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A comparative study of the causes of mortality among women of child bearing age in Mosul city (Al -Salam teaching hospital) interval 2013-2016

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ABSTRACT

Although most of maternal deaths are preventable, maternal mortality reduction programs have not been completely successful. As targeting individuals alone does not seem to be an effective strategy to reduce maternal mortality (Millennium Development Goal 5), the present study sought to reveal the role of many distant macrostructural factors affecting maternal mortality at the global level.

Methods: the methods depended on the files that recorded through 2013-2017.

Results: After preparing a global dataset, 439 indicators were selected from Al-Salam hospital indicators based on their relevance and the application of proper inclusion and exclusion criteria.

Conclusion: There is decreased in the cause women mortality (from 2013 to 2016). Also, there are a high significant (<0.05) between the age, years and the Causes of mortality among women of child bearing age. No significant showed between the mortality and the cause of birth during study years.

Key words: Mortality, Al-salaam hospital, prenatal during labor, post

1- INTRODUCTION

Women die as a result of complications during and following pregnancy and childbirth. Most of these complications develop during pregnancy and most are preventable or treatable. Other complications may exist before pregnancy but are worsened during pregnancy, especially if not managed as part of the woman's care. The major complications that account for nearly 75% of all maternal deaths are (4):

severe bleeding (mostly bleeding after childbirth) infections (usually after childbirth) high blood pressure during pregnancy (pre-eclampsia and eclampsia) complications from delivery unsafe abortion. The remainder are caused by or associated with diseases such as malaria, and AIDS during pregnancy.[1]

Some health indicators are known to reflect not only as the overall status of the health care system, but also various aspects of a country's structure. Maternal mortality is widely accepted as a key indicator of health and socioeconomic development [2]. It is a reflection of the whole national health system and represents the outcome of its cons and pros along with its other characteristics such as intersectoral collaboration, transparency and disparities. Beyond these, it can also illustrate even the sociocultural, political and economic philosophy of a society.

Improving maternal health and reducing maternal mortality ratio (MMR) by 75% between 1990 and 2015 have been defined as the Millennium Development Goal 5 (MDG 5A) [3]. Achieving all MDGs is still a major challenge to the health systems worldwide [4]. Despite the fact that most maternal deaths are preventable, progress in controlling such deaths has not been satisfactory [4]. Therefore, the MDGs cannot be successfully practiced due to data gaps, inconsistent indicators, and frequent revisions [5].
Maternal deaths are still unacceptably high in many low-income countries, where pregnancy and childbirth are high-risk events that constitute major public health challenge [2]. Consequently, concerted efforts have been made, including

long-term goals and programs aimed at improving maternal morbidity and mortality [3] [4]. One of such goals (the 5th Millennium Development Goal (MDG-5)), which aimed at reducing maternal deaths by three-quarters between 1990 and 2015, has been attained by only sixteen countries globally [2]. Notwithstanding, there has been an improvement in reduction of maternal mortality ratios (MMR) globally, with a report indicating 0.3% reduction in the initial five years and 2.7% reduction in the later years of the 15-year MDG span [2]. Great achievement in the MDG-5 target is particularly notable in the south, east, and Southeast Asian countries, while West and Central African regions without exception to Nigeria have made slow progress [2].

The aim of this study was to comparative study of the causes of mortality among women of child bearing age in Mosul city (Al -Salam teaching hospital) interval 2013-2016.

2-MATERNAL MORTALITY MEASUREMENT

Maternal mortality measures were obtained from hospital-specific data sources. Several data inputs on maternal mortality were included in the analysis: the absolute number of maternal deaths; the number of maternal deaths (i.e. the maternal mortality ratio or MMR); and the proportion of deaths among women of reproductive age that are due to maternal causes (PM).[6]

A retrospective study design was utilized with extraction and review of medical records of pregnancy-related deaths in UCTH, from January 2013 to December 2017.

Direct death: Death resulting from obstetriccomplications of the pregnant state (pregnancy, labor and puerperium), from interventions, omissions, incorrect treatment or from a chain of events resulting from anyof the above. [8]Indirect: death resulting from previousexiting disease or disease that developedduring pregnancy and was not to direct obstetric causes, but was aggravated by thephysiological effects of pregnancy. (8)Late death: death occurring between 42days and 1 year after abortion or delivery,due to direct or indirect maternal causes. (8)Coincidental death: death from an unrelated cause which happens to occur inpregnancy or the puerperium. The word "Coincidental " has replaced the term "Fortuitous ". (8)

3- RESULTS AND DISCUSSION

General for years study:

The results for all years can illustrate in the (Table1, Figure 1) that showed77.9% of the mortality among women of child bearing age not refer to the birth.(Table 2, Figure 2) showed the details of the detail's relation between Causes.This result showed there is decreased in the cause women mortality (from 2013 to 2016) and this can illustrate due to the increased in the midwife birth during ISIS war in Mosul City atthese years, this may be due to the insufficient in the hospital data.

Table1: The general Causes of mortality among women of child bearing age

CAUSE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	88	77.9	77.9	77.9
	1.00	25	22.1	22.1	100.0
	Total	113	100.0	100.0	

Table 2: The relation between the mortality during years (2013-2016)

YEAR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2013.00	78	69.0	69.0	69.0
	2014.00	20	17.7	17.7	86.7
	2015.00	8	7.1	7.1	93.8
	2016.00	7	6.2	6.2	100.0
	Total	113	100.0	100.0	

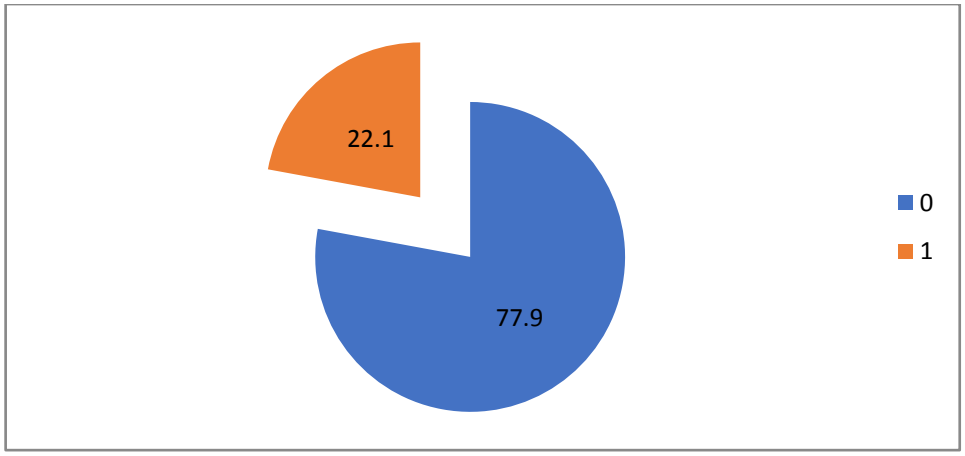

Figure 1: The general percentageCauses of mortality among women of child bearing age during 2013-2016

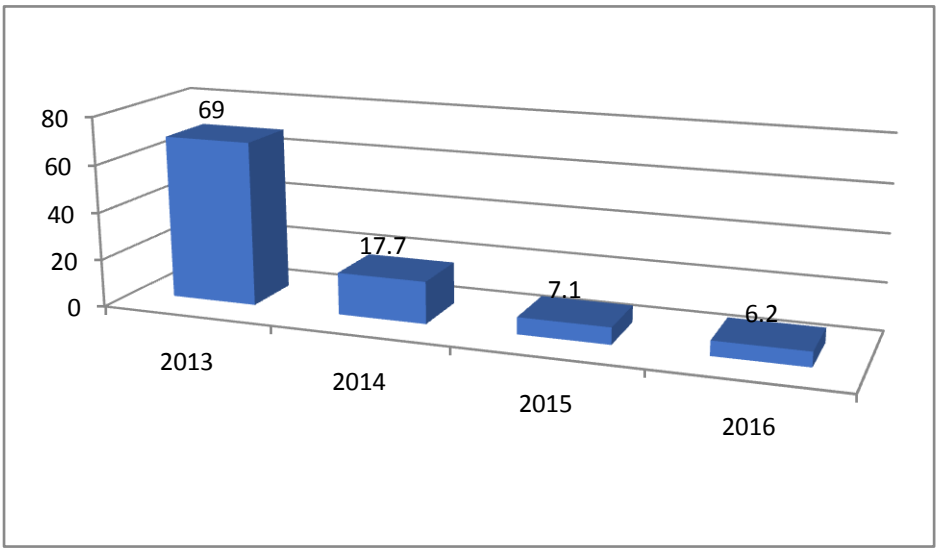

Figure 2: The details relation between Causes of mortality among women of child bearing age during 2013-2016.

Study according to the Bearing age:

(Table 3, Figure3) showed the differences between the mortality percentage during 2013-2016 depending on the bearing age. The diagram showed the high percentage in the 31-40 years (33.6%) (Figure 4). Although this results disagree with the Ann K. Blanc*et.al*[9].which concluded that the largest number of deaths occurs in the age groups from 20-34, largely because those are the ages at which women are most likely to give birth so efforts directed at this group would most effectively reduce the number of deaths. Otherwise they suggest that efforts also be directed toward those most at risk, i.e., older women and adolescents.

Table3: The differences between the bearing age

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	11 - 20	15	13.3	13.3	13.3
	21 - 30	29	25.7	25.7	38.9
	31 - 40	38	33.6	33.6	72.6
	41 - 50	31	27.4	27.4	100.0
	Total	113	100.0	100.0	

Figure 4: showed the difference between the mortality percentage during 2013-2016 depending on the bearing age.

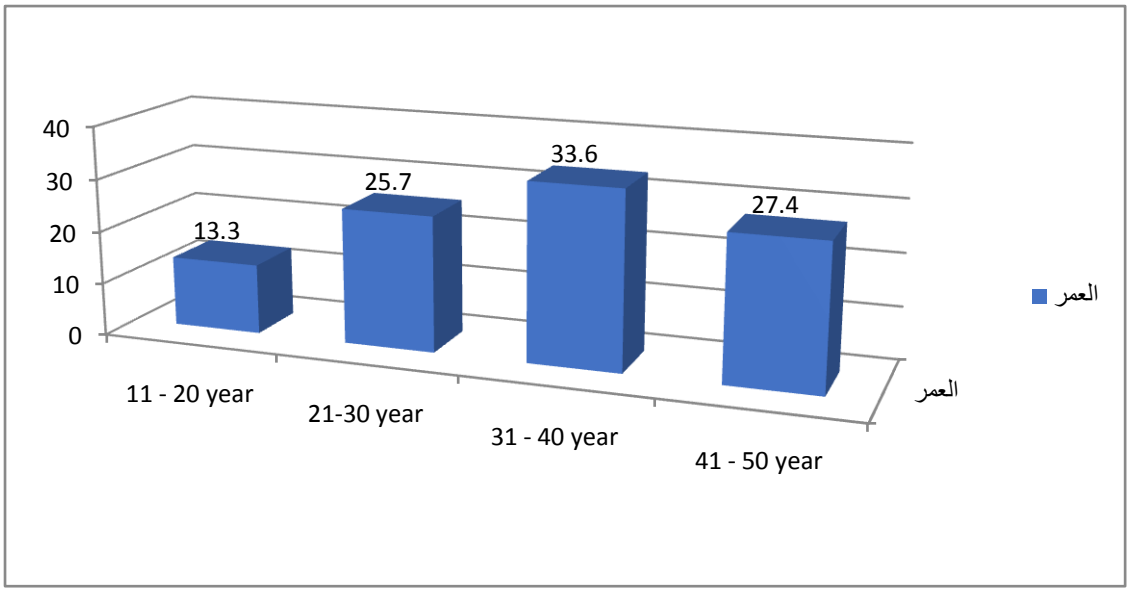

Table 4: one -sample test statistical analysis

	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
Age	35.214	112	.000	33.38053	31.5023	35.2588
cause	5.641	112	.000	.22124	.1435	.2990
Year	24390.845	112	.000	2013.50442	2013.3409	2013.6680

(Table 4) showed the one sample test statistical for the data research which indicate there are a high significant (<0.05) between the age, years and the Causes of mortality among women of child bearing age.

The relation between the mortality cause and the age

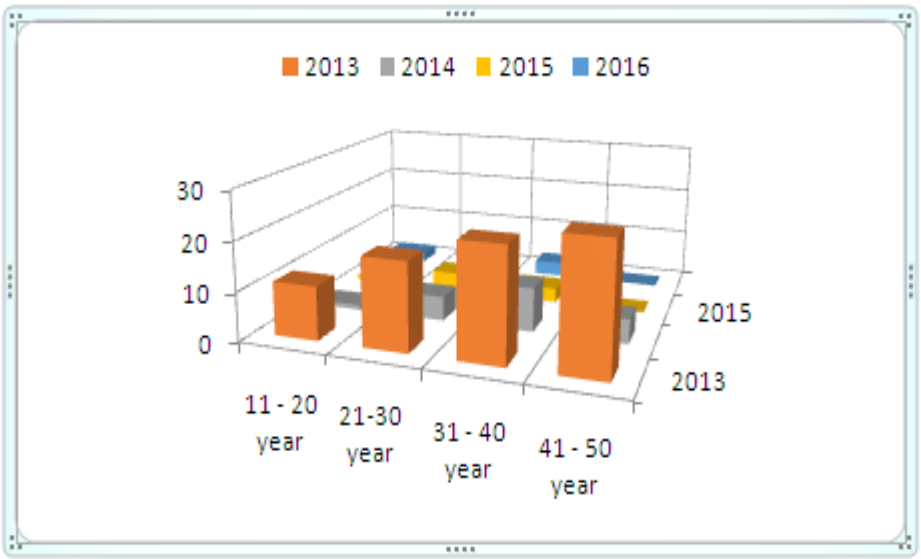

Figure 5: mortality among women of child bearing age at different years.

Table 5: Chi-Square test represent the relation between the mortality and women age.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	43.351[a]	34	.131

a. 67 cells (95.7%) have expected count less than 5. The minimum expected count is .22.

(Table5) showed that no significance between the mortality and women age.

When the study foxed to the details in the study years they can explained by (Tables 6-9) they showed no significance during all studied years (Figure 6).

Table 6: Year 2013

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.760[a]	27	.121

a. 54 cells (96.4%) have expected count less than 5. The minimum expected count is .17.

b. YEAR = 2013.00

Table 7: Year 2014

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.000[a]	16	.220

a. 34 cells (100.0%) have expected count less than 5. The minimum expected count is .05.

b. YEAR = 2014.00

Table 8: Year 2015

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.000[a]	6	.238

a. 14 cells (100.0%) have expected count less than 5. The minimum expected count is .50.

b. YEAR = 2015.00

Table 9: Year 2016

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.000[a]	6	.238

a. 14 cells (100.0%) have expected count less than 5. The minimum expected count is .50.

b. YEAR = 2016.00

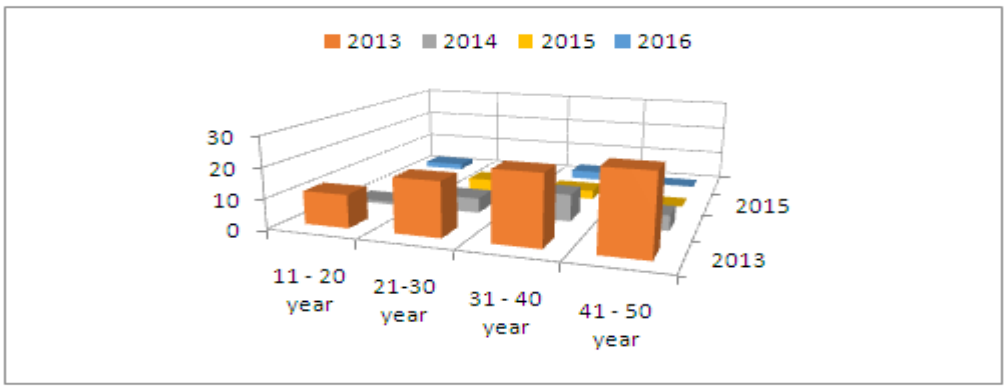

Figure 6: The relation between the age morality in each year.

The relation between mortality cause and in generalamong study years.

No significant showed between the mortality and the cause of birth during study years. (Tables 10- 18, Figure 7)

Table 10: Chi-Square for the relation between the mortality and the birth cause.

3-5:1- **The relation between the mortality at 2013 year**

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	43.351[a]	34	.131

a. 67 cells (95.7%) have expected count less than 5. The minimum expected count is .22.

Table 11: Year .2013

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.760[a]	27	.121

a. 54 cells (96.4%) have expected count less than 5. The minimum expected count is .17.

b. YEAR = 2013.00

3-5-2: The relation between the mortality at 2014 year.

Table 12: Year 2014

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.000[a]	16	.220

a. 34 cells (100.0%) have expected count less than 5. The minimum expected count is .05.

b. YEAR = 2014.00

3-5-2-3: The relation between the mortality at 2015 year

Table 13: Year 2015

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.000[a]	6	.238

a. 14 cells (100.0%) have expected count less than 5. The minimum expected count is .50.

b. YEAR = 2015.00

3-5-2-4: The relation between the mortality at 2016 year

Table 14: Year 2016

Chi-Square Tests [b]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.000[a]	6	.238

a. 14 cells (100.0%) have expected count less than 5. The minimum expected count is .50.

b. YEAR = 2016.00

The relation the cause of the mortality and the age

3-6-1: Year 2013

Table 15:

Test Statistics [c]

	AGE	CAUSE
Chi-Square [a,b]	31.846	34.667
df	27	1
Asymp. Sig.	.238	.000

a. 28 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.8.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 39.0.

c. YEAR = 2013.00

3-6-2: Year 2014

Table 16:

Test Statistics [c]

	AGE	CAUSE
Chi-Square [a,b]	2.100	16.200
df	16	1
Asymp. Sig.	1.000	.000

a. 17 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.2.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.0.

c. YEAR = 2014.00

3-6-3; Year 2015

Table 17:

Test Statistics [c]

	AGE	CAUSE
Chi-Square [a,b]	.750	.000
df	6	1
Asymp. Sig.	.993	1.000

a. 7 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.1.

b. 2 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 4.0.

c. YEAR = 2015.00

3-6-4: Year 2016

Table 18:

Test Statistics [c]

	AGE	CAUSE
Chi-Square [a,b]	.750	.000
df	6	1
Asymp. Sig.	.993	1.000

a. 7 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.1.

b. 2 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 4.0.

c. YEAR = 2016.00

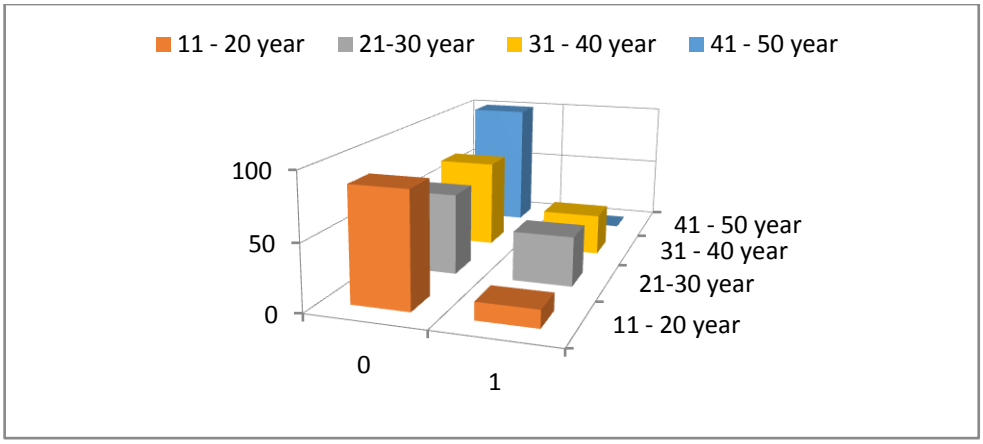

Figure 7: The relation between the mortality ang the age.

CONCLUSION

There is decreased in the cause women mortality (from 2013 to 2016). Also, there are a high significant (<0.05) between the age, years and the Causes of mortality among women of child bearing age. No significant showed between the mortality and the cause of birth during study years.

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