The Relationship between Child Marriage and Lack of Education and Girls' Physical & Psychological Health in Niger

Dr. Sherihan Radi
Doctoral student at Brandenburg University of Technology, Cottbus, Germany

Abstract: This empirical research aims at analyzing the relationship between child marriage and lack of education and girls' physical & psychological health in Niger. The research implements the quantitative methodology. It was carried out in two phases; reviewing the literature around the subject followed by an empirical study using questionnaires distributed to 132 refugees from Niger residing in Egypt. The outcomes of SmartPLS path model analysis of the data show that child marriage is significantly correlated with girls' physical & psychological health in Niger. They also show that lack of education is significantly correlated with girls' physical & psychological health in Niger. The findings reveal that child marriage and lack of education act as essential predictors of girls' physical & psychological health in Niger.

Keywords: child marriage, lack of education, physical health, psychological health, Niger, girl brides, gender inequality, poverty, children, literacy.

I. INTRODUCTION

Child marriage has existed for centuries due to poverty, tradition and gender inequality. It is considered a complex issue and is most common in poor communities and rural areas where these marriages are arranged by parents and where young girls don’t have any choice as prospects for them are limited as by the World Health Organization (2013).

As stated by UNFPA (2020), child marriage is not only considered a tragedy often for the most marginalized and vulnerable girls, it also harms societies, communities and families as it keeps them in a poverty cycle that continues through generations. By putting an end to child marriage, girls will be able to attend schools and find work that will increase productivity and earnings.

720 million women and girls worldwide who are alive today were married before they reached the age 18. Child marriage deprives a girl of reaching her full potential and exposes her to a cycle of dangerous harm and oppression as by Equality Now (2019).

According to the United Nations Children’s Fund UNICEF (2014), almost 40% of girls are married before the age 18 in Africa demonstrating the continuous prevailing high rates of child marriage in the continent.

As by John et al. (2019), child marriage has reproductive health, social and economic consequences for child brides, their families and their communities. Due to child marriage, access to resources, assets and social support systems is limited to girl brides and their abilities to make any choices in their lives are also limited. It also forces the girl brides with new responsibilities and roles before being ready to fulfill these roles. Moving to a new home and neighbourhood that requires the bride to form new social networks can lead to poor psychological well-being and mental health.

In accordance with Montbleau (2018), both females and males are affected by the lack of commitment to education in Niger but due to gender inequality, there is little hope with regard to the improvement of female education. Several reasons are considered as barriers for young women to attend school such as young motherhood, high birth rates, family responsibility and dynamics. All these burden women with physical and financial stress and this decreases any chance of receiving an education.
1.1 The problem of the study
Child marriage is a disputable topic in Niger. It is deep-rooted in the country's culture. Besides child marriage, Niger suffers from extreme low literacy rates for both genders particularly females. This research examines the relationship between child marriage and lack of education and girls' physical & psychological health in Niger.

1.2 Research Objectives
• RO1: To examine the relationship between child marriage and girls' physical & psychological health in Niger.
• RO2: To study the relationship between lack of education and girls' physical & psychological health in Niger.

1.3 Research questions
The study will tend to answer the following research questions:
- What is the relationship between child marriage and girls' physical & psychological health in Niger?
- What is the relationship between lack of education and girls' physical & psychological health in Niger?
- What are the actions taken by the government in Niger with regard to child marriage and lack of education? Are there any efforts made by different organizations?

II. LITERATURE REVIEW
This section will discuss the literature related to the definition of child marriage, reasons for child marriage, child marriage in Niger, lack of education in Niger and actions taken by the government of Niger and various organizations with regard to child marriage and education.

2.1 Child marriage definition
Based on the United Nations Population Fund UNFPA (2020), child marriage is considered a serious human rights violation that threatens the lives, health, safety and education of children from both genders. Child marriage rates for boys are very low even in countries with high child marriage rates among girls.

2.2 Reasons for child marriage
According to the UNFPA (2020), child marriage is considered the only option for millions of people. Daughters are often viewed as a burden due to gender inequality. Families are forced due to poverty and economic hardships to withdraw their daughters from school and make them marry early. They believe that marriage will secure a daughter's future as her husband or his family will care for her. In countries where the groom's family pays a dowry, families that face difficult conditions consider their daughters as an income source and let them marry early. On the other hand, in countries where the family's bride pays a dowry to the groom's family marry their daughters off early as younger brides pay smaller dowries.

Based on the World Health Organization WHO (2013), poor families marry off their young daughters in order to decrease the number of children they have to feed and educate. Additionally, some cultures believe that families will be blessed if their girls are married before reaching puberty. On the other hand, in some societies it is believed that child marriage protects the young girls from sexual attacks and ensures that they don't cause dishonour to their families by becoming pregnant out of wedlock.

As mentioned by Irani & Roudsari (2019), due to the value of the bride's young age by the groom and his family based on the assumption that young girls are virgins and that making young girls marry at early age protects them from non-marital pregnancy and non-marital sexual behavior, families are encouraged to practice child marriage.

2.3 Child marriage in Niger
Before discussing the issue of child marriage in Niger, it is essential to shed light on the country's economic status and the condition of children.
In accordance with the World Bank (2020), Niger's economy is not well asserted and regardless of the significant steps taken by Niger during the past decade in order to decrease the poverty rate, Niger's extreme poverty rate remained in 2019 at 41.41% influencing more than 9.5 million people.

Based on Frederick (2020), the United Nations expects that Niger's population would triple by 2050 and this will increase the country's inability to break the poverty cycle. The rapid growing population in Niger contributed to the country's high poverty rate and together with harsh climate and troubled borders, they contributed to the fact that Niger remains one of the most impoverished nations in the world. The country is fighting against hunger as 81% of Niger’s population lives in rural areas making most of them don't have access to a food market.

As mentioned by Wiggins (2020), 2.9 million people in Niger need humanitarian assistance and among them are 1.6 million children according to the UNICEF. Niger has the eleventh highest mortality rate in the world for children who are less than 5 years old and approximately half of the children live under the monetary poverty line. Due to the attacks that took place by non-state armed groups in Niger during the past couple of years, more than 100 schools closed in January 2020 and children have been kidnapped and used in attacks by these groups. Besides this, children in Niger face malnutrition and diseases such as cholera where 380,000 children are at risk of severe acute malnutrition and 600,000 children are at risk of an epidemic.

As expressed by Ventura (2020), as a result of an 80% of the country's territory covered by the Sahara desert together with a rapid growing population that depends mainly on small-scale agriculture, Niger is exposed to desertification and climate change threats. Mortality, disease rates and food insecurity in Niger are high.

Due to the country's minimal crop growth and dry climate, 40% of Nigerian children who are less than 5 years old experience malnutrition. Since agriculture accounts for more than 40% of Niger's GDP, frequent droughts and short rainy seasons harm the country's economy and cause job and food shortages as mentioned by Frederick (2020).

As by the Leprosy Mission International (2019), 80% of Niger's population lives on less than 2 euros per day demonstrating the high poverty and extreme poverty rates. In accordance with Idrissi (2019), Niger is the fifth poorest country in the world with the highest child marriage rate, where three out of four girls married before the age of 18. The main reasons for child marriage are poverty, traditions, customs and lack of education. Several families struggle to feed, protect and send their daughters to school. Despite of the international treaties signed by Niger that determine that the age of 18 is the age of marriage, the legal age of marriage for girls in Niger is 15 and for boys is 18. Regardless of the ongoing parliament discussions to ensure the respect of the international treaties by the national law, nothing has been achieved so far.

In Niger, men are the ones who make the decision to marry girls early to preserve family honour and to prevent pregnancy outside of marriage as by Girls Not Brides (2018).

As mentioned by Dodd (2016), the State of the World’s Children report by the UNICEF published in 2016 stated that 76% of girls in Niger are married before reaching the age 18, while 28% become wives before they reach the age of 15. This practice is mostly carried by poor families residing in rural areas. The reasons behind the high rates of child marriage in Niger include social and cultural beliefs in addition to economic conditions.

2.4 Lack of education in Niger

Based on the United States Agency for International Development USAID (2020), 70% of Niger population is illiterate. There is an 18% gender gap between boys and girls with regard to primary school enrollment and only 54% of female primary school students reached sixth grade.

As by the Leprosy Mission International (2019), literacy rate ranges between 21% and 33% making Niger among the countries with the lowest literacy in the world.

As mentioned by Giovetti (2019), school attendance in Niger is directly affected by extreme poverty and food insecurity. Niger has the lowest literacy rates in the world and ranks last (187) on the United Nations Development Programme’s Education Index with approximately 2.6 million children and adolescents not joining schools. At the same time and based on UNESCO, males' literacy rates in Niger is higher than women. 48.5% of men (15-24 years) are literate compared with
31.6% of women (15-24 years) who are literate. 19.83% of men (aged 65+) are literate compared with 7.9% of literate women (aged 65+).

It is required to apply serious improvements to girls' education in Niger as the UNICEF reported that one in two girls in Niger attends primary school, one in ten attends secondary school and one in fifty goes to high school as expressed by Montbleau (2018).

In accordance with Filipovic (2017), early marriage, poverty and a large family size cause Niger's low education and literacy rates. Since teachers are not well paid and sometimes are not paid for months, they are often on strike. Limited resources make families prefer investing any available money in boys' education while girls are not supported or encouraged to be educated. At the same time, due to social norms that make girls marry by the age of 15 with a majority of girls getting married at the age of 18, women and girls in Niger are the least educated in the world as they are expected to focus only on housework and childbearing.

As expressed by Knofczynski (2017), low attendance rates of girls in schools in Niger is correlated with the high number of child marriages leading to the existence of only a less than a quarter of literate young women in the country.

2.5 Actions taken by the government of Niger and various organizations with regard to child marriage and education

Based on UNICEF (2019), First Ladies from the Economic Community of West African States (ECOWAS) signed the Niamey Declaration of ECOWAS First Ladies: Call to End Child Marriage and to promote the girls empowerment and education. During the ceremony, the President of Niger said that child marriage is a scandal and must be ended. Additionally, the main focus of the UNICEF's work in Niger is to end child marriage. It addresses the economic and structural factors together with the social norms that contribute to the continued child marriage issue.

As by the (United Nations Population Fund ), UNFPA and UNICEF jointly launched in 2016 a global programme to deal with the issue of child marriage in twelve high burden- countries that included Niger. The UNFPA-UNICEF Global Programme to Accelerate Action to End Child Marriage empowers girls to be in charge of their future, achieve their aspirations for example through education. It also promotes the young girls' rights to abstain child marriage and pregnancy.

According to UNFPA (2014), Action for Adolescent Girls was launched by UNFPA in 2012 against child marriage in the world's poorest regions to address child marriage causes and consequences. It supports the African Union's campaign to end child marriage. It operated with partners that included Niger's Ministry of Population and Promotion of Women and Child Protection and works with government partners to change Niger's legal marriage age for girls to be from 18 years instead of 15 years.

Niger's President Issoufou Mahamadou promised in April 2018 to end early and forced marriage as mentioned by Theirworld (2018).

With regard to education, the World Bank Board of Directors approved on April 6, 2020 a $140 million financing from the International Development Association to improve the teaching and learning quality in Niger as stated by the World Bank (2020).

Based on Theirworld (2018), Niger's President stated in April 2018 that there is a focus on education especially for girls to end underage pregnancies and marriage. He also stated that young Nigerians must be educated and cared for. He promised to prioritize literacy and education for girls on the agenda, develop higher education opportunities and provide compulsory and free schooling for every child until the age of 16. On the other hand, the European Commission supports programme for education - which sums to $95 million from 2016 to 2019 to assist the Niger's government in its efforts to improve quality, governance and equal access in relation to education.

III. RESEARCH HYPOTHESES

H1: There is a relationship between child marriage and girls' physical & psychological health in Niger.

H2: There is a relationship between lack of education and girls' physical & psychological health in Niger.
IV. THEORETICAL FRAMEWORK

The model illustrated below was constructed according to the objective of the study. The conceptual framework of the research model is based on the independent variables (child marriage) and (lack of education) and the dependent variable (girls' physical & psychological health). It shows the link between the aforementioned independent variables and the dependent variable.

**Independent Variables**

1. Child marriage
2. Lack of education

**Dependent Variable**

Girls' physical & psychological health

![Diagram showing the relationship between independent and dependent variables.]

*Source: By researcher*

4.1 *The relationship between child marriage (independent variable) and girls' physical & psychological health (dependent variable)*

According to Zaman & Koski (2020), child marriage has negative health consequences on girls throughout their lives. Since it leads to less control over their fertility, girls end up having unwanted pregnancies and give birth at shorter periods.

Besides that, child marriage particularly with a large age gap or power imbalance between spouses does not enable girls to negotiate with the spouse the use of contraception during sex or the frequency of sex. All these factors expose these girls to a high risk of obstetric complications that can cause their death. They may also contract human immunodeficiency virus (HIV) and suffer from mental health disorders.

Based on UNFPA (2020), early pregnancy before the girls' bodies' maturity increases the risk of serious complications. Additionally, child brides may face violence whether from their spouses or in-laws as by UNFPA (2020). In accordance with UNFPA (2014), married girls under the age of 15 face the double risk of maternal death and obstetric fistula.

As by John et al. (2019), a relationship exists between child marriage and mental health and overall psychological well-being as girls experience psychological distress, psychiatric disorders and a high risk of suicidality and depression.

Child marriage has negative physical and psychological consequences and limits the girls' abilities in relation to the exercise of their rights as expressed by Sebany, Kapungu & John (2019).

As explained by Irani & Roudsari (2019), child marriage increases the risk of both psychological and physical problems. It is one of the major reasons of cervical cancer and exposes girl brides to the risk of mortality due to the occurrence of complications such as hemorrhage, sepsis and preeclampsia. Child marriage can also cause repeated child delivery, pregnancy termination and several unwanted pregnancies. It doesn't have negative consequences on mothers only but also on infants as it causes the delivery of preterm neonates or low-birth-weight infants. Besides that, child marriage prevents the girl brides to enjoy their childhood and receive and education. It can also make them to experience depression and isolation.

Due to child marriage, girls may also suffer from psychiatric disorders such as antisocial personality disorder, anxiety and phobia as expressed by Withers (2019).
According to Marinangeli (2019), child marriage makes girls subject to domestic violence, physical beatings, forced sex and psychological abuse. This endangers their empowerment feeling and psychological well-being, reduces their liberties and affects their emotional stability. It leads to the decline of their mental health making them experience panic and fear instead of a carefree child attitude and happiness.

4.2 The relationship between lack of education (independent variable) and girls' physical & psychological health (dependent variable)

According to Wodon et al. (2018), lack of education in particular of girls negatively affects their health. Uneducated women are not able to take care of themselves if they are injured or sick. On the other hand, lack of education makes women lack knowledge about sexually transmitted diseases such as HIV/AIDS. Additionally lack of education is strongly associated with the increase of child marriage and early childbearing that exposes the girl to the risk of maternal mortality and morbidity. Lacking physical maturity when giving birth increases risks of prolonged or obstructed labour and fistula. Other negative health consequences related to the lack of education that results into child marriage include girls' isolation, depression and malnutrition. It also leads to the lack of negotiating reproductive and sexual behaviors with the girls' spouses and this results into abortions, unwanted pregnancies, sexually transmitted infections and insufficient birth spacing.

As expressed by Belafi (2018), girls who are not educated are at risk of being married young and this increases their risk to diseases such as HIV. Education could lead to the decrease of maternal mortality by 70%. Therefore, providing girls with education improves their health and wellbeing.

V. RESEARCH METHODOLOGY

5.1 Design and Measures

This study employed a cross-sectional research design. The questionnaire included two major sections: child marriage (CM) and lack of education (LOE). The dimensions used to measure child marriage included age, gender and culture while lack of education was measured by the dimensions that included age, gender, standard of living and culture. As for the dimensions that measured girls' physical & psychological health (GPHPSH), they included unwanted pregnancies, maternal death, repeated child delivery, depression, fear, anxiety, phobia and panic.

A 7-item scale ranging from “strongly never/strongly disagree” (1) to “strongly always/strongly agree” (5) was used to measure all items in the questionnaires. Demographic variables were used as controlling variables.

5.2 Sample

170 questionnaires were distributed. Out of the total distribution, 132 useable questionnaires were returned to the researcher. The unit of analysis for this study consists of 132 refugees from Niger residing in Egypt. All questionnaires were answered voluntarily by the participants. The researcher respected the issue of confidentiality and assured the participants that their names will not be mentioned.

5.3 Data Analysis

In order to assess the validity and reliability of the instrument and test the research hypotheses, the SmartPLS version 2.0 was employed. The PLS path method generated by SmartPLS was used to test the hypothesized model and test outcomes will show the significant relationship between the independent variables and dependent variable if the value of t statistic is larger than 1.96. If the result reveals that the independent variables acts as essential predictors of dependent variable in the hypothesized model as by Henseler et al. (2009), a global fit measure is conducted to validate the adequacy of PLS path model globally as expressed by Wetzel et al. (2009).

If the result of testing the hypothesized model surpasses the cut-off value of 0.36 for large effect sizes of R², then this indicates that it provides sufficient support for the PLS path model globally as by Wetzel et al. (2009).

5.4 Results

5.4.1 Sample Profile

The table below demonstrates that the majority of respondents were female (53.80 %), aged between 31 and 40 (45.50 %), married (77.30%), currently work (56.80%), are illiterate (86.40%), have more than 3 children (49.20%) and having a very low standard of living (77.30%).

Novelty Journals
Table 1: Respondents’ Characteristics

<table>
<thead>
<tr>
<th>Respondent Characteristics</th>
<th>Sub-Profile</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>46.20</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>53.80</td>
</tr>
<tr>
<td>Age</td>
<td>18 to 30 years old</td>
<td>21.20</td>
</tr>
<tr>
<td></td>
<td>31 to 40 years old</td>
<td>45.50</td>
</tr>
<tr>
<td></td>
<td>41 to 50 years old</td>
<td>27.30</td>
</tr>
<tr>
<td></td>
<td>&gt; 51 years old</td>
<td>6.10</td>
</tr>
<tr>
<td>Status</td>
<td>Single</td>
<td>22.70</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>77.30</td>
</tr>
<tr>
<td>Employment</td>
<td>Currently jobless</td>
<td>31.10</td>
</tr>
<tr>
<td></td>
<td>Never worked before</td>
<td>12.10</td>
</tr>
<tr>
<td></td>
<td>Currently Work</td>
<td>56.80</td>
</tr>
<tr>
<td>Literacy</td>
<td>Literate</td>
<td>13.60</td>
</tr>
<tr>
<td></td>
<td>Illiterate</td>
<td>86.40</td>
</tr>
<tr>
<td>Employment</td>
<td>Have no children</td>
<td>10.60</td>
</tr>
<tr>
<td></td>
<td>Have only 1 child</td>
<td>18.20</td>
</tr>
<tr>
<td></td>
<td>Have 1-3 children</td>
<td>22.00</td>
</tr>
<tr>
<td></td>
<td>Have more than 3 children</td>
<td>49.20</td>
</tr>
<tr>
<td>Standard of living</td>
<td>Good</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Very Low</td>
<td>77.30</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>14.40</td>
</tr>
<tr>
<td></td>
<td>Struggling</td>
<td>5.30</td>
</tr>
</tbody>
</table>

5.4.2 Validity and Reliability Analyses for the Instrument

In order to assess the validity and reliability of the measurement scale, the confirmatory factor analysis was performed. The table below shows the results of convergent and discriminant validity analyses. All constructs had the values of average variance extracted (AVE) larger than 0.5, all constructs which had the diagonal values of $\sqrt{\text{AVE}}$ greater than the
squared correlation with other constructs in off diagonal demonstrate that all constructs met the acceptable standard of discriminant validity that was mentioned by Henseler et al. (2009). 

Table 2: The Results of Convergent and Discriminant Validity Analyses

<table>
<thead>
<tr>
<th>Construct</th>
<th>AVE</th>
<th>CM</th>
<th>LOE</th>
<th>GPHPSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td>0.6799</td>
<td></td>
<td></td>
<td>0.8246</td>
</tr>
<tr>
<td>LOE</td>
<td>0.7550</td>
<td>0.4519</td>
<td></td>
<td>0.8689</td>
</tr>
<tr>
<td>GPHPSH</td>
<td>0.6798</td>
<td>0.5185</td>
<td>0.4466</td>
<td>0.8245</td>
</tr>
</tbody>
</table>

By Researcher

Factor loadings and cross loadings for different constructs are shown in the table below. The correlation between items and factors had higher loadings than other items in different constructs. The variables loaded more strongly on their own constructs in the model, exceeding the specified minimum of 0.7 as by Henseler et al. (2009). Therefore, the validity of measurement model met the criteria.

Table 3: The Results of Factor Loadings and Cross Loadings for Different Constructs

<table>
<thead>
<tr>
<th>Construct/Item</th>
<th>CM</th>
<th>LOE</th>
<th>GPHPSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM1</td>
<td>0.871073</td>
<td>0.310906</td>
<td>0.529118</td>
</tr>
<tr>
<td>CM2</td>
<td>0.857759</td>
<td>0.286983</td>
<td>0.394263</td>
</tr>
<tr>
<td>CM3</td>
<td>0.738451</td>
<td>0.597314</td>
<td>0.316399</td>
</tr>
<tr>
<td>LOE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOE1</td>
<td>0.397669</td>
<td>0.851549</td>
<td>0.333655</td>
</tr>
<tr>
<td>LOE2</td>
<td>0.411788</td>
<td>0.948103</td>
<td>0.515966</td>
</tr>
<tr>
<td>LOE3</td>
<td>0.326355</td>
<td>0.924053</td>
<td>0.391539</td>
</tr>
<tr>
<td>LOE4</td>
<td>0.514323</td>
<td>0.736347</td>
<td>0.220117</td>
</tr>
<tr>
<td>GPHPSH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPHPSH 1</td>
<td>0.533721</td>
<td>0.388549</td>
<td>0.835873</td>
</tr>
<tr>
<td>GPHPSH 2</td>
<td>0.563093</td>
<td>0.440607</td>
<td>0.835139</td>
</tr>
<tr>
<td>GPHPSH 3</td>
<td>0.337223</td>
<td>0.418867</td>
<td>0.803903</td>
</tr>
<tr>
<td>GPHPSH 4</td>
<td>0.301134</td>
<td>0.435055</td>
<td>0.788973</td>
</tr>
<tr>
<td>GPHPSH 5</td>
<td>0.457269</td>
<td>0.388778</td>
<td>0.811889</td>
</tr>
<tr>
<td>GPHPSH 6</td>
<td>0.360990</td>
<td>0.160618</td>
<td>0.811400</td>
</tr>
<tr>
<td>GPHPSH 7</td>
<td>0.434469</td>
<td>0.322781</td>
<td>0.875628</td>
</tr>
<tr>
<td>GPHPSH 8</td>
<td>0.305412</td>
<td>0.299513</td>
<td>0.830251</td>
</tr>
</tbody>
</table>

By Researcher

The results of reliability analysis for the instrument can be seen in the table below. The composite reliability (CR) and Cronbach’s Alpha (CA) had values.

Table 4: Composite Reliability and Cronbach’s Alpha

<table>
<thead>
<tr>
<th>Construct</th>
<th>CR</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td>0.863760</td>
<td>0.769776</td>
</tr>
<tr>
<td>LOE</td>
<td>0.924344</td>
<td>0.891403</td>
</tr>
<tr>
<td>GPHPSH</td>
<td>0.944350</td>
<td>0.933199</td>
</tr>
</tbody>
</table>

By Researcher
5.5 Analysis of the Construct

The result of Pearson correlation analysis and descriptive statistics is demonstrated in the table below. The means for the variables vary from 4.2 to 4.3 signifying that the levels of child marriage, lack of education and girls’ physical & psychological health range from high (4) to highest level (7). The correlation coefficients for the relationship between the independent variables (child marriage) and (lack of education) and the dependent variable (girls’ physical & psychological health) were less than 0.90, indicating the data were not affected by serious collinearity problem as based on Hair et al. (2006). To test research hypotheses, the measurement scales that had validity and reliability were used.

Table 5: Pearson Correlation Analysis and Descriptive Statistics

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CM</td>
<td>4.3</td>
<td>1.3</td>
<td>1</td>
</tr>
<tr>
<td>2. LOE</td>
<td>4.2</td>
<td>1.5</td>
<td>.52**</td>
</tr>
<tr>
<td>3. GPHPSH</td>
<td>4.3</td>
<td>1.3</td>
<td>.47” .40”</td>
</tr>
</tbody>
</table>

Note: ** p<0.01

By researcher

5.6 Outcome and Hypotheses Testing

The outcomes of testing PLS path model are demonstrated in the figure below. The inclusion of child marriage and lack of education had explained 39% of the variance in girls’ physical and psychological health. The results of SmartPLS path model analysis revealed that child marriage is significantly correlated with girls’ physical & psychological health (β=0.42; t=4.00), supporting H1. It has also revealed that lack of education is significantly correlated with girls’ physical & psychological health (β=0.30; t=2.60), supporting H2. This result demonstrates that child marriage and lack of education are essential predictors of girls’ physical & psychological health in Niger.

![Figure 2: Outcomes of Testing PLS Path Method](image)

Source: By researcher

In order to determine a global fit of PLS path model, the researcher carried out a global fit measure (GoF) as by Wetzel et al. (2009). GoF=SQRT{MEAN (Communality of En-dogenous) x MEAN (R²)}=0.52, indicating that it surpasses the cut-off value of 0.36 for large effect sizes of R². This result confirms that the PLS path model offers better explanation compared with the baseline values (GoF small=0.1, GoF medium=0.25, GoF large=0.36). It also provides sufficient support to validate the PLS model globally as based on Wetzel et al. (2009).
VI. RESULTS AND DISCUSSION

The findings of the study show that there is a significant relationship between child marriage and girls' physical & psychological health in Niger. They also show that there is a significant relationship between lack of education and girls' physical & psychological health in Niger. The findings reveal that child marriage and lack of education act as essential predictors of girls' physical & psychological health in Niger. The study's findings with regard to child marriage are in compliance with what was mentioned by John et al. (2019) that there is a relationship between child marriage and mental health and overall psychological well-being as girls experience psychological distress, psychiatric disorders and a high risk of suicidality and depression.

The findings also commensurate with what was expressed by Sebany, Kapungu & John (2019) that child marriage has negative physical and psychological consequences and limits the girls' abilities in relation to the exercise of their rights.

The study's findings are in conformity with what was explained by Irani & Roudsari (2019) that child marriage increases the risk of both psychological and physical problems. It is one of the major reasons of cervical cancer and exposes girl brides to the risk of mortality due to the occurrence of complications such as hemorrhage, sepsis and preeclampsia. Child marriage can also cause repeated child delivery, pregnancy termination and several unwanted pregnancies. Besides that, child marriage makes girls experience depression and isolation.

The aforementioned findings are in line with what was mentioned by Zaman & Koski (2020) that child marriage has negative health consequences on girls throughout their lives and leads to less control over their fertility, unwanted pregnancies and giving birth at shorter periods. Girls are exposed to a high risk of obstetric complications that can cause their death. They may also contract human immunodeficiency virus (HIV) and suffer from mental health disorders.

The findings are also in compliance with what was stated by UNFPA (2020) that early pregnancy before the girls’ bodies’ maturity increases the risk of serious complications and what was mentioned by UNFPA (2014) that married girls under the age of 15 face the double risk of maternal death and obstetric fistula.

At the same time, the findings are in compliance with what was expressed by Withers (2019 ) that due to child marriage, girls may also suffer from psychiatric disorders such as antisocial personality disorder, anxiety and phobia and what was mentioned by Marinangeli (2019) that child marriage endangers girls’ psychological well-being, affects their emotional stability and leads to the decline of their mental health making them experience panic and fear instead of a carefree child attitude and happiness.

The study's findings with regard to lack of education are in compliance with what was expressed by Wodon et al. (2018) that lack of education in particular of girls negatively affects their health. Uneducated women are not able to take care of themselves if they are injured or sick. Lack of education makes women lack knowledge about sexually transmitted diseases such as HIV/AIDS. Additionally it is strongly associated with the increase of child marriage and early childbearing that exposes the girl to the risk of maternal mortality and morbidity. Lacking physical maturity when giving birth increases risks of prolonged or obstructed labour and fistula. Other negative health consequences related to the lack of education that results into child marriage include girls’ isolation, depression and malnutrition. It also leads to abortions, unwanted pregnancies, sexually transmitted infections and insufficient birth spacing.

The findings are also in line with what was mentioned by Belafi (2018) that girls who are not educated are at risk of being married young and this increases their risk to diseases such as HIV.

VII. CONCLUSION

Although there are actions taken by the government of Niger besides the efforts made by various organizations such as UNICEF and UNFPA, in order to end child marriage, changing deep-rooted thinking and stubborn behaviour is extremely challenging. Therefore, increasing awareness about the dangerous consequences of child marriage should be at community level to positively influence the actions and beliefs of people towards the empowerment of women and girls and diminishing the low value placed on girls.
The root causes of child marriage which include gender inequality, discrimination and poverty should be addressed. Everyone should be mobilized to change discrimination practices against girls in the country in order to work towards the creation of economic and social equality for both girls and young women.

Additionally, laws against child marriage should be enhanced in order to ensure the community's commitment towards the girls' rights in Niger and the achievement of gender equality. At the same time girls' education should be encouraged and promoted to boost their confidence and enable them to have the required knowledge about the dangers of child marriage.

As for the girls who are already married, they should also be given the opportunity for the enhancement of livelihood skills, schooling and employment. Besides that, they should be provided with reproductive health services and information.

As for education, awareness campaigns particularly at the level of communities and rural areas should be organized to make families aware that educating their children particularly girls will not burden the family; on the contrary it would improve the family's standard of living. Education should be recognized as a priority in Niger by the government and all institutions focusing especially on educating young girls. This would contribute to the reducing of child marriage, empowering girls to take part in the country's development. It would also diminish the continuous attempts of neglecting women and pushing them aside due to deep-rooted gender inequality or discrimination against women or the roles they play in society.

REFERENCES


