

Research Article

# Pregnancy Psychosocial Outcomes on Adolescent Girls at Dakodwamu a Suburb of Kumasi in the Ashanti Region, Ghana

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## Abstract

Adolescent pregnancy is a social and public health concern in Ghana, with high prevalence in some regions in the country, including the Ashanti Region, particularly at Dakodwamu. This study investigates the pregnancy psychosocial outcomes on adolescent girls at Dakodwamu a suburb of Kumasi in the Ashanti Region, Ghana. A cross-sectional descriptive design was employed with 393 respondents which comprised older adolescent girls aged 15-19 years. Data were analysed using frequency distribution, Pearson's chi-squared test of independence and multiple linear regression. Experienced obstetric outcomes were statistically significant at  $P < 0.05$ , (coeff = 1.000, 95% CI [0.914—1.086]). Have sleeping problem was observed as statistically significant at  $p < 0.05$ , (coeff = 0.497, 95% CI [0.411—0.583]). Again, faced family discrimination was statistically significant at  $P < 0.05$ , (coeff = -0.667, 95% CI [-0.667— -0.667]). Difficulty in getting money for abortion when pregnant was observed as statistically significant at  $p < 0.05$ , (coeff = -0.333, 95% CI [-0.333— -0.333]). Based on this, the study recommends that parents need to be encouraged to have strict rules and regulations within the family of teenage girls, but should also create the freedom within the family for teenage girls to discuss issues related to sex, sexuality and responsible adulthood.

## Keywords

Adolescents, Outcomes, Physical Effects, Pregnancy, Psychological Effects, Psychosocial Effects, Socioeconomic Effects

## 1. Introduction

The age at which a woman has her first child has an impact on her overall fertility, health, and welfare as well as the health of her child [10]. Children born to very young mothers are at increased risk of sickness and death [11]. Teenage mothers are more likely to experience adverse pregnancy psychosocial outcomes and are more constrained in their ability to pursue educational opportunities than young women who delay childbearing [11]. As of 2019, adolescents aged 15–19 years in low- and middle-income countries (LMICs)

had an estimated 21 million pregnancies each year, of which approximately 50% were unintended and which resulted in an estimated 12 million births [29, 9]. Based on 2019 data, 55% of unintended pregnancies among adolescent girls aged 15–19 years end in abortions, which are often unsafe in LMICs [29]. Adolescent mothers (aged 10–19 years) face higher risks of eclampsia, puerperal endometritis and systemic infections than women aged 20–24 years, and babies of adolescent mothers face higher risks of low birth weight, preterm birth

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and severe neonatal condition [29]. Data on childbirths among girls aged 10–14 are getting more widely available. Globally the adolescent birth rate for girls 10–14 years in 2023 was estimated at 1.5 per 1000 women with higher rates in sub-Saharan Africa [4.4] and Latin America and the Caribbean [2.3] [31].

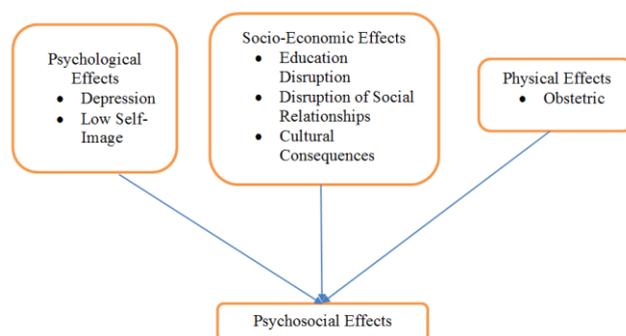
In Ghana, teenage childbearing varies by region; Greater Accra [7%] and Upper West [8%] regions have the lowest proportion of teenagers who have begun childbearing, and the other regions range from 13% to a high of 19% in Western region. Teenage childbearing declines sharply with education: from 35% of teenagers with no education to 4% of those with some secondary education [11]. Teenage women in urban areas are less likely [11%] to have begun childbearing than those in rural places [18%] [11]. By region, the percentage of women age 15–19 years who have ever been pregnant ranges from 6% in Greater Accra to 26% in Savannah [10].

Surprisingly, between 2016 and 2020 Ashanti region has recorded 89,856 teenage pregnancy cases [12]. Out of this, a total of 18,461 were recorded in 2016. This figure dropped in 2017 and 2018 with 18,066 and 17,447 cases respectively. This trend was bucked in 2019 when the number of teenage pregnancy cases shot up to 18,080. It, however, saw a decline in 2020 when the number of cases recorded reduced to 17,802 [12]. Every year, an estimated 21 million girls aged 15–19 years in developing regions become pregnant and approximately 12 million of them give birth [29]. Therefore, unearthing pregnancy psychosocial outcomes on adolescent girls is significant in drawing policy recommendation. A search from libraries and electronic databases has not located studies that specifically document pregnancy psychosocial outcomes on adolescent girls at Dakodwamu a suburb of Kumasi in the Ashanti Region, Ghana. The present study therefore aimed at examining pregnancy psychosocial outcomes on adolescent girls at Dakodwamu a suburb of Kumasi in the Asanti Region, Ghana. By specifically analysing: the psychological effects of pregnancy on adolescent girls at Dakodwamu; the physical effects of pregnancy on adolescent girls at the Dakodwamu; and lastly, the social and economic consequences of pregnancy on adolescent girls at Dakodwamu. The study further hypothesised that there is no statistically significant relationship between pregnancy psychosocial outcomes and adolescent girls' background characteristics.

## 2. Theoretical Perspective

To understand the main research objective, the study drew on [17] problem behaviour theory (PBT). The theory explains that, teenage pregnancy is considered as problem behaviour that results in significant levels of psychological distress. This theory asserts that adolescent problem behaviours are developmentally antecedent by social structural variables [6]. The social structural variables include the parent's education, occupation, religion, ideology, family structure, home climate,

and peer and media involvement. These social factors “interact and spawn a personality system which is composed of motivational, belief, and self-control factors, and a perceived-environment system, which is composed of perceptions of parental support, peer support and parent-peer interaction” [6]. These social structural factors produce the systems that determine problem behaviour engagement, and also trigger the onset of problem behaviour [6, 3, 30]. The decision to engage in problem behaviour results from the interplay between the personality system and the perceived environmental system. From the perspective of Problem Behaviour Theory, teenage pregnancy could be seen as developing from problem behaviour that adolescents engage in as they negotiate their path towards independence, with the perceived support that social structures provide.



Source: Authors' Construction (2023).

**Figure 1.** A Conceptual Framework explaining Psychosocial Effects of Pregnancy.

## 3. Methods

### 3.1. Study Context and Respondents

The study was conducted at Dakodwamu a suburb of Kumasi in the Ashanti Region of Ghana. Dakodwamu was chosen because teenage pregnancy was down to 5.3%, (2017) and 6.7 (2016) [12]. However, contraceptive use shot up to 15.8% from the previous year's 14.7%. There was however, an increase in maternal deaths – cases which rose to 111 from the 2016 total of 66 coupled with institutional maternal mortality ratio which grew from 211 per 100,000 births to 333 per 100,000 live births [12]. In the community, the study enrolled adolescent girls aged 15-19 years in the study. In all, 393 respondents were recruited for the study.

### 3.2. Study Design and Data Source

The study employed descriptive cross-sectional survey design. The design was carefully chosen because it focuses on a representative sample from the population to generalise the results for the study population [27] which, in return, allows for systematic collection of data using structured question-

naires [7]. The research instrument formulated was based on literature and the conceptual framework of the study. Already compiled and tried survey instruments were also reviewed and those deemed appropriate to the study were integrated into the design of the data collection instrument. Data were solicited from pregnant adolescents from the field at Dakodwom a suburb of Kumasi in the Ashanti Region, Ghana. Primary data is preferred because it is data the researcher collect himself directly from the source hence the researcher becomes the first person to use this exact set of data.

### 3.3. Sample and Sampling Procedure

A sample size of 393 was sampled from the population of 201073 female adolescents. The choice of the sample size was based on [19] table of determining sample size. To reach the respondents, the study employed systematic random sampling technique to select the respondents for the study. The sampling technique was chosen because it is based on selection of units situated at certain predetermined interval called the sampling fraction. This is applicable for small scale surveys and one of its main advantages is that it can also be used without having a list of basic sampling units, as in situations where dwellings are well organized in rows, blocks or along a river or main road. The population of adolescent girls aged 10 to 19 years in the Kumasi Metropolitan is 201073 which was used for the study [13]. The population is made up of adolescent girls (15-19 years) who live in Kumasi Metropolitan. This consisted of both pregnant and non-pregnant adolescents.

Facility-based sampling was used to sample respondents for the study. Facility-based sampling refers to recruiting members of a target population from a variety of facilities including correctional and drug treatment centers, sexually transmitted diseases clinics or general health centers and hospitals [16]. Individuals from hidden population can be recruited from each of these facilities, but biases may happen due to under-sampling of those who are not willing to seek and obtain services especially when their behaviours are stigmatized [2]. The choice of the facility-based sampling was because the respondents would be difficult to reach using other sampling techniques. The selection of the respondents for the study commenced on Wednesday, 15<sup>th</sup> of July, 2020 and ended on Friday, 31<sup>st</sup> of July, 2020.

### 3.4. Data Collection Procedures

With the help of three research assistants, the collection of data commenced on 15<sup>th</sup> of July, 2020 and ended on 31<sup>st</sup> of July, 2020 at Dakodwamu a suburb of Kumasi in the Ashanti Region of Ghana. In all, two weeks were used to collect the data from the field.

### 3.5. Data Quality Concerns

To ensure data quality, Cronbach's alpha reliability test was

run on the psychosocial outcomes and the background characteristics data collected from the field, it emerged that Cronbach's alpha rated the data as acceptable with a reliability of  $\alpha = 0.63$ . According to [15], a general accepted rule is that alpha of 0.6-0.7 indicates an acceptable level of reliability and that data is useful.

As part of ensuring validity of data collected from the field, effort was made to pretest the questionnaire before the actual data collection. Also, standardized data collection instruments which were used in previous psychosocial outcomes survey [33, 8] were adopted.

### 3.6. Data Analysis

Data collected from the field were processed using the Statistical Package for Social Sciences (SPSS) version 20. Frequency distribution was used to summarize demographic data, responses on psychological effects, physical effects, and social and economic consequences of pregnancy on adolescent girls. The Pearson's chi-squared test of independence was used to test the three statistical hypotheses postulated in the study to either accept or reject the null hypotheses. However, the multiple linear regression analysis was also run on the various results to identify possible risk factors and protective factors to adolescents' girls pregnancy psychsocial outcomes.

### 3.7. Ethical Consideration

On ethical consideration, participation was made voluntary and respondents were given the option to decline at any time. In the field, verbal informed consent was taken from both parents and adolescents aged 18-19years while adolescents below 18years old also assented after their parents have consented on their behalf. However, because verbal informed consent was sought from the participants, it was not documented but was witnessed by the participant's parents, partner or any elderly person who directly related to the participant. The reason why adolescents less than 18years assented was that in Ghana according to the 1992 constitution, one becomes an adult and takes decisions for him/herself after he/she has celebrated the 18th birthday so without that all decisions concerning adolescents (minors) are done by their parents. Hence, they have not reached the legal age to decide for themselves. Anonymity and confidentiality were assured. During the fieldwork, all forms of identification including respondents' names, addresses and telephone numbers were avoided. In addition, ethical clearance (with ID number UC-CIRB/CHLS/2020/09) to conduct this study was obtained from the Ethical Review Board of University of Cape Coast, Ghana. To exclude those who were not part of the study, the age of the adolescents was verified using the identification documents.

## 4. Results

### 4.1. Socio-Demographic Characteristics of Respondents

Table 1 shows the socio-demographic characteristics of respondents. A little above twenty per cent (20.4%) of the respondents in the sample were 15 years while 19.8 per cent were 17 years. Regarding religion, Christianity was the dominant category constituting 60.1 per cent, the least category was traditionalist (19.8%). Whereas self-employed was nearly about 60 per cent (59.8%) constituting the majority, the least category was employed (20.1%). In terms of marital status, all the respondents (100%) were in the not married category. Concerning partner’s age, about sixty per cent (59.8%) of the respondents’ partners were between 20-29 years while 20.1% of the respondents’ partners were between 30-39 years. Regarding living arrangement, all the respondents (100%) live with their parents. In terms of gravida (number of pregnancies), the dominant category were those that had experience pregnancy for the first time constituting sixty per cent (60.3%).

Table 1. Socio-Demographic Characteristics of Respondents.

Socio-Demographic Characteristics	F	%
Age		
15	80	20.4
16	79	20.1
17	78	19.8
18	78	19.8
19	78	19.8
Religion		
Christianity	236	60.1
Islamic	79	20.1
Traditional	78	19.8
Employment Status		
Employed	79	20.1
Self-employed	235	59.8
Unemployed	79	20.1
Marital Status		
Not married	393	100.0
Partner’s Age		
Less than 20 years	79	20.1
20-29 years	235	59.1
30-39 years	79	20.1

Socio-Demographic Characteristics	F	%
Living Arrangement		
Parents	393	100.0
Gravida		
1	237	60.3
2	156	39.7
Total	393	100.0

Source: Fieldwork (2023)

### 4.2. Psychosocial Effects

Psychosocial effects during pregnancy are always associated with changes in psychological, physical and socio-economical functioning of pregnant women. It is usually associated with ambivalence, frequent mood changes varying from anxiety, fatigue, exhaustion, sleepiness, depressive reactions to excitement and so on [4].

This section of the chapter analyses physical effects of pregnancy on adolescent girls. Specifically, the focus is on obstetric effects. The reason for this aspect of the chapter is a need to understand obstetric effects of pregnancy on adolescent girls in order to make an objective conclusion either it’s positively or negatively breaks them down or not. This variable has been used to assess physical effect of pregnancy on adolescent girls.

### 4.3. Physical Effects of Pregnancy on Adolescent Girls

To obtain data on the obstetric outcomes of pregnancy on adolescent girls, research objective one was formulated. The respondents were, therefore, asked series of questions to examine if they encounter obstetric issues during pregnancy. The results are presented in Table 2.

Table 2. Physical Effects of Pregnancy on Adolescent Girls.

Physical Effects	F	%
Experience obstetric issues		
Yes	236	60.1
No	157	39.9
Experience sleeping problem		
Yes	236	60.1
No	157	39.9
Have problem in looking after your own self		
Yes	158	40.2

Physical Effects	F	%
No	235	59.8
Total	393	100.0

Source: Fieldwork (2023)

On experiencing obstetric problems, the results show that 60.1 per cent of the respondents reported they experience obstetric problems. Among the 236 adolescent girls that reported that they experience obstetric problems were further asked to stipulate the obstetric problems they encounter and the report revealed that about eighty-five per cent (84.7%) reported preterm, severe maternal morbidity and anaemia while 15.3 per cent indicated toxemia (See Table 2).

On whether adolescent girls have sleeping problems or not, 60.1 per cent of the adolescent girls said they experience sleeping problems. Those that reported that they experience sleeping problems were further asked to highlight why they have sleeping problems and the results show that about forty per cent (39.9%) said is because of emotional problems, another 39.9 per cent said it is nightmares while the least category (20.0%) said pregnancy symptoms (See Table 2).

Regarding if adolescent girls have problem looking after themselves or not, the results indicated that 59.8 per cent of the respondents reported that they do not have problem looking after themselves while 40.2 per cent said they do have problems looking after themselves. Among the 158 adolescent girls that confirmed that they do have problems looking after themselves were further asked to identify some of the reasons that militate against them looking after themselves and more than half (53.8%) indicated no motivation for self-care, feeling guilty about spending time or money taking care of yourself and lack of awareness of your own needs while 46.2 per cent said thinking self-care takes too much time, thinking you are not worthy of self-care, thinking self-care is a sign of weakness or a vanity measure and putting other's needs first (See Table 2).

In Table 3, Pearson's chi squared test of independence examining the relationship between psychosocial effects of pregnancy and background characteristics of adolescent girls are presented. This analysis was run to test the hypothesis there is no statistically significant relationship between psychosocial effects of pregnancy and adolescent girls' background characteristics. Statistically significant relationships were found among all the background characteristics namely; age [ $p=0.000$ ], religion [ $p=0.000$ ], employment status [ $p=0.000$ ], partner's age [ $p=0.000$ ] as well as gravida [ $p=0.000$ ] and psychosocial effects.

**Table 3.** The Relationship between Psychosocial Effects of Pregnancy and Adolescent Girls Background Characteristics.

Socio-Demographic Characteristics	Experience Psychosocial Effects	Not Experience Psychosocial Effects	Total n (%)	X <sup>2</sup>	P.Value
Age				388.892***	0.000
15	98.8	1.2	80(100.0)		
16	100.0	0.0	79(100.0)		
17	0.0	100.0	78(100.0)		
18	0.0	100.0	78(100.0)		
19	0.0	100.0	78(100.0)		
Religion				174.388***	0.000
Christianity	33.5	65.5			
Islamic	100.0	0.0			
Traditional	0.0	100.0			
Employment Status				174.856***	0.000
Employment	100.0	0.0	79(100.0)		
Self-employment	33.6	66.4	235(100.0)		
Unemployment	0.0	100.0	79(100.0)		
Partner's Age					
Less than 20 years			79(100.0)		
20-29 years	35.6	66.4	235(100.0)		
30-39 years	0.0	100.0	79(100.0)		

Socio-Demographic Characteristics	Experience Psychosocial Effects	Not Experience Psychosocial Effects	Total n (%)	X <sup>2</sup>	P.Value
Gravida (No of Pregnancies)				173.923***	0.000
1	66.1	33.3	237(100.0)		
2	0.0	100.0	156(100.0)		

Note: Row percentages in parenthesis, Chi square significant at (0.001)\*\*\*, (0.01)\*\*, (0.05)\*  
Source: Fieldwork (2023)

Table 4 highlights a multiple linear regression results on physical effects of pregnancy on psychosocial effects among adolescent girls. This analysis was done in order to get an insight of the factors studied under physical effects those that predict psychosocial effects on the adolescent girls. The results are presented in Table 4.

**Table 4.** Multiple Linear Regression Results on Physical Effects of Pregnancy on Psychosocial Effects among Adolescent Girls.

Factor	Coefficient	P. Value	95% CI	
Have obstetric outcomes	1.000***	0.000	-0.719	-0.275
Have sleeping problem	0.497***	0.000	0.411	0.583
Constant	-0.497	0.000	-0.719	-0.275

Chi squared significant at (0.05)  
Source: Fieldwork (2023)

It emerged in Table 4 that, experienced obstetric outcomes was statistically significant variable that seems to have exerted much influence on psychosocial effects among adolescent girls at  $p=0.000$ , (coeff=1.000, 95% CI [0.914—1.086]). This indicates that a one-unit shift in the value of have obstetric outcomes increases the psychosocial effects of pregnancy on the adolescent girls. Have sleeping problem was observed as statistically significant to psychosocial effects of pregnancy on adolescent girls at  $p=0.000$ , (coeff = 0.497, 95% CI [0.411—0.583]). This suggests that as the value of have sleeping problem increases by 0.49 unit increases the influence of the psychosocial effects of pregnancy on the adolescent girls (See Table 4).

#### 4.4. Socio-Economic Effects of Pregnancy on Adolescent Girls

Teen mothers are likely to leave school and face a high risk of unemployment, poverty and dependence [21]. The American statistics show that only 41 per cent of mothers who have children before age 18 ever complete secondary school

compared to 61 per cent of similar situated young women who delay child bearing until 20 or 21 [22]. To assess socio-economic effects of pregnancy on adolescent girls, several questions were asked to collect data from the respondents to analyse the kind of socio-economic effects of pregnancy that adolescent girls encounter. The questions covered education disruption, disruption of social relationships and cultural consequences and the results are shown in Table 5.

**Table 5.** Socio-Economic Effects of Pregnancy on Adolescent Girls.

Socio-Economic Effects	F	%
Feel discriminated in the family		
Yes	279	71.0
No	114	29.0
Being treated unjustly by family, friends and community members		
Yes	237	60.1
No	157	39.9
Experience stigmatisation		
Yes	357	90.8
No	36	9.2
How did you see your relationship with your friends and family when you were pregnant		
Cordial	79	20.1
Poor	158	40.2
Disheartened	156	39.7
Were you always despised in the society and treated differently and could not do activities with friends		
Always	236	60.1
Sometimes	78	19.8
Never	78	20.1
Have economic strains		
Always	79	20.1
Sometimes	158	40.2

Socio-Economic Effects	F	%
Never	156	39.7
Do you sometimes feel like you need money for your upkeep and do not get		
Always	157	39.9
Sometimes	157	39.9
Never	79	20.1
When pregnant, did you look for money for abortion and did not get		
Yes	157	39.9
No	236	60.1
Did you find it easy to get financial support from family members or friends		
Always	177	45.0
Sometimes	123	31.3
Never	93	23.7
Have you stopped schooling because of pregnancy		
Yes	315	80.2
No	79	19.8
Total	393	100.0

Source: Fieldwork (2023)

Results in Table 5 depict that majority (71.0%) of the respondents indicated that they did face family discrimination. Among the 279 adolescent girls that reported that they faced family discrimination were further asked to indicate how often they encounter the family discrimination and the results revealed that 74.9 per cent said that they always face it while 25.1per cent reported that its sometimes.

Whereas 60.1 per cent of the adolescent girls indicated that they were treated unjustly by friends and community members, 39.9 per cent were certain that they were not treated unjustly by friends and community members (See Table 5). Nearly ninety-one per cent (90.8%) of the respondents said

they did experience stigma in the society. A little above fifty-one per cent (51.5%) of the 357 adolescent girls that said they experience stigma in the society indicated that they sometimes encounter stigma in the society while 48.5 per cent reported that they always face the stigma from the society. Regarding how friends and family members related to adolescent girls when they were pregnant, about 40.2 per cent of the adolescent girls reported that the relationship they experience from friends and family members was poor while those that said it was cordial were 20.1per cent (See Table 5).

When asked whether adolescent girls were despised in the society and treated differently and could not do activities with friends, the results revealed that 60.1 per cent of the respondents indicated that they were always despised and treated differently and could not do activities with friends while 19.8 per cent said they sometimes experience despised and treated differently and could not do activities with friends (See Table 5). Among the respondents sampled for the study, 40.2 per cent of them said they sometimes have economic strains while those who always have economic strains were 20.1 per cent. On whether adolescent girls find it difficult getting money to care for the baby or not, the results revealed that about forty per cent (39.9%) said they always find it difficult in getting money to care for their babies while 20.1 per cent affirmed that they never find it difficult getting money to care for their babies (See Table 5).

When asked if adolescent girls looked for money when they were pregnant to go for abortion and did not get, the results indicated that 60.1 per cent were certain that they never looked for money to go for abortion and they did not get. In terms of education disruption, 80.2 per cent said that they stopped schooling because of the pregnancy. Among the 315 respondents that indicated that they faced education disruption, 95.2 per cent said they stopped schooling because of discrimination while 4.8 per cent said it was as a result of limited school activities (See Table 5).

In Table 6, multiple linear regression analysis on socio-economic outcomes of pregnancy and psychosocial effects among adolescent girls is presented. This analysis was done in order to find out which factors among socio-economic outcomes predict psychosocial effects on adolescent girls.

**Table 6.** Multiple Linear Regression Analysis on Socio-Economic Outcomes of Pregnancy and Psychosocial Effects among Adolescent Girls.

Factor	Coefficient	P. Value	95% CI	
Faced family discrimination	-0.667***	0.000	-0.667	-0.667
Difficult getting money for abortion when pregnant	-0.333***	0.000	-0.333	-0.333
Education disruption	0.333***	0.000	0.333	0.333
Constant	3.000	0.000	3.000	3.000

Chi square significant at 0.05

It emerged in Table 6 that, faced family discrimination was statistically significant variable that seems to have influenced psychosocial outcomes among adolescent girls at  $P=0.000$ , (coeff= -0.667, 95% CI [-0.667— -0.667]). This indicates that -0.66 units shift in the value of the faced family discrimination; the mean of psychosocial outcomes on adolescent girls also tends to decrease. Difficulty in getting money for abortion when pregnant was observed as statistically significant to psychosocial outcomes of pregnancy on the adolescent girls at  $p=0.000$ , (coeff=-0.333, 95% CI [-0.333— -0.333]). This suggests that as the value of difficulty in getting money for abortion when pregnant increases by -0.33 units, the mean of the psychosocial outcomes tends to decrease (See Table 6).

Education disruption was observed as statistically significant variable influencing psychosocial outcomes of pregnancy on adolescent girls at  $p=0.000$ , (coeff=0.333, 95% CI [0.333—0.333]). This result suggests that 0.33 unit changes in the education disruption, the mean of the psychosocial outcome of pregnancy on adolescent girls tends to increase (See Table 7).

#### 4.5. Psychological Effects of Pregnancy on Adolescent Girls

Depression is a consequence of an on-going struggle that depressed people endure in order to try and maintain emotional contact with desired objects [23]. Depression can also occur when a person feels that they have failed to meet their own standards or the standards of important others, and that therefore they are failures. The person ultimately turns the anger to the self [23]. To analyse psychological effects of pregnancy on Adolescent Girls, several questions were asked to collect data from the respondents to analyse the kind of psychological effects of pregnancy on Adolescent Girls. The questions covered depression, and low self-image and the results are shown in Table 7.

**Table 7.** Psychological Effects of Pregnancy on Adolescent Girls.

Psychological Effects	F	%
Feel depressed		
Yes	237	60.3
No	156	39.7
Do you often experience emotional problems		
Always	236	60.1
Sometimes	79	20.1
Never	78	19.8
What makes you emotionally constraint		
Anger, sadness and guilty conscience	78	19.8

Psychological Effects	F	%
Fear, confused about life, hopeless and anxiousness	315	80.2
Have low self-image		
Yes	236	60.1
No	157	39.9
Total	393	100.0

Source: Fieldwork (2023)

Results in Table 7 illustrate that 60.3 per cent of the respondents indicated that they feel depressed. Among the 237 adolescent girls that reported that they feel depressed were further asked to indicate how often they feel depressed and the results revealed that overwhelmingly majority (96.6%) said that they always feel depressed while 3.4 per cent reported that its sometimes. The 237 adolescent girls that indicated that they feel depressed were asked again to stipulate what makes them feel depressed and the results were that 60.1 per cent said they feel they could not achieve standards of important others, 20.1 per cent reported fears of abandonment by their family while 19.8 per cent said they feel they have failed in life.

Whereas 60.1 per cent of the adolescent girls indicated that they always experience emotional problems, 19.8 per cent were certain that they never experience emotional problems (See Table 7). Analysis of what makes adolescent girls emotionally constraint revealed that 80.2 per cent of the adolescent girls graciously cited fear, hopeless, anxiousness and confusion about life. Concerning whether adolescent girls have low self-image revealed that 60.1 per cent said they have low self-image. The 236 adolescent girls that said they have low self-image, about forty-nine per cent (48.7%) indicated that they have no job prospect, 36.0 per cent said their education is truncated while 15.3 per cent reported failure to achieve their aim (See Table 7).

Nearly ninety-one per cent (90.8%) of the respondents said they did experience stigma in the society (See Table 7). A little above fifty-one per cent (51.5%) of the 357 adolescent girls that said they experience stigma in the society indicated that they sometimes encounter stigma in the society while 48.5 per cent reported that they always face the stigma from the society.

Regarding how friends and family members related to adolescent girls when they were pregnant, about 40.2 per cent of the adolescent girls reported that the relationship they experience from friends and family members was poor while those that said it was cordial were 20.1per cent (See Table 7). When asked whether adolescent girls were despised in the society and treated differently and could not do activities with friends, the results revealed that 60.1 per cent of the respondents in-

licated that they were always despised and treated differently and could not do activities with friends while 19.8 per cent said they sometimes experience despised and treated differently and could not do activities with friends (See Table 7).

Among the respondents sampled for the study, 40.2 per cent of them said they sometimes have economic strains while those who always have economic strains were 20.1 per cent (See Table 7). On whether adolescent girls find it difficult getting money to care for the baby or not, the results revealed that about forty per cent (39.9%) said they always find it difficult in getting money to care for their babies while 20.1 per cent affirmed that they never find it difficult getting money to care for their babies (See Table 7).

When asked if adolescent girls looked for money when they

were pregnant to go for abortion and did not get, the results indicated that 60.1 per cent were certain that they never looked for money to go for abortion and they did not get (See Table 6). In terms of education disruption, 80.2 per cent said that they stopped schooling because of the pregnancy (See Table 7). Among the 315 respondents that indicated that they faced education disruption, 95.2 per cent said they stopped schooling because of discrimination while 4.8 per cent said it was as a result of limited school activities.

In Table 8, multiple linear regression results on psychological effects of pregnancy on psychosocial effects among adolescent girls are presented. This analysis was done to predict the factors studied under psychological effects those that predict psychosocial outcomes on the adolescent girls.

**Table 8.** Multiple Linear Regression Results on Psychological Effects of Pregnancy on Psychosocial Effects among Adolescent Girls.

Factor	Coefficient	P. Value	95% CI	
Feel depressed	-0.833***	0.000	-0.906	0-761
Experience emotional problems	-0.167***	0.000	-0.211	-0.123
Have low self-image	-0.334***	0.000	-0.400	-0.267
Constant	3.667	0.000	3.460	3.873

Chi squared significant at 0.05

It emerged in Table 8 that, feel depressed was statistically significant variable that seems to have influenced psychosocial outcomes among adolescent girls at  $p=0.000$ , (coeff=-0.833, 95% CI [-0.906— -0.761]). This indicates that -0.83 units shift in the value of the feel depressed; the mean of psychosocial outcomes on adolescent girls also tends to decrease. Experience emotional problems was observed as statistically significant to psychosocial outcomes of pregnancy on the adolescent girls at  $p=0.000$ , (coeff = -0.167, 95% CI [-0.211— -0.123]). This suggests that as the value of experience emotional problems increases by -0.16 units, the mean of the psychosocial outcomes on adolescent girls tends to decrease (See Table 8).

Have low self-image was observed as statistically significant variable influencing psychosocial outcomes of pregnancy on adolescent girls at  $p=0.000$ , (coeff =-0.333, 95% CI [-0.400— -0.267]). This result suggests that -0.33 unit change in the have low self-image, the mean of the psychosocial outcome of pregnancy on adolescent girls tends to decrease (See Table 8).

## 5. Discussion

The discussion of the analysis is based on the selected variables to investigate the influences that psychosocial effects of pregnancy exert on adolescent girls at the Da-

kodwamu a suburb of Kumasi in the Ashanti Region, Ghana. The discussion of the results of the study concerns the objectives, literature review and key variables, using psychosocial effects as the underlying conceptual framework. The study focused on investigating the psychological, physical effects and socio-economic consequences of pregnancy on adolescent girls.

### 5.1. Physical Effects of Pregnancy on Adolescent Girls

The focus of this objective is on obstetric outcomes of pregnancy. Adolescent girls report on obstetric outcomes on pregnancy, surprisingly, revealed that most of them face obstetric issues and have sleeping deficits during pregnancy. However, an encouraging proportion of the adolescent girls refute the fact that they encounter problem when looking after themselves. The reason for these responses could be that the body of the adolescent girls has not naturally developed to such an extent that it can restfully house a developing baby. Hence, an immature body carrying a baby would apparently pose some hitches for both the adolescent girl and the baby she carries. It is assumed if the body that carries the baby is immature then, it is the more and more it will pose a problem on both the adolescent girl and the baby. Furthermore, experiencing sleeping problems among the adolescent girls is an

indication one is having anaemia and hypertension. This result is in line with a study conducted by [32] that it does appear that teenage pregnancy does pose considerable obstetric health problems to the teenager herself and the child. Moreover, the proportion of the adolescent girls who refute the fact that they encounter problem when looking after themselves reason could be that they do not battle with dealing with common barriers to self-care in life. Again, it could be that, these adolescent girls have observed that self-care is necessary to do every day to build coping skills to help manage stress, prevent illness, and stay well.

The study identified a statistically significant relationship between psychosocial effects of pregnancy on adolescent girls and their background characteristics therefore, the null hypothesis was rejected. This implies that most adolescent girls when they become pregnant at their teen ages do encounter psychosocial effects. Ideally, the assumption is that, the more and more adolescent girls become pregnant at teen ages it is the more and more they become depressed, encounter obstetric issues, nightmares, discrimination and financial constraint. It emerged that the  $p$ -value of the socio-demographic characteristics were not greater than the standard 0.05 cut-off which indicates that the variables were not independent of each other and that there was a statistically significant relationship between the categorical variables. This finding is in line with a study by [25] that psychosocial effects during pregnancy are always associated with changes in psychological, physical and socio-economical functioning of pregnant women. It is usually associated with ambivalence, frequent mood changes varying from anxiety, fatigue, exhaustion, sleepiness, and depressive reactions to excitement and so on.

The multiple linear regression analysis on physical effects revealed association between experienced obstetric issues and psychosocial effect. This relationship had revealed that when adolescent girls experience obstetric issues during pregnancy, it goes a long way to increase the psychosocial effects of pregnancy on them. The coefficient (1.000) of experienced obstetric issues, one can easily predict that the variable is a risk factor to pregnancy on adolescents. This means that adolescent girls irrespective of their stature can go through a lot during pregnancy and that can adversely affect their life.

Moreover, the association found between experiencing sleeping problem and psychosocial effects revealed that when the value of experiencing sleeping problem increases, the mean of psychosocial effects also tends to increase. This stems from the fact that the coefficient (0.497) of the variable classifies the experiencing sleeping problem as a risk factor to pregnancy. What it means is that the more and more adolescent girls become pregnant, it is the more and more they encounter sleeping problems.

## 5.2. Socio-Economic Constraints of Pregnancy on Adolescent Girls

As the study tries to ascertain socio-economic constraints

of pregnancy on adolescent girls, it was revealed that majority adolescent girls have at least faced family discrimination, unjustly treatment from friends, family and community members, and stigmatisation. This supports the assertion that society frowns on adolescent pregnancy. It also indicates that becoming a mother during teen age interferes with the manner in which other people in the society relate to the adolescent in question. Family discrimination, unjustly treatment from friends, family and community members, and stigmatisation on the part of the adolescent girl who is pregnant could mean that people around the adolescent girl whether her parents or friends get upset of the pregnancy of the adolescent girl in question. This finding confirmed a study by [20, 14] that many teenage mothers felt that their pregnancy upset their parents.

Evidence from the data indicated that adolescent girls when become pregnant, the relationship they enjoy from their friends and family members is poor; disheartened and are even always despised in the society. This is an indication that what adolescent girls go through during pregnancy could tell that having a child during adolescent age cannot raise one's social status; instead, it is perceived as a disgrace in the community.

It appeared that several adolescent girls' complaint that they sometimes have economic strains such as financial problems. This confirms the fact that adolescent girls might not be working for money and that when they become pregnant they find it difficult in getting money to cater for their upkeep. In view of this, adolescent girls might feel disheartened, disappointed and devastated in life which might not make them fare better in life. This finding corroborates to a study by [1, 26] that socioeconomic difficulties are experienced by teenagers who become pregnant during their teenage years.

Various constraints surround adolescent girls when they become pregnant. For instance, the study found that 80.2% of the adolescent girls graciously cited that when they became pregnant their education got truncated. The reason for this result could be that the adolescent girls in question could not go back to school after delivery as they were forced to look after their children. This finding is in line with a study by [18] that most teenagers dropped out of school because they had to look after their children after giving birth.

The multiple linear regression analysis on socio-economic constraints on adolescent girls' revealed association between faced family discrimination and psychosocial effects of pregnancy on adolescent girls. This relationship had revealed that adolescent pregnancy increases family discrimination. Per the coefficient (-0.667) of the variable, one can say that an increase in family discrimination decreases the psychosocial effects on the adolescents.

More so, the association found between found it difficult looking for money for abortion and did not get and psychosocial effects revealed that when the value of found it difficult looking for money for abortion and did not (explanatory variable) increases, the mean of psychosocial effects of pregnancy

on adolescents decreases. This stems from the fact that the coefficient (-0.333) of the found it difficult looking for money for abortion and did not get classifies it as a protective factor to psychosocial effects. What it means is that though adolescents look for money for abortion and do not get, yet, it decreases the mean of psychosocial outcomes on the adolescents.

The association observed between education disruption and psychosocial effects revealed that as the value of the education disruption increases, the mean of the psychosocial effects tends to increase as well. The coefficient (0.333) of the education disruption signifies that it is a risk factor to psychosocial effects of pregnancy on adolescents. It also means as there is a 0.33 unit increase in the education disruption value, it increases the mean of psychosocial effects of pregnancy on adolescents.

### 5.3. Psychological Effects of Pregnancy on Adolescent Girls

Analysing issues on the psychological effects of pregnancy on adolescent girls unearthed that, adolescent girls when pregnant feel depressed. Evidence from the data supports that adolescent girls during pregnancy always experience emotional problems. Overwhelming number of the adolescents cited fear, confusion, hopeless, anxiousness about life as well as low self-image as the reasons that emotionally constraint them. This supports the assertion that depression is one health problem adolescents cannot escape during pregnancy hence they feel they are dependent upon relationships with others and this relationship eventually get threatened and breakup as a result of discrimination. This finding agrees to study by [5, 24] that the pregnant adolescent girls might feel guilty and depressed in view of the increasing responsibility awaits them. However, from the psychosocial approach, pregnancy can be understood as a specific highly emotional state, which may be a potent stressor to hamper adolescents thereby, perpetuating depression among them. Moreover, adolescents that become pregnant during their teen years might have a low self-image, doubts about their feminine attractiveness, feel inferior and seek warmth and attention which they find it difficult in getting.

The multiple linear regression analysis on psychological effects on adolescent girls' revealed association between feel depressed and psychosocial effects of pregnancy on adolescent girls. This relationship had revealed that the more and more adolescent feel depressed, it is the more and more it decreases the psychosocial effects on adolescent. The coefficient (-0.833) of the variable, depicts that as the value of the feel depressed increases, the mean of the psychosocial effects tends to decrease.

The association found between facing emotional problems and psychosocial effects revealed that when the value of facing emotional problems increases by (-0.167), it tends to decrease the mean of the psychosocial effects on the adolescents. This means that the more and more adolescents

experience emotional problems, it is the more and more it decreases the mean of the psychosocial effects on their health.

The association observed between have low self-image and psychosocial effects revealed that as the value of the low self-image increases, the mean of the psychosocial effects tends to decrease as well. The coefficient (-0.333) of the low self-image signifies that it is a protective factor to psychosocial effects of pregnancy on adolescents. It also means as there is a -0.33 unit increase in the low self-image, it is the more and more it decreases the psychosocial effects of pregnancy on adolescents.

## 6. Conclusions

The study represents the cross-sectional perspective of pregnant adolescent girls. It also sought to gain a holistic view of pregnancy psychosocial outcomes on adolescent girls at Dakodwamu a Suburb of Kumasi in the Ashanti Region, Ghana trying to ascertain which of the pregnancy psychosocial outcomes such as physical, socio-economic and psychological outcomes exert much influence on the adolescent girl.

A problem behaviour theory was reviewed which served as a justification and foundation to the purposes of the study. In this study, quantitative and cross-section survey plan were used to investigate physical outcomes, socio-economic outcomes and psychological outcomes of pregnancy adolescent girls face when pregnant at Dakodwamu.

Overwhelmingly majority of the adolescent girls during pregnancy face physical outcomes such as obstetric issues and have sleeping deficits. To some extent, it calls for a collaborative effort from stakeholders to mitigate childbirth complications and ensure safe delivery hence requires concerted effort and a shared responsibility of the teenage mothers, family and healthcare professionals (nurses and midwives) and, perhaps, the traditional birth attendance to help curb the menace.

In this study, it emerged that adolescent girls encounter socio-economic constraints when pregnant which stems facing family discrimination, unjustly treatment from friends, family, community members, and stigmatisation. To a large extent parents and community members should team up to help provide information in the community to assist adolescent girls to stay clear from risky sexual behaviour to help avert adolescent pregnancy and its associated overwhelmingly socio-economic constraints.

The study unearthed that majority of the adolescent girls experienced psychological outcomes when pregnant where they highlighted that they feel depressed coupled with emotional problems. It appeared overwhelmingly adolescent girls cited fear, confusion, hopelessness, anxiousness about life as well as low self-image as the reasons that make them emotionally constraint. This meant that adolescent girls are left alone to deal with their own predicament which actually

breaks them down. Therefore, important others could do the needful to psyche these adolescent girls so that they can bounds back in life to fulfil their purpose.

## Abbreviations

GHS	Ghana Health Service
GSS	Ghana Statistical Service
ICF	International Classification of Functioning, Disability and Health (ICF)
LMICs	Low-and-Middle-Income Countries
PBT	Problem Behaviour Theory

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## Author Contributions

Anthony Edward Boakye is the sole author. The author read and approved the final manuscript.

## Declaration

### Ethical Approval

Ethical clearance (with ID number UC-CIRB/CHLS/2020/09) to conduct this study was obtained from the Ethical Review Board of University of Cape Coast, Ghana.

### Consent to Participate in the Study

Verbal consent was sought from the respondents in the field before a respondent took part in the study.

### Consent to Publish

Respondents were informed that the study was strictly academic and that the results would be published for the purposes of adding up to knowledge in the academia.

## Funding

The work was self funded.

## Availability of Data and Materials

The data is only available to the author hence it was a primary data.

## Conflicts of Interest

The author declares no conflicts of interest.

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## Research Field

**Anthony Edward Boakye:** Reproductive Health and Right, Parent-Child Connectedness, Family Dietary Quality, Family Food Security and Hunger, Nutrition and Health