardship and a work-centric culture, it is common for nurses to work long hours. More than 25% of the working nurses have to work at least 50 hours per week, these working hours may be at the morning shift, afternoon, or even at evening. Therefore, time spent with their family members is reduced, consequently, they do not spend sufficient time on family communication [5]. Previous studies have demonstrated that long working hours affect parent-child interaction and aggravate work-family conflicts. Therefore, families are exposed to high incidence of family problems, such as child abuse and domestic violence [6-8].

According to the Social Development Index (SDI-2012) in Hong Kong, the incidence of family violence and child abuse has tripled in the past 10 years. The reported domestic violence cases per 100,000 households increased from 52.6 in 2000 to 143 in 2010, and child abuse cases increased from 36.2 in 2000 to 90.7 in 2010 per 100,000 households[9].

In Egypt as well according to Egypt Demographic and Health Survey (EDHS-2014), there were more than three-quarters of the children (age 0-14 years) disciplined in a violent way, such as screaming at the child or administering some type of physical punishment and more than two-thirds of the respondents reported cases are domestic violence [10].

Therefore, nurses' families are at risk of breaking down and are facing great challenges in upholding their family functioning and wellbeing. Under these circumstances, persistent effort is needed to sustain healthy nurses` family relations and family functioning [11]. Effective family communication, family time and routines are common protective factors across the family life cycle. Family communication is a way to allow family members to understand and to show love, care and concern for each other. Meal time was considered as a perfect time for family communication as the family is generally gathered at that time [12].

Community health nurses play an important role in maintaining family mental health enhancement as they apply the principles of teaching and learning to promote positive health action to facilitate behavior change [13]. Community health nurses can be instrumental in educating the public about family mental health as a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and increasing the ability to adapt to change and to cope with diversity. Family mental health is essential for personal and family well-being, interpersonal relationships, and contribution to community or society. It can be done through family communication as it is the cornerstone in maintaining healthy family relationships and family identity across generations [14].

Considering the importance of positive family communication in family relationships and the growing trend of poor family communication in nurses` families, educational programs were thought to employ gratitude expression practice to promote family communication through happy family meal-time [15,16]. Gratitude as a kind of positive emotion was adopted for this intervention study. It is conceptualized as a virtue or as an emotional state that involves an interpersonal connection between the benefactor and recipient. It could be expressed through gratefulness, thankfulness and appreciation. Therefore, the study focus was on 'eat with gratitude and praise' to enhance family communication among family members [17, 18].

Significance of the study. Nurses working shifts, staffing shortages, as well as challenging work conditions and job stress make nurses prone to experiences of poor family communication with their family members that affect negatively on their work efficiency. So, effective family communication can alleviate excessive work-family conflicts [19, 20]. **For this reason**, the study was conducted to assess the effect of educational program on family communication for nurses at Maternal and Child Health centers in Tanta city.

Aim of the study: The aim of the study was to evaluate the effect of educational program on family communication for nurses at Maternal and Child Health centers in Tanta city.

II. Material and method

Research design: An experimental research design was utilized in this study.

Setting: The study was conducted at all Maternal and Child Health centers (n=5) and the two Medical centers affiliated to Ministry of Health in Tanta city, El-Gharbiya governorate.

Subjects: All available nurses working at the previously mentioned settings (n=150) were included in the study. Pilot study was done on 20 nurses of them working at Tanta Awal at El-Shrouk and Tanta Rabae at Kohafa. The rest 130 were included in the actual study. They were randomly divided into two equal groups according to working setting. Centers were given serial numbers; odd numbers were for the study group, and even numbers for the control group, each group 65. The study group included nurses working at Medical center at Siger and Tanta Thalith at EL-Azharia. The control group included nurses working at Medical center at Said, Tanta Tanie at EL-Embaby and Tanta Khames at El-Agizy.

Tools of the study: An interview schedule was used to collect the necessary data. The interview questionnaire included the following four tools:-

Tool I: - Socio-demographic and environmental data:
The aim of this tool was to assess the nurses' socioeconomic levels. It was developed by **Fahmy and El-Sherbini (2008)** [21]. It consisted of two parts:
• **Part (1): Socio-demographic data**: included data about nurses' age, marital status, education, residence, family type, income, family size, number of children, and husband's education and occupation.

- **Part (2): Environmental data:** included housing condition as number of rooms, availability of sanitary water supply, ventilation and the presence of sewage and refuse disposal system**.**

The total score of socioeconomic level according to **Fahmy and El-Sherbini (2008)** [21] was (46). The socioeconomic levels were classified as follows:-

- Low Social Level   < 50%   (< 23)
- Low Middle Social Level   50 - < 75 %   (23 - < 34.5)
- High Middle Social Level   75 -< 85 %   (34.5- < 39)
- High Social Level   85 - 100%   (39 - 46)

Tool II: - Family communication:

This tool was used to assess the family communication. It was developed by Esther L., (2013) [22]. It consisted of two parts:

- **Part (1): Family communication frequency and family dinning pattern.**

This part was used to assess the frequency and average time spent on family communication and family dining. It consisted of six questions related to family`s average time spent on dinning, communication during dinning, and cooperation with family to prepare dinning/meals. Two of these six questions had response options. One question asked respondents about the time spent on family communication and had options of very adequate, adequate, fair, not adequate, and not adequate at all. The Likert type responses were 1:5 respectively. The other question asked respondents to quantify the average time spent on family communication during dinning in the past seven days and had options of most of the time, half of the time, a little of the time, no chatting at all and had not dined together. The Likert type responses were 1:5 respectively.

- **Part (2): Family Adaptability and Cohesion Evaluation Scales (FACES).**

It was used to assess nurses` agreement on the usage of positive family communication skills in their families. It consisted of 10-items that cover the extent to which degree the nurses were satisfied with the way they communicate, express affection, discuss their ideas and beliefs, and express their true feelings to their family members. Responses were rated **on a five-point Likert-type scale** and ranged from (1= strongly disagree to 5= strongly agree). The total score of the scale ranged from 10-50. This score was converted into a percent score, and classified into three categories:-
- Poor family communication < 50 % of the total family communication score.
- Satisfied family communication 50-70 % of the total family communication score.
- Good family communication > 70 % of the total family communication score.

Tool III: - Gratitude among family members:

The aim of this tool was to assess nurses` gratitude expression practice and dispositional experience of gratitude among their families. Esther L., (2013), developed it [22]. It consists of two parts:

- **Part (1): Gratitude expression practice (praise) scale.**

This scale was used to quantify gratitude expression practice of nurses among their family members in the past seven days. It consisted of five questions related to expression of critique, thanks, appreciation to family members, and provision of positive suggestions. It is a 5 Likert scale. The responses were rated always (5 points), often (4 points), sometimes (3 points), rarely (2 points), and never (1 point). The total score of the scale ranged from 5-25. This score was converted into a percent score, and classified into two categories:

- Poor gratitude expression practice (praise) < 60 % of the total gratitude expression practice score.
- Good gratitude expression practice (praise) ≥ 60 % of the total gratitude expression practice score.

- **Part (2): Gratitude questionnaire form scale.**

This scale is the most widely used scale for assessing the dispositional experience of gratitude. It is a scale consisted of 6 items that assess the respondents' response on five-point Likert-type scale (1 = strong disagree and 5 = strong agree). The total score of the scale was ranged from 6- 30. This score was converted into a percent score, and classified into three categories:-
- Poor feeling of gratefulness < 50 % of the total gratitude score.
- Satisfied feeling of gratefulness 50-70 % of the total gratitude score.
- Good feeling of gratefulness > 70 % of the total gratitude score.

Tool IV: - Family health, happiness and harmony (3Hs) scale:
   This tool is to assess family health, happiness and harmony (3Hs). It was developed by Esther L., (2013) [22]. It consists of four parts:

• **Part 1:- Nurses` behavior related to family health, happiness and harmony (3Hs).**
   This part was used to assess respondents' behavior in arranging related family activities to promote family health, happiness and harmony (3Hs). It consisted of eleven common family activities that listed with binary responses (2= Yes and 1= No). These activities included enjoying fresh fruits and vegetables with family, chatting with the family, doing exercise with the family, sharing happy experience with the family, and criticizing family member less often. Respondents indicated if they had carried out any of these specified family activities with their family members in the past seven days

• **Part 2:- The Family Harmony Scale (FHS).**
  The aim of this part was used to assess agreement of respondents on family harmony. It consisted of 8 items that cover the extent to which degree the family gets along well, nurses were happy to live with their family members together, the family was harmonious, and family`s day to day interactions were peaceful. It was assessed with a five-point Likert-type scale, ranged from (1= strongly disagree to 5= strongly agree). The total score of the family harmony ranged from 8 to 40. This score was converted into a percent score, and classified into three categories:-
• Inharmonious < 50 % of the total family harmony score.
• Harmonious 50-70 % of the total family harmony score.
• Very harmonious > 70 % of the total family harmony score

• **Part 3:- The Subjective Happiness Scale (SHS).**
   This part was used to assess the extent of overall subjective happiness among respondents. It consisted of 4-items and assessed with a seven-point Likert-type scale. The researcher adapted it to only five-point Likert-type scale rated from 1 to 5. The total score of the scale ranged from 4 - 20. This score was converted into a percent score, and classified into three categories:-
• Not happy < 50 % of the total family happiness score.
• Happy 50-70 % of the total family happiness score.
• Very happy > 70 % of the total family happiness score.

• **Part 4:- Family health Scale.**
   The aim of this part was to assess nurses` self-perception of their own health and family health with a scale rated from (0 = Not Healthy) to (10 = Very Healthy)·

III. Method
The operation of the study was carried out as follows:

(1)- Obtaining approval:
Before conducting the study, a written permission letter was obtained from the Faculty of Nursing –Tanta University and directed to the responsible authorities of Maternal and Child Health centers and medical centers.

(2)- Developing the tools:
   The study tools were adapted by the researcher based on literature review [21, 22]. Then the study tools were translated into Arabic and introduced to jury committee (2 Professors of Community Health Nursing, 2 Professors of Public Health Medicine and 2 Professors of Psychiatric Nursing), before conducting the study to be tested for its face and content validity. Each of these experts gave an average total percentage of their acceptance of the tool. The acceptance varied from 85:100%. The mean test validity was 91.8%.

(3)- The pilot study:
   A pilot study was carried out on 20 female nurses to test the tool for its clarity and organization and to determine the length of time needed to collect the data from each nurse. The necessary modification was done. Those nurses were excluded from the study sample. **To assess reliability**, the study tools were given to the previous 20 female nurses and test re-test was computed and found to be = (0.875).

(4)- Ethical and legal considerations:-
- - An informed consent for participation in the study was obtained from the entire subjects after explanation of the objective of the study.
- - Each participant was informed that she has the right to withdraw from the study any time she want.
- - No harm was introduced to the participants.
- - Keeping privacy and confidentiality of any information obtained from the study subjects.

(5)- Developing the educational program. The following steps were followed to develop the program.
- **Assessment phase**: The data was collected by the previously mentioned tools through interviewing each nurse individually in predetermined setting to collect the baseline data as a pre-intervention assessment.

- **Planning phase:** an educational program was planned according to the nurses` needs obtained from the assessment phase and literature review.

- **Implementation phase:**
  - - The program was totally carried out by the researcher; this is to ensure providing complete, consistent and accurate knowledge about family communication, health, happiness and harmony and gratitude expression practice.
  - - Implementation of the program was carried out at the previously mentioned settings.
  - - The researcher arranged meeting with nurses at MCH centers three days per week from July 2016 until the middle of February 2017.
  - - The program consisted of 5 sessions provided for the study groups. The duration of each session ranged from 30-45 minutes.

The sessions were as follows: the program included (5) sessions, session 1; program orientation and expectation aimed to orient the study participants with the importance of the program. Session 2; overview on the family, its function, and family communication. Session 3; gratitude expression practice which aimed to inform the participants about the gratitude as a reinforce factor to enhance family communication. Session 4; family 3 Hs (Health, Happiness and Harmony) that focused on the importance of positive family communication skills and gratitude expression practice to enhance family health, happiness and harmony. Session 5; Family Mealtime (the happy family kitchen) which orient nurses about the importance of family mealtime for parent-child interaction, and allow the participants to express their gratefulness and praise towards each other.

The researcher used many teaching methods and aids during implementation of the program such as;
interactive lecture, group discussions, role play, and game as (ball and strips) to help participants to acquired communication skills. And a booklet for nurses, power point, video tab presentation, and real materials as; balls, ropes, blindfold, tables were used as teaching aids used in the happy kitchen. Furthermore, real food was used in the happy kitchen as vegetables, cheese sandwiches, tea, and sugar.

- **Evaluation phase:** the aim of this phase was to evaluate the effectiveness of the educational program on family communication for nurses.
  - - Tool (I) was administered individually to both groups at the beginning of the study to collect the baseline data as a pre-intervention assessment.
  - - Tools (II – IV) were administered 2 times for the control group: i.e.; before implementation of the program (pre-test) and three months after (post-test).
  - - Tools (II – IV) were administered 3 times for the study group: : i.e.; before implementation of the program (pre-test), 4 weeks after implementation of the program to allow the participants with enough time to apply the gratitude expression practice program among their family member, and three months after (post-test).

(6)- Statistical analysis:
The collected data were organized, tabulated and statistically analyzed using SPSS software statistical computer package version 20. For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison between the two groups and was done using Chi-square test (X^2). For comparison between means of the two groups, student t-test was used. For comparison between more than two means, the F value of analysis of variance (ANOVA) was calculated, where Schaffer test was performed to compare between each two means if F value was significant. Correlation between variables was evaluated using Pearson's correlation coefficient. Significance was adopted at $p<0.05$ for interpretation of results of tests of significance.

IV. Results
Table (1): Distribution of the studied sample regarding to their socio-demographic characteristics

Socio-demographic characteristics	The studied groups(n=130)				Study vs. Control:	
	The control group (n=65)		The study group (n=65)		X^2	P
	n	%	n	%		
Age in Years:						
20-	2	3.1	4	6.2	1.667	0.197
30-	35	53.9	31	47.7		
40-60	28	43.0	30	46.1		
Range	56-27		56-34			
Mean ±SD	39.37 ±6.86		40.42±7.99			
Marital status:						
Married	55	84.6	59	90.8	1.667	0. 197
Others	10	15.4	6	9.2		
Nurse educational level:						
Diploma of Nursing	38	58.5	38	58.5	0.444	0.505
Technical Institute of Nursing	14	21.5	17	26.2		
Bachelor of Nursing	13	20.0	10	15.3		
Residence:						
Rural	10	15.4	12	18.5	0.222	0.637
Urban	55	84.6	53	81.5		
Family income:						
Not enough	19	29.2	27	41.6		
Enough only	43	66.2	37	56.9	3.125	0.077
Enough and saving	3	4.6	1	1.5		

Table (1) continue

Number of family members:						
≥4	36	55.4	16	24.6		
5	25	38.4	20	30.8	18.689	0.000*
6+	4	6.2	29	44.6		
Number of house rooms:						
1-2	18	27.7	10	15.4	2.189	0.139
3+	47	72.3	55	84.6		
Crowding index:						
1-	14	21.5	20	30.8	5.765	0.016*
2-	40	61.5	45	69.2		
3-6	11	17	0	0		

Number of children			(n=57)			
1-2	44	67.7	20	35.1	4.412	0.036*
3-4	21	32.3	37	64.9		
Types of family:				72.3		
Nuclear family	56	86.2	47	20.0		
Single parents family	3		13	7.7	5.538	0.019*
Extended family	6	4.6	5			
		9.2				

Table (1) continue

Husband education:	(N=56)		(N=60)			
Illiterates / Read and write	4	7.2	4	6.7		
Elementary education	7	12.6	12	20	0.925	0.336
Secondary education	30	53.5	18	30		
University education +	15	26.7	26	43.3		
Husband occupation:	(n=56)		(n=60)			
Working	52	92.8	54	90	2.333	0.127
Not working	4	7.2	6	10		

*Significant (P<0.05)

Table (1) Distribution of the studied sample regarding to their socio-demographic characteristics. The table reveals that the mean age of study group was 40.42 years $\pm$7.99, while the mean age of the control group was 39.37 years $\pm$6.86. The majority of the study group and control groups (90.8% and 84.6 % respectively) were married.

As regard to the educational level, 58.5 % of both groups had diploma of nursing, while 81.5% and 84.6 % of the study and control groups respectively were from urban areas. As regard to the family income, more than half (56.9%) of the study group mentioned that their income was enough, compared with (66.2%) of the control group. Less than one half (44.6%) of the study group belonged to families that composed of 6 members or more, while 55.4% of the control group belonged to families that composed of 4 members or less. Concerning the number of house rooms, most of the study and control groups (84.6% and 72.3% respectively) their houses consisted of 3 rooms or more.

In relation to crowding index, the same table reveals that, 69.2% of the study group, compared to 61.5% of the control group their crowding index was 2 to less than 3 rooms. Regarding the number of children, 35.1% of the study group reported that they had 1-2 children, compared with 67.7% of the control group. In addition, 72.3% of the study group and 86.2% of the control group belonged to nuclear families. Concerning the husbands` education, 30% of the study group and 53.5% of the control their husbands` had secondary education. The majority (90% and 92.8%) of husbands of the study and control group respectively were working.

It was also observed that, there was a statistical significant difference between the two groups in relation to their number of family members (X^2 =18.689), crowding index (X^2 =5.765), number of children (X^2 =4.412),and types of family (X^2 =5.538) ,(p> 0.05).

Table (2): Distribution of the studied nurses in relation to family communication frequency through-out the study phases

Variables	The studied groups(n=130)												Study vs Control: X^2 P	
	The control group (n=65)					The study group (n=65)								
	Pre		3monthes post		X^2 P	pre		Immediate post		3months post		X^2 P	pre	3months post
	N	%	N	%		N	%	N	%	N	%			
In the past 7 days, communication /chat with family members on average per day. (minutes)														
(minutes)														
15-30	29	44.6	39	60	0.2778 0.096	40	61.5	0	0	0	0	101.706 0.000*	9.308 0.002*	64.000 0.000*
120-30<	33	50.8	24	37		19	29.2	26	40	28	43			
350-120<	3	4.6	2	3		6	9.2	39	60	37	57			
Time to communicate with family members.														
Very adequate /☐ Adequate	4	6.1	2	3.1	0.182 0.670	5	7.7	65	100	56	86.1	110.411 0.000*	0.615 0.433	59.000 0.000*
Fair	11	17	17	26.2		17	26.2	0	0	9	13.8			
Not adequate/ Not adequate at all	50	76.9	46	70.8		43	66.2	0	0	0	0			
*Significant (P<0.05)														

*Significant (P<0.05)

Table (2) Distribution of the studied nurses in relation to the family communication frequency through-out the study phases. The table demonstrates that the study group reported significant increase in the average time of communication /chat with family members per day throughout the study phases than the control group with a statistically significant difference between the two groups three months post program ($X^2 = 64.000$ & p = 0.000). Regarding the time to communicate with the family members, the table illustrates that, three months post program 86.1% of the study group reported that they had very adequate time /adequate time to communicate with the family members compared to only 3.1% of the control group with a statistically significant difference between the two groups ($X^2 = 59.000$ & p=0.000).

Table (3): Distribution of the studied nurses in relation to their total score of Family Adaptability and Cohesion Evaluation Scale (FACESIV) through-out the study phases

Total score of Family Adaptability and Cohesion Evaluation Scale (FACESIV)	The studied groups(n=130)												Study vs. Control: X^2 P	
	The control group (n=65)					The study group (n=65)								
	Pre		3months post		X^2 P	pre		Immediate post		3months post		X^2 P	pre	3months post
	N	%	N	%		N	%	N	%	N	%			
Poor < 50 %	7	10.8	12	18.5	1.400 0.237	26	40	0	0	0	0	109.451 0.000*	14.535 0.000*	53.000 0.000*
Satisfied 50-70 %	39	60	42	64.6		31	47.7	1	1.5	1	1.5			
Good > 70 %	19	29.2	11	16.9		8	12.3	64	98.5	64	98.5			
Mean± SD	31.75 ±5.492		29.03± 4.667		F-test P Scheffe test 9.280 0.003*	27.20± 4.954		39.48 ±2.319		38.98±2.939		F-test P Scheffe test 244.315 0.000*	Study versus Control group: t-test P	
													4.964 0.347*	14.550 0.000*

*Significant (P<0.05)

Table (3) Distribution of the studied nurses in relation to their total score of Family Adaptability and Cohesion Evaluation Scale (FACES) through-out the study phases. The table shows that the number of nurses of the study group who reported good score of Family Adaptability and Cohesion Evaluation Scale improved significantly throughout the study (pre=12.3%, immediate=98.5%, and three months post program=98.5%) .

furthermore, the study group had a higher mean scores of Family Adaptability and Cohesion Evaluation Scale than the control group three months post program (38.98±2.939 and 29.03± 4.667 respectively), with a significant difference between the two groups (t = 14.550).

Table (4): Distribution of the studied nurses in relation to their total score of gratitude expression practice (praise) through-out the study phases

Gratitude expression practice (praise).	The studied groups(n=130)												Study vs. Control: X² P	
	The control group (n=65)					The study group (n=65)								
	Pre		3months post		X² P	pre		Immediate post		3months post		X² P	pre	3months post
	N	%	N	%		N	%	N	%	N	%			
Poor < 60 %	23	35.4	29	44.6	1.286 0.257	24	36.9	1	1.5	2	3.1	39.000 0.000*	0.037 0.847	23.516 0.000*
Good ≥ 60 %	42	64.6	36	55.4		41	63.1	64	98.5	63	96.9			
Mean± SD	16.94±2.645		16.32±2.399		F-test P Scheffe test 0.073 0.788	16.49±3.006		19.94±2.030		19.69±1.936		F-test P Scheffe test 133.001 0.000*	Study versus Control group: t-test P 1.496 0.786	11.956 0.002*

*Significant (P<0.05)

Table (4) Distribution of the studied nurses in relation to their total score of gratitude expression practice through-out the study phases. The table shows that preprogram the two groups had the similar scores of the gratitude expression practice. While, the number of the nurses of the study group who reported good gratitude expression practice improved throughout the study (pre= 63.1%, immediate= 98.5%, and three month post program= 96.9%), with a statistically significant difference between the two groups three months post program (X² = 23.516 & p > 0.05). There were also significant difference between the mean scores of gratitude expression practice of the study group and the control group three months post program (t = 11.956).

Table (5): Distribution of the studied nurses in relation to their total score on feeling of gratefulness through-out the study phases

Feeling of gratefulness	The studied groups(n=130)												Study vs. Control: X² P	
	The control group (n=65)					The study group (n=65)								
	Pre		3months post		X² P	pre		Immediate post		3months post		X² P	pre	3months post
	N	%	N	%		N	%	N	%	N	%			
Poor < 50 %	10	15.4	5	7.7	0.500 0.480	8	12.3	0	0	0	0	99.546 0.000*	4.923 0.027*	49.000 0.000*
Satisfied 50-70%	42	64.6	47	72.3		46	70.8	2	3.1	3	4.6			
Good < 70 %	13	20	13	20		11	16.9	63	96.9	62	95.4			
Mean± SD	19.35±3.529		19.51±2.943		F-test P Scheffe test 1.931 0.167	18.42±3.622		24.95±1.643		25.09 ±2.350		F-test P Scheffe test 42.638 0.000*	Study versus Control group: t-test P 0.898 0.371	8.813 0.000*

*Significant (P<0.05)

Table (5) Distribution of the studied nurses in relation to their total score on feeling of gratefulness through-out the study phases. It shows that, preprogram the two groups had the similar scores of gratefulness. The number of the nurses of the study group who reported good feeling of gratefulness improved throughout the study period (pre= 16.9%, immediate= 96.9%, and three months post program= 95.4%), with a statistically significant difference between the two groups three months post program ($X^2 = 49.00$ & $p > 0.05$). The study group had a higher mean score of feeling of gratefulness than the control group three months post program (25.09 ±2.350 and 19.51±2.943 respectively), with a significant difference between the two groups (t = 8.813).

Table (6): Distribution of the studied nurses in relation to their total score of Family Harmony Scale (FHS) through-out the study phases

Family Harmony	The studied groups(n=130)													Study vs Control: X^2 P	
	The control group (n=65)					The study group (n=65)							X^2 P	pre	3months post
	Pre		3months post		X^2 P	pre		Immediate post		3months post					
	N	%	N	%		N	%	N	%	N	%				
Inharmonious < 50 %	7	10.8	15	23.1	0.444 0.505	2	3.1	0	0	0	0		68.634 0.000*	1.059 0.303	37.356 0.000*
Harmonious 50-70 %	35	53.8	28	43.1		37	56.9	1	1.5	2	3.1				
Very harmonious < 70 %	23	35.4	22	33.8		26	40	64	98.5	63	96.9				
Mean± SD	27.03±5.568		9.60±1.886		F-test P Schaffer test 3.928 0.050*	26.82±4.687		32.03±2.143		31.85±2.300			F-test P Schaffer test 53.621 0.000*	Study versus Control group: t-test P	
														0.239 0.561	9.121 0.000*

*Significant (P<0.05)

Table (6) Distribution of the studied nurses in relation to their total score of Family Harmony Scale (FHS). The table shows that there were significant improvements in the mean score of Family Harmony Scale (FHS) among the study group throughout the study period than the control group. The study group had a higher mean scores of Family Harmony Scale (FHS) than the control group three month post program (31.85±2.300 and 9.60±1.886 respectively), with a significant difference between the two groups (t = 9.121).

Table (7): Distribution of the studied nurses in relation to their total score on the Subjective Happiness Scale (SHS) through-out the study phases

Family Happiness	The studied groups(n=130)													Study vs. Control: X^2 P	
	The control group (n=65)					The study group (n=65)							X^2 P	pre	3months post
	Pre		3months post		X^2 P	pre		Immediate post		3months post					
	N	%	N	%		N	%	N	%	N	%				
Not happy < 50 %	33	50.8	35	53.8	0.029 0.866	33	50.8	7	10.8	10	15.4		22.585 0.000*	0.027 0.869	14.297 0.000*
Happy 50-70 %	31	47.7	27	41.5		28	43.1	57	87.7	54	83.1				
Very happy < 70 %	1	1.5	3	4.6		4	6.2	1	1.5	1	1.5				
Mean± SD	9.60±1.886		9.77±1.975		F-test P Scheffe test 0.250 0.618	9.98±2.147		11.22±1.431		11.14±1.629			F-test P Scheffe test 9.958 0.000*	Study versus Control group: t-test P	
														1.085 0.449	4.313 0.048*

*Significant (P<0.05)

Table (7) Distribution of the studied nurses in relation to their total score on Subjective Happiness Scale (SHS) through-out the study phases. The table shows that the number of nurses of the study group who reported happy family improved throughout the study period (pre= 43.1%, immediate= 87.7%, and three month post program= 83.1%), with a statistically significant difference between the two groups three months post program ($X^2 = 14.297$ & $p > 0.05$). There were also significant differences between the mean scores of the study and the control groups three months post program (11.14±1.629 and 9.77±1.975 respectively) (t = 4.313).

Table (8): Correlation between the Family Harmony, The Subjective Happiness, and nurse and family health scores of the studied nurses and their Family Adaptability and Cohesion Evaluation Scales (FACES) score 3 months post-test.

Variables	The control group	The study group
	Total FACES score	Total FACES score
	r P	r P
The Family Harmony score	0.688 0.000*	0.259 0.038*
The Subjective Happiness score	0.033 0.794	0.033 0.794
Nurse health score	0.005 0.969	0.473 0.000*
Family health score	0.073 0.562	0.414 0.001*

*Significant (P<0.05) r=Correlation coefficient

Table (8) Correlation between the Family Harmony, the Subjective Happiness, nurse and family health scores of the studied nurses and their Family Adaptability and Cohesion Evaluation Scales (FACES) score 3 months post-test. The table illustrates that, there was a positive correlation between Family Adaptability and Cohesion Evaluation Scales (FACES) score of the study group and their family harmony score (p=0.038), their subjective health score (p=0.000), and their subjective family health score (p=0.001), 3 months post-test.

V. Discussion

All communities seek for mental health and happiness for their members. To achieve this goal, the effective factors have to be identified, as much as possible. One of these factors is enhancing family health and the communications among its members. Family is a unique texture for helping the adjustment of mental health, and the most important environment that contributes to physical and mental health of its members. The ways of family communications and the methods in which the family members express their ideas and feelings are considered one of the most significant factors that influence the mental and physical health of family members [23, 24].

Family communication, family time and routines are common protective factors across the family life cycle. Family communication is a way to allow family members to understand how to show love, care and concern for each other [25]. Considering, the importance of positive family communication in family relationships and the growing trend of poor family communication in nurses` families, the present study aimed to assess the effect of educational program on family communication for nurses at Maternal and Child Health centers in Tanta city.

Achieving the improvement in family communication is an extremely difficult task for most nurses because of the nature of the work stress that lead to work-family conflict. Effective family communication requires spending time to communicate with family members each other. This study revealed that, preprogram the two (study and control) groups showed decrease in family communication frequency. This was evidenced by low average time of communication /chat with family members and time to communicate with family members.

This results may be due to effect of long working hours, daily home requirements and the miss use of technological communication as smart phone, face book, and whatsapp that are widely spread nowadays among all families. Immediately and three months after applying the program, the study group reported significant increase in the average time of communication /chat with family members per day and time to communicate with family members than the control group with a statistically significant difference between the two groups. This result may be due to increase in the awareness of study group about the importance of effective family communication in maintaining a healthy family through the practice sessions of the educational program that had been applied with them. The program offered a planned practice activity with them aimed to use effective communication skills to attain a healthy family communication.

This result is in agreement with the result of **Esther L.,** (2013) [22], who applied a happy family kitchen program on Chinese family in Hong Kong and reported that, preprogram the study and control groups showed decrease in the average time of communication with family members and the time to communicate with family members. Immediately and three months after applying the program, the study group reported significant increase

in the average time of communication with family members per day and time to communicate with family members than the control group.

As regards to, the total score of Family Adaptability and Cohesion Evaluation Scale (FACES), it was observed that the number of nurses of the study group who reported good score improved significantly throughout the study than the control group, with statistically differences between the two groups (pre and three months post program). Along with this finding a study conducted by **Lindley,** (2015) [26], assessed the effect of using positive communication skills in improving family communication in Minneapolis families in United States. It revealed that there were significant improvement in the number of respondents who gained good score of Family Adaptability and Cohesion Evaluation Scale among the study group than the control group after applying the educational program to improve family communication, which was attributed to the effectiveness of the program and awareness of the study group of importance to improve family communication.

There was also a positive correlation between the studied nurses` score on the gratitude expression practice, and their gratitude feeling score and their score on Family Adaptability and Cohesion Evaluation 3 months post-test. This showed the importance of gratitude intervention program as a reinforcer to enhance the family communication. This result is in agreement with the result of Gordon et al., (2013) (27), who conducted a study to assess the effect of gratitude expression practice in improving family communication in Spain, and reported that, there was also a positive correlation between respondents` score on the gratitude expression practice, gratitude feeling and Family Adaptability and Cohesion Evaluation 3 months post-test after applying of educational program to improve the family communication.

Family has a major role in maintaining health, harmony, and happiness of its members. It provides them with healthy, safety, and security. In a family, if every person's needs are being met, the family will be functioning well and in harmony with one another. Good family communication is an effective factors in achieving this role. Family communication perceived as a key factor in maintaining family health, harmony, and happiness of the members (23, 24). In addition, the present study illustrated that, the study group had a significant improvement in the mean score of assessment of their families' health immediate and 3 months post intervention. This could be attributed to the effect of the program which enhanced regular meetings at meal time that permit positive family role model, educating about the type of healthy food consumption, eating fresh vegetables, and practicing exercise which was transmitted to family members. This result is similar to findings of **Richman et al.,** (2012) [28], who assess the effect of using communication skills in improving family communication of Chinese family in China, and reported the positive change could be due to the protective role of positive emotions of programs on health, happiness and harmony of the family members.

In addition, it was observed that the number of nurses of the study group who reported very harmony family increased three months post program than the control group with a statistically significant difference between the two groups three months post program. This result is in agreement with the result of **Lee et al.,** (2013) [29], who conducted a study to assess the effect of health education program to improve Chinese family harmony in Hong Kong using the Family Harmony Scale (FHS) to assess the agreement of respondents on family harmony, and reported a significant improvement in family harmony. This results may be due to the nature of the tradition of the Chinese society that consider positive family communication as a key factor to achieve harmony, heath, and hipness among family members which can be reflected as a good mental and physical health to the community.

Concerning the responses of the studied nurses in relation to their total score on Subjective Happiness Scale (SHS) through-out the study phases, it was found that the number of nurses of the study group who reported happy family increased immediate and 3 months post intervention with a statistically significant difference between the two groups three months post program. This result is in agreement with the result of **Esther L.,** (2013) [22], who applied a happy family kitchen program on Chinese family in Hong Kong considering the importance of positive family communication, and reported that the number of the study group who reported happy family improved throughout immediate and 3 months post program with a statistically significant difference between the study and control groups three months post program.

Furthermore, one of the most important factors that act as key factor to have a happy family is to eat meals together. This is considered so hard to do in today's society. However, it was reported that communication within a family is enhanced if taking more meals together, even if it's in front of the TV [26]. In this context, the result of this study showed that there was a positive correlation between nurses' responses on Family Adaptability and Cohesion Evaluation score of the study group and their family harmony score, subjective health perception score, and subjective family health perception score, 3 months post-test.

This correlation is clarifying that nurses in the study group got benefit from the family communication practical experience with each other which intern improve their family harmony, own health, and their family health. Along with this finding a study conducted by **Lindley et al.,** (2015) [26], who assess the effect of educational program on family communication among families in New York, and reported that a positive correlation between the score of the study group on Family Adaptability and Cohesion Evaluation Scales and their family harmony

score, own health, and their family health, 3 months post-test after applying of the educational program. This result showed the importance of positive family communication skills as it perceived as a reinforcing factor in maintaining family health, harmony, and happiness of the family members.

Income is considered one of the important factors affecting family health, happiness, harmony and communication. Family income play an important role in maintaining the stability of family and productivity. The present study illustrated that, there was a positive correlation between Family Adaptability and Cohesion Evaluation score of the nurses` in the study group and their family income. This results may be attributed to that most of the subjects were from the high middle social class and this may decreased the family conflicts related to inadequate income. This findings contradict with, **Olson et al.,** (2006) [30], who studied the effect of using a positive communication skills in improving the family communication in Minneapolis families in United States, and reported that there was no correlation between Family Adaptability and Cohesion Evaluation score of the study group and their family income. This result is supported by the result of **Cohen et al.,** (2008)[31], who used the Family Adaptability and Cohesion Evaluation Scale to study the benefits of enhancing family communication on family happiness, health and harmony among respondents of family in Minneapolis in United States. They found that there was a positive correlation between Family Adaptability and Cohesion Evaluation score of the study group and their family income as it represented a strong relationship with the family happiness. The financial status of the family may act as a buffer and influence perceptions of family happiness with enhancement of family communication.

Continuous effort should be made to help nurses achieving healthy family communication. This can be achieved through the organization and the implementation of family communication support groups within the work settings. Healthy family communication will help nurses attain healthy, harmony and happy family with high quality productivity to the community.

VI. Recommendations
Based on the results of the presents study, the following recommendations are suggested:

- Every couples should struggle to provide a positive role model for their kids about healthy eating and transmit the values and attitudes of the family from one generation to the next through effective communication skills during family mealtime.
- Encourage maternal and child health centers nurses using workplace to give educational program and classes on family communication skills to enhance family mental health.
- Nurses who work outside the home and have intense schedules can use technology and finding a way to keep in touch with their families, and communicate when they cannot physically be with them through smart phone call or message in order to reduce work-family conflict.
- The university curriculum for undergraduate students, should include principles of effective communication that based on the Egyptian culture and tradition, gratitude, and using mealtime to achieve healthy, happy, and harmony family.
- All available mass media as T.V, newspaper, radio, and social media can be utilized to employ gratitude expression practice to promote family communication skills through happy family meal-time focusing on "eat with gratitude and praise" to enhance family communication among family members.

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