International Journal of Education, Learning and Development

Vol.8, No.3, pp.1-16, March, 2020

Published by *ECRTD-UK*

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

A QUANTITATIVE RESEARCH ON LOW-INCOME FAMILY AND CHILD SUPPORT POLICY IN THE UNITED STATES

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ABSTRACT: *Nowadays, there are many families that have multiple children in the United States; this situation has become a major concern in many states because of the need for child support (Annette, 2003). The goal of conducting this quantitative research is to determine the factors that might contribute to improving the quality of lives of Americans and provide critical ideas on child-support policies. Also, this study will provide suggestions to the public policy on how to help low-income families support their children's education and healthcare programs. This research aims to improve the understanding of the importance of helping low-income families and children to reach their healthcare and education goals, as well as provide ideas for the States in order to reduce family burden. The researcher will identify research questions and explain the importance of providing economic security for parents who are living in difficulties because of raising multiple children. This study shows that family income will have different results when it comes to cultivating children depending on parents' races (Annette, 2003). Additionally, the author examines income levels among white people, Black or African American, American Indian or Alaskan Native, Asian and Pacific Islander American, and Hispanic American. The quantitative statistical analyses will provide ideas for the government agencies to find solutions and to help low-income families raising their children.*

KEYWORDS: Low-income family, T-test, ANOVA, quantitative correlation design

INTRODUCTION

In the last decades, there was a phenomenon of economic insecurity and declining wages in the United States (Jane & Elizabeth, 2011). Childcare is unaffordable and inaccessible, which affects the community and drain on U.S. working families and employers' bottom lines (Child Care Aware of America, 2018). Jessica et al. (2019) reported that since 2018, the poverty rate in the United States was 11.8 %. The problems of income inequality and poverty in the United States are still significant. The National Center for Children in Poverty has paid attention to family economic security for a long time. The research shows that about 15 million children and 43% of children live in low-income families in the United States (The National Center for Children, n.d.). It is important to help families meet their financial needs and promote well-being for their children. The government needs to pay attention to ensure families to gain adequate income and have enough savings to raise their children. Harris (1998) indicated that social welfare would impact the family's structural changes as well as lead to parents' decision making about childbearing and education. Harris (1998) also suggested that increasing employment is an effective way of

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

improving social welfare and supporting children. The author investigates how family income has critical implications for children's development in a family from different racial backgrounds.

The outcomes are based on larger sample sizes, which can represent a large group of the population (Healey, 1990). There are two research questions needed to be addressed in order to find options for lower-income families. First, what are the trends in income segregation between different races? Second, is there any relationship between family income and the number of children they are willing to raise? This research seeks to identify the problems that families might encounter and provide suggestions for policymakers to find the best way to establish fair support obligations for families, as well as cooperation between different departments.

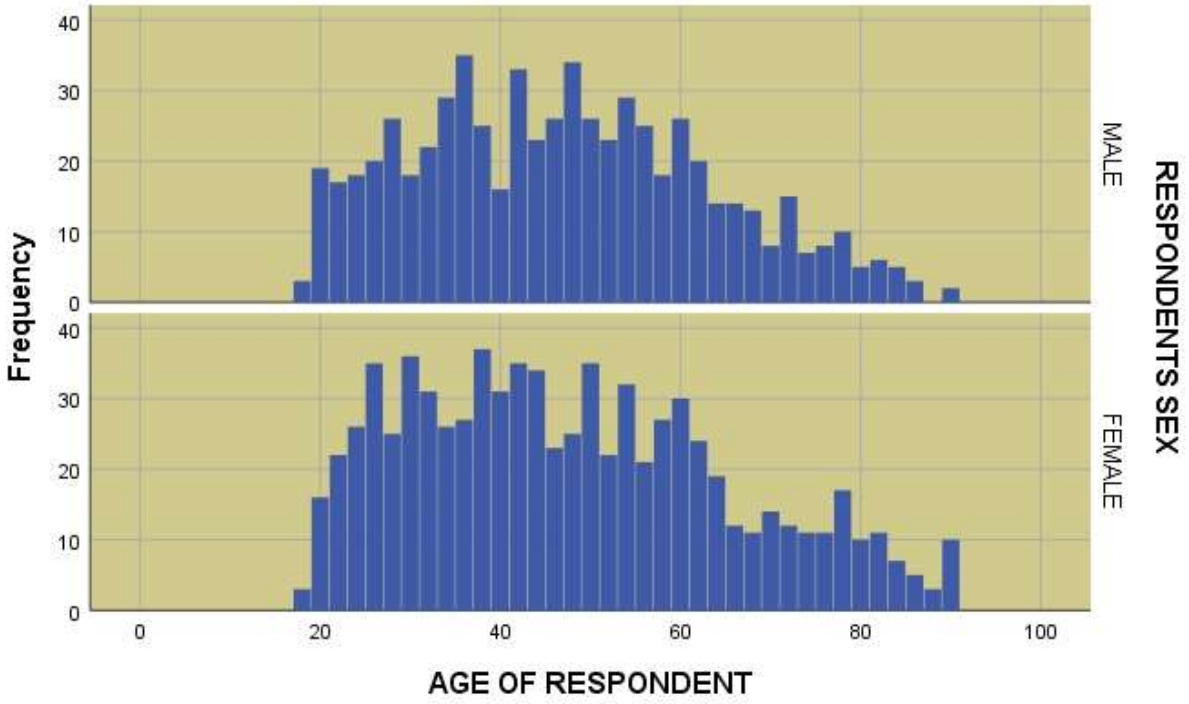
Study Population and Quantitative Design

The income data was chosen from General Social Survey, and income levels vary across different races. This data analysis will help the policymakers when they try to provide children's medical insurance; it will also provide ideas of how to help these families who are experiencing medical hardships, have obstacles to support the children because of a single-family, or the parents are disabled and cannot work enough time to cultivate their children (Phillipe & Lance, 2007). Low-income single families often face many barriers. The ignorance of enriching home environments may result in growing gaps in society and it might lead to low socioeconomic mobility (Jane & Elizabeth, 2011). Also, low-income parents often lack resources to achieve their parenting goals (Phillipe & Lance, 2007). The state government needs to invest in parents so they can afford the family expenses while cultivating their children. Cancian and Costanzo (2018) indicated that States might lack evaluating issues of equity, simplicity, and transparency when weighing a public policy. The author believes that the State should ensure flexible and equal child support policies for low-income families who are unemployed for a long time. Policy approaches have to address how to increase equity between different families and races, and to help the family in supporting children's development, as well as provide regular in-home visits by trained nurses for families who are experiencing financial or physical difficulties.

T-test Design

The T-test is a type of inferential statistics. It has been used to determine if there is a significant difference between the means of different groups (Field, 2018). It helps to compare whether two groups' averages are unlikely to occur because of random sample selection (Field, 2018).

Graph



Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AGE OF RESPONDENT	Equal variances assumed	5.853	.016	-.766	1415	.444	-.699	.912	-2.488	1.090
	Equal variances not assumed			-.772	1397.703	.440	-.699	.905	-2.474	1.077

The chosen variables for this T-Test are sex and age of respondents. The mean score of females is higher than the mean of males. The table shows that the mean for males is 46.5, and the mean for females is 47.2. The null hypothesis is that there is no difference between the two groups. However, the *p*-value for the 2-tailed test is 0.44, which means that the null hypothesis cannot be rejected. There is no statistical difference when comparing the means of the two groups.

ANOVA Quantitative Design

The purpose of using a two-way ANOVA is to understand the data by illustrating t-tests, ANOVAs, and correlations (Field, 2018). The ANOVA can examine potential differences between different

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

variables and examine the interaction between variables (Healey, 1990). The table below shows the Between-Subjects Factors. The number of children has eight levels from 0 to 8, and race has five levels, such as white, black or African American, American Indian or Alaskan Native, Hispanic American, and Asian and Pacific Islander Americans.

Between-Subjects Factors

		Value Label	N
NUMBER OF CHILDREN	0	0	336
	1	1	195
	2	2	303
	3	3	193
	4	4	97
	5	5	36
	6	6	20
	7	7	8
	8	EIGHT OR MORE	6
WHAT IS RS RACE 1ST MENTION	1	WHITE	868
	2	BLACK OR AFRICAN AMERICAN	158
	3	AMERICAN INDIAN OR ALASKA NATIVE	11
	4	Asian and Pacific Islander American	41
	5	Hispanic American	116

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Tests of Between-Subjects Effects

Dependent Variable: TOTAL FAMILY INCOME

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3906.413[a]	37	105.579	3.691	.000
Intercept	16023.414	1	16023.414	560.249	.000
childs	576.831	8	72.104	2.521	.010
racecen1	818.737	4	204.684	7.157	.000
childs * racecen1	855.198	25	34.208	1.196	.231
Error	33062.178	1156	28.600		
Total	359269.000	1194			
Corrected Total	36968.590	1193			

a. R Squared = .106 (Adjusted R Squared = .077)

The *p*-value for the number of children is 0.1, which means that there is a significant relationship between children and family income. The *p*-value of race is 0.00, which also indicates that there is a significant relationship between income and race. If we look at both variables of race and children, the significant number is 0.231. It means that the relationship between all the variables is not significant. When comparing the combination of race and children with the single variable of either race or children separately, the combination variables of race and children are less significant than comparing children or race with family income separately.

Estimated Marginal Means

1. Grand Mean

Dependent Variable: TOTAL FAMILY INCOME

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
14.231[a]	.462	13.324	15.139

a. Based on modified population marginal mean.

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2. NUMBER OF CHILDREN

Estimates

Dependent Variable: TOTAL FAMILY INCOME

NUMBER OF CHILDREN	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	14.677	.727	13.251	16.103
1	16.205	1.227	13.797	18.614
2	16.603	.678	15.273	17.933
3	13.767	1.220	11.374	16.159
4	13.935	1.396	11.196	16.675
5	15.983[a]	1.523	12.994	18.972
6	12.141[a]	1.571	9.058	15.224
7	10.000[a]	2.324	5.440	14.560
EIGHT OR MORE	11.500[a]	2.414	6.764	16.236

a. Based on modified population marginal mean.

From this graph, it indicates that the mean of 2 children has the highest score of 16.603, and the lowest mean score is 10 for seven children. The highest mean for the number of children is 16.603. When we look at the Pairwise Comparisons, it does not have a statistically significant difference between how many and total family income because the significance number ranges from 0.233 to 1, which is higher than 0.05, meaning that the family with seven children have less income than the family with less than seven children or have eight or more. Families with eight or more children have less income than families with less than six children with a mean of 11.5.

Univariate Tests

Dependent Variable: TOTAL FAMILY INCOME

	Sum of Squares	df	Mean Square	F	Sig.
Contrast	538.169	8	67.271	2.352	.016
Error	33062.178	1156	28.600		

The F tests the effect of NUMBER OF CHILDREN. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

The Univariate Tests show that the *p*-value is 0.016, which means that it successfully rejects the null hypothesis. It indicates that there is a relationship between the number of children and family income.

3. WHAT IS RS RACE 1ST MENTION

Estimates

Dependent Variable: TOTAL FAMILY INCOME

WHAT IS RS RACE 1ST MENTION	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
WHITE	16.215	.554	15.128	17.302
BLACK OR AFRICAN AMERICAN	12.092	.914	10.299	13.886
AMERICAN INDIAN OR ALASKA NATIVE	12.283[a]	1.878	8.598	15.968
Asian and Pacific Islander American	16.859[a]	1.438	14.038	19.681
Hispanic American	13.324[a]	.645	12.059	14.589

a. Based on modified population marginal mean.

This table indicates that Asian and Pacific Islander Americans have the highest income mean of 16.859, and Black or African Americans have the lowest mean of 12.092. People should pay attention to support Black or African American families.

Pairwise Comparisons

Dependent Variable: TOTAL FAMILY INCOME

(I) WHAT IS RS RACE 1ST MENTION	(J) WHAT IS RS RACE 1ST MENTION	Mean Difference (I-J)	Std. Error	Sig.[d]	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
WHITE	BLACK OR AFRICAN AMERICAN	4.123*	1.069	.001	1.116	7.129
	AMERICAN INDIAN OR ALASKA NATIVE	3.932[b]	1.958	.449	-1.575	9.439
	Asian and Pacific Islander American	-.644[b]	1.541	1.000	-4.979	3.690
	Hispanic American	2.891*,[b]	.850	.007	.501	5.281
BLACK OR AFRICAN AMERICAN	WHITE	-4.123*	1.069	.001	-7.129	-1.116
	AMERICAN INDIAN OR ALASKA NATIVE	-.191[b]	2.089	1.000	-6.066	5.684

	Asian and Pacific Islander American	-4.767[b]	1.704	.052	-9.560	.026
	Hispanic American	-1.232[b]	1.119	1.000	-4.378	1.915
AMERICAN INDIAN OR ALASKA NATIVE	WHITE	-3.932[c]	1.958	.449	-9.439	1.575
	BLACK OR AFRICAN AMERICAN	.191[c]	2.089	1.000	-5.684	6.066
	Asian and Pacific Islander American	-4.576[b,c]	2.366	.533	-11.229	2.077
	Hispanic American	-1.041[b,c]	1.986	1.000	-6.625	4.544
Asian and Pacific Islander American	WHITE	.644[c]	1.541	1.000	-3.690	4.979
	BLACK OR AFRICAN AMERICAN	4.767[c]	1.704	.052	-.026	9.560
	AMERICAN INDIAN OR ALASKA NATIVE	4.576[b,c]	2.366	.533	-2.077	11.229
	Hispanic American	3.535[b,c]	1.576	.251	-.897	7.968
Hispanic American	WHITE	-2.891[*,c]	.850	.007	-5.281	-.501
	BLACK OR AFRICAN AMERICAN	1.232[c]	1.119	1.000	-1.915	4.378
	AMERICAN INDIAN OR ALASKA NATIVE	1.041[b,c]	1.986	1.000	-4.544	6.625
	Asian and Pacific Islander American	-3.535[b,c]	1.576	.251	-7.968	.897

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. An estimate of the modified population marginal mean (J).

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

c. An estimate of the modified population marginal means (I).

d. Adjustment for multiple comparisons: Bonferroni.

In terms of family income, comparing white Americans with Black or African Americans, there is a statistically significant relationship between the two populations, as well as comparing white Americans with Hispanic Americans. The *p*-value shows 0.007, which means that there is a statistically significant difference between the two populations.

Univariate Tests

Dependent Variable: TOTAL FAMILY INCOME

	Sum of Squares	df	Mean Square	F	Sig.
Contrast	683.904	4	170.976	5.978	.000
Error	33062.178	1156	28.600		

The F tests the effect of WHAT IS RS RACE 1ST MENTION. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

4. NUMBER OF CHILDREN * WHAT IS RS RACE 1ST MENTION

Dependent Variable: TOTAL FAMILY INCOME

NUMBER OF CHILDREN	WHAT IS RS RACE 1ST MENTION	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
0	WHITE	16.822	.340	16.154	17.490
	BLACK OR AFRICAN AMERICAN	14.561	.835	12.922	16.200
	AMERICAN INDIAN OR ALASKA NATIVE	10.667	3.088	4.609	16.725
	Asian and Pacific Islander American	14.800	1.381	12.091	17.509
	Hispanic American	16.533	.976	14.618	18.449
1	WHITE	17.165	.454	16.275	18.055

	BLACK OR AFRICAN AMERICAN	14.395	.868	12.693	16.097
	AMERICAN INDIAN OR ALASKA NATIVE	16.000	5.348	5.507	26.493
	Asian and Pacific Islander American	19.800	2.392	15.107	24.493
	Hispanic American	13.667	1.544	10.638	16.696
2	WHITE	18.330	.355	17.634	19.027
	BLACK OR AFRICAN AMERICAN	14.486	.904	12.712	16.259
	AMERICAN INDIAN OR ALASKA NATIVE	16.750	2.674	11.504	21.996
	Asian and Pacific Islander American	19.615	1.483	16.705	22.526
	Hispanic American	13.833	1.092	11.692	15.975
3	WHITE	17.347	.446	16.473	18.222
	BLACK OR AFRICAN AMERICAN	13.591	1.140	11.354	15.828
	AMERICAN INDIAN OR ALASKA NATIVE	5.000	5.348	-5.493	15.493
	Asian and Pacific Islander American	18.800	2.392	14.107	23.493
	Hispanic American	14.095	1.167	11.806	16.385
4	WHITE	15.014	.626	13.786	16.242
	BLACK OR AFRICAN AMERICAN	14.300	1.691	10.982	17.618

	AMERICAN INDIAN OR ALASKA NATIVE	13.000	3.782	5.580	20.420
	Asian and Pacific Islander American	13.000	5.348	2.507	23.493
	Hispanic American	14.364	1.612	11.200	17.527
5	WHITE	15.833	1.261	13.360	18.307
	BLACK OR AFRICAN AMERICAN	13.000	2.021	9.034	16.966
	AMERICAN INDIAN OR ALASKA NATIVE	.[a]	.	.	.
	Asian and Pacific Islander American	24.000	5.348	13.507	34.493
	Hispanic American	11.100	1.691	7.782	14.418
6	WHITE	14.923	1.483	12.013	17.833
	BLACK OR AFRICAN AMERICAN	7.500	3.782	.080	14.920
	AMERICAN INDIAN OR ALASKA NATIVE	.[a]	.	.	.
	Asian and Pacific Islander American	.[a]	.	.	.
	Hispanic American	14.000	2.392	9.307	18.693
7	WHITE	14.000	2.392	9.307	18.693
	BLACK OR AFRICAN AMERICAN	8.000	3.782	.580	15.420
	AMERICAN INDIAN OR ALASKA NATIVE	.[a]	.	.	.

	Asian and Pacific Islander American	8.000	5.348	-2.493	18.493
	Hispanic American	.[a]	.	.	.
EIGHT OR MORE	WHITE	16.500	3.782	9.080	23.920
	BLACK OR AFRICAN AMERICAN	9.000	5.348	-1.493	19.493
	AMERICAN INDIAN OR ALASKA NATIVE	.[a]	.	.	.
	Asian and Pacific Islander American	.[a]	.	.	.
	Hispanic American	9.000	3.088	2.942	15.058

a. This level combination of factors is not observed, thus the corresponding population marginal mean is not estimable.

Income also varies by race and ethnicity. When examining the interaction factors between the number of children and race, the lowest mean score of 5 is for comparing three children with American Indian or Alaskan Native, and the mean of 7.5 is for comparing six children with black or African Americans. However, the higher mean score of 24 is for comparing Asian and Pacific Americans with five children, and the mean score of 19.8 is for comparing Asian and Pacific Islander Americans with one child.

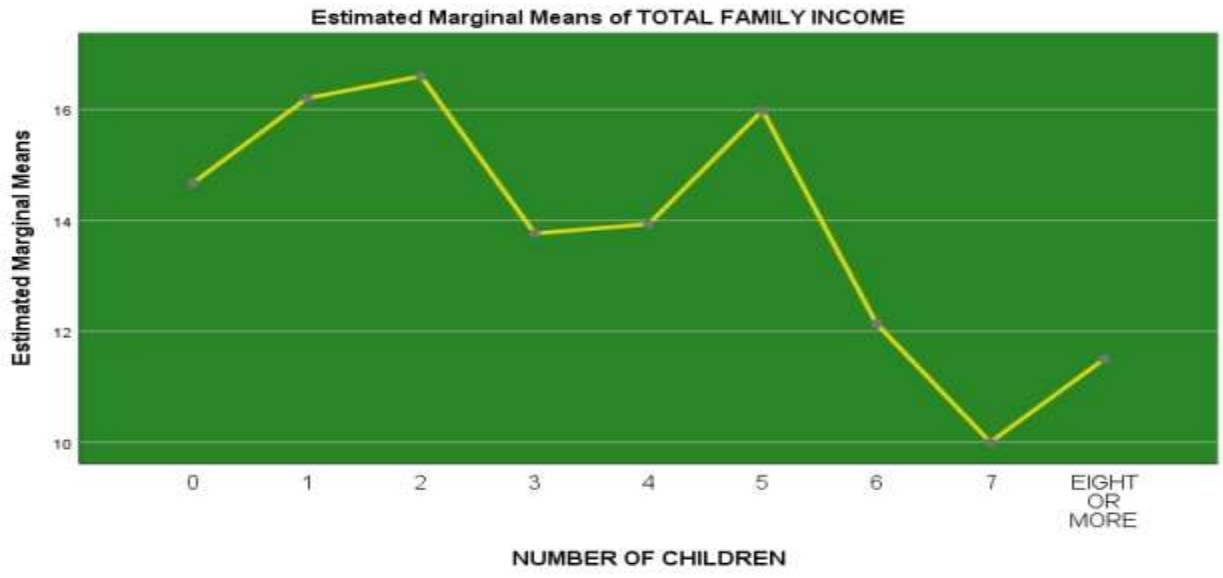
Report

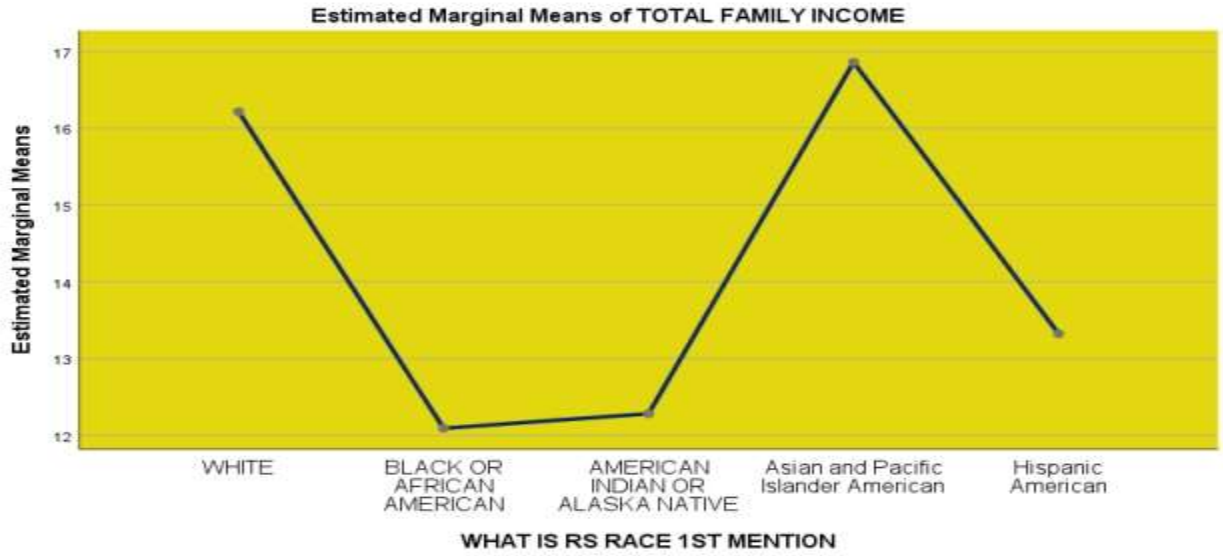
TOTAL FAMILY INCOME

NUMBER OF CHILDREN	Mean	N	Std. Deviation
0	16.36	338	5.328
1	16.47	195	5.400
2	17.57	305	5.398
3	16.39	196	5.658
4	14.86	98	5.896
5	14.00	37	6.191
6	13.76	21	6.032
7	11.75	8	4.803
EIGHT OR MORE	11.50	6	6.091
Total	16.39	1204	5.582

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

The table above illustrates that there is not much difference when comparing 0 to 3 children with family income, but the difference is significant when comparing eight children with two children. Families with eight or more children have the lowest mean family income. However, the total family income for a family with two children has the highest mean. It illustrates that families with more children might experience more financial difficulties. Policymakers need to update the policy when it comes to supporting families with multiple children.





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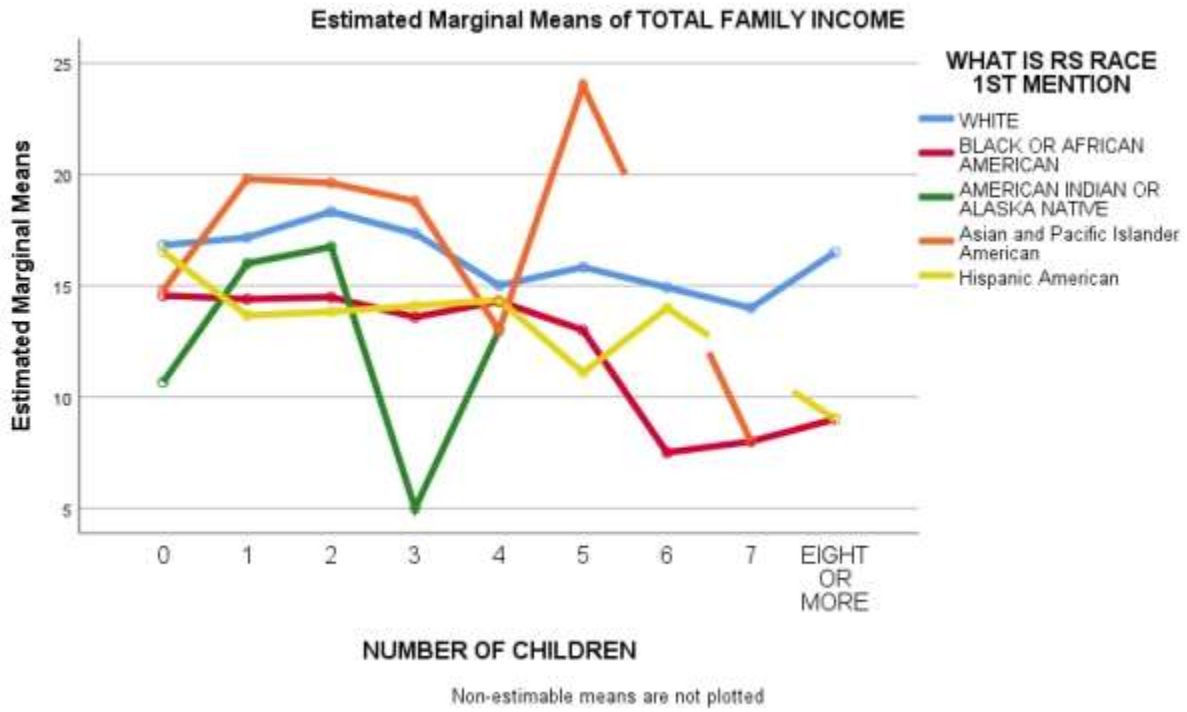


When looking at white Americans, the means do not demonstrate a significant difference between 0 children and eight children in terms of family incomes. When analyzing Asian and Pacific Islander Americans for the means of family income and the number of children, four children's families have the lowest score for a family income, and five children's families have the highest income mean. American Indian or Alaskan native family income mean reaches the lowest score for three children's families compared with the income means of other races. However, the income mean of 5 children families reaches the highest score of around 24 compared with other races.

Correlation Quantitative Design

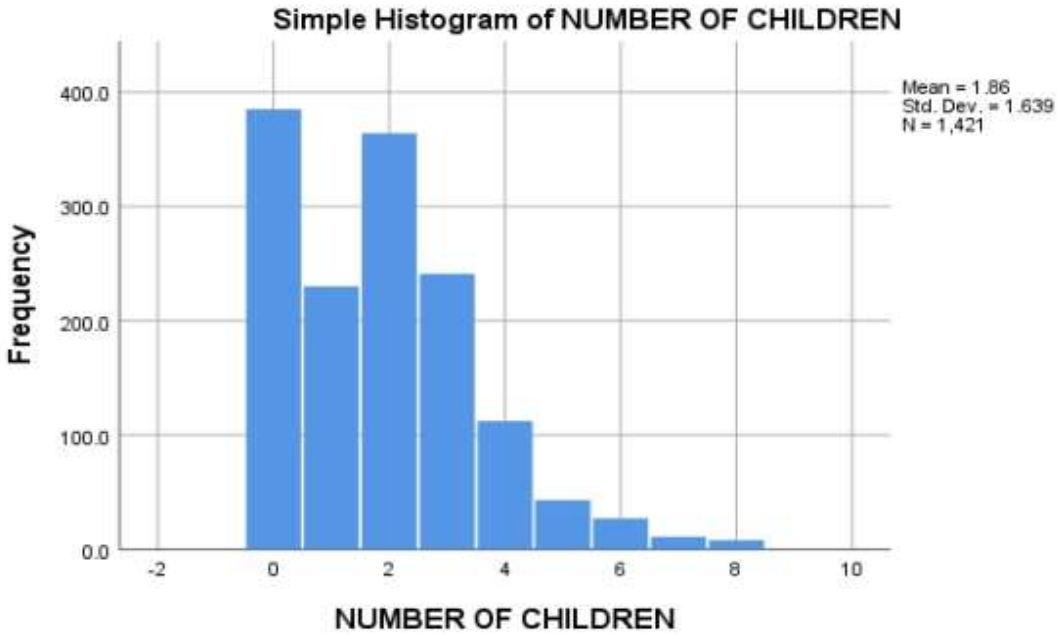
A correlation test measures the relationship between different variables and to determine if two variables are correlated (Hoover, 2013). The correlation is a number between -1 and 1, which indicates that the two variables are linearly related. Positive coefficients indicate that when one variable number increases, other variables also increase. Negative coefficients produce a downward slope, which means that when the value of one variable increases, the value of the other variable decreases.

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

Correlations

		NUMBER OF CHILDREN	TOTAL FAMILY INCOME
NUMBER OF CHILDREN	Pearson Correlation	1	-.105**
	Sig. (2-tailed)		.000
	N	1421	1204
TOTAL FAMILY INCOME	Pearson Correlation	-.105**	1
	Sig. (2-tailed)	.000	
	N	1204	1205

**. Correlation is significant at the 0.01 level (2-tailed).



In this case, the correlation will be used to measure the relationship between two variables (Chava & Anna, 2014). In this correlation test, looking at the variables of the number of children and family income based on the General Social Survey database, the p-value is lower than 0.05, which means that there is a statistically significant relationship between the number of children and family income. However, the Pearson correlation value is - 0.105, it illustrates that there is a negative correlation relationship between the number of children and family income, which means that the more children a family has, the more likely the family will face financial challenges, making them a low-income family.

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

CONCLUSION

This research provides the idea of establishing child support orders and ensuring that child support agencies will establish a long-term peaceful community and a harmonious society. Affordable childcare and social warfare policy have long-term benefits for people. The U.S. Government can play a critical role in supporting low-income families. In addition, the state government should consider how to improve children's economic security by increasing their family income. The author encourages to increase unemployment insurance, initiate financial work, update minimum wage standards, improve childcare, to ease financial burdens of a family, and to ensure higher educational needs for the children. This research will enhance the understanding of the challenges of low-income families and cultivating children in low-income families, especially when the parents have multiple children. It is important to raise people's awareness of changing public policies for people who have urgent needs.

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