

STATISTICAL ANALYSIS OF THE CONNECTION BETWEEN MARRIAGE AGE WELFARE FACTORS RESIDENCE

DATA COLLECTION / STATISTICAL ANALYSIS

INTRODUCTION

CHILD MARRIAGE (CHILD MARRIAGE REFERS TO ANY FORMAL MARRIAGE OR INFORMAL UNION BETWEEN A CHILD UNDER THE AGE OF 18 AND AN ADULT OR ANOTHER CHILD) IS A CONCERNING WORLDWIDE ISSUE AND STOPPING IT, IS INCLUDED IN OF THE SUSTAINABLE DEVELOPMENT GOALS (GENDER EQUALITY),IT IS NOTABLE THAT CHILD MARRIAGE IS MORE COMMON AMONG GIRLS , "CHILD MARRIAGE IS AN APPALLING VIOLATION OF HUMAN RIGHTSAND ROBS GIRLS OF THEIR EDUCATION, HEALTH AND LONG-TERM PROSPECTS," SAYS BABATUNDE OSOTIMEHIN, M.D, EXECUTIVE DIRECTOR, UNFPA."A GIRL WHO IS MARRIED AS A CHILD IS ONE WHOSE POTENTIAL WILL NOT BE FULFILLED. SINCE MANY PARENTS AND COMMUNITIES ALSO WANT THE VERY BEST FOR THEIR DAUGHTERS, WE MUST WORK TOGETHER AND END CHILD MARRIAGE."CHILD MARRIAGE CAN BE DUE TO VARIOUS FACTORS, IN THIS PROJECT WE DECIDED TO DISCUSS HEALTH INSURANCE (WHICH IS A WELFARE FACTOR), RESIDENCE AND THEIR CONNECTION WITH MARRIAGE AGE IN DIFFERENT AREAS (SOUTH ASIA AND SUB-SAHARAN AFRICA) AND THEN WE COMPARED THE SITUATION BETWEEN THOSE AREAS.

COMPARING BETWEEN SOUTH ASIA AND SUB-SAHARAN AFRICA

SOUTH ASIA : BANGLADESH , INDONESIA , MALDIVES

PAKISTAN, PHILIPINES

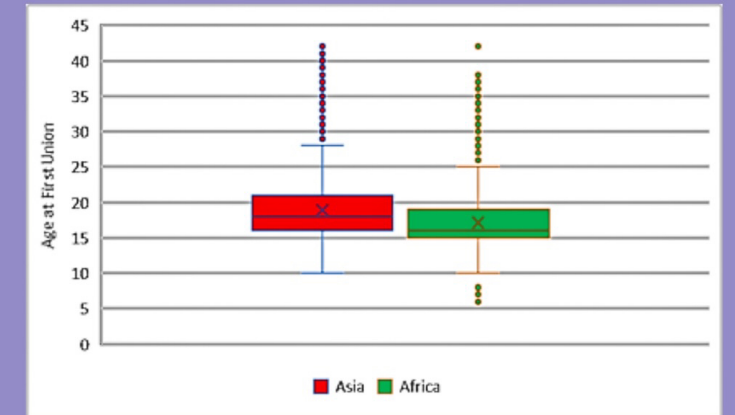
SUB-SAHARAN AFRICA : BENIN, BURUNDI,CAMEROON

GUINEA, MALI, NIGERIA, SENEGAL, ZAMBIA

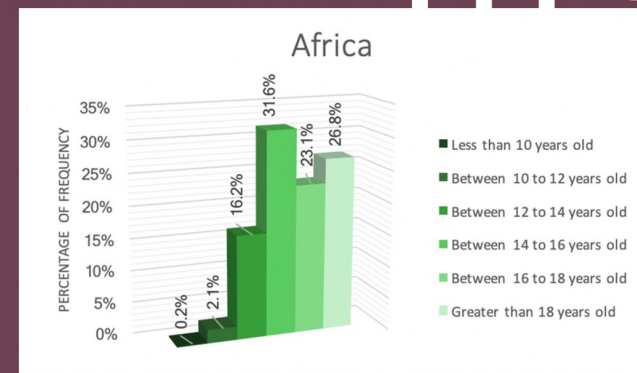
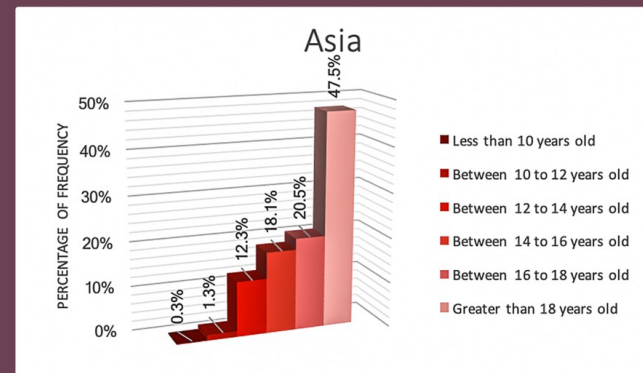
2017 - 2018 DATA

THESE BOXPLOTS DISPLAY VARIATION IN SAMPLES OF OUR STATISTICAL POPULATION .

WE COLLECTED DATA FROM DHS DATABASE AND USED EXCEL 2019 AND SPSS 22 TO PUT IT IN ORDER . THIS PROJECT IS CONCERNING 2017 - 2018 DATA, AND THE COUNTRIES INCLUDED IN THIS PROJECT ARE BANGLADESH , INDONESIA , MALDIVES , PAKISTAN , PHILIPINES IN SOUTH ASIA AND BENIN , BURUNDI , CAMEROON , GUINEA , MALI , NIGERIA , SENEGAL , ZAMBIA IN SUB-SAHARAN AFRICA.



THIS DIAGRAM CLEARLY SHOWS THE MEDIAN AGE OF MARRIAGE AS SAME AS THE LOWER QUARTILE AND THE UPPER QUARTILE, IN SUB-SAHARAN AFRICA IS LOWER THAN IT IN SOUTH OF ASIA. STATISTICAL TEST FOR ANALYZING DIFFERENCES BETWEEN THESE TWO GROUPS IS USED AS FOLLOWS.



NORMALITY ASSUMPTION
THE KOLMOGOROV-SMIRNOV TEST IS USED TO DECIDE IF A SAMPLE COMES FROM A POPULATION WITH A SPECIFIC DISTRIBUTION

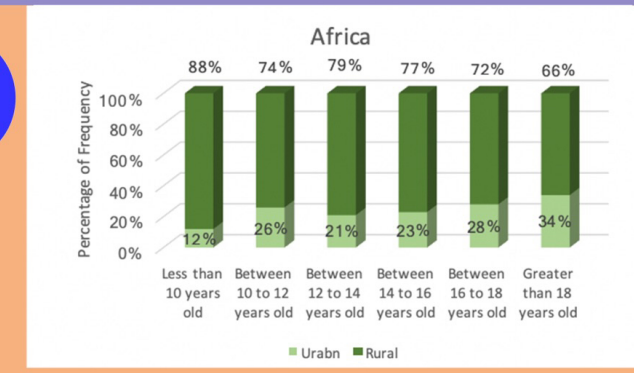
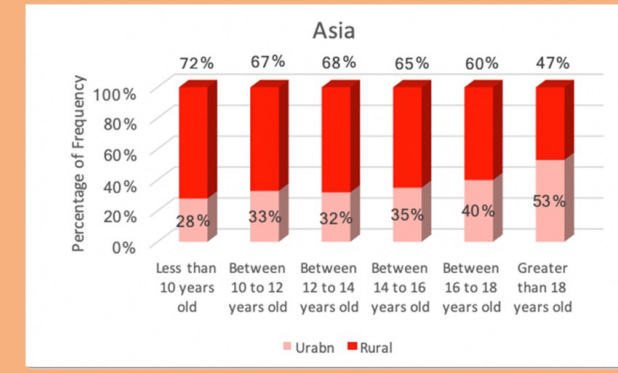
Kolmogorov-Smirnov	
Test Statistic	0.128
p-value	0.000

CONCLUSION 1 : THE TEST INDICATES THAT THE AGE OF MARRIAGE DOES NOT FOLLOW A NORMAL DISTRIBUTION (P = 0.000 < 0.05) SO, NONPARAMETRIC TEST SHOULD BE USED FOR ANALYSIS OF IT.

COMPARE AGE OF MARRIAGE BETWEEN ASIA AND AFRICA BY MANN-WHITNEY U TEST
THIS TABLE SHOWS US THE ACTUAL SIGNIFICANCE VALUE OF THE TEST, THE TEST STATISTIC AND THE ASYMPTOTIC SIGNIFICANCE (2-TAILED) P-VALUE.

Test Statistics	
Mann-Whitney U	346974059.5
Z	-53.557
P-value	0.000

CONCLUSION 2 : FROM THIS DATA, IT CAN BE CONCLUDED THAT AGE OF MARRIAGE IN THE ASIA WAS STATISTICALLY SIGNIFICANTLY HIGHER THAN THE AFRICA (P = .000 < 0.05).

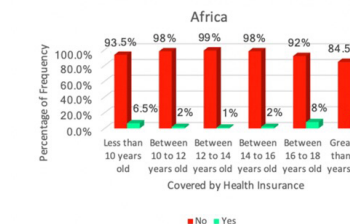
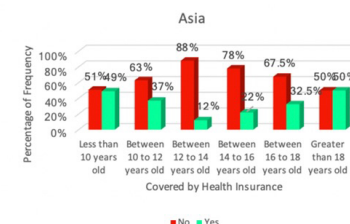


COMPARE AGE OF MARRIAGE BETWEEN URBAN AND RURAL BY MANN-WHITNEY U TEST

Test Statistics	Age of Marriage	Rank	N	Mean Rank	Test Statistics	Age of Marriage	Rank	N	Mean Rank
Mann-Whitney U	170035451	Urban	18569	23779.05	Mann-Whitney U	40767536	Urban	5955	12264.07
	-39.982	Rural	23651	19015.36		-17.399	Rural	16132	10593.62
P-value	0.000	Total	42220		P-value	0.000	Total	22087	

CONCLUSION 3 : FROM THIS DATA, IT CAN BE CONCLUDED THAT AGE OF MARRIAGE IN THE URBAN WAS STATISTICALLY SIGNIFICANTLY HIGHER THAN THE RURAL (P = .000 < 0.05).

BOTH PLOTS OF ASIA AND AFRICA SHOW THAT THE PERCENTAGE FREQUENCY OF WOMEN WHO WERE MARRIED AT A LOWER AGE AND LIVING IN RURAL IS HIGHER THAN THOSE WHO LIVE IN URBAN. IT MEANS THAT CHILD MARRIAGE IS MORE PREVALENT IN RURAL AREAS THAN IN URBAN AREAS. THE MANN-WHITNEY U TEST IS USED TO COMPARE DIFFERENCES BETWEEN THESE TWO GROUP IN ASIA AND AFRICA.



THESE PLOTS REPRESENT THE PERCENTAGE FREQUENCY OF WOMEN WHO HAVE BEEN COVERED BY HEALTH INSURANCE OR NOT IN THEIR AGE OF MARRIAGE CATEGORY. IN BOTH CONTINENTS, IT IS CLEARLY SHOWN THE PERCENTAGE FREQUENCY OF WOMEN WHO ARE COVERED BY HEALTH INSURANCE IS HIGHER IN WOMEN WHO WERE MARRIED AT A HIGHER AGE THAN WHO WERE MARRIED AT A LOWER AGE. IT MEANS WOMEN WHO WERE MARRIED AT A LOWER AGE ARE EXPOSED TO THE LOW-QUALITY WELFARE FACTOR.

GENERAL CONCLUSION

THIS STUDY LEADS US TO A GENERAL CONCLUSION THAT REPRESENTS THE CONNECTION OF MARRIAGE AGE WITH BOTH THE RESIDENCE AND HEALTH INSURANCE (WHICH IS INCLUDED IN WELFARE FACTORS), IT APPEARS THAT EARLY MARRIAGE IS MORE COMMON AMONG THE PEOPLE WHO DON'T HAVE FULL ACCESS TO SEVERAL FACILITIES AND THEY MAY LIVE IN A LESS IMPROVED CONDITION . THERE'S ALSO A POSSIBILITY THAT EARLY MARRIAGE IS MORE OCCURED IN AREAS WHICH HAVE STAYED UNDER THEIR OLD TRADITIONS AND LACK OF AWARENESS HAS EFFECTED THEIR PEOPLE .

REFERENCES :
UNFPA , (2012) , " MARRYING TOO YOUNG, END CHILD MARRIAGE " , NEWYORK , PUBLISHED BY THE UNITED NATIONS POPULATION FUND , PP , 1 - 76 .
[HTTPS://WWW.UNFPA.ORG/SITES/DEFAULT/FILES/PUB-PDF/MARRYINGTOOYOUNG.PDF](https://www.unfpa.org/sites/default/files/pub-pdf/marryingtooyoung.pdf)

WWW.UNICEF.ORG/PROTECTION/CHILD-MARRIAGE
[HTTPS://WWW.DHSPROGRAM.COM/](https://www.dhsprogram.com/)